



we-ef

WE-EF LEUCHTEN

General Catalogue

European Edition

70 YEARS
WE-EF LEUCHTEN
1950-2020

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It takes the brightest to create more than just brightness

Somewhere on the globe it is always about to get dark – and the setting sun sets the stage for a new, shining play. When the streets and squares of a city, and when boulevards, buildings and parks are transformed by a new, atmospheric light, this mesmerising shift is often the work of WE-EF. For many years we have been designing and producing exterior lighting technology that is more than just bright.



Design and Technology

Ever since its foundation in 1950, the WE-EF brand has set standards in professional exterior lighting with unique design and innovative technology.

From day one, our thoughts and actions have been true to the ways and values of a family business – creative and close to the customer, flexible and focused on solutions. Driven by this spirit, we have created a product portfolio for lighting urban spaces as well as architecture – timelessly designed and exceptional in its functionality.



Transforming Atmosphere

A Worldwide Perspective

For WE-EF, creating and listening are one. The ongoing dialogue with our customers and partners helps us know what counts. Our core competencies are built on two essential premises. On the one hand, it is the uncompromising performance and efficiency delivered by the LED modules and optical systems we design in-house.

On the other hand, it is the first-class materials, sophisticated construction and the exclusive processes that WE-EF employs in manufacturing highly reliable, long-lasting products – offering peace of mind to project owners and other stakeholders. The qualities of German engineering are held in high regard the world over. WE-EF products combine these qualities with the experience and cultural perspective of a truly international group of companies. This diversity is one of our core strengths.

Crystal-clear Values

For ideas and products to shine, the atmosphere in which they are created has to match the atmosphere they create. Respect and open-mindedness are key to innovation – and central pillars of our corporate culture.

We are proud that many of the brightest minds in lighting have joined the ranks of our employees, customers and partners.

We will continue to break new ground – creating individual solutions for a wide range of exterior lighting projects, perfectly honed for their purpose.





Markets and applications: Cities thrive in open spaces We create the atmosphere

To speak the same language. All over the world.

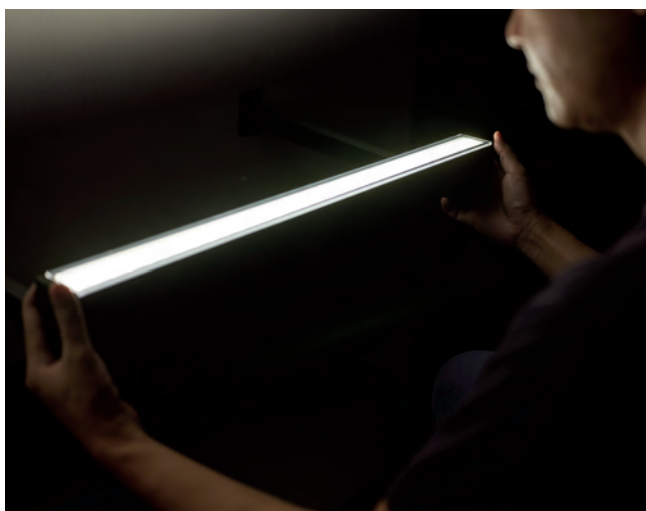
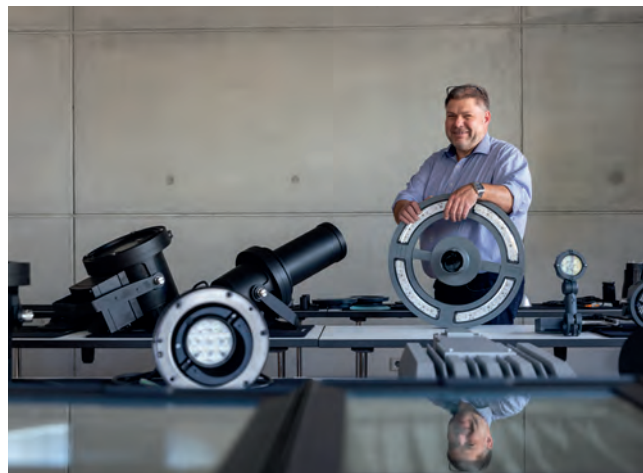
In addition to WE-EF's head office in Bisingen, Germany and the company's second factory in Neuendorf (Brandenburg, Germany), the WE-EF Group of Companies includes subsidiaries in France, Switzerland, the United States, Thailand and Australia.

As a consequence, customers from all parts of the world find the perfect contact at WE-EF – people who not only speak their language, but who are also intimately familiar with the specific regional conditions – from rules and regulations to requirements arising from the local climate.

What makes man-made environments worth living in? The planners and architects of today's urban cityscapes have all the answers – public spaces that make you feel welcome; parks and landscapes that embrace you with their atmosphere; places of encounter that feel vibrant and safe to everyone; and buildings as beacons of identity, impressive in scale and iconic in design. At the centre of it all, a profound sense of humanity and purpose.

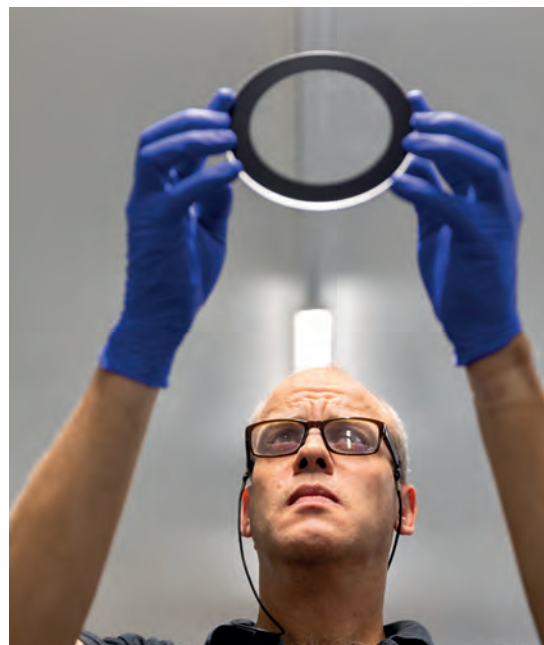
All these qualities can be extended – and even expanded – after dark by the intelligence of light, i.e., sophisticated lighting concepts that accentuate existing design dimensions and add a whole new world of possibilities. The result is a distinctive nocturnal identity, from functional efficiency to atmospheric enchantment.

This is what WE-EF is all about – setting the stage for great architecture with exterior luminaires, systems and accessories for opening up landscapes, and enlivening the streets and squares of cities and making them safe. Every single product and the entire structure of our portfolio have been thoroughly considered from a real-life planning perspective, and it shows – down to the tiniest technical detail of our luminaires. And in the new, application-centred structure of this catalogue.



Design and Engineering: Intelligence in every detail

Timeless. Purist. Clean. Shaped by an organic precision – WE-EF luminaires look their part for a number of reasons. One is that they are designed for seamless integration into a wide variety of architectural and urban contexts by day as well as by night. Today – and for many years to come.



Longevity – in both aesthetics and technology – is at the core of our products' DNA. It is the result of an unusually close alliance of designers, lighting technicians and engineers in WE-EF's product development – fostered over many years and strengthened by short distances between research and development laboratories and production.

This well-established collaboration leads to products that are thoroughly considered down to the last detail, with construction optimised for consistent excellence in manufacturing as well as easy maintenance and recycling. In addition, they are produced with materials and processes that help to protect our environment.

In order to minimise the ecological footprint, however, each luminaire must be perfectly honed to its purpose. In street and area lighting, finding the perfect combination of beam angle, glare limitation and efficiency not only leads to improved lighting comfort, but also to significantly reduced cost and less CO₂ – fewer light points, faster installation, lower maintenance. It's a promise WE-EF gladly gives in writing. As one of the first manufacturers of street and area lighting, WE-EF publishes life cycle assessments for select products in the form of Environmental Product Declarations (EPDs) in accordance with ISO14025 and EN 15804.



More than a phrase: Made by WE-EF

It's not just what you do. It's how you do it. For this reason, the continuous training of our staff is just as elementary to WE-EF as our investments in research and development, tools and production facilities.

This is all the more important because there is quite a few things we rather do ourselves than to have them outsourced, as others do. Our production depth is high, and proudly so. We design, engineer and manufacture our own LED optics OLC® (One LED Concept), according to WE-EF's IOS® (Innovative Optical System) philosophy. We build our own tools for die casting and injection moulding – accurate to one thousandth of a millimetre.

We manufacture components from profiles and sheet metal on state-of-the-art CNC machines. We protect surfaces against corrosion, applying our industry-leading 5CE system. In all, when it comes to assembly, we mount and test all our luminaires according to certified processes. That's why every WE-EF product is a purpose-built performance package that will not be found anywhere else.

■ For more information on technologies applied, refer to page 362

1950

1950: A young man graduates as a master electrician. Aided by his wife Gisela, he establishes an electrical installation company in Bispingen, Lower Saxony, a small town in northern Germany. His name is Wolfgang Fritzsche.

The idea that his initials – 'W' and 'F' – will one day christen a global brand is, as yet, beyond his wildest dreams. Yet, he still has the courage to take his first steps as an entrepreneur. Driven by his desire for independence and self-determination, he goes his own way, encouraged by the unwavering belief that anything is possible – as long as you are truly determined and work hard for your goals.

As an electrician, Wolfgang Fritzsche is often called to install luminaires from various manufacturers on farms and in the communities around Bispingen. He senses an opportunity for business – and says to himself:

1955

"When others can do this, so can I! Why not create our own luminaires?" A few years later, this vision becomes reality, with the first luminaires carrying the 'WE-EF' sign.

Right from the start, growth and shared knowledge are important ingredients of WE-EF's corporate philosophy – in the customer's best interest, but also in the name of social responsibility. WE-EF has been training apprentices since 1955. In more than six decades, about 170 apprentices have been trained and started into their careers at WE-EF.

Many stay long-term. To this day, company affiliations of 15, 25 or even 40 years are nothing out of the ordinary at WE-EF.



01

Wolfgang Fritzsche
Elektromeister
Bispingen
(Geschäftszeichen)

Bispingen 3. 12. 1949
Gewerbeliste – Nr. 135

Anmeldung - Abmeldung - eines Gewerbebetriebes

Bezeichnung des Gewerbebetriebes (Firmenbezeichnung) Elektroinstallations-Geschäft

Inhaber des Gewerbebetriebes Wolfgang Fritzsche
Elektromeister

Art des Gewerbes Elektroinstallateur-Handwerk

Sitz der Betriebsleitung Bispingen

Ort des Hauptbetriebes Bispingen

Betriebsstätten am Ort der Anmeldung keine

Betriebsstätten außerhalb dieses Ortes keine

Geschäftsvorgänger – Geschäftsnachfolger

Tag der Eröffnung – Übernahme – Übergabe – Einstellung – des Gewerbebetriebes 1. Jan. 1950

Grund der Abmeldung

Mitteilung - Bescheinigung
an Herrn
Wolfgang Fritzsche
Bispingen

Bestell-Nr. 13/52. - Mitteilung - Bescheinigung - über Gewerbe-An- oder Abmeldung. (Durchschreibeverfahren)
Gesamtdruck-Verlag - 34550

8. 7. 9. 48

Der Gemeindevorstand
Bispingen
Herrn Gemeindevorstand
Herrn Gemeindevorstand

02



03



04

1960-1970

Innovative technology. Exemplary design. High-quality materials. Uncompromising customer orientation. These are the four pillars of urban light development at WE-EF – from the company's earliest days to the present.

WE-EF builds its first aluminium sand-casting foundry in 1960. By the mid-1960s, the transition to aluminium gravity die casting is complete. Subsequently, 1972 marks the operational start of the first aluminium high-pressure die casting machines. At the same time, WE-EF establishes its in-house tool design and construction department.

To this day, most of WE-EF's aluminium luminaire housings are produced in one of its three company-owned aluminium foundries in Germany and Thailand.

Tool-making expertise is one of several areas consciously kept in-house. WE-EF develops and manufactures moulds for aluminium gravity die-casting and pressure casting as well as injection moulds for plastic components – right up to the highly complex injection moulds for all optical lens systems currently used at WE-EF. Without exception.

The formative decade from 1960-1970 is also marked by the publication of the first WE-EF catalogue – a first which will be followed by many more. True to WE-EF's down-to-earth-spirit, its initial format is a modest DIN A5. During the course of the 1970s, the steadily increasing volume of the WE-EF catalogue becomes an impressive metaphor for the company's growth – finally making the leap to the current A4 format.

Then, as now, WE-EF remained committed to realising any customer request for customisation in a straightforward and competent manner. The key to keeping this commitment is sophisticated design – prepared for change, right from the start.



05



06



07



08

1970

Marked by the 1973 oil crisis, the 1970s are an unforgiving environment for business. But for WE-EF, they are a period of substantial growth. A major driver – increasing exports to many Middle Eastern countries.

As WE-EF's international trade thrives, there are also advances in R&D: The all-new technical and test laboratories set up in 1975 are testaments to WE-EF's determination to drive progress through science – and to make lasting contributions to the global development of lighting technology. After all, urban light is no job for tinkers.

1975

Today, WE-EF runs almost all tests required for luminaire certification in-house in these labs, which are continuously updated and kept up to speed.

Accredited to, and compliant with all relevant norms, they measure every imaginable aspect of light as well as heat, dust, water and impact resistance – and many more aspects.



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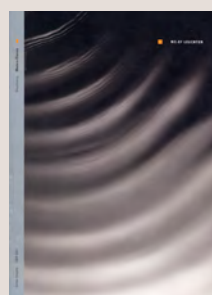
05



06



07



08



09

01 Lighting laboratory

02 Testing laboratory

03 Catalogue 1972-1973

04 Catalogue 1981

05 Catalogue 1991-1993

06 Catalogue 1996-1998

07 Catalogue 2002-2004

08 Catalogue 2004-2007

09 Catalogue 2006-2009

1980

In quick succession, both Thomas and Stephan Fritzsche join their father's company, and WE-EF's corporate strategy receives further refinement.



10

The aesthetic and functional demands of lighting designers, architects and engineers get centre stage; the required service, including consulting and training, is a vital aspect.

Meanwhile, WE-EF's reference portfolio grows – not only in number, but also in scope, complexity and impact. A central principle remains untouched – every job gets the same attention. No matter how big or small. On an equal footing with technology and function, WE-EF establishes design as a key corporate value. As off-the-peg solutions gradually fade in volume, modularity becomes a cornerstone of WE-EF's development process.

By the mid-1980s, the formal language and train of thought shaping WE-EF's products increasingly show their ties to the philosophy of Bauhaus and HfG Ulm: Functional, plain design as a fusion of the very best in craftsmanship, industrial production and progressive technology.

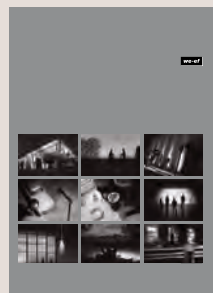
1982

Thanks to this approach, WE-EF luminaires retain their aesthetic and functional value over their entire life cycle. Systematically thought through in every detail long before production, their design remains a fresh and timeless part of public space, in streets, squares and pathways.

As the successor to its Asian regional office, WE-EF establishes a dedicated Thailand branch in 1982. The goal – local manufacturing of WE-EF products for the Asia-Pacific region and Australia/New Zealand. Today, WE-EF Thailand employs a staff of 145.

Little by little, telex and typewriters make way for fax machines and computers. However, the first ERP system for computer-aided production planning is still years in the future.

During this decade, lighting-specific software is rare and expensive – too expensive for WE-EF. Undaunted, WE-EF's engineers turn necessity into virtue and develop their own. Their code for calculating the statics of lighting columns and planning lighting projects, created as a side project, remains in use for many years, with convincing results.



11



12



13



14



15

1990

At the start of the 1990s, WE-EF founder Wolfgang Fritzsche gradually withdraws from day-to-day business.

He continues to serve the company as chairman and valued advisor. Thomas and Stephan Fritzsche become co-owners of the company.

WE-EF continues to grow. Alongside Bispingen (Lower Saxony), a second production facility is created in Neuendorf im Sande (Brandenburg). Finally, there is some space – a rare commodity in Bispingen; 70,000 square metres of land offer plenty of opportunities for growth. As a consequence, WE-EF's pole production (including the associated powder coating line) and, later, all sheet metal processing are relocated. Not a single job in Bispingen is lost, while new ones are created in Neuendorf. WE-EF's growth makes it possible.

In 1994, WE-EF LUMIERE turns the lights on at the new branch in France. Founded in Strasbourg, the company later moves to Lyon. Today, France is not only WE-EF's most successful export destination, but also its biggest national market. What a success story – chapeau!

Also in 1994, Australia sees the foundation of WE-EF LIGHTING. The chosen location "Down-Under" is Melbourne in the State of Victoria. WE-EF's service now covers the entire continent of Australia and Oceania.



01

01 Office and Lightbox, Neuendorf im Sande

1994

1996

1998

The 2000 Olympic Summer Games in Sydney become a showcase for WE-EF. Many buildings and facilities of the world's first green Olympic Games are illuminated by WE-EF, using sustainable concepts.

Only six years after the foundation of WE-EF Australia, the brand has established a strong position in the public image of Australia's major cities.

In 1994, WE-EF replaces wet with powder coating, resulting in a more environmentally-friendly process. One year later, the first CNC milling machines are put into operation.

Another milestone is the iF Product Design Award for the first luminaire jointly developed by WE-EF Germany and WE-EF Thailand.

In 1996, WE-EF's design departments in Germany and Thailand fully transition to 3D CAD technology – in a very short time frame. A few years later, all processes in luminaire and tool design as well as tool construction will have been seamlessly digitized.

From the late 1960s onwards, WE-EF has regularly exhibited at the World Light Show in Hanover – at the time the world's largest lighting technology fair. When the first Light + Building trade fair takes place in Frankfurt on the Main in 2000, it replaces Hanover as the lighting industry's premier international gathering place – and, of course, WE-EF is there, right from the start (and up to the present).

In 1998, WE-EF's trademark reliability is finally awarded an official letter and seal. The basis? A comprehensive quality management system according to ISO 9001, tailored to monitor and evaluate all company processes according to national and international standards. This not only includes production and engineering, but also training, qualification, motivation and environmental protection.

2000

In 2000, WE-EF crosses the Atlantic. WE-EF LIGHTING, the new North American branch, is founded in Pittsburgh, Pennsylvania.

Big country, big challenges: America demands a long breath. However, time has proven the decision right, and WE-EF is proud to have stuck to its goals and beliefs. America offers a world of opportunity. Not only, but also, for WE-EF.

The year 2006 marks the beginning of a new technological era for WE-EF. At an early stage, the company recognises the potential of Light Emitting Diodes (LEDs) for exterior lighting.

2005

2006

2008

At the Light + Building fair 2008, WE-EF introduces the very first 'butterfly' lens for LED street lights. Greeted with reservations at the time, it is the nucleus of a concept that has long since been patented and recognised as the state-of-the-art in almost all street lights around the world – WE-EF's OLC® One LED Concept.

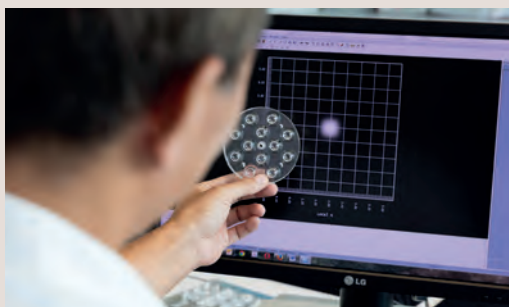
The beginning of the 2000s also marks the start of WE-EF's "Lightboxes" – next-generation training centres at various locations.

Differing in size, shape and equipment, they are all designed for one common goal – showing what light can do. Once experienced, it is never forgotten. Today, WE-EF Lightboxes have been installed in Bangkok, Melbourne, Sydney, Lyon and Neuendorf im Sande.

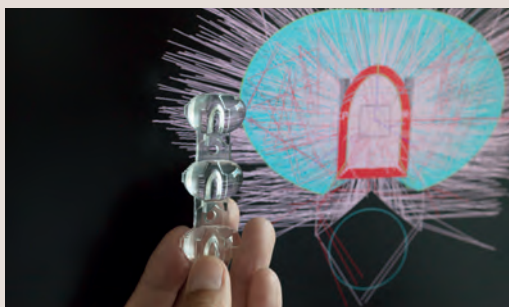
In the latter part of the new millennium's first decade, WE-EF Germany's aluminium pressure casting foundry moves in 2008 from Bispingen to Neuendorf im Sande – bigger, more modern and more productive than ever.



02



03



04



05

02 Lens samples

03 OLC® One LED Concept

04 Butterfly lens

05 Lightbox

2010

In 2010, WE-EF creates its Swiss branch, WE-EF HELVETICA. Since then, a small but dedicated sales team has taken care of the wishes and needs of local customers and partners. Its commitment and reliability pay off – two crucial factors for success in Switzerland. WE-EF has it.

A life cycle analysis provides the framework for WE-EF's first Environmental Product Declarations (EPDs) in 2013 – a quantitative description of the environmental life cycle of WE-EF luminaires, from production to operation and recycling. For an effective conservation of resources, both longevity and energy efficiency are of the essence. This view has always been at the core of WE-EF's DNA.

In 2014, WE-EF LEUCHTEN in Bispingen opens its new head office – a modern office and laboratory building of glass and concrete, with edges and corners and a clear functional language. An architectural statement that truly expresses WE-EF's corporate self.

A short while after, in 2015, WE-EF LUMIERE moves to its new premises on the outskirts of Lyon – a move made inevitable by the sustained growth in the previous decades. With its sophisticated architecture, the Lyon building is not only perfectly adapted to today's workplace requirements, but also incorporates active environmental protection.

One year after WE-EF's workforce moves in, the first bee colonies follow, inhabiting the factory premises and bringing the French head office in touch with mother nature. In summer, sheep graze in the meadows.



In 2015, company founder Wolfgang Fritzsche dies aged 91. His extraordinary character, as well as his profound impact on the company and its culture, are felt and appreciated to this day – much like the initials 'W' and 'F' that will continue to mark the WE-EF brand for many years to come.

2014

2015

2017

2018



01



02

End of 2015, the Fritzsche family and other shareholders of the WE-EF Group decide to take a major step for securing the long-term future of the company. They accept an invitation for negotiations to join Sweden's Fagerhult Group. The agreement is signed in 2017.

In August 2018, Thomas Fritzsche resigns as Managing Director of WE-EF LIGHTING Thailand, ending his professional career after a total of 42 years at WE-EF, 36 of them in Thailand.

01 Inauguration of new WE-EF LEUCHTEN head office and laboratory building in Bispingen

02 New head office of WE-EF LUMIERE near Lyon

2019



In 2019, Gisela Fritzsche, wife to company founder Wolfgang, dies in Bisingen at the age of 96 – in the very house that was once home to WE-EF's first production site. She never wanted to move.

2020+

WE-EF is more than a loose association of national companies carrying the same name. We are one family, one brand, worldwide.

One Family, One Brand – this is the joint motto for WE-EF's international network from 2020 onwards.

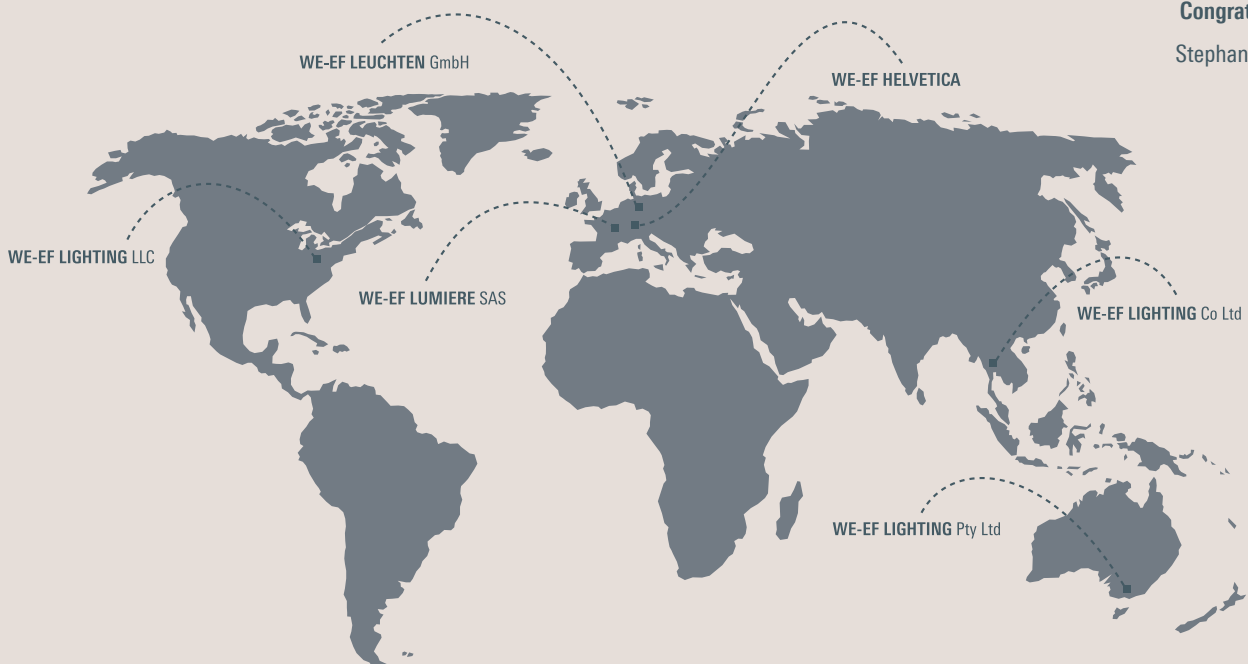
All the WE-EF Group's activities in product policy and communication focus on our corporate values of innovation, functionality and design. To us at WE-EF, this means a commitment to excellence in everything we do. The new corporate design connects the elements of the brand closer than ever, around the globe, for the entire WE-EF family.

Today, about 500 employees at six locations all over the world work for the WE-EF brand. They are the basis for everything we are and the foundation on which our success is built. Our sincerest gratitude and respect go out to them.

1950-2020: 70 years WE-EF.

Congratulations!

Stephan Fritzsche



Architecture

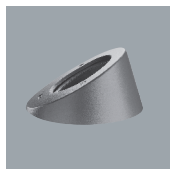
Inground luminaires

Round



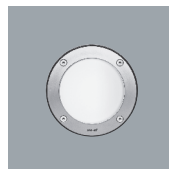
EFC100

30



ESC100

34



ETC100

36

Marker light



ETC100

38



ETC100-GB

40

Gimbal



ETC100-GB TW

42

Gimbal

Tunable white



ETC100-GB CC

46

Gimbal

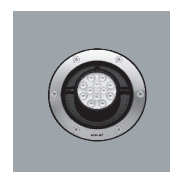
Colour changer



ETC300

50

Marker light



ETC300-GB

54

Gimbal

Inground luminaires

Linear



ETV100

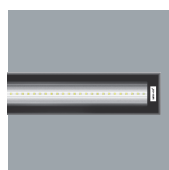
62

Marker light



ETV100

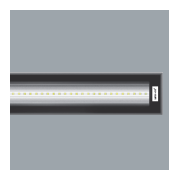
64



ETV100-TW

68

Tunable white



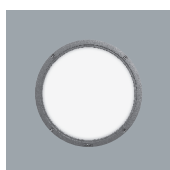
ETV100-CC

70

Colour changer

Wall luminaires

Recessed



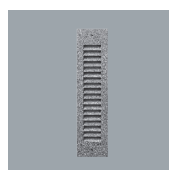
TRO200

80



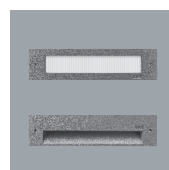
STL100

82



SVL100

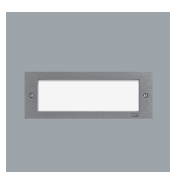
84



STO100

86

STI100



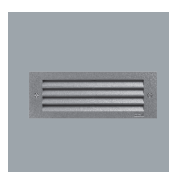
STO200

90



SVO200

92



STL200

94

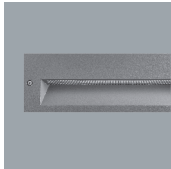


SVL200

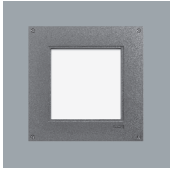
96

Architecture

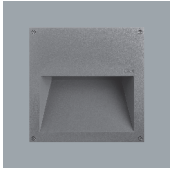
Wall luminaires
Recessed



STI200 98



QRO300 100

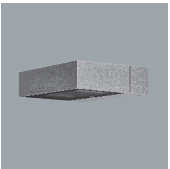


QRI300 102

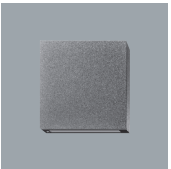
Wall luminaires
Surface mounted



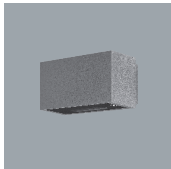
VLR100 108



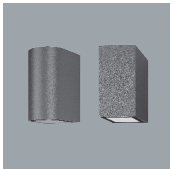
PLS400 112



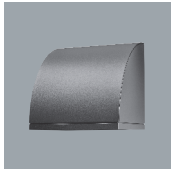
QLS400 116



RLS400 120



SLS400 122
VLS400



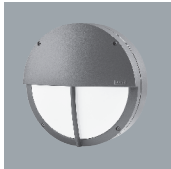
OLV300 126



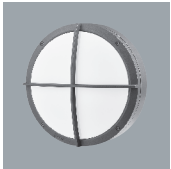
PIA200 128



DLO200 130

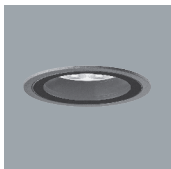


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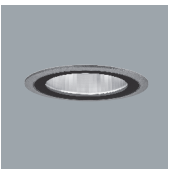


DLG200 132

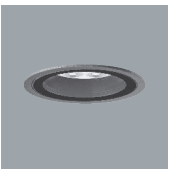
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DOC100 138
DOC200



DOC100-FT 140
DOC200-FT
Darklight



DOC100-FT TW 144
Darklight
Tunable white



DAC200-GB 146
DAC200-GB
Gimbal



DAC100 148
DAC200

Architecture

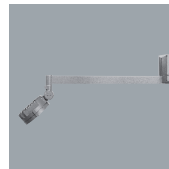
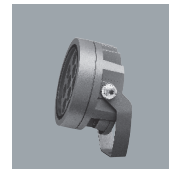
Projectors



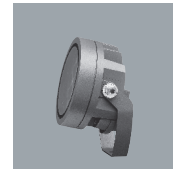
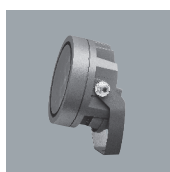
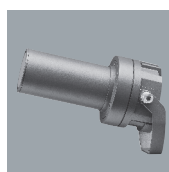
FLD100 156



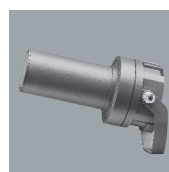
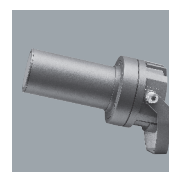
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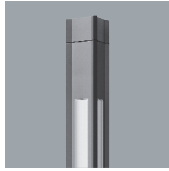
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ZFS400

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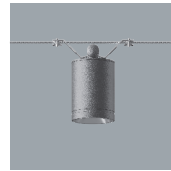
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CFS500

250



DAS100

252

Pole mounted luminaires



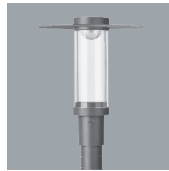
ZFT400-FT

258



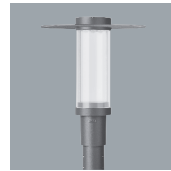
ZFT400

260



ZAT400-FT

262



ZAT400

264



ZA600-FT

266



RMT300

272



RMM300

274



RMC300

276



CFT500

282

City

Pole mounted
luminaires

RFL500-SE 288



VFL500 292



VFL500-SE 296



PFL500 298



PFL200 300

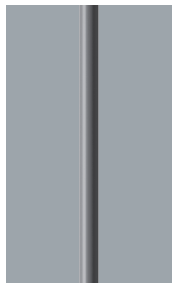
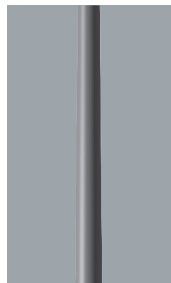
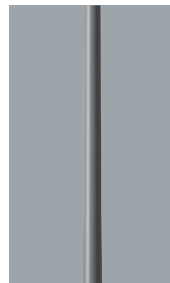
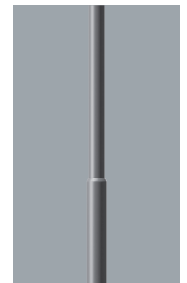
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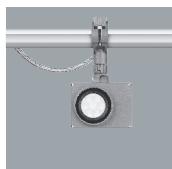
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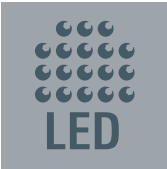


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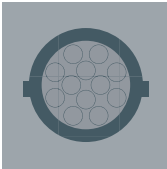
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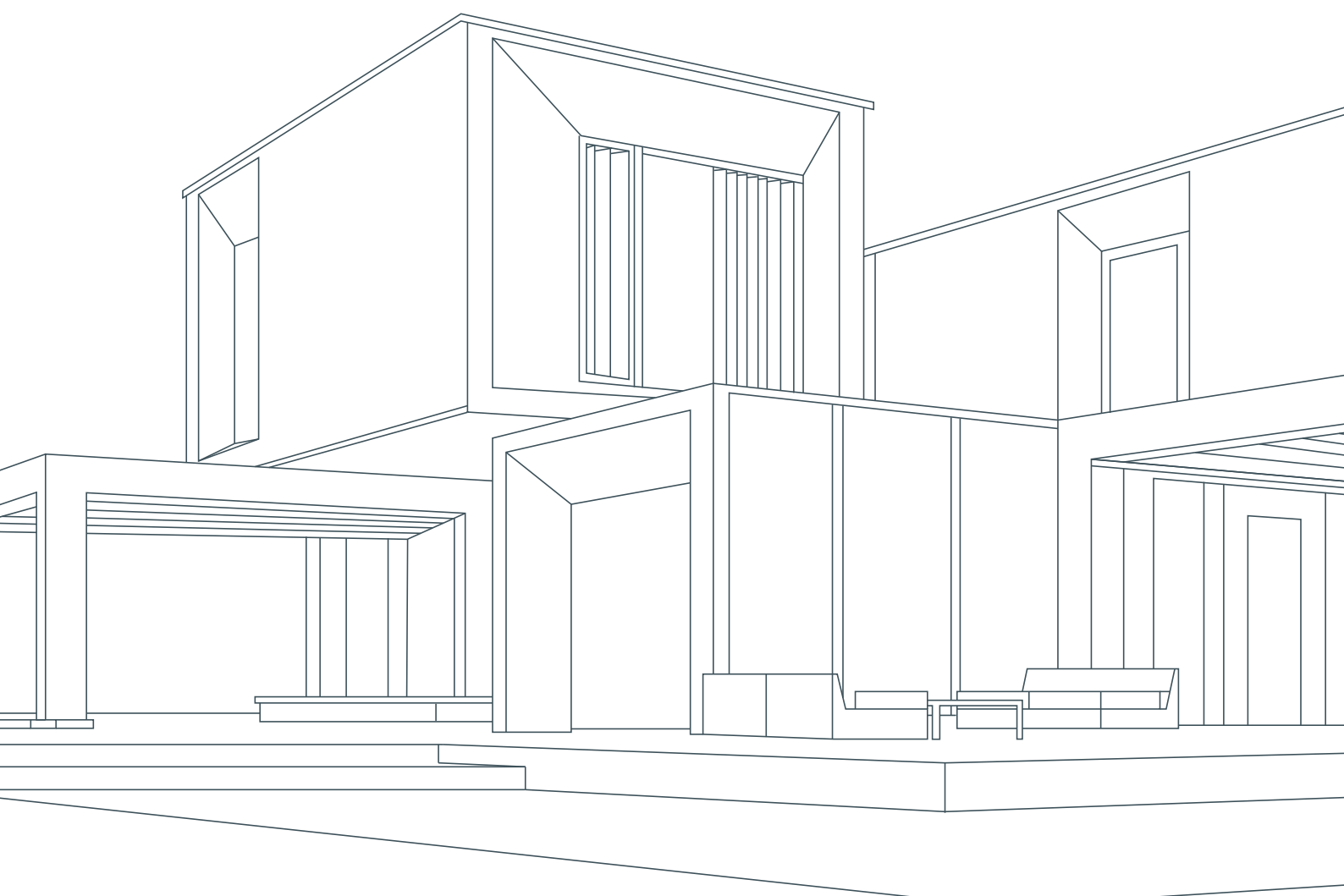


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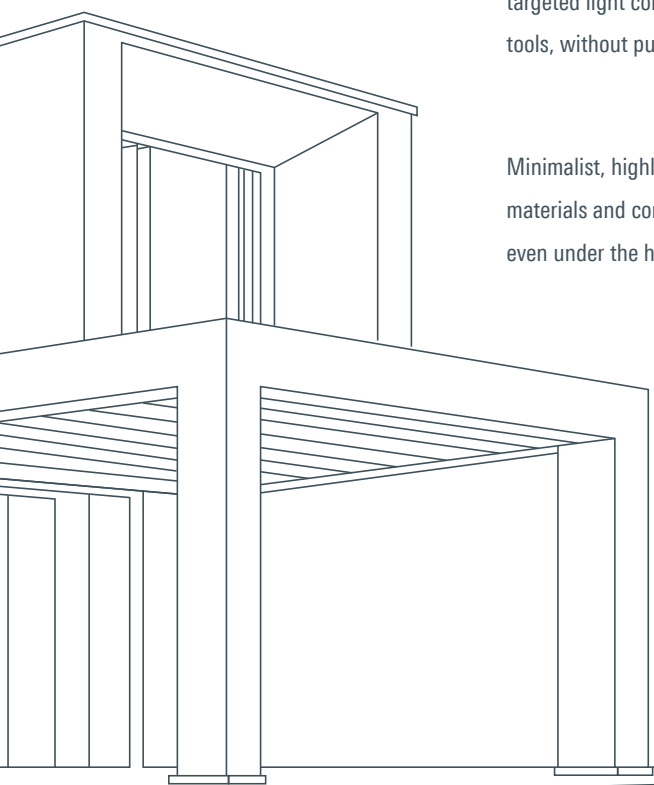


No urban lightscape can ever be complete without artfully illuminated architecture that turns lighting concepts into holistic experiences.

When we navigate cities great and small, it is their landmarks that help us find our way. They are anchors in the urban sea, a fact that any contemporary lighting concept ought to reflect – Illuminated façades mark spaces and their confines. Accentuated details turn buildings into landmarks – signature elements that bolster a city's image.

The luminaires in WE-EF's architectural lighting portfolio give planners all they need for covering the entire spectrum of exterior architectural lighting – from planar to focused, from functional to creative, for everyday uses as well as for special occasions. Innovative lighting technology ensures targeted light control with high efficiency and minimum stray light – luminaires that are powerful tools, without pushing themselves to the fore.

Minimalist, highly precise shapes join forces with the superior quality and workmanship of WE-EF's materials and corrosion-resistant surfaces – giving maximum longevity in both technology and aesthetics, even under the harshest environmental conditions.



Inground luminaires

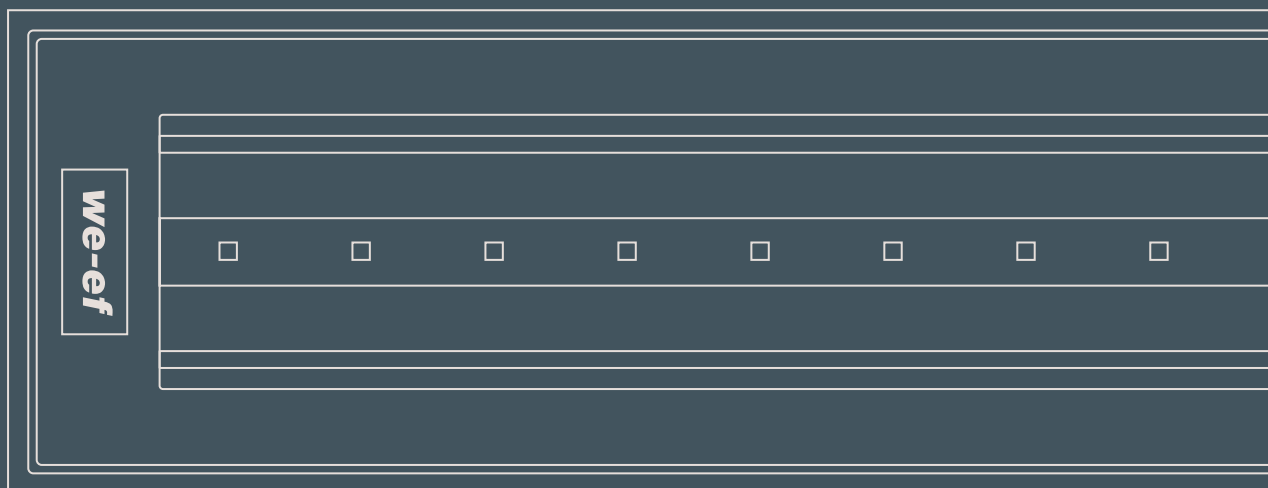
we-ef

A wide range of applications for recessed inground luminaires is available – washing façades, tracing contours or providing orientation.

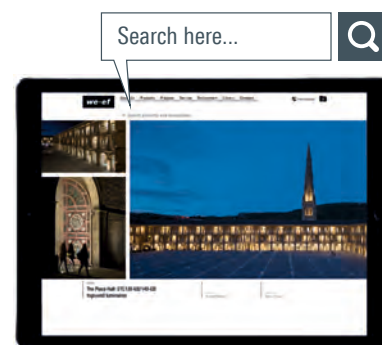
Their distinctive bottom-to-top light direction guarantees an impressive look.

When it comes to inground installations, classic WE-EF qualities such as 5CE Superior Corrosion Protection and maintained sealing come into full play.

With their varied range of round and linear designs and broad choice of light distributions and power levels, right up to highly versatile gimbal versions, the luminaires in this product group are flexible and essential tools for all planning professionals in designing architecture and urban spaces with light.



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Inground luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Piece Hall

A Piece of Timeless Grandeur

For centuries, this unique eighteenth century complex, with its four colonnaded wings embracing a central plaza, served as a market hall for fabrics and cloth – and a symbol of civic pride. Widely regarded as one of Britain's most outstanding buildings of the Georgian period, Piece Hall underwent major conservation and transformation in 2017. Its appealing blend of restaurants, shops, offices and cultural events attracts a diverse and international mix of visitors.

Recessed inground luminaires by WE-EF place effective sidelights on the pillars and set an impressive scene for the hall's main gate – with flexible alignment achieved by gimbal-mounting. RAIL66 system with FLC121 projectors placed by the roof edges help to emphasise architectural details while illuminating the corner areas of the grand plaza.





The Piece Hall

Halifax (UK)

Owner: The Piecehall Trust

Architect: LDN Architects

Lighting design: Happold Lighting



Luminaire housing:	Stainless steel construction. Die-cast dome, marine-grade aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	PC. Driven over at low speed only. Not designed for normal traffic conditions, can be damaged under such conditions as breaking, accelerating or turning
Gasketing:	Silicone rubber gasket(s)
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber. Complete with cable gland and 1.5 m of flexible PVC free cable. IP68 in-line connector facilitates easy removal for off-site maintenance. Installation blackout included. Sealable junction box; to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP67

IK09

St Marys Axe
London (UK)
Architect: Foster & Partners
Lighting design: Speirs + Major

Available distribution:
Controlled, one or two-sided

Standard colours:

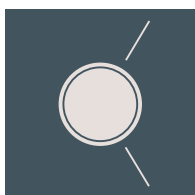




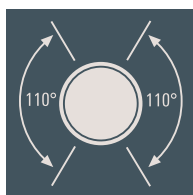

 RAL 9004 9006 9007 7016 9016



Controlled, one or two-sided

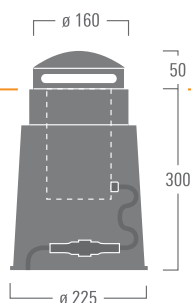


One-sided



Two-sided

EFC120



One-sided

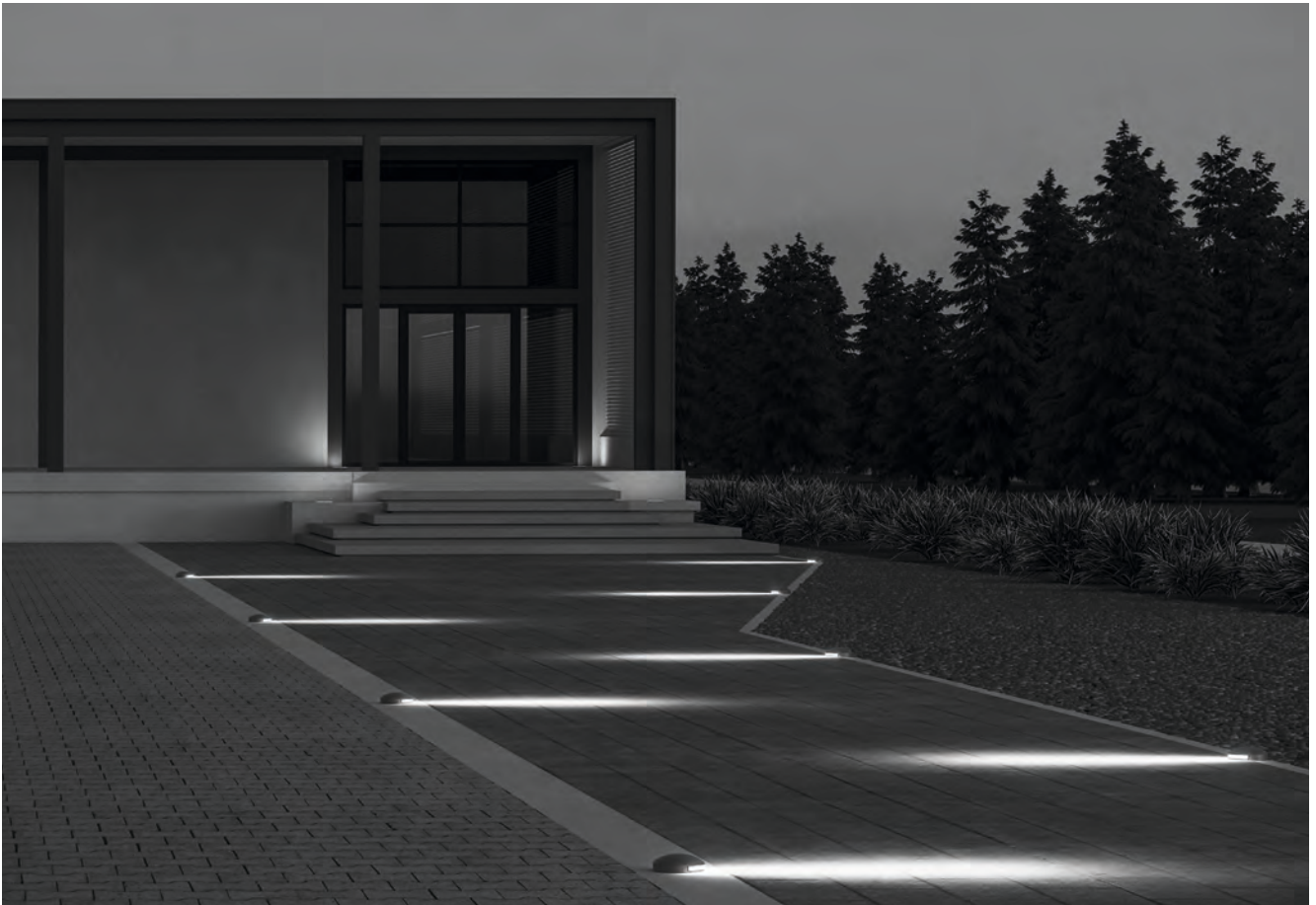
6 W
430 lm

Two-sided

12 W
860 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57

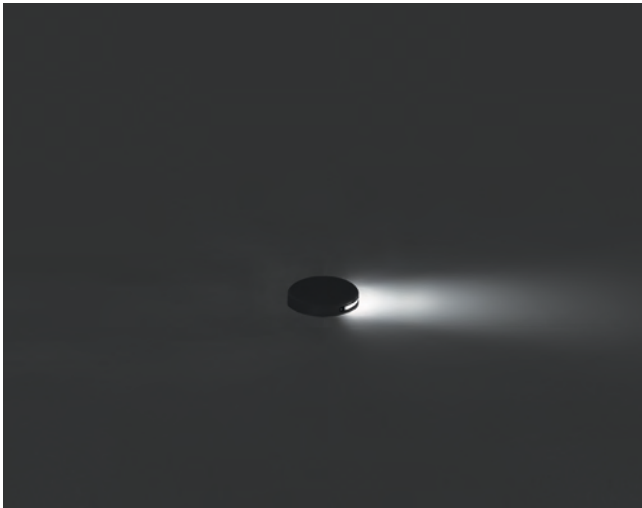


Highlights – Just Above Ground

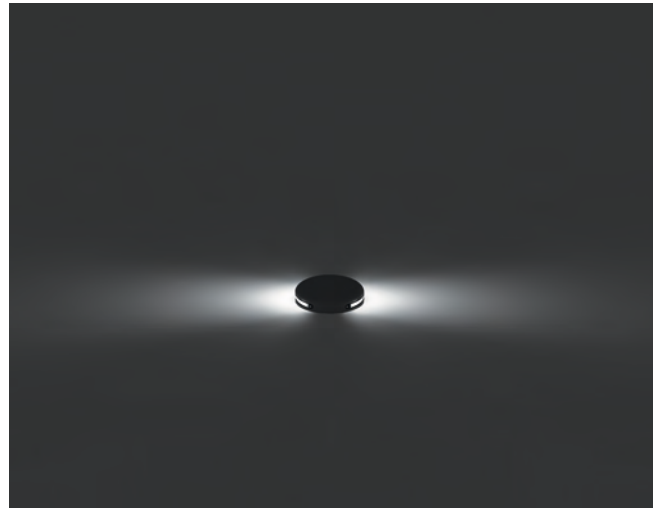
EFC100 luminaires deliver eye-catching floor-grazing effects that create interest, reveal texture and provide orientation.

Floor Grazing

The EFC100 series inground marker lights are ideal tools for floor grazing applications. Optics contained within the shallow above-ground hood emit a tightly controlled horizontal beam to reveal material, colour and texture of a pavement, landscape or similar setting.



One-sided



Two-sided



Luminaire housing:	Stainless steel construction. Die-cast hood with 30° angle, made from marine-grade aluminium alloy avoids glare to passers-by and helps prevent accumulation of insects, leaves and debris on the lens
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Cable gland with spiral cable bending protection. Installation blockout and sealable junction box; to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP67

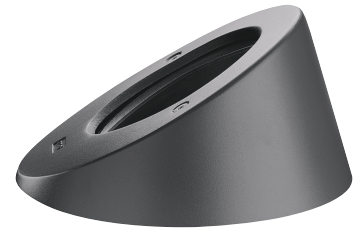
IK07



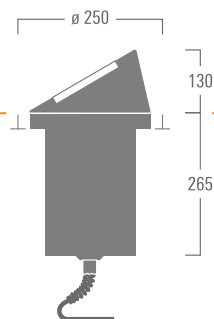
[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

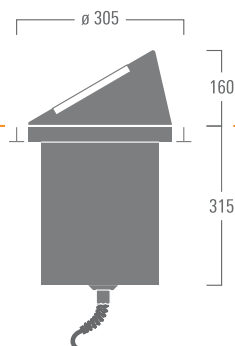


ESC130



[M] [EE] [EES]
18 W
1510-1630 lm

ESC140



[M] [EE] [EES]
24 W
2200-2370 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57



Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	EC electronic converter – to be ordered separately
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. IP68 in-line connector facilitates easy removal for off-site maintenance. Installation blockout and sealable junction box; to be ordered separately
Control:	Optional dimmable version available. To be specified at time of ordering

ETC109	CLASS III	*IP68	IK09
ETC119	CLASS III	IP67	IK09

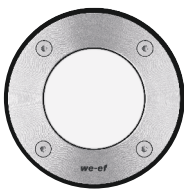
Coal mine Zollverein
Essen (DE)
Landscape architect: Planergruppe GmbH
Lighting design: Licht Kunst Licht

Available distribution:
Diffused

*IP68 – up to 10 metres

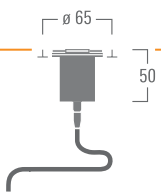
Standard colour:

Stainless steel



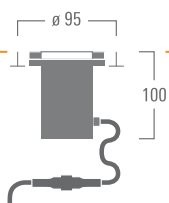
Flush with surface

ETC109

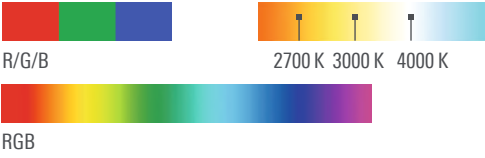


Diffused White (3000 K)	Red	Green	Blue	RGB
0.5 W 4 lm	0.5 W 3 lm	0.5 W 2 lm	0.5 W 1 lm	1.5 W 4 lm

ETC119



Diffused
1 W 24 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 57



Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	EC electronic converter – to be ordered separately
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. IP68 in-line connector facilitates easy removal for off-site maintenance. Installation blackout and sealable junction box; to be ordered separately
Control:	Optional dimmable version available. To be specified at time of ordering

CLASS
III

IP67

IK09

ZOOM Office Building
 Berlin (DE)
 Architect: Hascher und Jehle
 Lighting design: Lichtvision Design

Available distributions:
 [M] [EE] [EES]

Standard colour:



Stainless steel



[M] Symmetric, medium beam

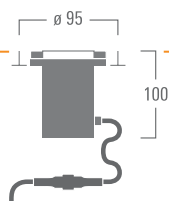
[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



Flush with surface

ETC110-1



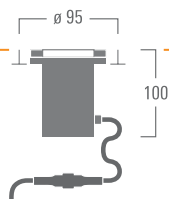
[M] [EES]

2 W

160 lm

Max. 1 internal accessory

ETC110-3



[M] [EE] [EES]

3 W

310 lm

Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57



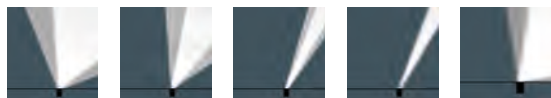
Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Coating option:	ASC Anti Slip Coating to DIN 51130 (Trip Classification 10) – available on request
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Cable gland with spiral cable bending protection. Installation blockout and sealable junction box; to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP67

IK10+





[B] Symmetric, wide beam

[M] Symmetric, medium beam

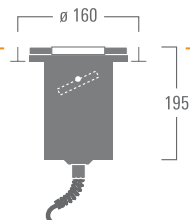
[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



ETC120-GB



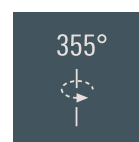
[M] [EE] [EES]

6 W

550-590 lm

Max. 1 internal accessory

ETC120-GB

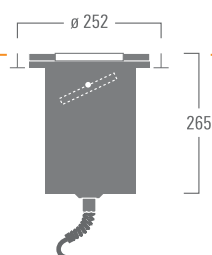


Rotation



Tilt angle

ETC130-GB



[B] [M] [EE] [EES] [A20]

18 W

1550-1930 lm

Max. 1 internal accessory

ETC130/140-GB

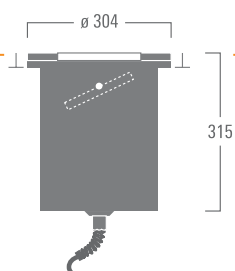


Rotation



Tilt angle

ETC140-GB



[B] [M] [EE] [EES] [A20]

24 W

2190-3010 lm

Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-e.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57



Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Coating option:	ASC Anti Slip Coating to DIN 51130 (Trip Classification 10) – available on request
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Cable gland with spiral cable bending protection. Installation blackout and sealable junction box; to be ordered separately
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 372
Control:	DALI

CLASS
I

IP67

IK10+

Available distributions:
[B] [M] [A20]

Standard colour:



Stainless steel



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[A20] Asymmetric, wallwash

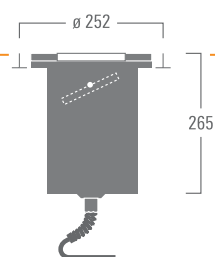


Rotation



Tilt angle

ETC130-GB TW

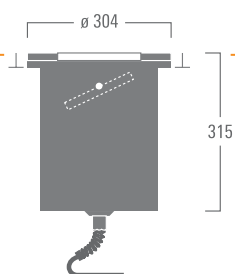


[B] [M] [A20]

19 W

1840-2010 lm

ETC140-GB TW



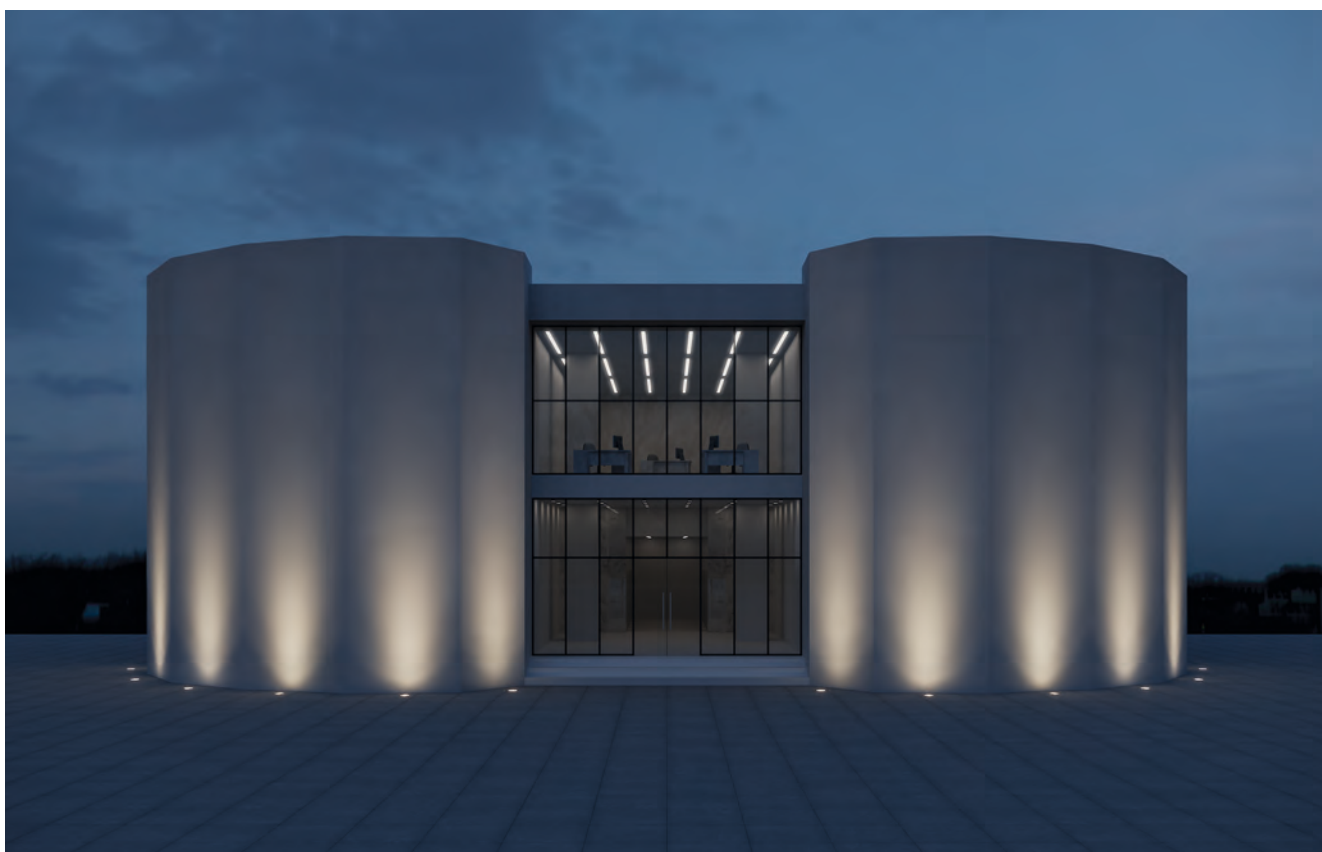
[B] [M] [A20]

30 W

2880-3150 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-e.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57

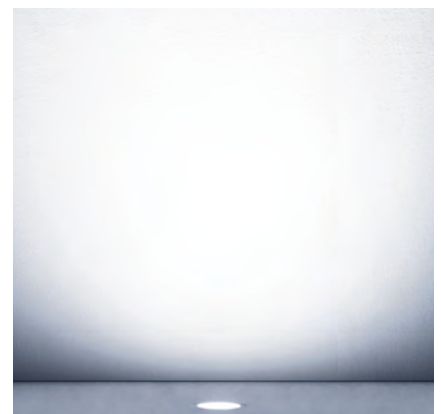
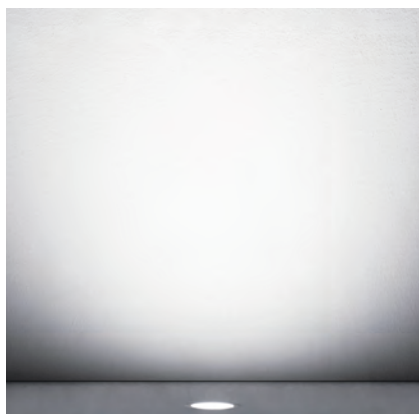
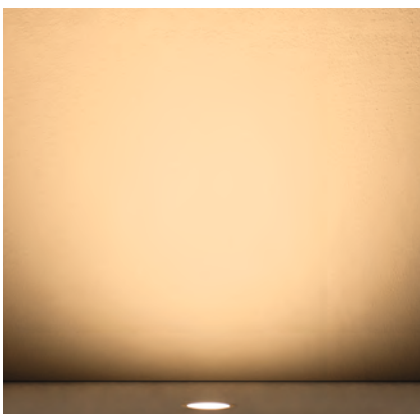
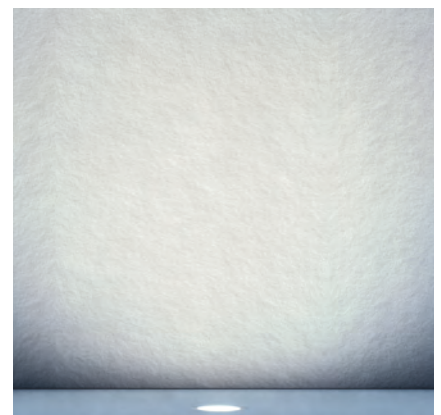
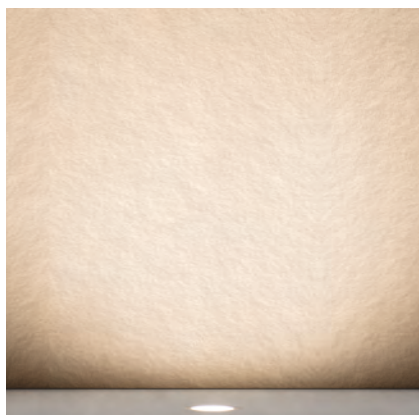
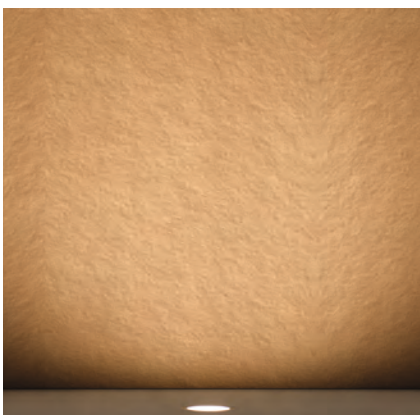
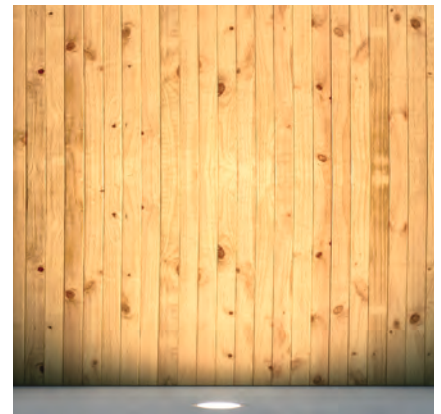
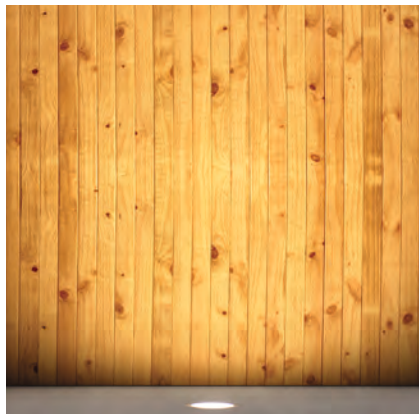
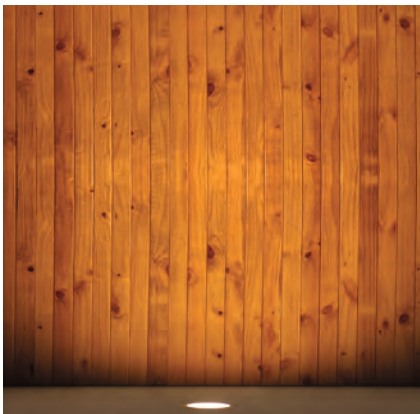


Wall Grazing

Uplights, in close vicinity to the vertical target surfaces, are used as 'wall grazers'. The intentional 'scalloping' effects just above ground level, combined with the fading luminance towards the top, enhance the building's polygon design. In addition, mood changes can be achieved by 'smooth tuning' of the colour temperature from 2700 K to 6000 K.

Tunable White

WE-EF's industry-leading technology facilitates 'smooth tuning' from a warm 2700 K to a cool 6000 K while maintaining consistent luminous flux. Three typical colour temperatures within this range are shown here, demonstrating the visual effects they have on a variety of surface materials and colours. Refer to page 372 WE-EF Tunable White Technology.



2700 K

5000 K

6000 K



Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Coating option:	ASC Anti Slip Coating to DIN 51130 (Trip Classification 10) – available on request
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Installation blackout and sealable junction box; to be ordered separately
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 373
Control:	DMX, refer to page 58

CLASS
I

IP67

IK10+





[B] Symmetric, wide beam
[M] Symmetric, medium beam
[A20] Asymmetric, wallwash

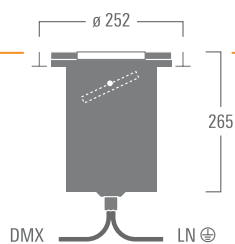


Rotation



Tilt angle

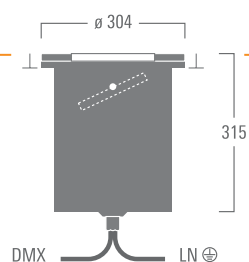
ETC130-GB CC



RGBW
[B] [M] [A20]
19 W
1230-1330 lm

RGBA
[B] [M] [A20]
19 W
1030-1120 lm

ETC140-GB CC



RGBW
[B] [M] [A20]
30 W
1920-2200 lm

RGBA
[B] [M] [A20]
30 W
1650-1900 lm

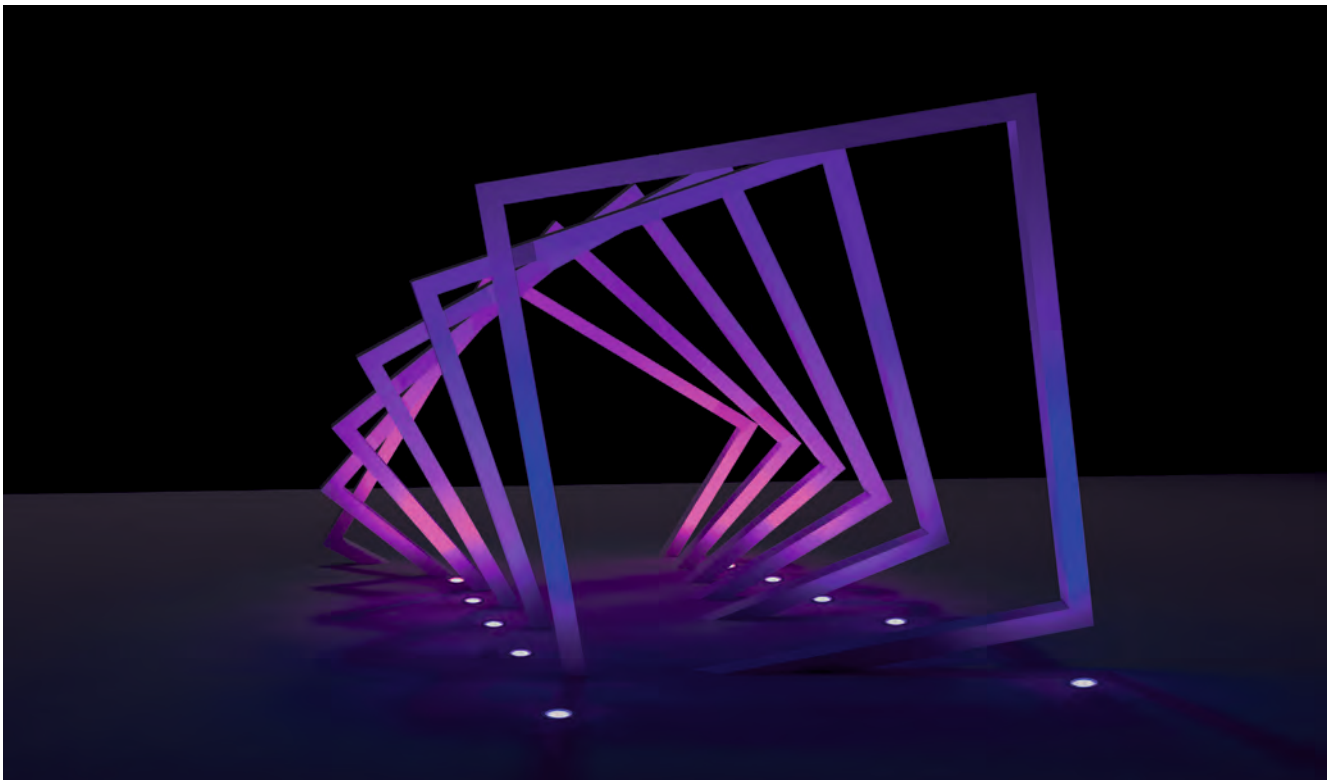
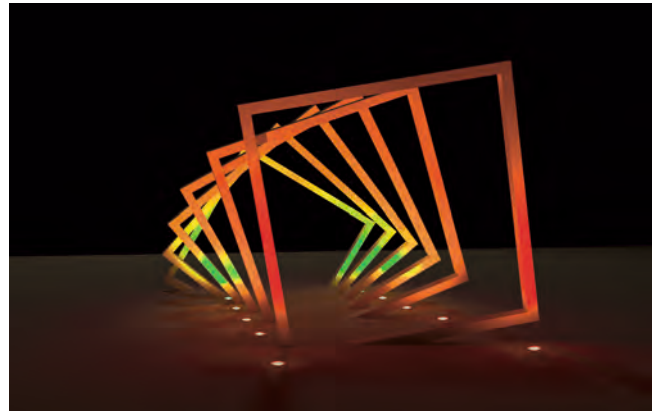
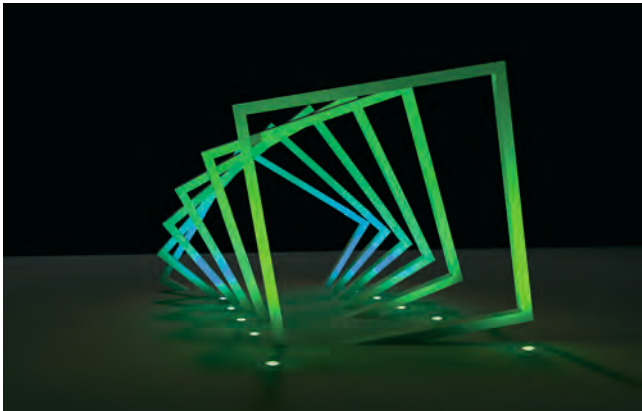


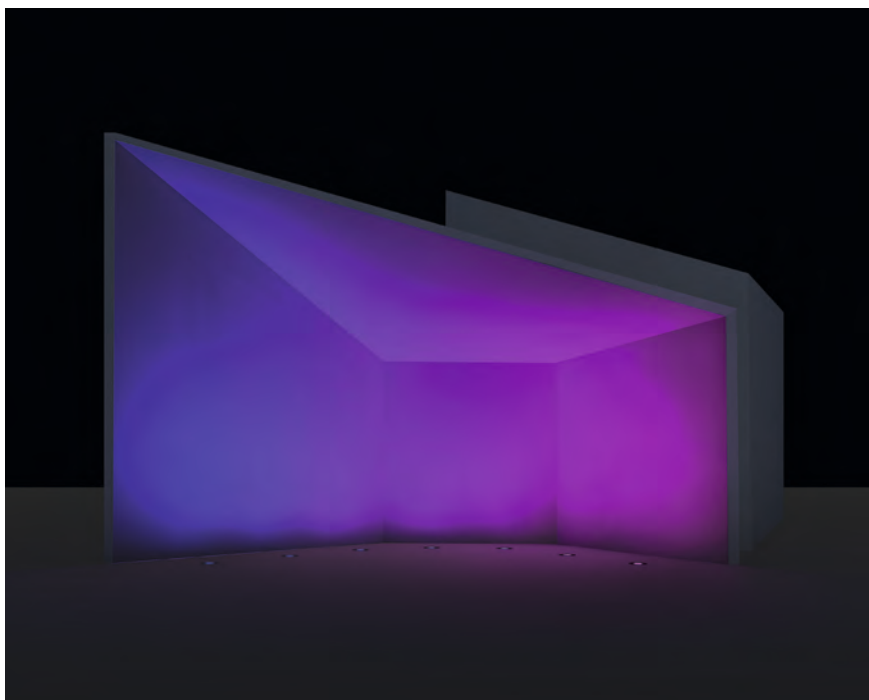
RGBW / RGBA

- For detailed specifications, product codes and latest performance data, refer to www.we-e.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57

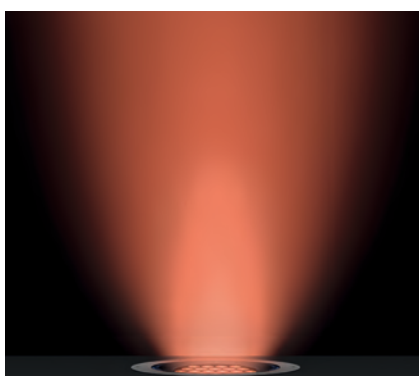
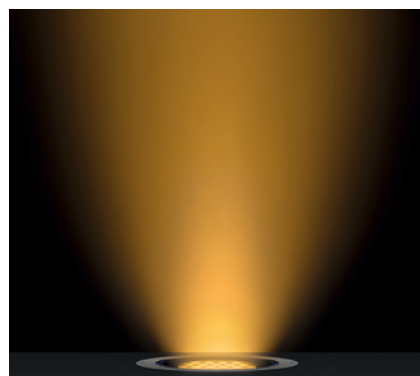
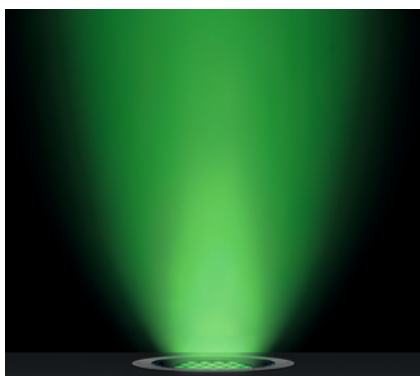
How to Light a Sculpture

The ETC100-GB series has a gimbal-mounted optical system that enables precise alignment. A great advantage, especially when lighting free-standing sculptures.



**Industry-Leading Performance**

Dynamic colour change schemes, when professionally executed, can create sensational, eye-catching effects, e.g., on commercial and public buildings. WE-EF's Colour Boost Technology, in combination with CAD-optimised optical lenses, ensure smooth beam overlaps as well as high illuminance intensities wherever desired. Refer to WE-EF Colour Boost Technology page 373.





Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Coating option:	ASC Anti Slip Coating to DIN 51130 (Trip Classification 10) – available on request
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Cable gland with cable bending protection for ETC329. Installation blackout and sealable junction box; to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP67

IK10+

Technical college
 Berlin, Wildau (DE)
 Architect: Anderhalten Architekten
 Lighting design: Ritter Lichttechnik

Available distribution:
 Diffused

Standard colour:

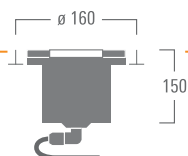


Stainless steel



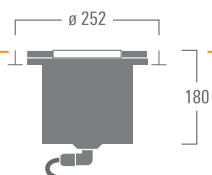
Flush with surface

ETC329



Diffused
5.5 W
110 lm

ETC339



Diffused
15.5 W
290 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57

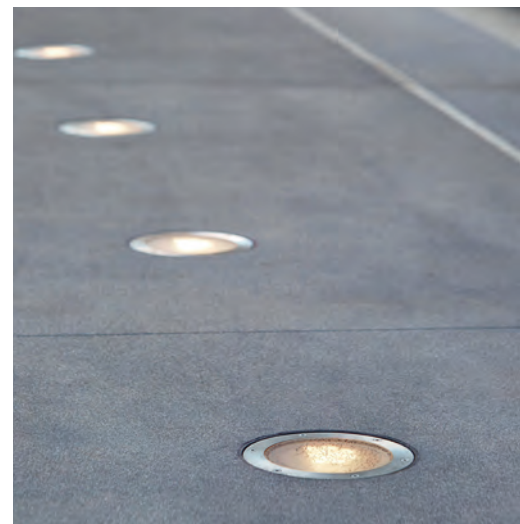
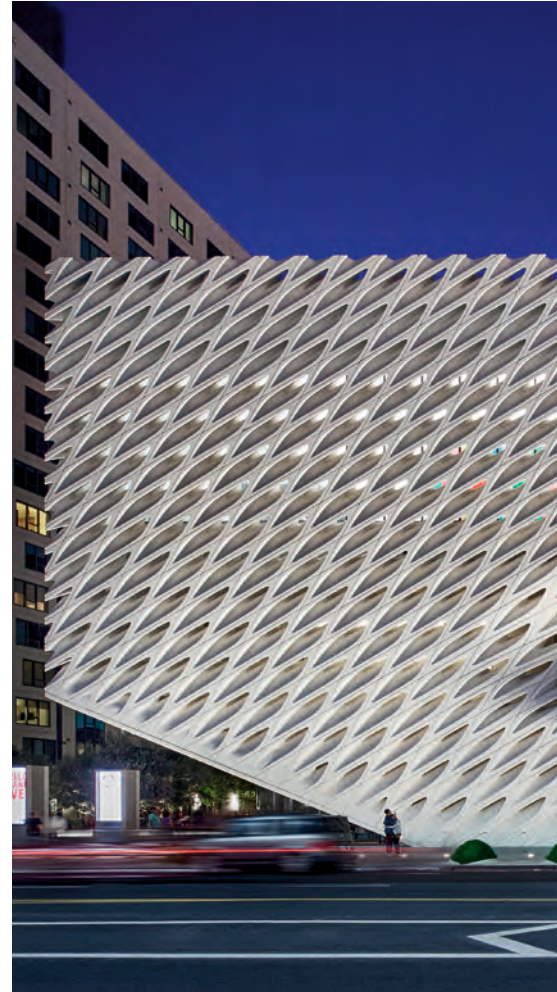
The Broad Museum

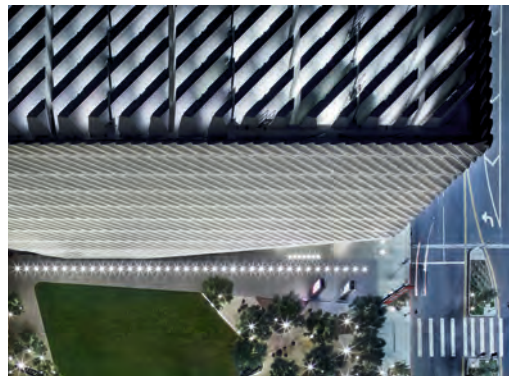
The Art of Illumination. From the Ground Up.

This world-renowned museum for contemporary art on Los Angeles' premier cultural mile, the Grand Avenue, welcomes more than 900,000 international visitors per year. Its strikingly perforated concrete façade serves as a daylight filter for the exhibition spaces inside, and at the same time shapes the Broad's architectural identity – by day and by night.

Arranged like a string of pearls around the building, an ensemble of 180 recessed ETC330-GB inground luminaires by WE-EF enhance the Broad's architectural magic. Locked at an inclination of 5 degrees, the gimbal-mounted modules are equipped with an internal glare shield.

At the corners of the building, additional rows of luminaires below the façade sections feature linear lenses to widen the light distribution. The bright contours accentuate the entrance and help to attract visitors in the evening hours.





The Broad Museum

Los Angeles (US)

Architect: Diller Scofidio + Renfro
in collaboration with Gensler Architects

Lighting design: Tillotson Design Associates





Luminaire housing:	Stainless steel construction
Corrosion protection:	PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max. load 5 tonnes. Driven over at low speed only
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Coating option:	ASC Anti Slip Coating to DIN 51130 (Trip Classification 10) – available on request
Installation:	Factory-sealed termination chamber complete with cable gland and 1.5 m of flexible PVC free cable. Cable gland with cable bending protection for ETC320. Installation blockout and sealable junction box; to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP67

IK10+

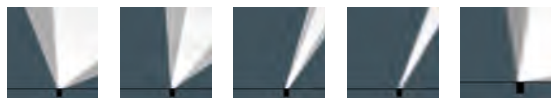
Monash University
Melbourne (AU)
Landscape architect: Taylor Cullity Lethlean
Lighting design: Electrolight

Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colour:



Stainless steel



[B] Symmetric, wide beam

[M] Symmetric, medium beam

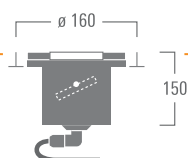
[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



ETC320-GB

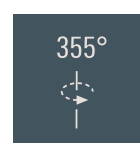


[M] [EE] [EES]

6 W

550-590 lm

Max. 1 internal accessory

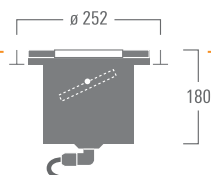


Rotation



Tilt angle

ETC330-GB



[B] [M] [EE] [EES] [A20]

12 W

1130-1410 lm

Max. 1 internal accessory



Rotation



Tilt angle



- For detailed specifications, product codes and latest performance data, refer to www.we-e.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 57



ETC100-GB TW Tunable White

The shown application features uplights in close vicinity to a vertical structure, creating a 'column grazing' effect. Mood changes are achieved through 'smooth tuning' from 2700 K to 6000 K.



ETC100-GB CC Colour Changer

The application of coloured light on trees and other plants always carries a risk. With a clearly defined objective, however, the resulting eye-catching effects may just be what is needed to draw people's attention to a project's key area or feature.



EFC100
ESC100
ETC100
ETC100 GB / ETC300-GB

Internal optical accessories

Max. 1 accessory depending on luminaire

Honeycomb louvre

for [M] [EE] [EES]



Flood lens

for [M] [EE] [EES]



Linear spread lens

for [M] [EE] [EES]



Mounting accessories

Installation cover

optional



Installation blackout

recommended



Sealable junction box

recommended

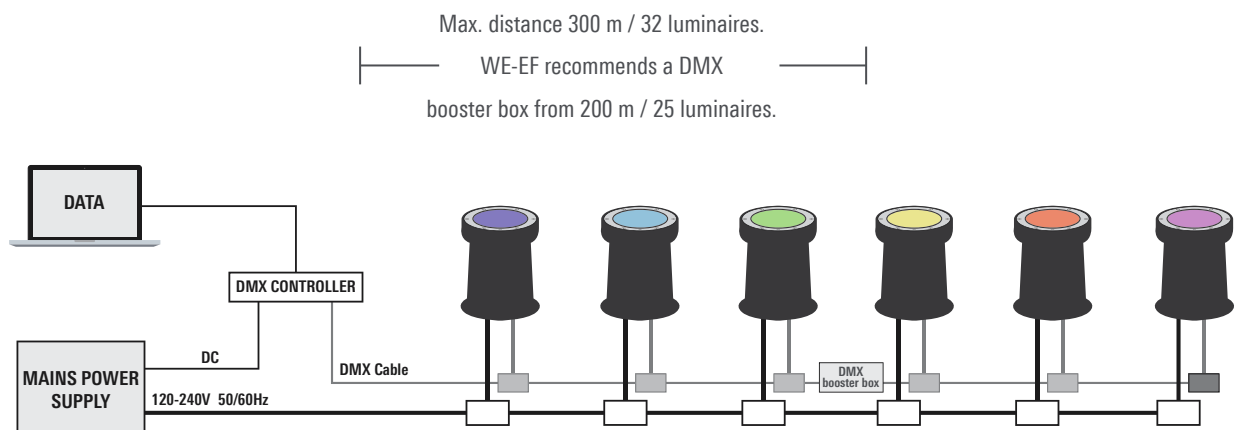


Hardwired DMX

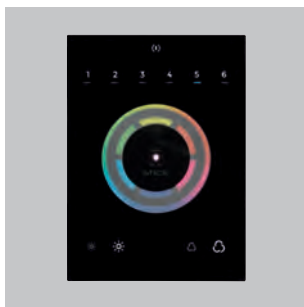
Each ETC100-GB CC colour changer features a DMX control interface. As standard the ETC100-GB CC can be supplied with DMX and power cables in varying lengths, please specify when ordering.

Wiring schematic – single layout

The inground luminaires do not need to be opened for installation. Power and data connections are simply made via the junction boxes.



WE-EF can assist with the selection of support equipment for your project.



DMX Controller

The Touch panel is an intuitive and easy-to-use keypad for one DMX universe.



DMX booster box

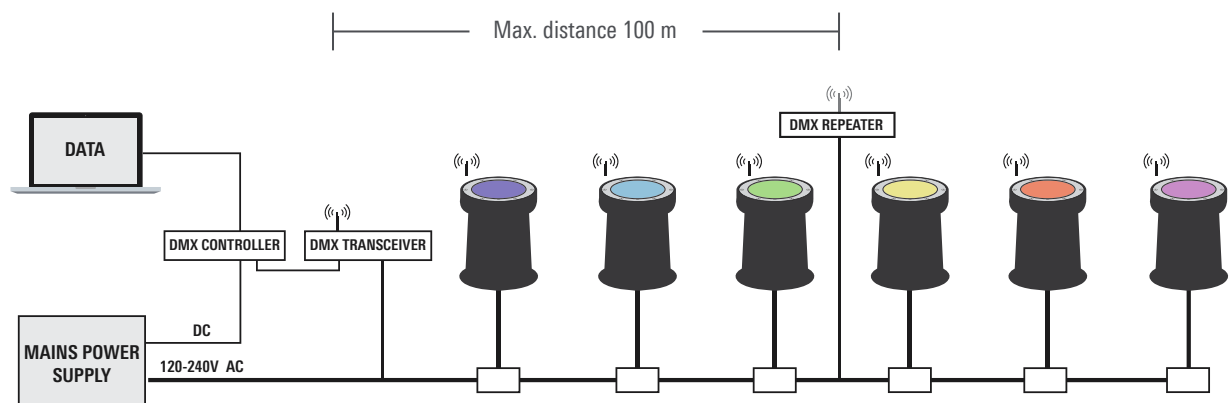
Designed to increase the DMX signal.
(Illustration shows booster without box)

Wireless DMX

Each ETC100-GB CC colour changer features a DMX control interface. Dedicated ETC100-GB CC versions for wireless data transmission are available on request. Such a requirement must be specified at the time of ordering.

Wiring schematic

All inground luminaires are equipped with an antenna. Depending on the number, the distance and the local topography, repeaters may have to be used for radio transmission.



WE-EF can assist with the selection of support equipment for your project.



DMX Wireless Antenna



DMX Controller Smart

The (RDM ready) Touch Panel allows for bi-directional data flow for optimal wireless installations.



DMX Transceiver

Wireless transmission of signal up to 100 m





Bayertor

Straight Into the City. Led by Linear Light.

Set in Landsberg, Bavaria, the Bayertor is deemed by many as one of the most striking and attractive medieval town gates in all southern Germany.

The new lighting introduced during its recent refurbishment has made the way in and through even safer and more convenient. During the planning stage, it became apparent that linear recessed inground luminaires, such as WE-EF's ETV130, deliver a better result with fewer luminaires in this particular situation than round alternatives.

An asymmetrical wallwash light pattern ensures the homogenous illumination of walls, ceilings and archways.

Bayertor
Landsberg (DE)
Planning: Stadt Landsberg



Luminaire housing:	Marine-grade, all aluminium construction
Corrosion protection:	PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel. Max. static load, 3 tonnes (according to DIN EN 60598-2-13)
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber complete with cable gland and 0.5 m of flexible PVC free cable, including sealable junction box. Does not need to be opened for installation. Installation blackout (for single or multiple configuration); to be ordered separately
Control:	DALI

CLASS
I

IP67

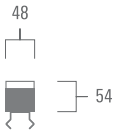
IK08

Pedestrian zone
 Elmshorn (DE)
 Lighting design: Stadtwerke Elmshorn

Available distribution:
 Diffused



ETV129



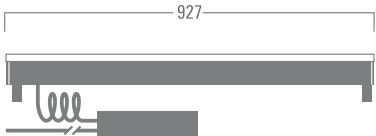
Red

2 W
70 lm

Green/Blue/White

3 W
20-130 lm

ETV139



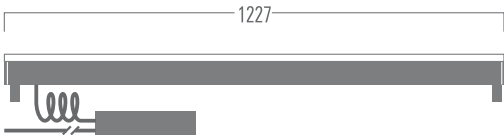
Red

3 W
100 lm

Green/Blue/White

4.5 W
30-200 lm

ETV149



Red

4 W
130 lm

Green/Blue/White

6 W
40-260 lm



R / G / B / W

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 73



Luminaire housing:	Marine-grade, all aluminium construction
Corrosion protection:	PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel Max. static load, 3 tonnes (according to DIN EN 60598-2-13)
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber complete with cable gland and 0.5 m of flexible PVC free cable, including sealable junction box. Does not need to be opened for installation. Installation blackout (for single or multiple configuration); to be ordered separately
Control:	DALI

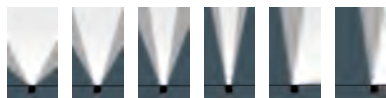
CLASS
I

IP67

IK08

Queensland University
St. Lucia Campus
Brisbane (AU)

Available distributions:
[LB] [LM] [LE] [LEE] [LA10] [A6]



[LB] Symmetric linear, wide beam

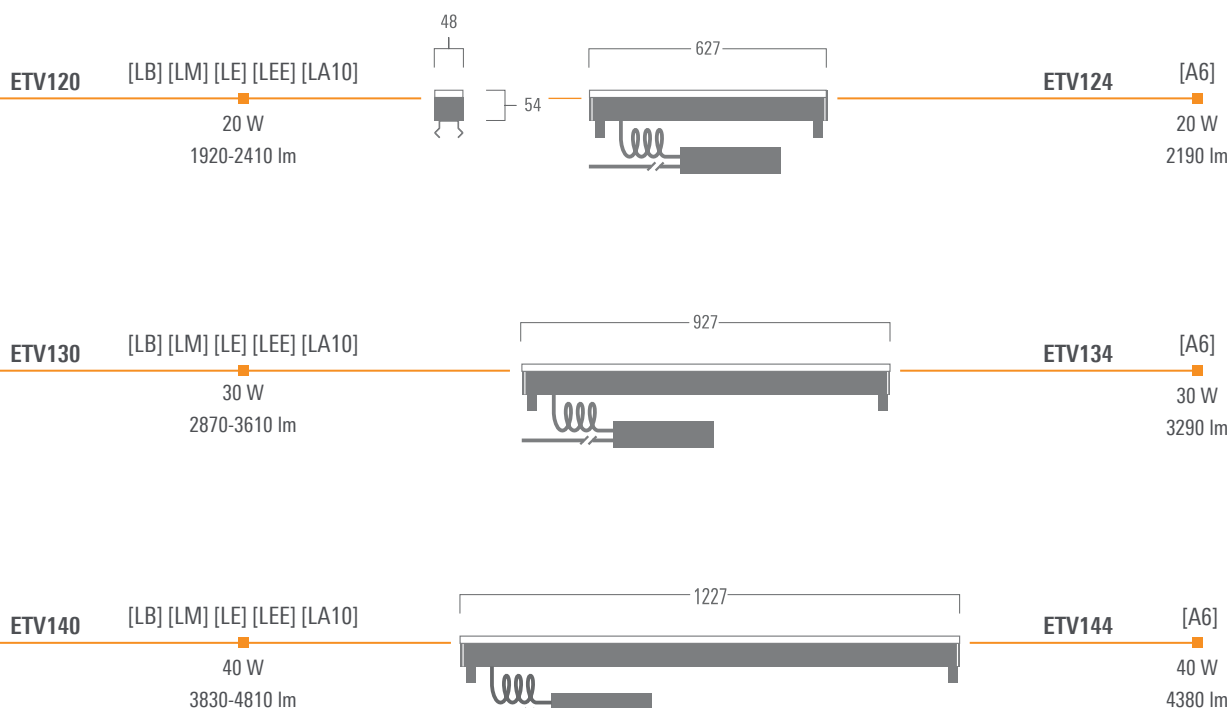
[LM] Symmetric linear, medium beam

[LE] Symmetric linear, narrow beam

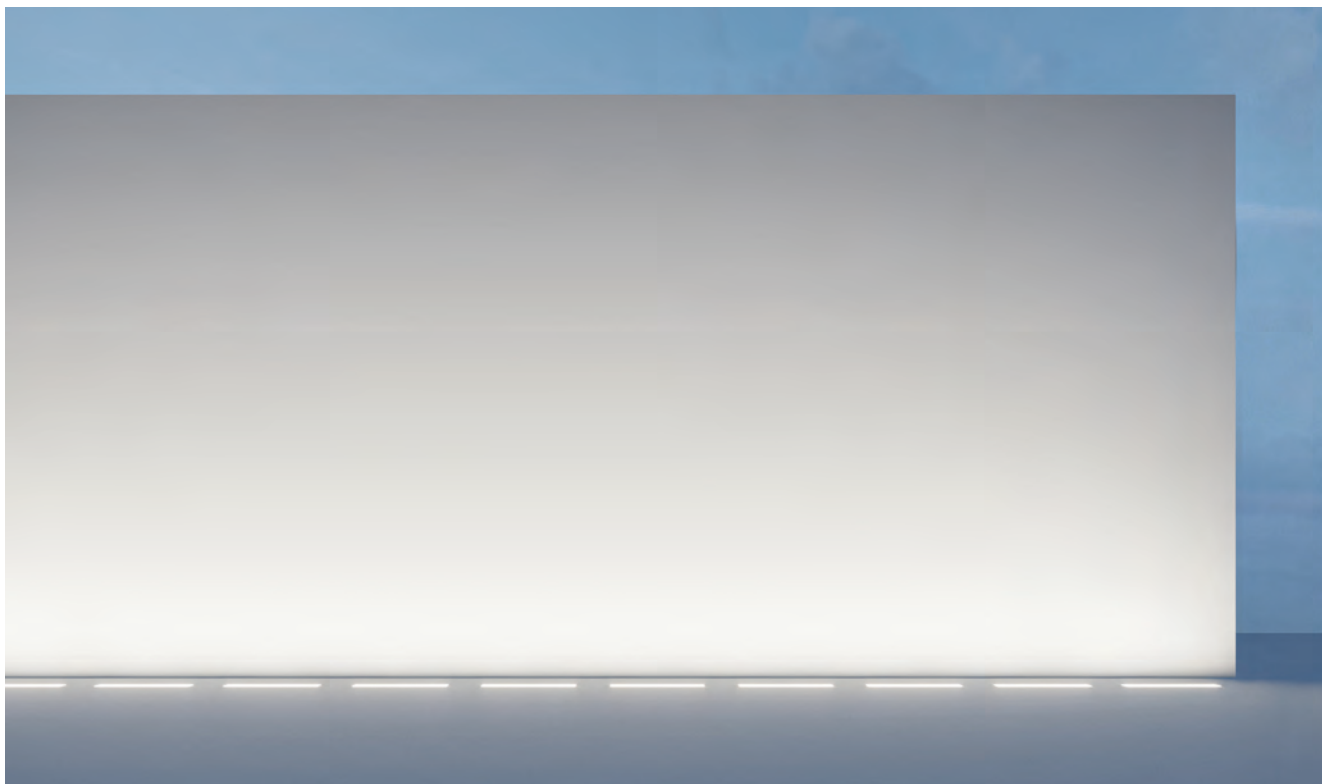
[LEE] Symmetric linear, very narrow beam

[LA10] Asymmetric linear, wallwash

[A6] Asymmetric linear, wallgrazer



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 73



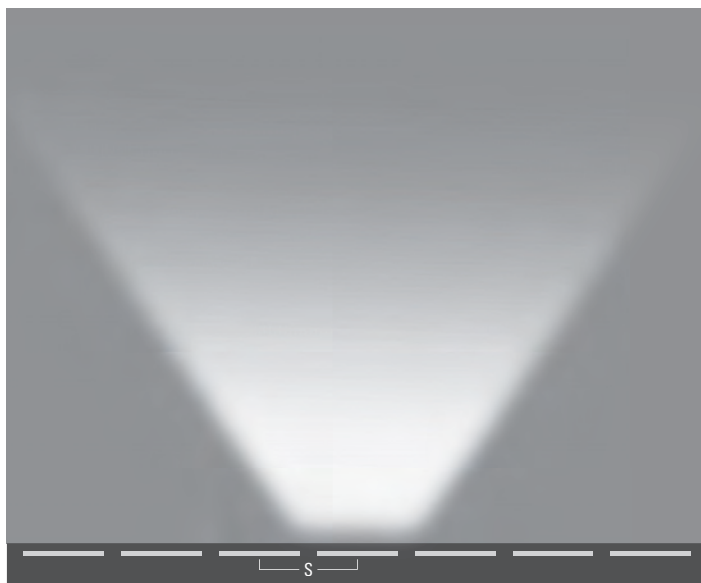
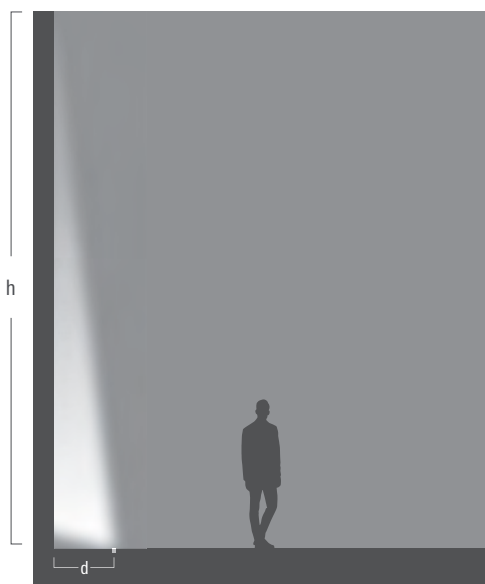
ETV100 [LA10] for Wallwash Applications

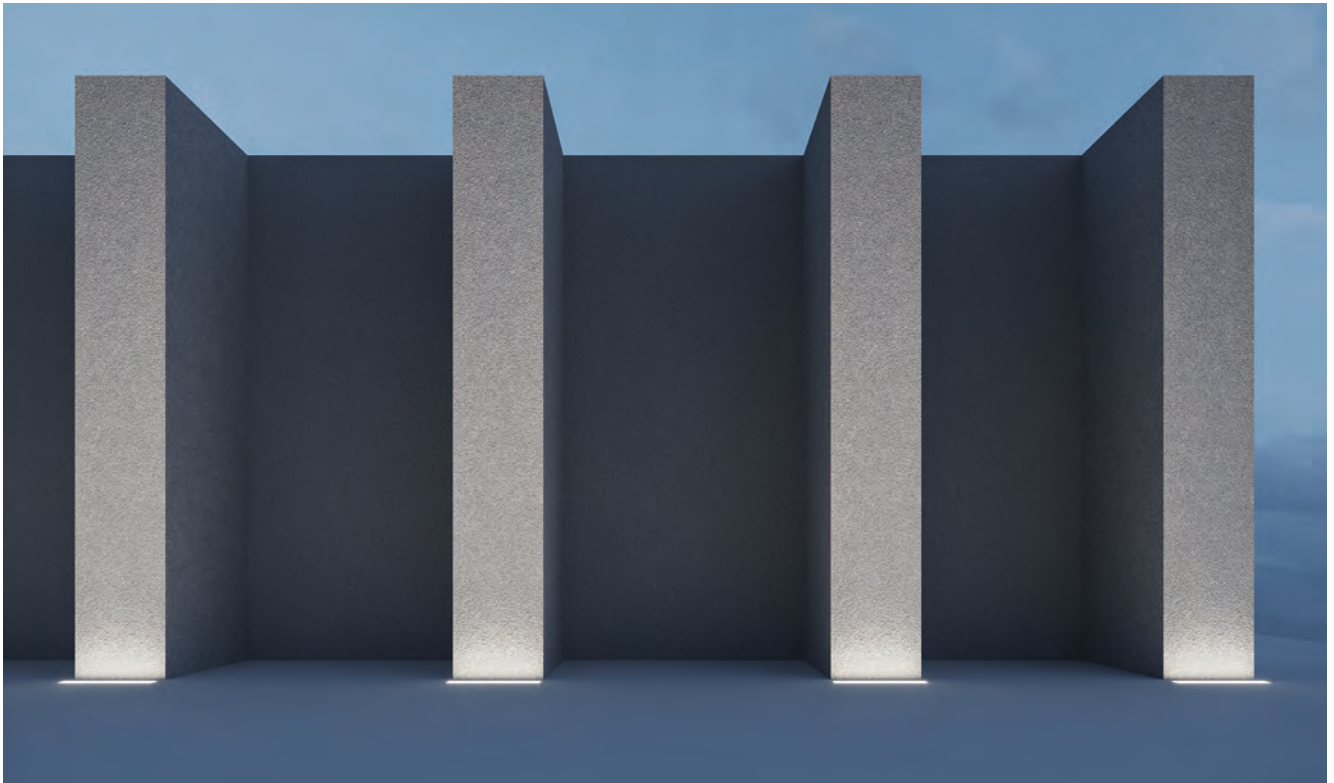
With the objective of using wallwashing to achieve the highest possible uniformity on a horizontal level, some gradual fading of light towards a wall's top is sometimes desirable for enhancing the three-dimensional visual effect.

h = height of wall/target surface

d = distance from wall/target surface = $0.09 \times h$ to $0.125 \times h$ (close distance to wall enhances three-dimensional fading effect towards top;
large distance delivers high overall uniformity)

s = spacing between luminaire centres = (length of luminaire) + $(0.6 \times d)$



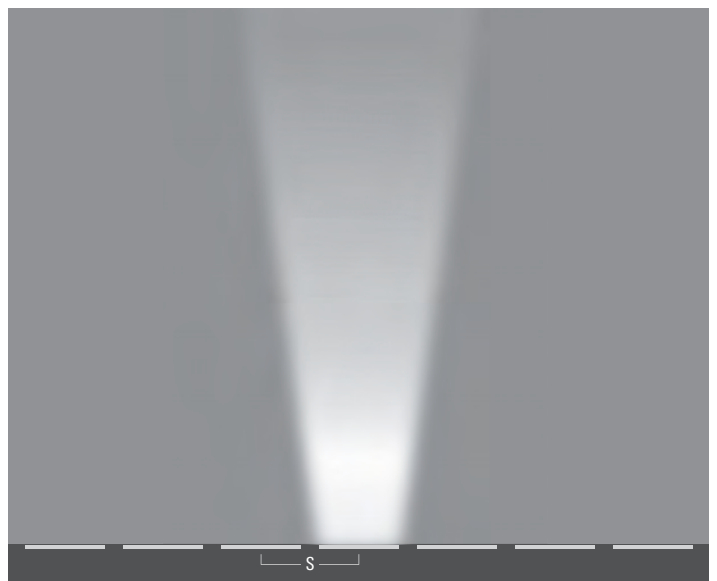
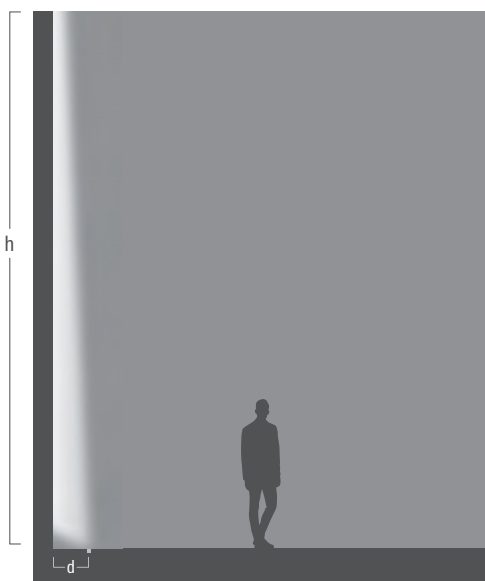
**ETV100 [A6] for Wall Grazing**

In wall grazing applications, luminaires are brought close to the vertical surface in order to reveal its texture and character. For this purpose, in linear luminaires, optics combining slight asymmetric and narrow beam characteristics have proved to work particularly well.

h = height of wall/target surface

d = distance from wall/target surface = $0.05 \times h$ (general guideline; best confirmed in practical tests)

s = spacing between luminaires (to be determined case-by-case, depending on project requirements)





Luminaire housing: Marine-grade, all aluminium construction

Corrosion protection: PCS hardware

Driver: EC electronic driver, in separate compartment, fits into installation blackout

Main lens: Safety glass; can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel.

Max. static load, 3 tonnes (according to DIN EN 60598-2-13)

Gasketing: Silicone rubber gasket

Optics: CAD-optimised for superior illumination and glare control

Installation: Factory-sealed termination chamber complete with cable gland and 0.5 m of flexible PVC free cable, including sealable junction box. Does not need to be opened for installation. Installation blackout (for single or multiple configuration); to be ordered separately

Technology: WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 372

Control: DALI

CLASS
I

IP67

IK08

The Sound at Cypress Waters

Texas (US)

Artist: Juanjo Novella

Available distributions:

[LB] [LM] [LE] [LEE] [LA10] [A6]



[LB] Symmetric linear, wide beam

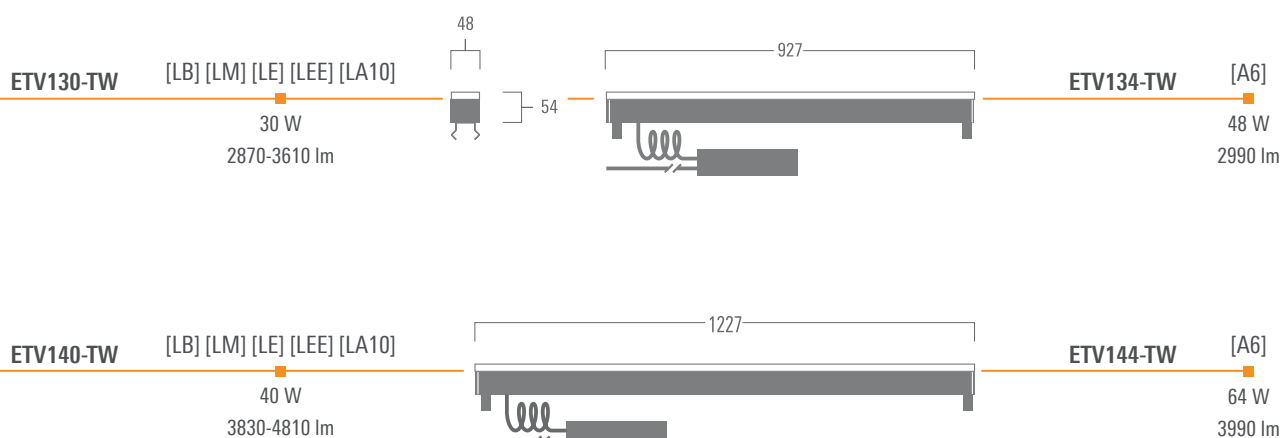
[LM] Symmetric linear, medium beam

[LE] Symmetric linear, narrow beam

[LEE] Symmetric linear, very narrow beam

[LA10] Asymmetric linear, wallwash

[A6] Asymmetric linear, wallgrazer



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 73



Luminaire housing:	Marine-grade, all aluminium construction
Corrosion protection:	PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel. Max. static load, 3 tonnes (according to DIN EN 60598-2-13)
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Factory-sealed termination chamber complete with cable gland and 0.5 m of flexible PVC free cable, including sealable junction box. Does not need to be opened for installation. Installation blackout (for single or multiple configuration); to be ordered separately
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 373
Control:	DMX

CLASS I

IP67

IK08



[LB] Symmetric linear, wide beam

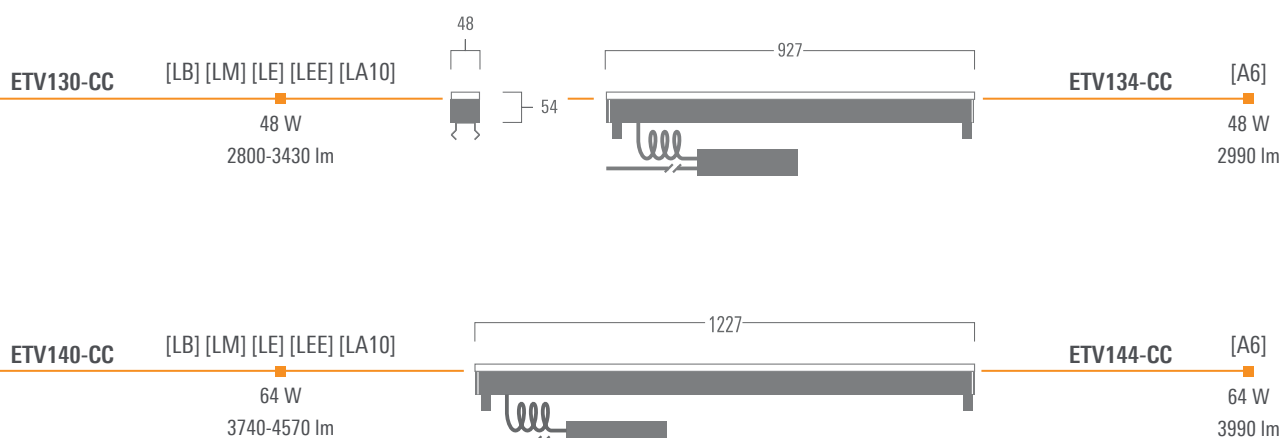
[LM] Symmetric linear, medium beam

[LE] Symmetric linear, narrow beam

[LEE] Symmetric linear, very narrow beam

[LA10] Asymmetric linear, wallwash

[A6] Asymmetric linear, wallgrazer



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 4000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 73

**Ease of maintenance**

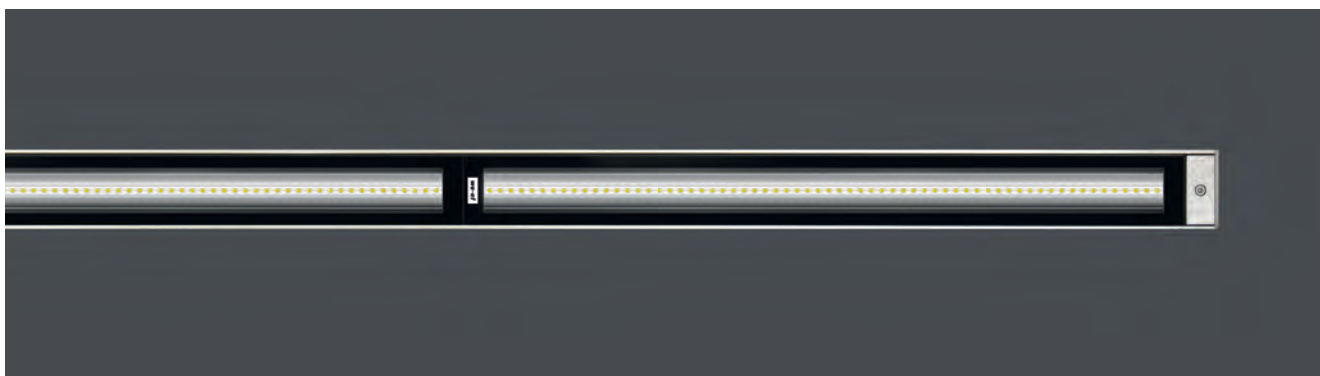
Once installed, the luminaire can be easily accessed or replaced by releasing the spacers (shown) and applying a special tool provided by WE-EF.

**Light metal – Heavy duty**

The ETV100 series can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel. Max. static load, 3 tonnes (according to DIN EN 60598-2-13).

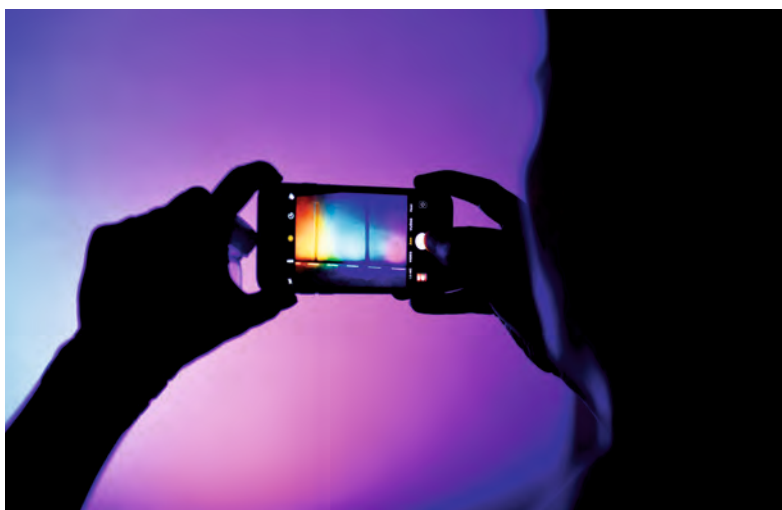
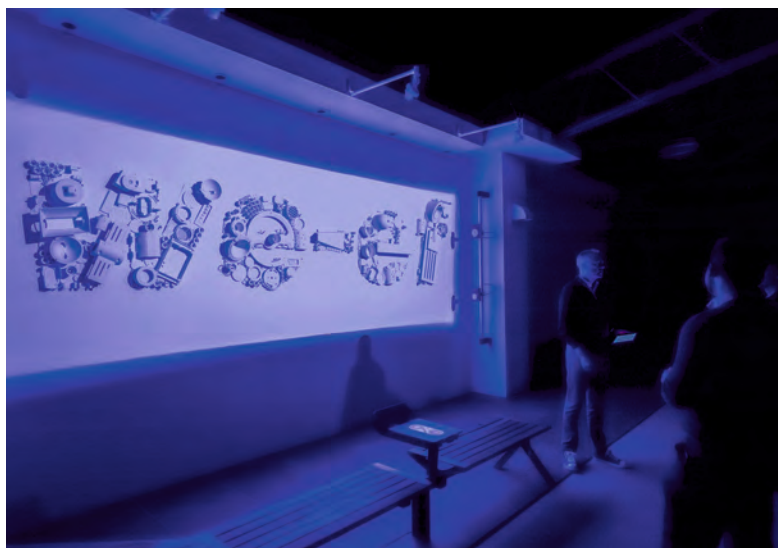


It is installed using a BEV installation blockout in a gravel bed, with concrete poured in for stabilization.



Installation blockout

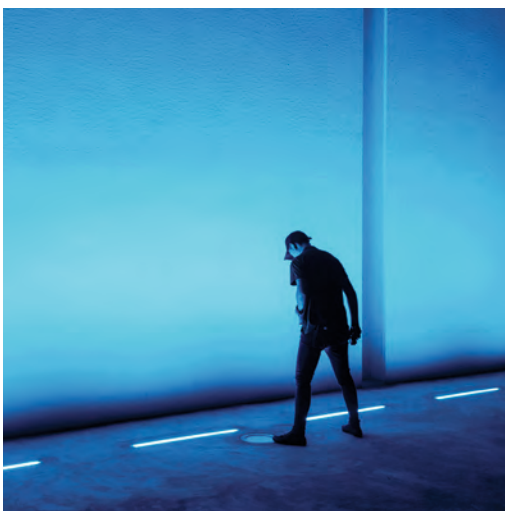
Blockout versions for single and multiple luminaire configurations are available. Multiple versions allow for up to four luminaires to be installed in one continuous row, without any gaps between them.



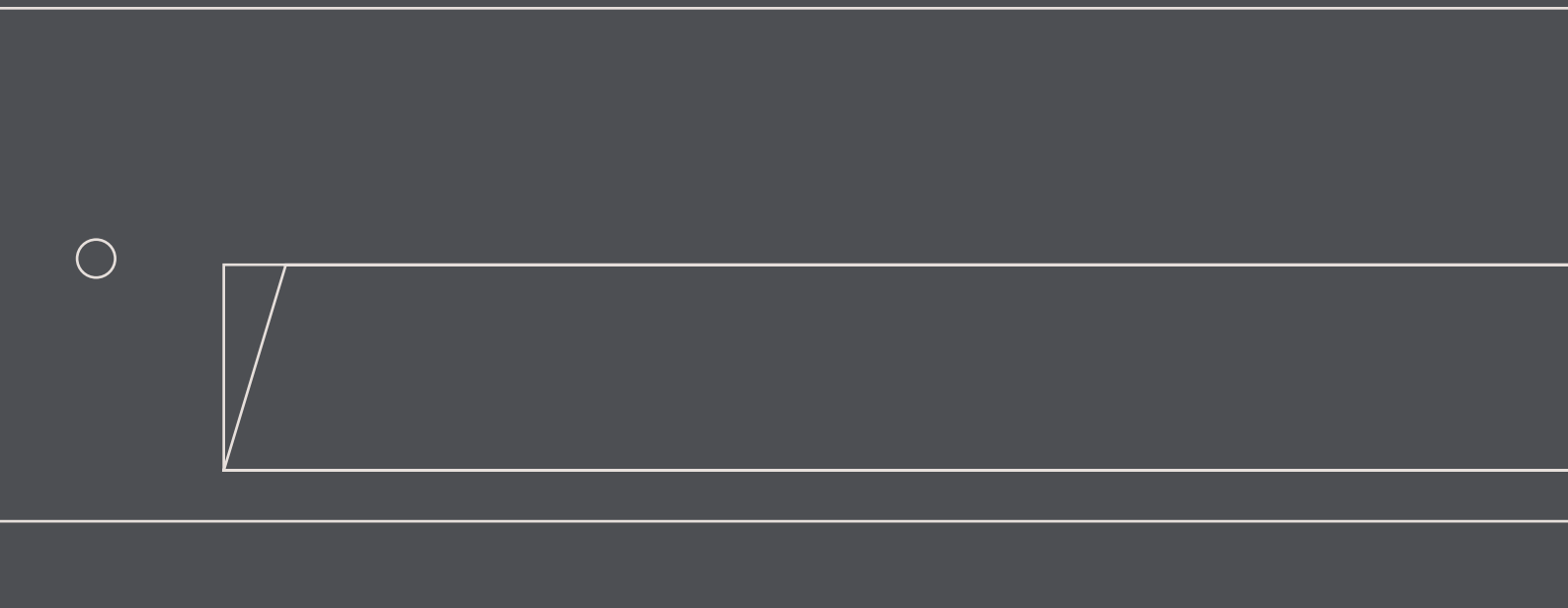
WE-EF LIGHTBOX

Hands-on Lighting Experience on Four Continents

Through its global network, the WE-EF group has established Lightbox facilities in a number of countries on four continents. Each Lightbox is used for a multitude of hands-on applications, be it for internal purposes such as product testing and performance verification or staff training, for community events and university student education, or for communication with lighting professionals, architects and project owners.



An extensive variety of inground uplights, wall washers, downlights and projectors are on hand to test – individually or simultaneously – and experiment with a broad variety of lighting effects and moods.

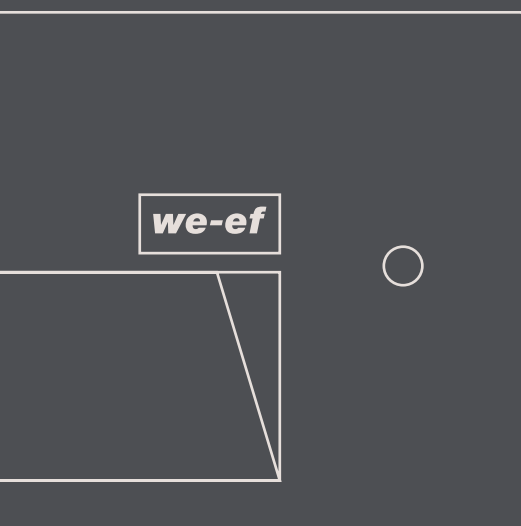


Whenever the elegant integration of lighting into architectural environments is called for, wall recessed luminaires offer many aesthetic and functional advantages.

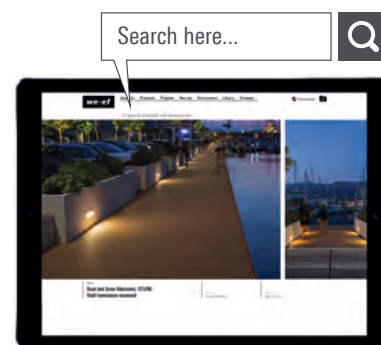
Walls, steps and landings. Because their lighting technology is concealed in the installation space, the luminaires' light emission is all that meets the eye – through diffusely-lit surfaces or as glare-free directional lighting, e.g., for stairs and paths.

For this type of luminaire, easy installation is a decisive factor, as are the effect of the lighting and the quality of the housing. To further ease the process, WE-EF offers installation blockouts for raised or flush mounting and other useful aids.

Wall luminaires recessed



TRO200	80
STL100	82
SVL100	84
STO100 / STI100	86
STO200	90
SVO200	92
STL200	94
SVL200	96
STI200	98
QRO300	100
QRI300	102



Wall luminaires recessed

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

Quai des Sous-Mariniers

Lighting the Way

Marking safe routes and providing guidance for pedestrians is an important aspect of public lighting. Orientation luminaires and steplights by WE-EF are just the right tools for the job. Mounted close to the ground and featuring excellent glare control, they offer a high level of visual comfort. Shining far into the target area, their light accentuates both the course and condition of paths and stairs. Installed in walls, retaining structures or urban furniture, these luminaires are an effective instrument for functional urban illumination.

Quai des Sous-Mariniers

Toulon (FR)

Installer: Provelec







- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control: Optional 0-10 V version available. To be specified at time of ordering

CLASS
I

IP55

IK10

Available distribution:
Diffused

Standard colors:



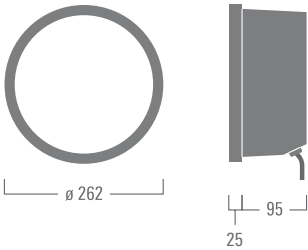


 RAL 9004 9007 8016 9016



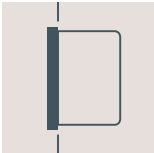
TR0259

Diffused
12 W
1040 lm

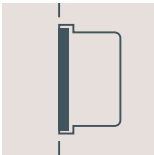


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (1")
of wall surface



Type II:
For flush luminaire
installation



delivered lumens



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering


CLASS
I



IP66

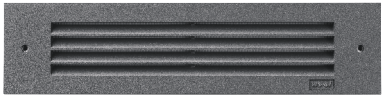
IK07

Available distribution:
Shielded

Standard colors:





 RAL 9004 9007 8016 9016



STL134

Shielded
6 W
20 lm

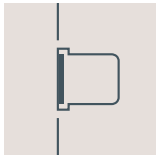


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (0.4")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Available distribution:
Shielded

Standard colors:



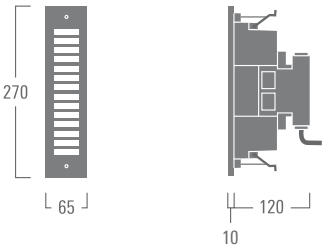


 RAL 9004 9007 8016 9016



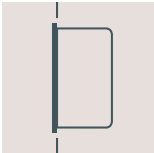
SVL134

Shielded
6 W
20 lm

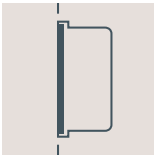


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (0.4")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering

CLASS
I






IP66

IK07

Available distributions:

Diffused
'Floor wash'

Standard colours:

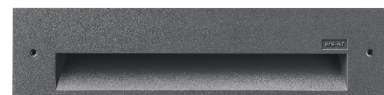
				
RAL 9004	9007	8016	9016	Stainless steel



ST0100 Stainless Steel



ST0100

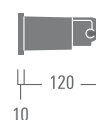


STI100

ST0134 / ST0134 Stainless Steel

Diffused

5 W
80 lm

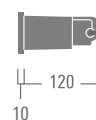


10

STI134

'Floor wash'

6 W
170 lm



10

Mounting accessories:

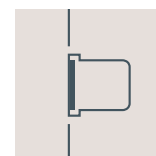
Pre-installation blockouts

Type I:

Luminaire faceplate
remains proud (0.4")
of wall surface

**Type II:**

For flush luminaire
installation



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^\circ\text{C}$

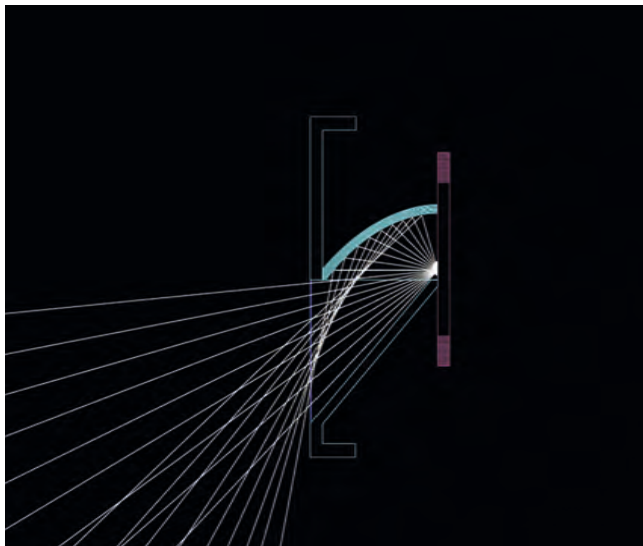
Steplight Variations

Steplights are installed at low heights and serve to illuminate paths, terraces and stairs. They can be installed in such a way that the luminaire faceplate remains proud of wall surface or flush.



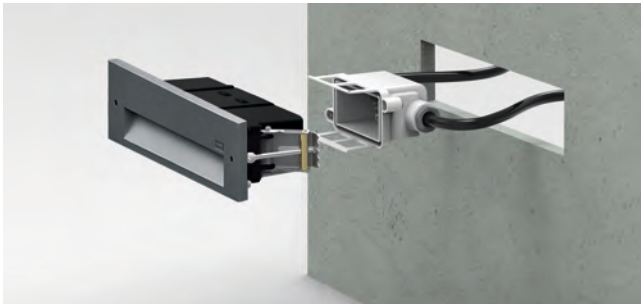
Steplight Performance

This illustration depicts the respective photometric performances of WE-EF steplights in terms of floor wash capabilities (illuminance) as well as glare potential (surface luminance).

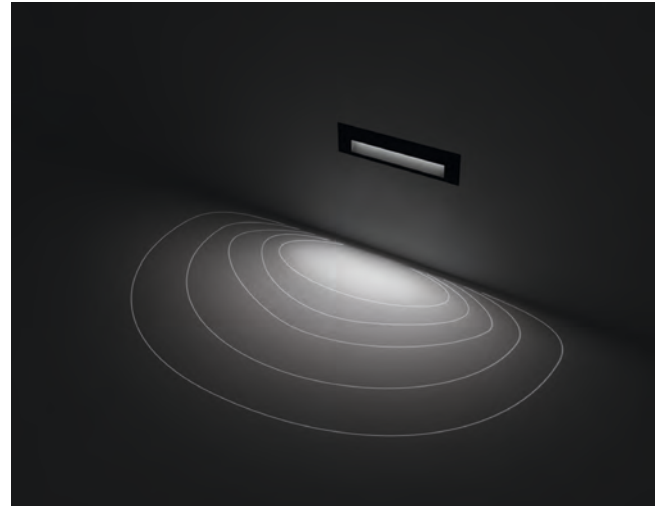


STI134 Ray-tracing

This CAD ray-tracing simulation demonstrates the combined forward and downward distribution by the luminaire's unique reflector element. An additional refractor lens ensures simultaneous sideward distribution of the light.



Installation is possible in stud walls, concrete niches or with the help of an optional BST installation blockout in cast concrete walls.





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering

ST0209 / ST0259

CLASS
I

IP55

IK10

ST0279

CLASS
I






IP66

IK10

Drift Park
Rhyl, North Wales (UK)
Landscape architect:
Brock Carmichael

Available distribution:
Diffused

Standard colours:

				
RAL 9004	9007	8016	9016	Stainless steel



Stainless Steel

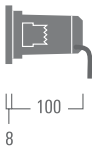
ST0209 / ST0209 Stainless Steel

Diffused
4 W
130 lm



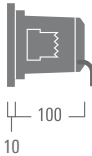
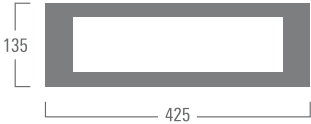
ST0259 / ST0259 Stainless Steel

Diffused
6 W
190 lm



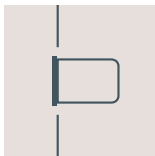
ST0279 / ST0279 Stainless Steel

Diffused
9 W
330 lm

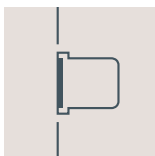


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (0.3-0.4")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^\circ\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering

CLASS
I

IP55



IK10

Hafenpromenade
Eckernförde (DE)
Landscape architect: Seebauer Wefers
und Partner

Available distribution:
Diffused

Standard colours:



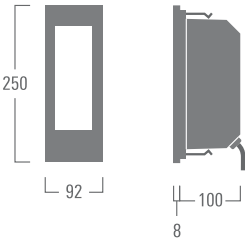



 RAL 9004 9007 8016 9016 Stainless
steel



Stainless Steel

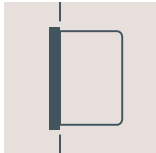
SV0259 / SV0259 Stainless Steel

Diffused
6 W
190 lm

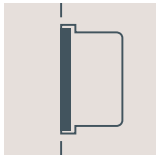


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (0.3")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control: Optional 0-10 V version available. To be specified at time of ordering

CLASS
I

IP55

IK10

The 2008 Serpentine Gallery Pavilion
London (UK)
Architect: Frank Gehry
Lighting design: Arup Lighting

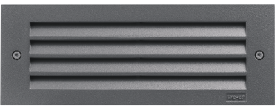
Available distribution:
Diffused

Standard colors:





 RAL 9004 9007 8016 9016



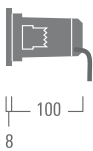
STL209

Diffused
4 W
20 lm



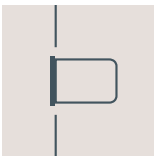
STL259

Diffused
6 W
20 lm

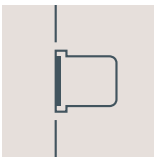


Mounting accessories:
Pre-installation blockouts

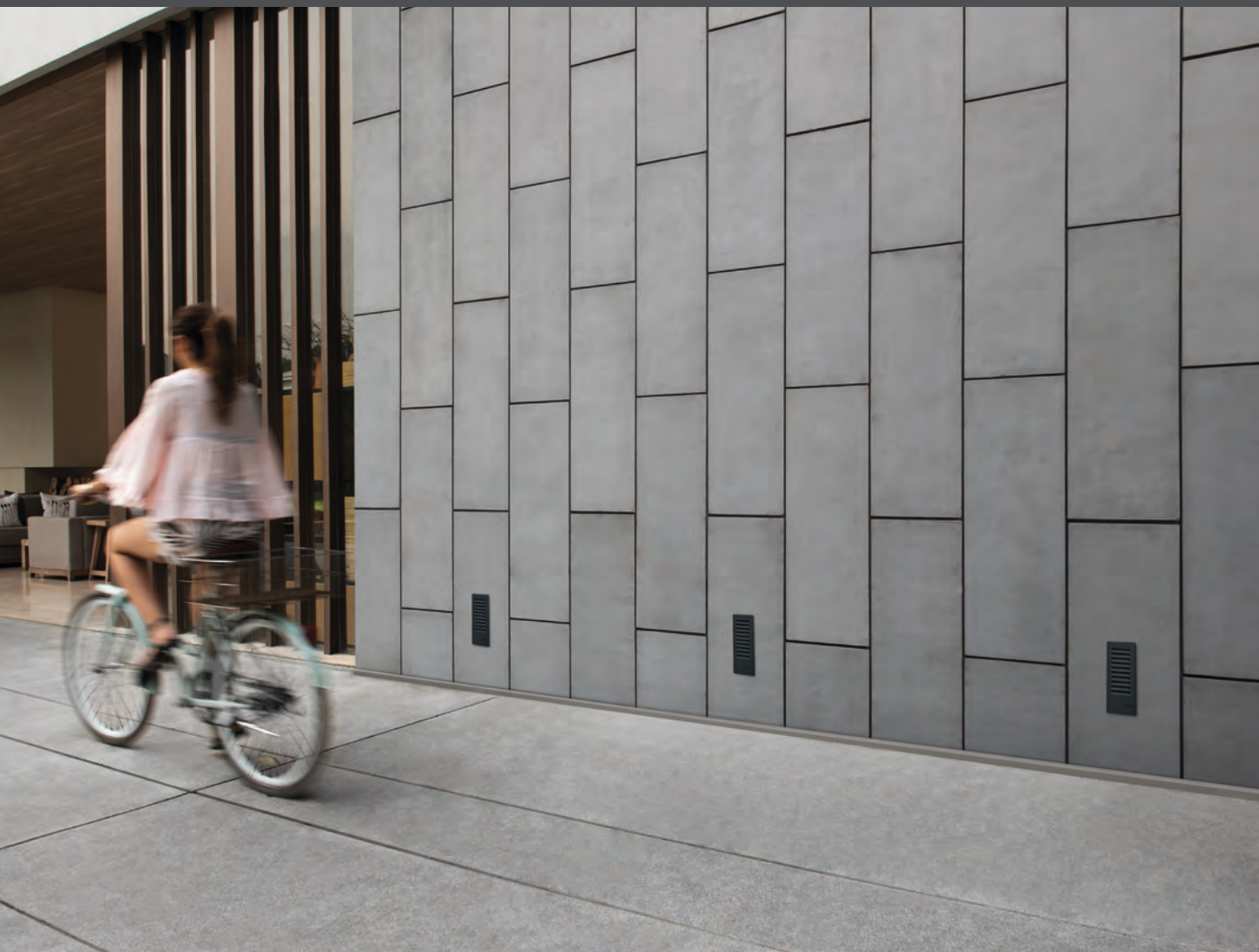
Type I:
Luminaire faceplate
remains proud (0.3")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
Control:	Optional 0-10 V version available. To be specified at time of ordering

CLASS
I

IP55

IK10

Available distribution:
Diffused

Standard colors:



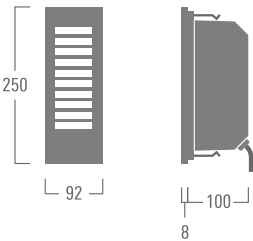


 RAL 9004 9007 8016 9016



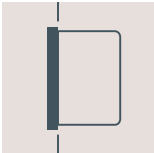
SVL259

Diffused
6 W
30 lm

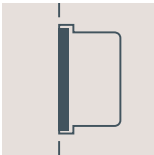


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (0.3")
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I





IP66

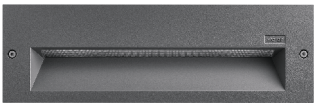
IK10

Sun Plaza Shopping Mall
Bucarest (RO)
Architects: Chapman Taylor
Lighting design: Scott Beleuchtung

Available distribution:
Asymmetric 'forward throw'

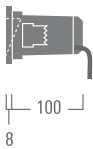
Standard colors:





 RAL 9004 9007 8016 9016



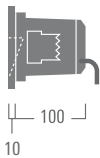
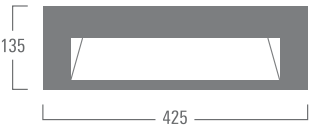
STI259

Asymmetric
'forward throw'
4 W
180 lm



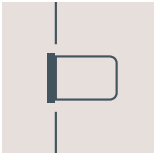
STI279

Asymmetric
'forward throw'
8 W
360 lm

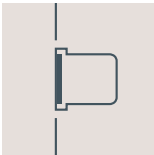


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud
(8-10 mm) of wall
surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I





IP55

IK10

Train station Berlin Südkreuz
Berlin (DE)
Architect: J.S.K. GmbH
Lighting design: DE Consult

Available distribution:
Diffused

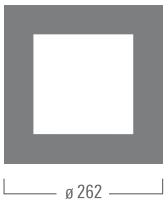
Standard colors:





 RAL 9004 9007 8016 9016



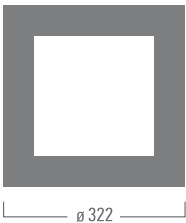
QR0359

Diffused
12 W
670 lm



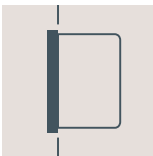
QR0379

Diffused
24 W
1380 lm

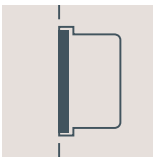


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (25 mm)
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries. Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I



IP55

IK08

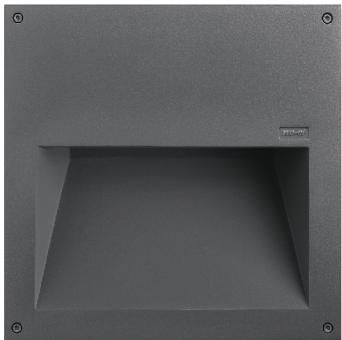
John Curtain School of Medical Research
Canberra (AU)
Architect: Lyons
Lighting design: Umow Lai & Associates

Available distribution:
Asymmetric 'forward throw'

Standard colors:

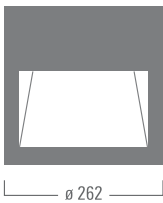




 RAL 9004 9007 8016 9016



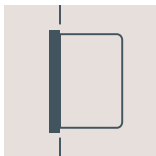
QRI359

Asymmetric
'forward throw'
4 W
180 lm

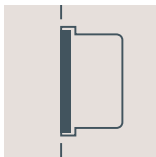


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (25 mm)
of wall surface

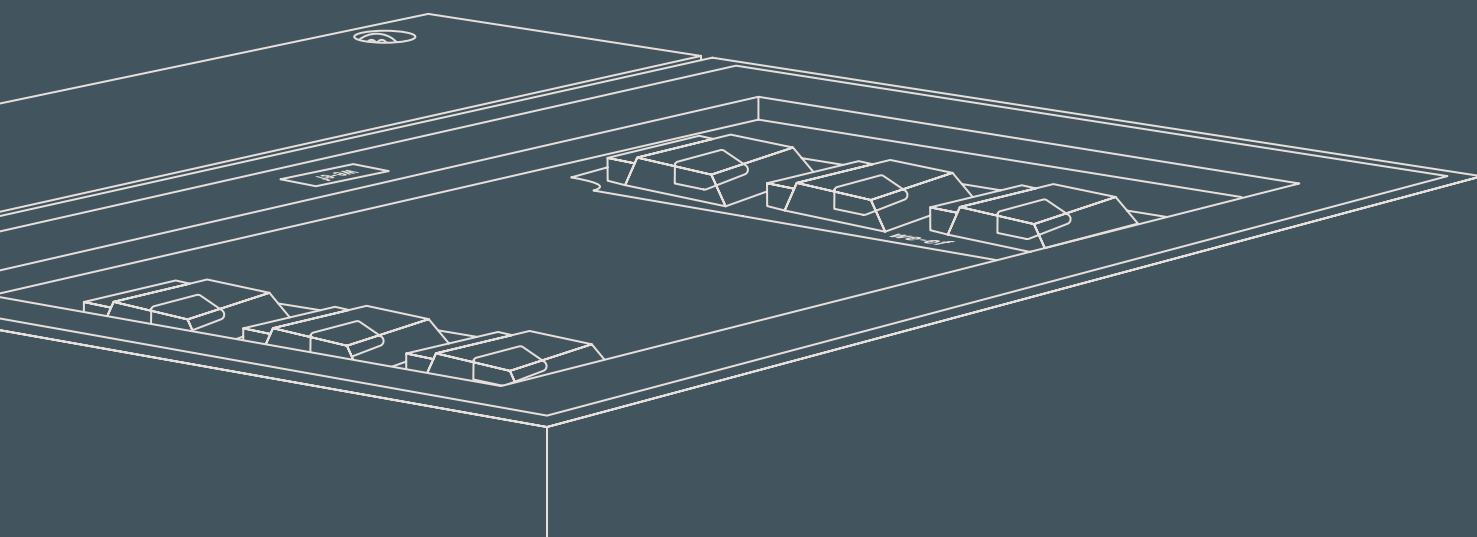


Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are delivered lumens for 3000 K at $T_q = 25^{\circ}\text{C}$

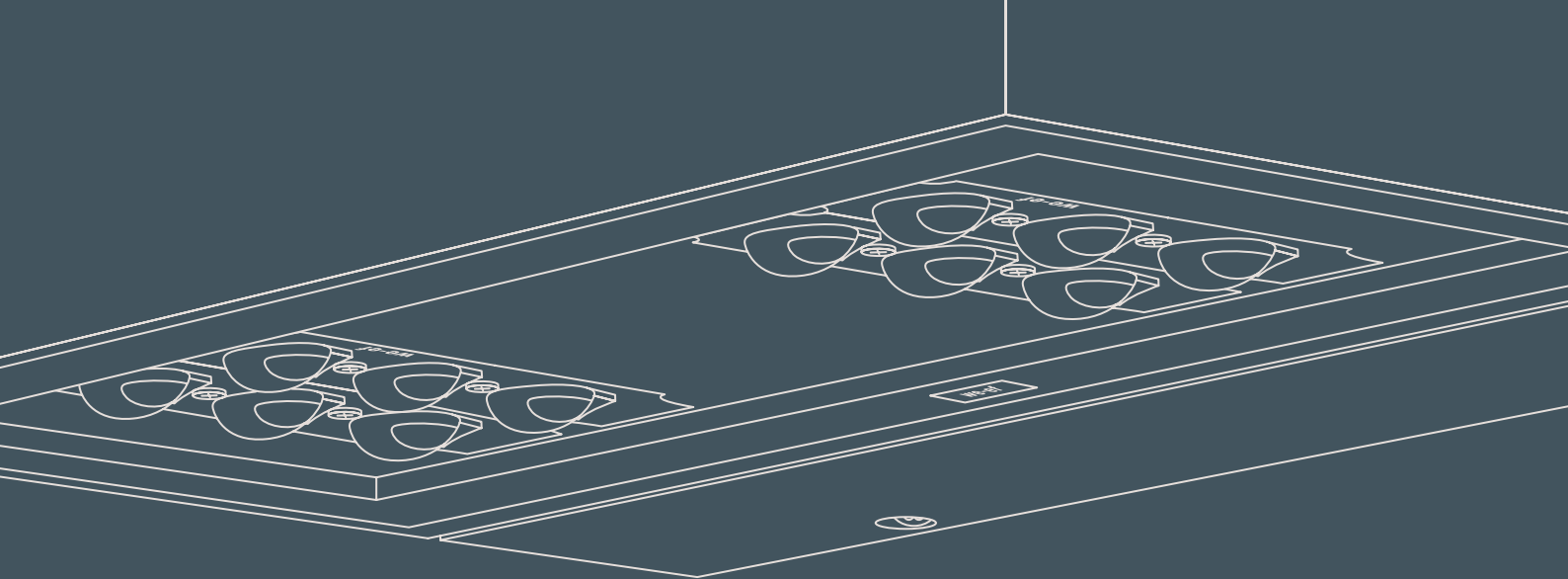
Wall luminaires surface mounted



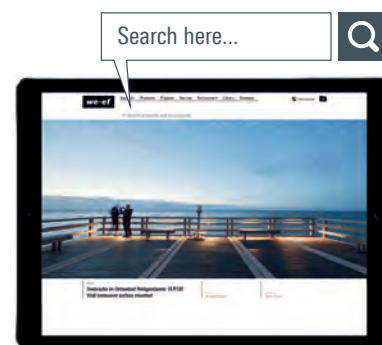
Versatile. Effective. Easily installed. Wall luminaires - surface mounted by WE-EF are the straightforward way to excellent exterior lighting.

These multi-purpose lighting tools are perfect for a wide variety of tasks including setting the stage for architecture with linear lighting; flooding walls and ceilings; marking paths and walkways; and illuminating areas and passages with directional or diffused, glare-free light.

Their common denominator is hassle-free installation. A solid surface and a supply line are all that is needed. This ease of installation is what makes this type of luminaire particularly suitable for upgrading existing projects.



VLR100	108
PLS400	112
QLS400	116
RLS400	120
SLS400 / VLS400	122
OLV300	126
PIA200	128
DLO200	130
DLB200 / DLG200	132



Wall luminaires surface mounted

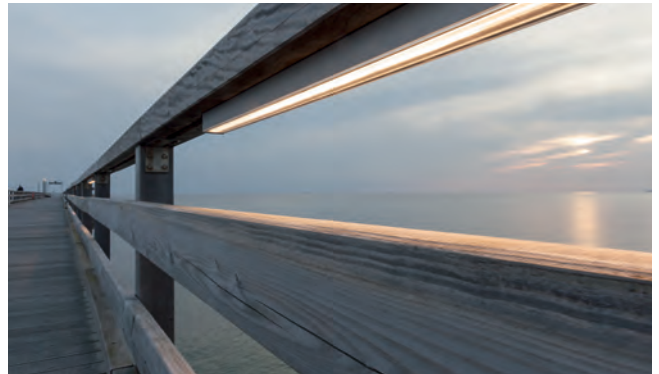
For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Pier Heiligendamm

Lights Above the Sea

With its unique atmosphere, the famous pier of Baltic seaside resort Heiligendamm is a 200-metres-long invitation to promenade and linger. Within the used lighting portfolio, VLR100 linear surface mounted luminaires feature prominently; integrated into the bridge railing, their asymmetrically distributed light provides targeted illumination for the pier's traffic layer.





The Pier

Heiligendamm (DE)

Lighting design: Institut für Gebäude + Energie + Licht Planung,
Prof. Dr.-Ing. Thomas Römhild, Wismar



Luminaire housing:	Marine-grade, die-cast aluminium construction. Anodized aluminium extrusion
Corrosion protection:	5CE, including PCS hardware
Driver:	Separated EC electronic converter
Main lens:	PMMA
Gasketing:	Silicone rubber gasket
Installation:	1.2 m connecting cable, UV-stabilised, PVC free. Luminaire is factory-sealed and does not need to be opened during installation
Control:	DALI

CLASS
I

IP67

IK09

The Pier

Heiligendamm (DE)

Lighting design: Institut für Gebäude + Energie
+ Licht Planung, Prof. Dr. Ing. Thomas Röhmhild

Available distributions:

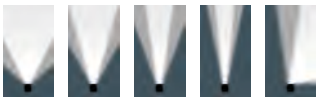
[LB] [LM] [LE] [LEE] [LA10]

Standard colours:

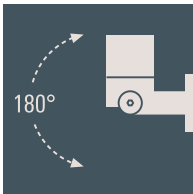





 RAL 9004 9006 9007 7016 9016



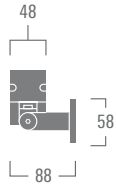
- [LB] Symmetric linear, wide beam
- [LM] Symmetric linear, medium beam
- [LE] Symmetric linear, narrow beam
- [LEE] Symmetric linear, very narrow beam
- [LA10] Asymmetric linear, wallwash



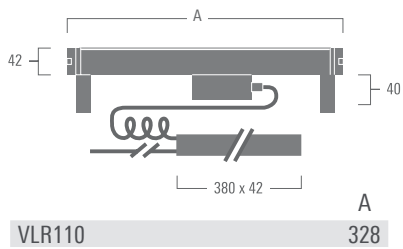
180° Vertical aiming range



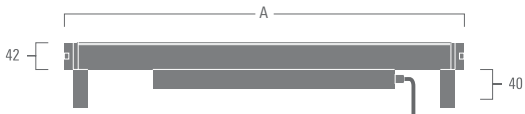
VLR100
[LB] [LM] [LE] [LEE]



VLR100
[LA10]



VLR110 328



	A
VLR120	628
VLR130	928
VLR140	1228
VLR150	1528

VLR110

[LB] [LM] [LE] [LEE]

10 W
960-1200 lm

VLR120 / 130 / 140

[LB] [LM] [LE] [LEE] [LA10]

20 W
1920-2410 lm

[LB] [LM] [LE] [LEE] [LA10]

30 W
2870-3610 lm

[LB] [LM] [LE] [LEE] [LA10]

40 W
3830-4810 lm

VLR150

[LB] [LM] [LE] [LEE]

50 W
4790-6010 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$

Linear Luminaires – Ideal for Wallwashing

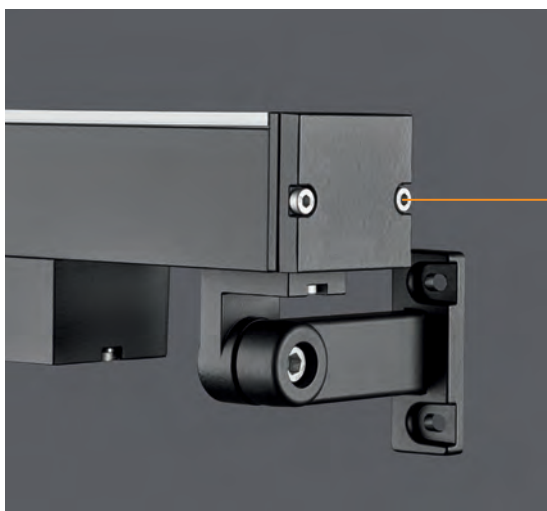
Whether it is straightforward uniformity of light that is required for a feature wall, or highly creative lighting effects on an embellished vertical surface, linear luminaires often deliver – or are at least part of – the solution. With a choice of five distinctly different light distributions, the VLR100 series luminaires offer lighting professionals unprecedented planning freedom while working on either small- or large-scale projects.





Factory-sealed

Luminaire does not need to be opened during installation.
IP68 cable gland.



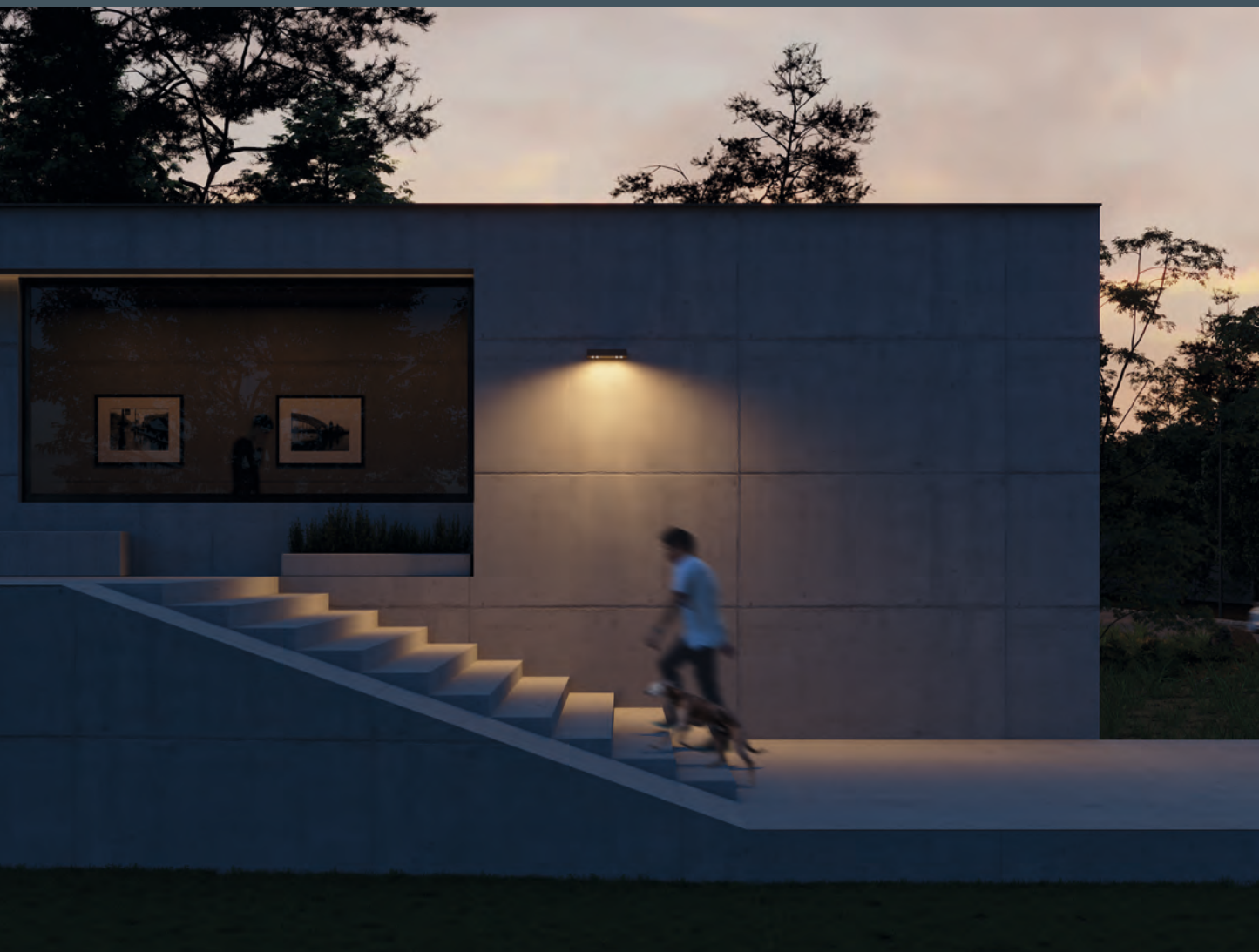
PCS Polymer Coated Stainless Steel

WE-EF's PCS fasteners protect against galvanic corrosion,
thereby enhancing product longevity and serviceability.



180° Vertical Aiming Range

This linear wall luminaire offers vast flexibility when it
comes to precisely directing the light to fulfill project and
on-site requirements.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries. Luminaire is factory-sealed and does not need to be opened during installation
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK08

Available distributions:
[M] [E] [S70] [A60] [R65]

Standard colours:






 RAL 9004 9006 9007 7016 9016



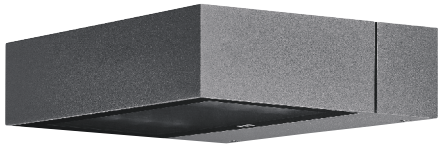
[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[S70] Asymmetric 'side throw'

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



Suitable for downlighting, façade and uplighting applications

PLS420

[M] [E] [S70] [A60] [R65]

12-26 W

800-2400 lm

Max. 1 internal accessory



PLS430

[M] [E] [S70] [A60] [R65]

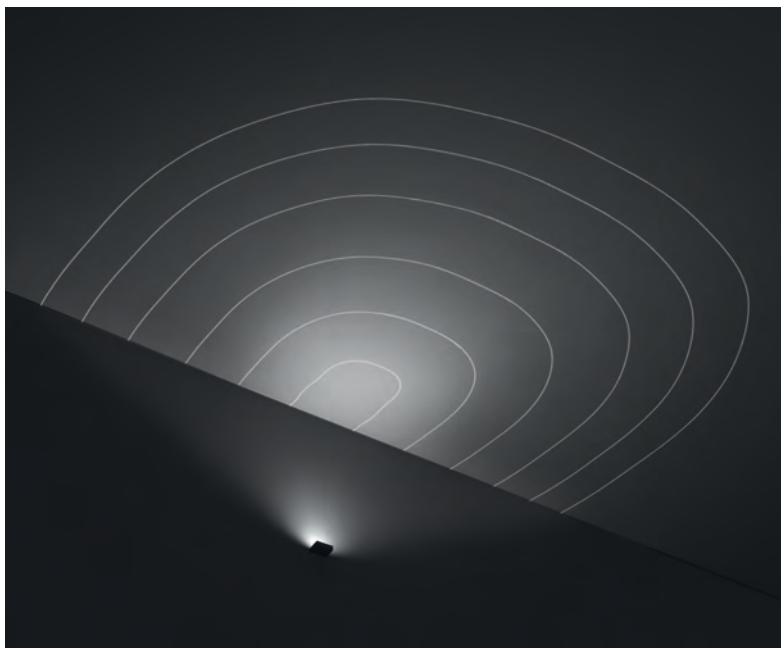
24-52 W

1600-4800 lm

Max. 1 internal accessory

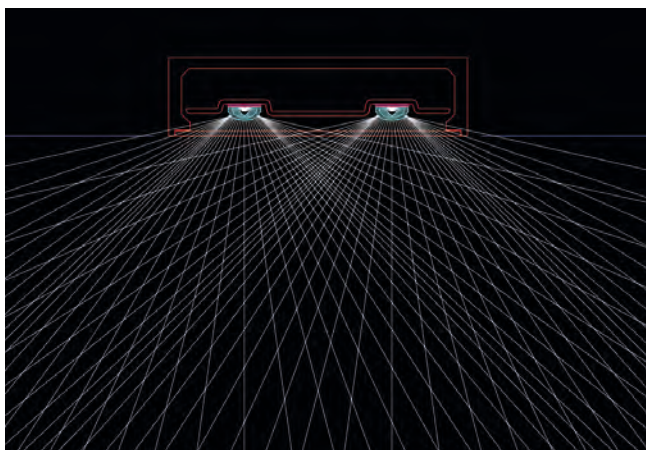


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to www.we-ef.com

**PLS400 series**

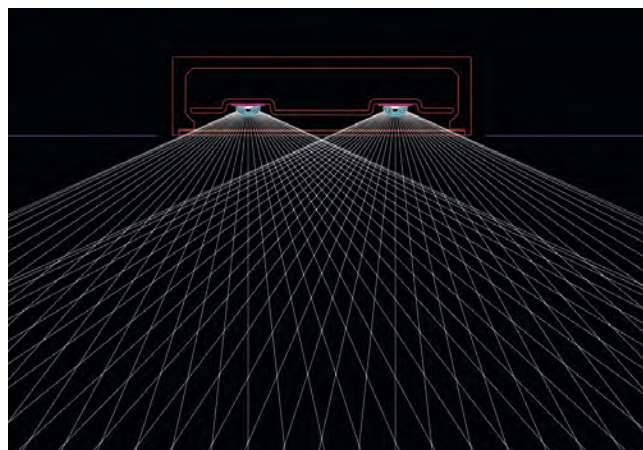
With five different light distributions to choose from, the PLS400 series luminaires are ideal tools for a large variety of façade and area lighting applications, especially in an architectural setting.





PLS400 series – Ray-tracing

The [S70] optical system allows for large spacing intervals between luminaires, as demonstrated in this typical application example.



PLS400 series – Ray-tracing

The [R65] optics deliver rectangular 'side throw' distribution for applications where larger area coverage is required.



PLS400 series [S70]



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Available distributions:

[R45] [M] [E]
[M/R45] [E/R45] [M/M] [E/M] [E/E]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[R45] Rectangular 'side throw'
[M] Symmetric, medium beam
[E] Symmetric, narrow beam



[M/R45] Medium beam up, 'side throw' down
[E/R45] Narrow beam up, 'side throw' down
[M/M] Medium beam, up and down
[E/M] Narrow beam up, medium beam down
[E/E] Narrow beam, up and down

Suitable for downlighting, façade and uplighting applications

QLS410

One-sided
[R45] [M] [E]

6-13 W
500-1130 lm

Two-sided
[M/R45] [E/R45] [M/M] [E/M] [E/E]

12 W
1000-1120 lm



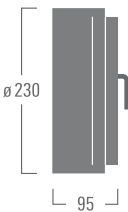
QLS420

One-sided
[R45] [M] [E]

12-26 W
1000-2260 lm

Two-sided
[M/R45] [E/R45] [M/M] [E/M] [E/E]

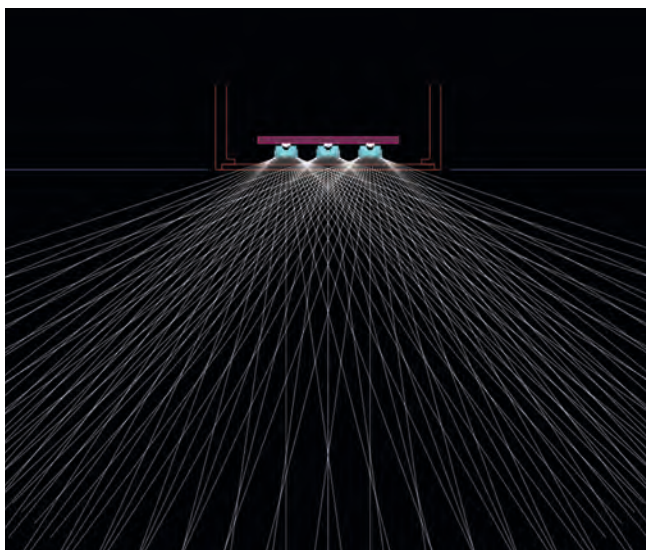
24 W
1990-2230 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

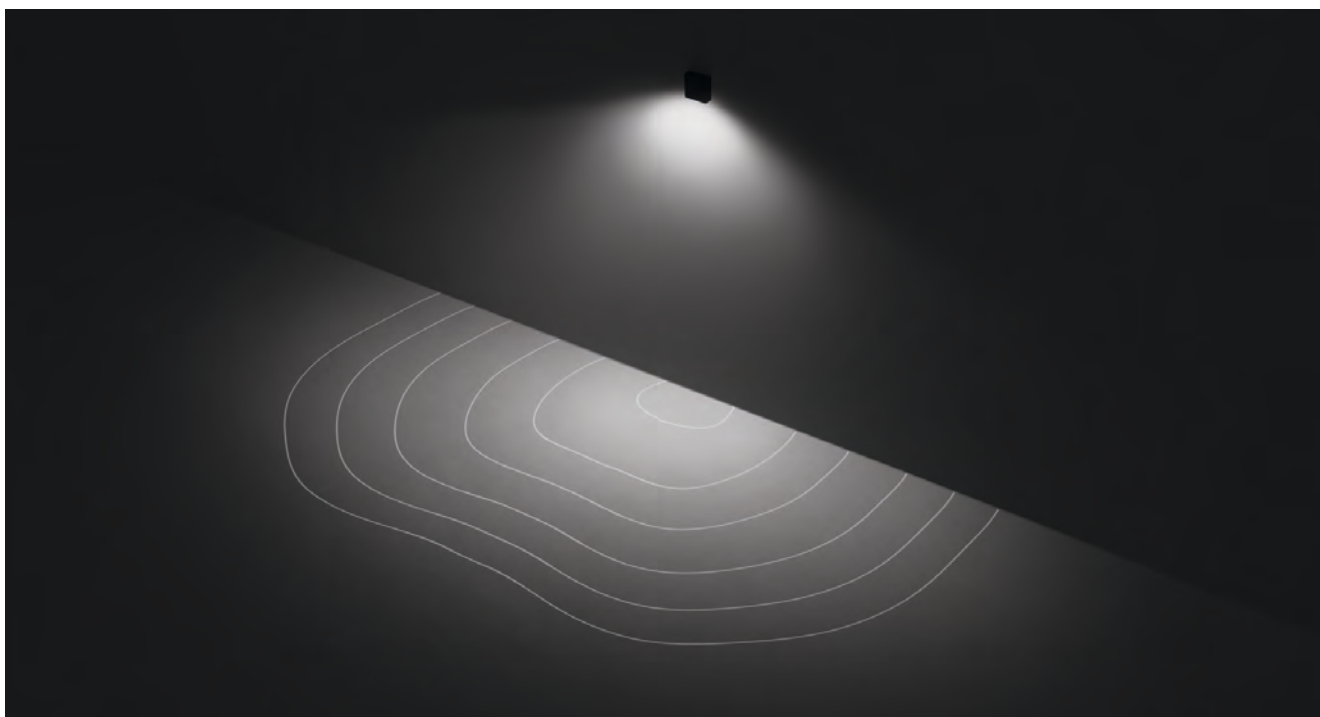
**Minimalist Aesthetics**

The luminaire can be seamlessly integrated into architecture to provide functional lighting for various applications ranging from illuminating buildings, façades and more. Shown on this page is an example of a QLS400 series [R45] installation.



QLS400 series – Ray-tracing

This CAD ray-tracing simulation demonstrates the [R45] optics' broad downward light distribution as well as its glare control qualities. The combined 'side throw' and 'forward throw' of light delivers uniform coverage for large areas.



Area and Pathway Lighting Qualities

Typical isolux diagram of a single-unit QLS400 series [R45] installation. Several luminaires installed in a row provide excellent illumination for a building's passageways, its perimeter etc.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries. Luminaire is factory-sealed and does not need to be opened during installation
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK08

Available distributions:
[R45] [M] [E]

Standard colours:



RAL 9004 9006 9007 7016 9016



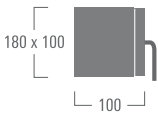
[R45] Rectangular 'side throw'
[M] Symmetric, medium beam
[E] Symmetric, narrow beam



Suitable for downlighting, façade and uplighting applications

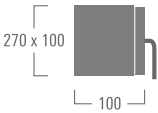
RLS410

[R45] [M] [E]
6-13 W
460-1200 lm
Max. 1 internal accessory



RLS420

[R45] [M] [E]
12-26 W
930-2400 lm
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Available distributions:

[M] [E] [A60]

[M/M] [E/M] [E/E] [E/A60]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[M] Symmetric, medium beam
[E] Symmetric, narrow beam
[A60] Asymmetric 'forward throw'



[M/M] Medium beam, up and down
[E/M] Narrow beam up, medium beam down
[E/E] Narrow beam, up and down
[E/A60] Narrow beam up and 'forward throw' down



SLS400



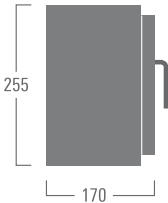
VLS400

Suitable for downlighting, façade and uplighting applications

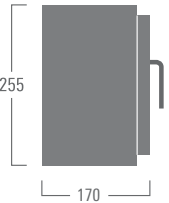
SLS410 / VLS410

One-sided
[M] [E] [A60]
6-13 W
220-1130 lm

Two-sided
[M/M] [E/M] [E/E] [E/A60]
12 W
780-1120 lm



SLS410

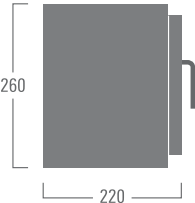


VLS410

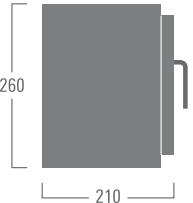
SLS420 / VLS420

One-sided
[M] [E] [A60]
12-26 W
720-2260 lm

Two-sided
[M/M] [E/M] [E/E] [E/A60]
24 W
1840-2230 lm



SLS420



VLS420



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Noltemeyer Bridge Urban Railway Station

Hanover (DE)

Lighting design: Üstra Hanover



Noltemeyer Bridge Urban Railway Station

A Timely Blend of Functionality and Aesthetics

The distinct shape of WE-EF's OLV300 series wall mounted luminaires perfectly matches the contemporary design of this highly frequented steel bridge across Hanover's Mittelland Canal, which also serves as a stop for the urban light rail system. While emphasising the structure of the bridge girders, the light distribution also fulfils all requirements for safe, pleasant and economical platform lighting.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP65

IK07

Henry Rolland Park
Canberra (AU)
Lighting design: John Raineri & Associates

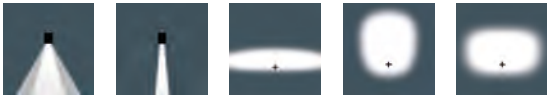
Available distributions:
[M] [EES]
[S70] [A60] [R65]

Standard colours:






 RAL 9004 9006 9007 7016 9016



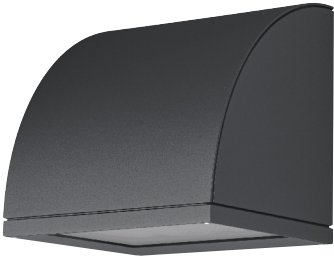
[M] Symmetric, medium beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[S70] Asymmetric 'side throw'

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



Luminaire can be mounted for up or down lighting

OLV330

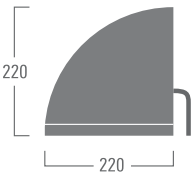
[M] [EES]

12-18 W
1390-1960 lm

OLV334

[S70] [A60] [R65]

12-24 W
1390-1960 lm



OLV330/334

OLV340

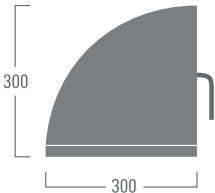
[M] [EES]

24-36 W
2810-4110 lm

OLV344

[S70] [A60] [R65]

24-48 W
2420-4680 lm



OLV340/344



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass, hinged
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK08

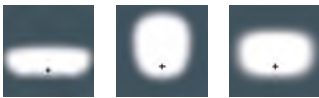
McCarran International Airport Terminal 3
Las Vegas (US)
Lighting design: Horton Lees Brogden

Available distributions:
[S65] [A60] [R65]

Standard colours:



RAL 9004 9006 9007 7016 9016

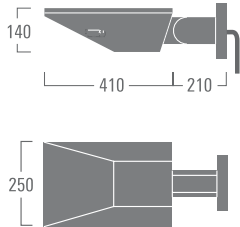


[S65] Asymmetric 'side throw'
[A60] Asymmetric 'forward throw'
[R65] Rectangular 'side throw'



PIA230

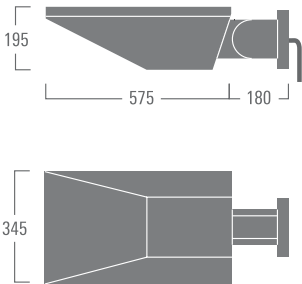
[S65] [A60] [R65]
24-36 W
2060-3540 lm
Max. 1 internal accessory



Tilt angle

PIA240

[S65] [A60] [R65]
54-72 W
5240-7500 lm
Max. 1 internal accessory



Tilt angle



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Two cable entries
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP55

IK10

Temple Quay
Bristol (UK)
Architect: Landscape Projects,
Manchester / London

Available distribution:
Diffused

Standard colours:



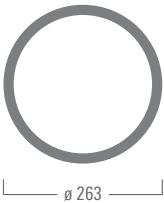



 RAL 9004 9006 9007 7016 9016



DL0229

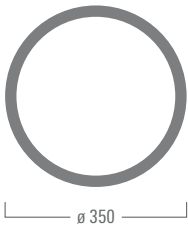
Diffused
12 W
1040 lm



DL0229

DL0239

Diffused
24 W
2150 lm



DL0239



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: Two cable entries
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I

IP55

IK10

The National Museum of Liverpool.
Liverpool (UK)
Architect: 3XN & AEW
Lighting design: Buro Happold Lighting

Available distribution:
Diffused

Standard colours:







RAL 9004 9006 9007 7016 9016



DLB200



DLG200



100

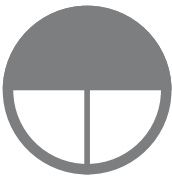


ø 263

DLB229



140



ø 350

DLB239

DLB229 / DLG229

Diffused

12 W
1040 lm



100



ø 263

DLG229

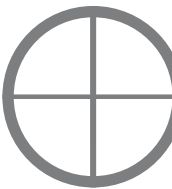
DLB239 / DLG239

Diffused

24 W
2150 lm



140

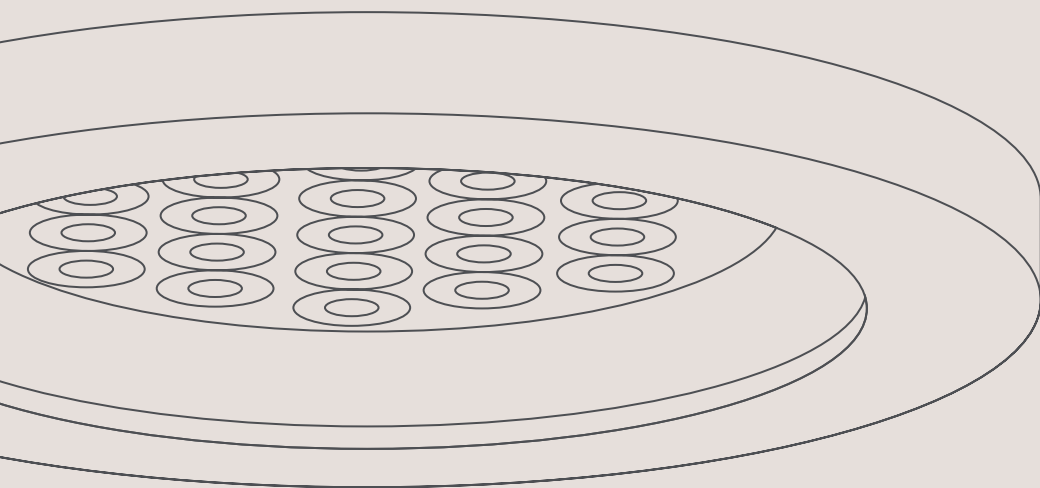


ø 350

DLG239



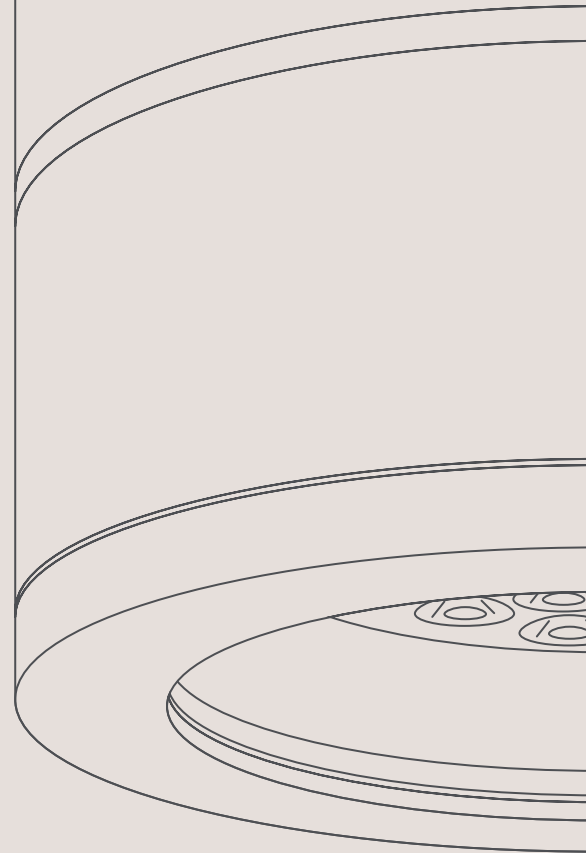
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$



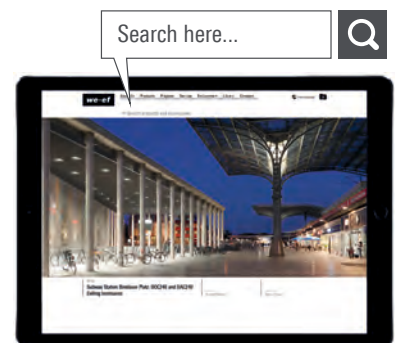
Whether recessed or surface mounted, WE-EF ceiling luminaires enable the seamless continuation of lighting concepts from the interior to the exterior.

Indoors, ceiling luminaires are the tool of choice for all general lighting purposes – but there are also many mounting positions in architectural lighting exteriors, such as canopies, passageways or façade overhangs. All of them are uncompromisingly designed for durability, no matter how challenging the conditions – with carefully sealed, closed housings, long-lasting materials and corrosion-resistant surfaces.

Ceiling luminaires



DOC100 / DOC200	138
DOC100-FT / DOC200-FT	140
DOC100-FT TW	144
DOC200-GB / DAC200-GB	146
DAC100 / DAC200	148



Ceiling luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



Breslauer Platz Underground Station

A Brighter Day Underground

Located on the north side of Cologne's main railway hub, this newly-built underground station is marked by classic elegance and transparent architecture. To uphold and even enhance its bright and friendly atmosphere by night, more than 370 WE-EF luminaires are at work – a combination of DOC240 and DAC240 recessed and surface mounted ceiling luminaires deliver excellent visual conditions for passengers, passers-by and railway staff.

Breslauer Platz Underground Station

Cologne (DE)

Project owner: KVB Kölner Verkehrs-Betriebe

Architect: Büder + Menzel Architekten BDA

Lighting design: Licht Kunst Licht AG





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally separated compartment
Main lens:	Safety glass.
	DOC200 – Safety glass hinged, frame with safety catch
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries. Luminaire is factory-sealed and does not need to be opened during the installation. Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
DOC100:	The luminaire is not suitable for chlorine containing environments e.g. swimming pools
DOC200:	Luminaire suitable for chlorine containing environments e.g. swimming pools, on request. Must be specified at time of ordering
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Park Hyatt
Bangkok (TH)
Architect: AL_A

Lighting design: Inverse Thailand / London

Available distributions:

[B] [M] [EE] [EES] [A20]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

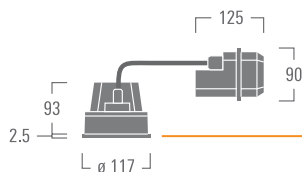


DOC100



DOC200

DOC110



[B] [M] [EE] [EES] [A20]

12 W

970-1370 lm

Max. 1 internal accessory

Mounting accessories:

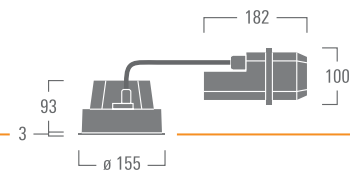
Pre-installation blockouts

Type I:

Luminaire faceplate remains proud (2.5-18 mm) of ceiling



DOC120



[B] [M] [EE] [EES] [A20]

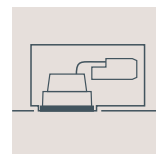
24 W

2040-2610 lm

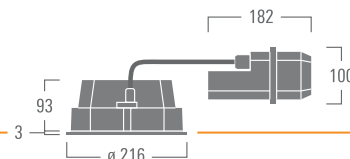
Max. 1 internal accessory

Type II:

For flush luminaire installation



DOC140



[B] [M] [EE] [EES] [A20]

48 W

4120-5460 lm

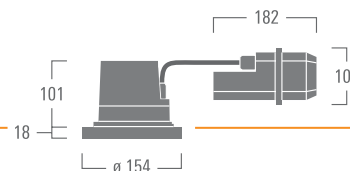
Max. 1 internal accessory

Type III:

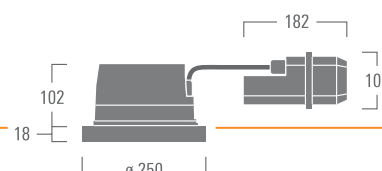
For flush with shadow line installation



DOC220



DOC240



[B] [M] [EE] [EES] [A20]

24-48 W

2040-5460 lm

Max. 1 internal accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 151



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally separated compartment
Main lens:	Safety glass.
	DOC200 – Safety glass hinged, frame with safety catch
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	Darklight anodised aluminium reflector
Installation:	Two cable entries. Luminaire is factory- sealed and does not need to be opened during the installation. Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
DOC100:	The luminaire is not suitable for chlorine containing environments e.g. swimming pools
DOC200:	Luminaire suitable for chlorine containing environments e.g. swimming pools, on request. Must be specified at time of ordering
Technology:	Darklight Reflector Technology; refer to page 374
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Available distributions:
[B] [M] [E]

Standard colours:

				
RAL 9004	9006	9007	7016	9016



[B] Symmetric, wide beam
[M] Symmetric, medium beam
[E] Symmetric, narrow beam



DOC100-FT



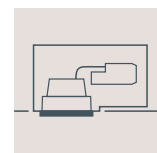
DOC200-FT

Mounting accessories:

Pre-installation blockouts

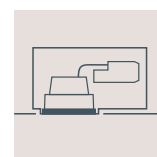
Type I:

Luminaire faceplate remains proud (3-19 mm) of ceiling



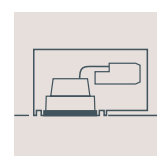
Type II:

For flush luminaire installation

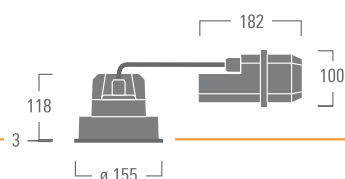


Type III:

For flush with shadow line installation



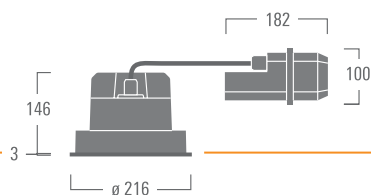
DOC120-FT



[B] [M] [E]

17-24 W
820-2420 lm
Max. 1 internal accessory

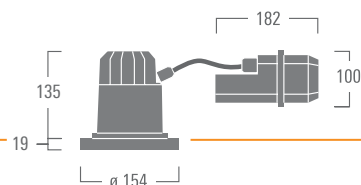
DOC140-FT



[B] [M] [E]

24-37 W
1290-3430 lm
Max. 1 internal accessory

DOC220-FT



[B]

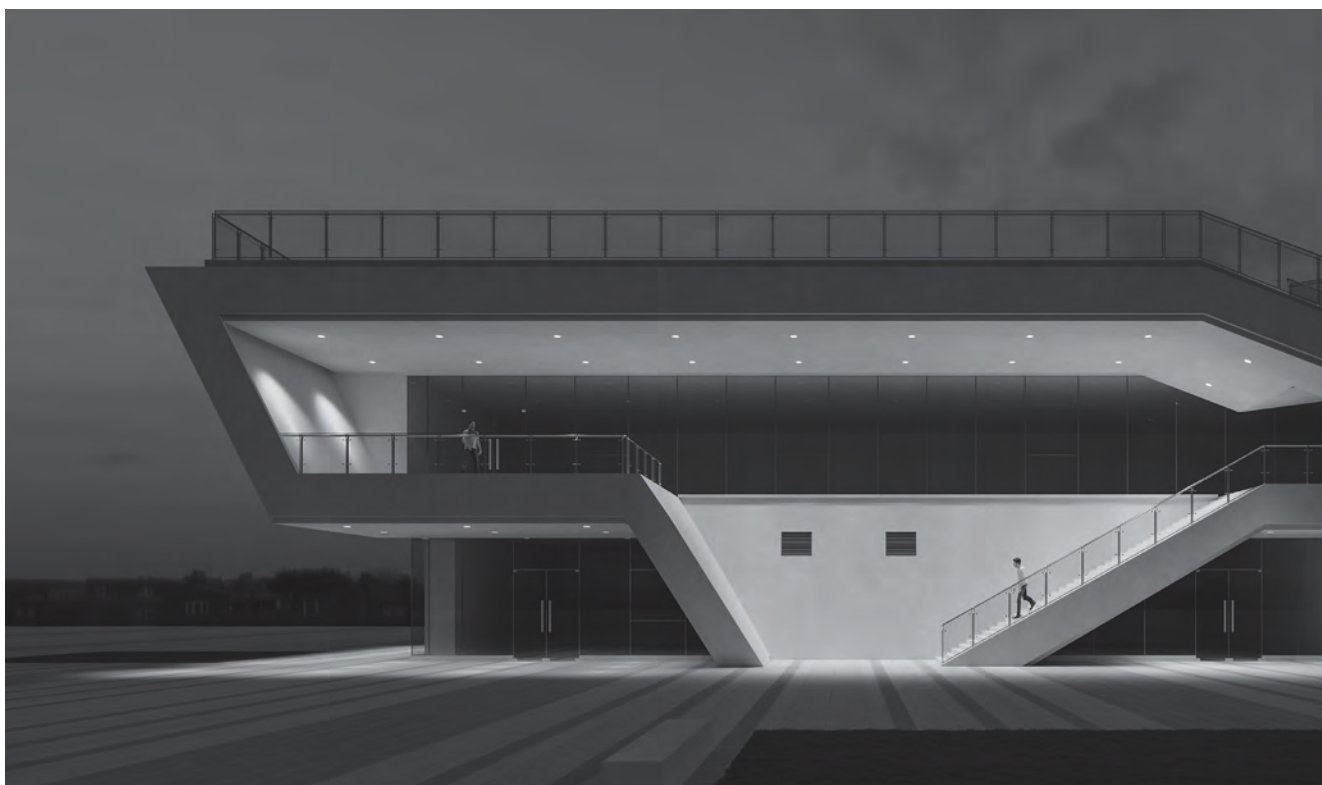
24 W
2430 lm

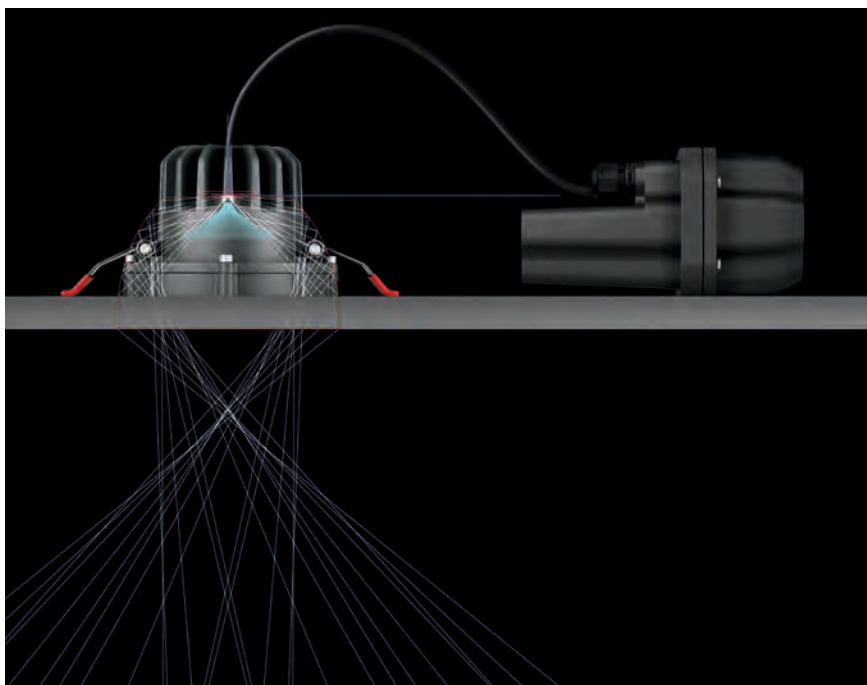


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 151

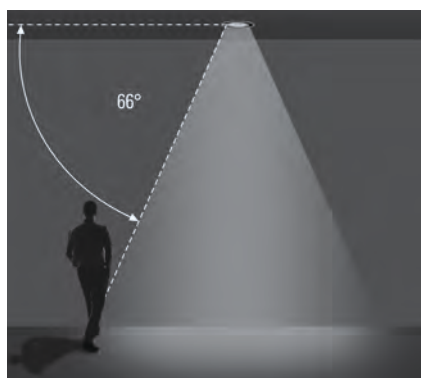
Architecture made to shine

In modern architecture, exterior spaces are often an extension of the interior - and vice versa. Unobtrusive luminaires such as the WE-EF DOC100 downlight series are ideal tools for making the architecture take centre stage. A host of available light distributions and controls allow effective illumination of horizontal and vertical surfaces – bright where needed, subtle where desired – while ensuring excellent glare control and visual comfort.

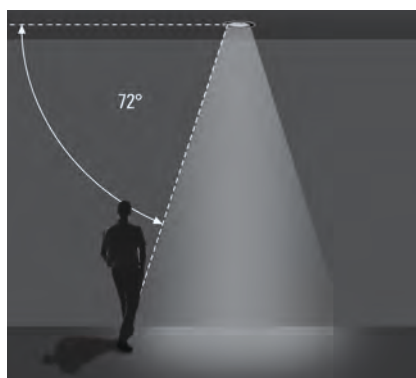


**DOC100-FT Darklight ray-tracing**

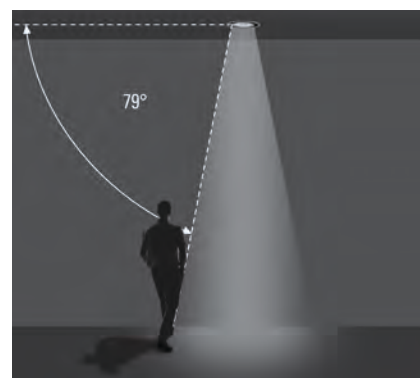
This CAD ray-tracing simulation demonstrates the darklight reflector's combined light control and shielding qualities. While the former quality ensures uniform illumination of the target surface, the latter prevents direct eye contact with the light source.



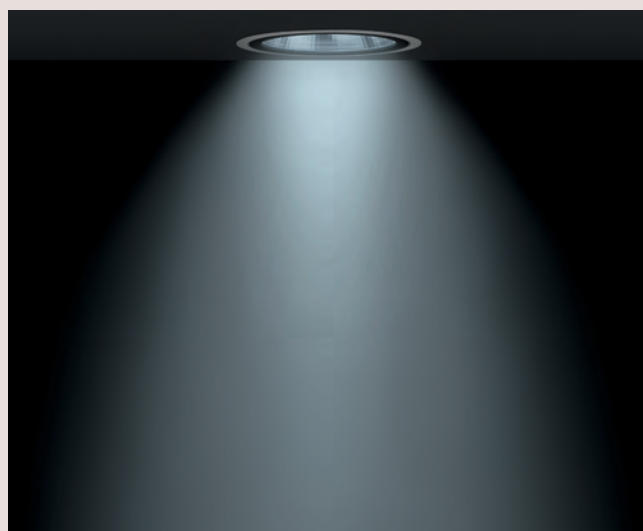
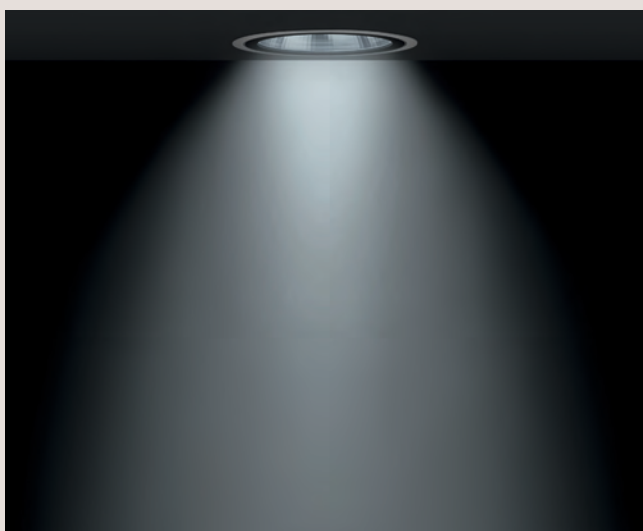
[B] Wide beam
66° shielding angle



[M] Medium beam
72° shielding angle



[E] Narrow beam
79° shielding angle



Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

Driver: Integral EC electronic converter in thermally separated compartment

Main lens: Safety glass

Gasketing: Silicone CCG® Controlled Compression Gasket

Optics: Darklight anodised aluminium reflector

Installation: Two cable entries. Luminaire is factory- sealed and does not need to be opened during the installation. Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
The luminaire is not suitable for chlorine containing environments
e.g. swimming pools

Technology: WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 372

Darklight Reflector Technology; refer to page 374

Control: DALI

CLASS
I

IP66

IK07

Available distributions:

[B] [M] [E]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

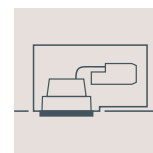


Mounting accessories:

Pre-installation blockouts

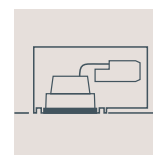
Type I:

Luminaire faceplate
remains proud (3 mm)
of ceiling

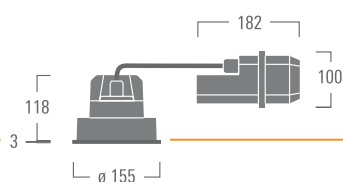


Type III:

For flush with
shadow line
installation



DOC120-FT TW



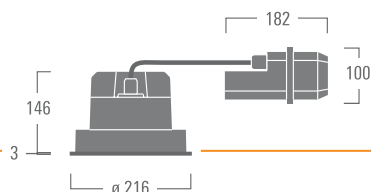
[B] [M] [E]

17 W

480-1110 lm

Max. 1 internal accessory

DOC140-FT TW



[B] [M] [E]

24 W

950-1860 lm

Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 151



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally separated compartment
Main lens:	Safety glass hinged, frame with safety catch
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Two cable entries. Luminaire suitable for chlorine containing environments e.g. swimming pools, on request. Must be specified at time of ordering. DOC200 – Luminaire is factory- sealed and does not need to be opened during the installation. Pre-installation blackout is recommended for mounting in cast concrete ceilings - to be ordered separately
Control:	Optional DALI version available. To be specified at time of ordering

DOC240-GB	CLASS I	IP66	IK07
DAC240-GB	CLASS I	IP65	IK07

White City
London (UK)
Lighting design: Speirs & Major Associates

Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colours:





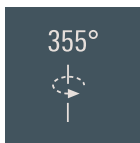
- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'
- [A20] Asymmetric, wallwash



DOC200-GB



DAC200-GB



Rotation



Tilt angle

Mounting accessories for DOC200-GB:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (18 mm)
of ceiling



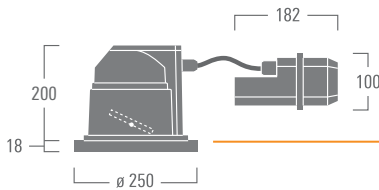
Type II:
For flush luminaire
installation



Type III:
For flush with
shadow line
installation

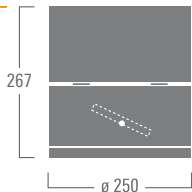


DOC240-GB



[B] [M] [EE] [EES] [A20]
18 W
1550-1960 lm
Max. 1 internal accessory

DAC240-GB



[B] [M] [EE] [EES] [A20]
18 W
1550-2050 lm
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 151



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally separated compartment
Main lens:	Safety glass.
	DAC200 – Safety glass hinged, frame with safety catch
Gasketing:	Silicone rubber gasket
Optics:	CAD-optimised for superior illumination and glare control
	OLC® One LED Concept
Installation:	Two cable entries. Luminaire suitable for chlorine containing environments e.g. swimming pools, on request. Must be specified at time of ordering
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP65

IK07

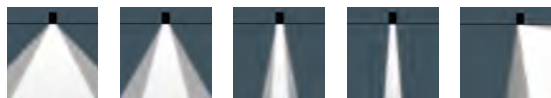
Steinmüller passage
Gummertsbach (DE)

Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colours:



RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

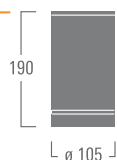


DAC100



DAC200

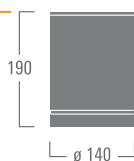
DAC110



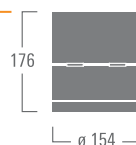
[B] [M] [EE] [EES] [A20]

6-12 W
552-1370 lm
Max. 1 internal accessory

DAC120



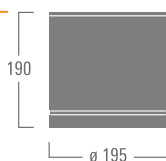
DAC220



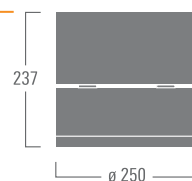
[B] [M] [EE] [EES] [A20]

24 W
2040-2610 lm
Max. 1 internal accessory

DAC140



DAC240



[B] [M] [EE] [EES] [A20]

48 W
4115-5460 lm
Max. 1 internal accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 151

Installation accessories

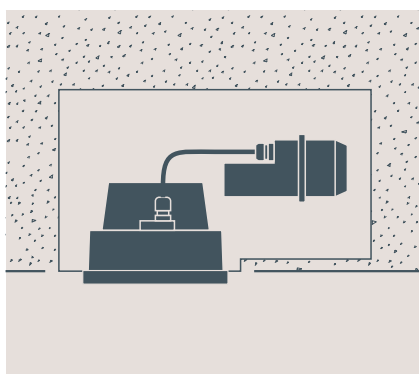
The installation of recessed ceiling luminaires can be problematic due to rough site conditions during the civil construction phase. WE-EF has developed this unique range of installation blockouts, to be integrated in concrete structures during the initial phase of construction.

Later, after the site has been cleared of mortar, sand and debris, the electrician can unpack the luminaire for a fast, easy and cost-saving installation.

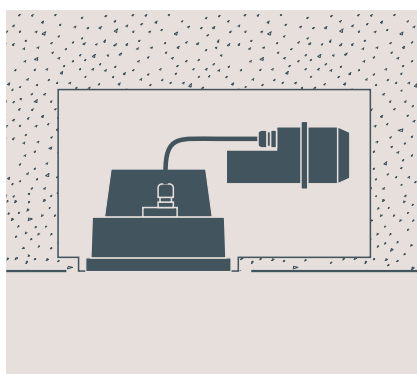
Installation blockouts:

Type I / Type III – for DOC100

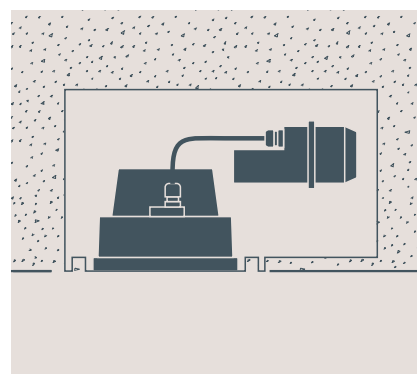
Type I / Type II / Type III – for DOC200



Type I – proud



Type II – flush



Type III – flush with shadow line



Installation blockout Type I with recessed ceiling luminaire DOC140

Installation blockout

When using Type I blockout, the luminaire frame is not flush with the ceiling surface.

DOC100: Luminaire frame raised 2.5-3 mm

DOC200: Luminaire frame raised 18-19 mm

Internal optical accessories

Max. 1 accessory. Factory installed. To be specified at time of ordering.

DOC100
DOC100-FT
DOC100-FT TW
DOC200-GB
DOC200

DAC100
DAC200-GB
DAC200



Honeycomb louvre
for [M] [EE] [EES]



Linear spread lens
for [M] [EE] [EES]

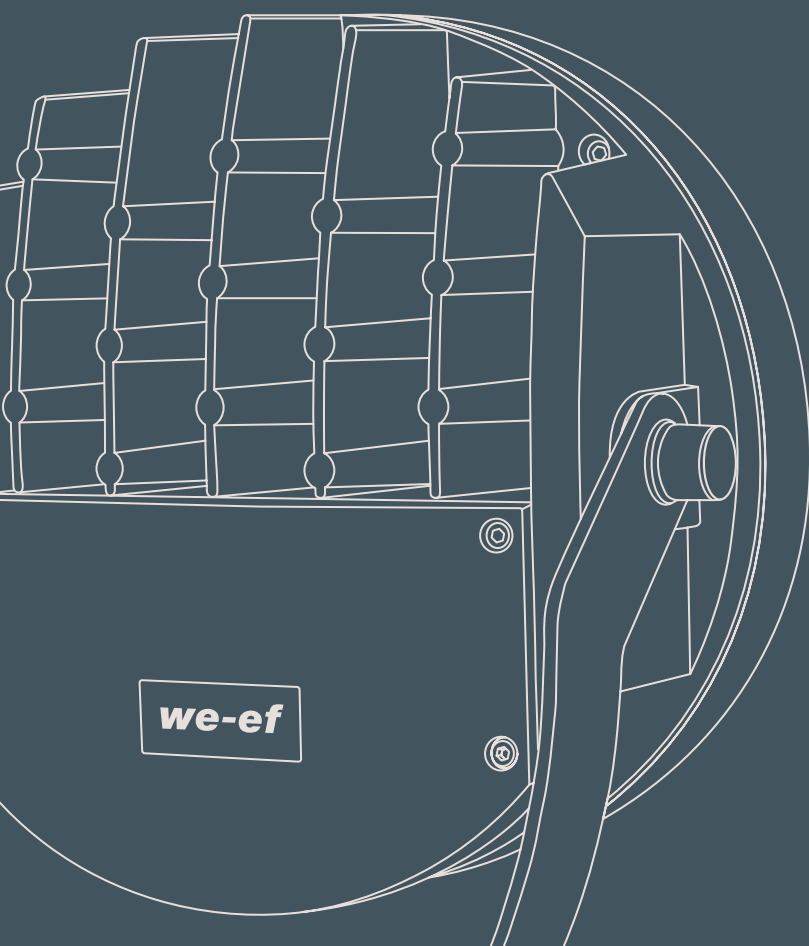


Flood lens
for [M] [EE] [EES]



Wallwash lens
for [M]



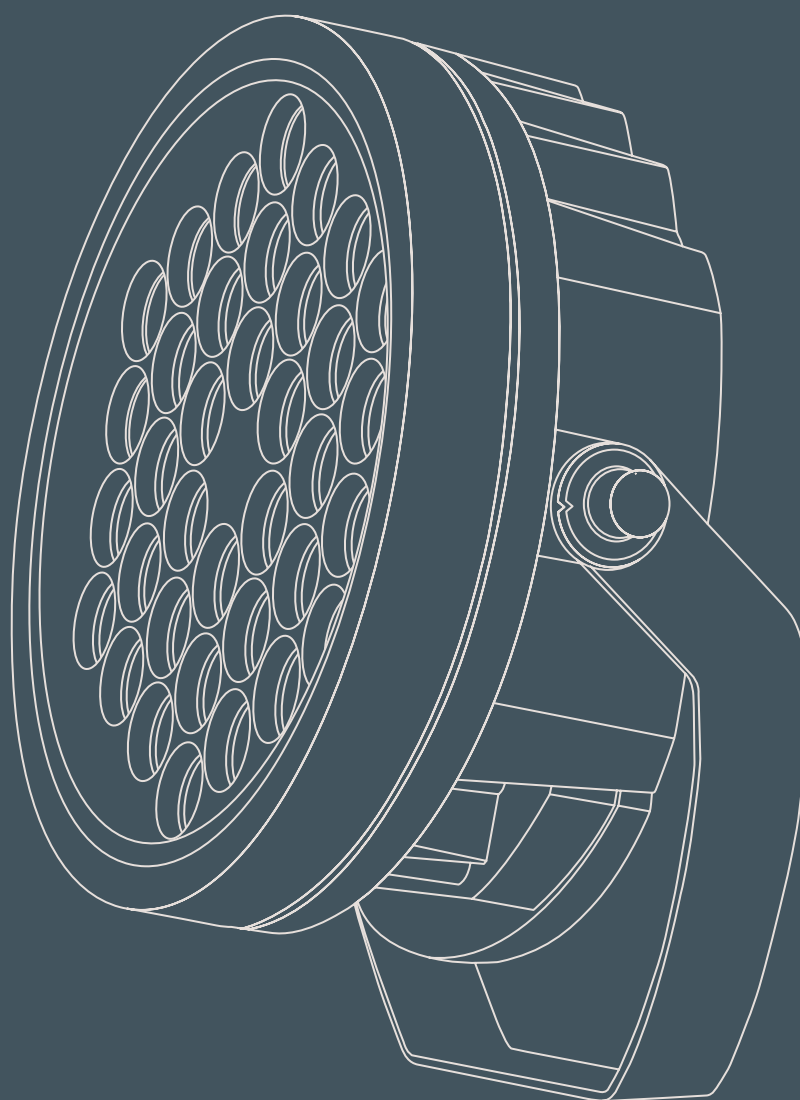


Versatility and precision – projectors are the ideal means for the setting in scene of buildings, façades, monuments and sculptures with directional light.

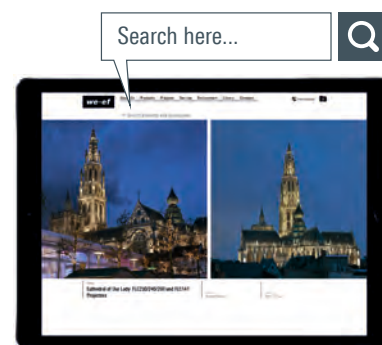
It is a boon to have such a comprehensive toolbox as the WE-EF projector range – ranging from compact spotlights for short distances to powerful projectors for monumental buildings and objects, and from extremely narrow beam to wide beam light distributions.

Luminaires for special effects, such as colour changers or profile projectors, complete the range. The functional design of WE-EF projectors is focused on easy and safe installation, durability and reliable operation.

Projectors



FLD100	156
FLC100	158
FLC100 Wall bracket	160
FLC200	166
FLC200-TW	170
FLC200-CC	176
FLC200 PP	184
FLC200-TW PP	186
FLC200-CC PP	188
FLC300	198
FLC300 Wall bracket	200
ULC200	204



Projectors

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



ZOOM office and commercial building

A Brilliant Presence in Berlin's City West

ZOOM office and commercial building

Berlin (DE)

Project owner: Hines Immobilien GmbH

Architect (design): Hascher Jehle Architecture

Architect (implementation): Aukett + Heese

Lighting design: Lichtvision Design



Staggered horizontal light bands accentuate the horizontal structures of this rounded building complex at the corner of West Berlin's Kantstrasse and Joachimsthaler Strasse. At the heart of the lighting concept is the building's bright crown, created by an ensemble of WE-EF FLC121 projectors strategically placed near the foot of the superstructure atop the Zoom building's flat roof. To achieve a homogeneous light distribution on the surface areas, the medium-emitting projectors are equipped with band-type diffusion lenses. The window reveals are illuminated by recessed ETC110 inground luminaires using symmetric, extreme narrow beam light distribution with 'sharp cut-off'.



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: The luminaire is factory-sealed and does not need to be opened during installation
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Town hall
Dresden (DE)

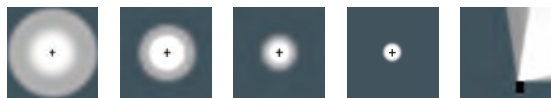
Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLD111

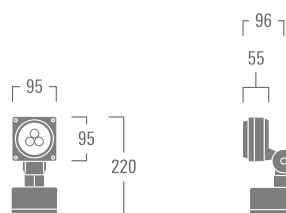
[M] [EE] [EES] [A20]

6 W

390-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLD121

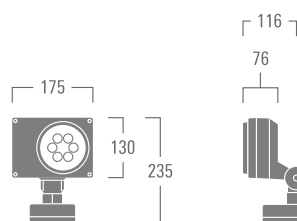
[B] [M] [EE] [EES] [A20]

12 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLD131

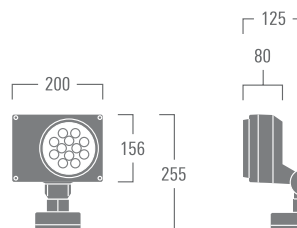
[B] [M] [EE] [EES] [A20]

24 W

1940-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 162



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	The luminaire is factory-sealed and does not need to be opened during installation

CLASS
I

IP66

IK07

ZOOM Office Building, Berlin (DE)

Architect (design): Hascher Jehle Architecture

Architect (implementation): Aukett + Heese

Lighting design: Lichtvision Design

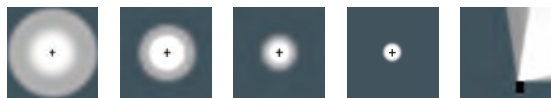
Available distributions:

[B] [M] [EE] [EES] [A20]

Standard colours:



RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC121

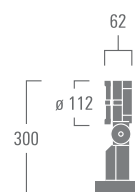
[B] [M] [EE] [EES] [A20]

12 W

1030-1370 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC131

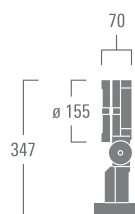
[B] [M] [EE] [EES] [A20]

24 W

2040-2610 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC141

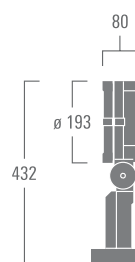
[B] [M] [EE] [EES] [A20]

48 W

4120-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 163



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: The luminaire is factory-sealed and does not need to be opened during installation

CLASS
I

IP55

IK07

Concord City Place
(US)

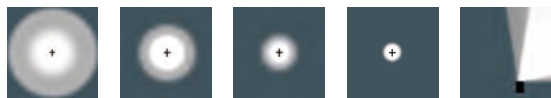
Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colours:






 RAL 9004 9006 9007 7016 9016



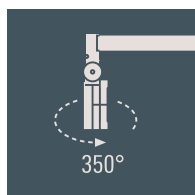
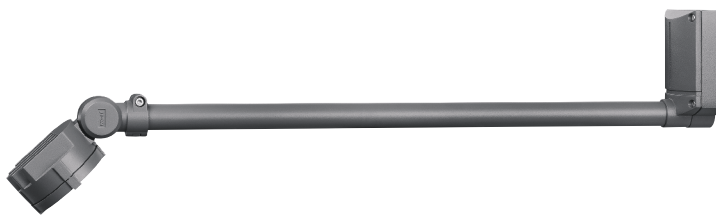
[B] Symmetric, wide beam

[M] Symmetric, medium beam

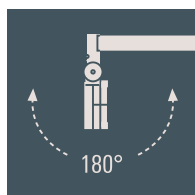
[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



Horizontal aiming



Vertical aiming

FLC121 Wall bracket

[B] [M] [EE] [EES] [A20]

12 W

1030-1370 lm

Max. 1 internal accessory

Max. 1 external accessory

FLC131 Wall bracket

[B] [M] [EE] [EES] [A20]

24 W

2040-2610 lm

Max. 1 internal accessory

Max. 1 external accessory

FLC141 Wall bracket

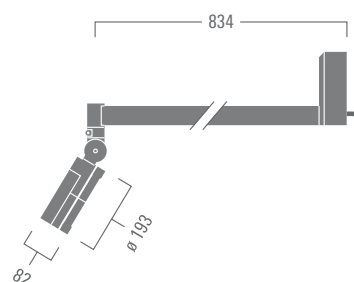
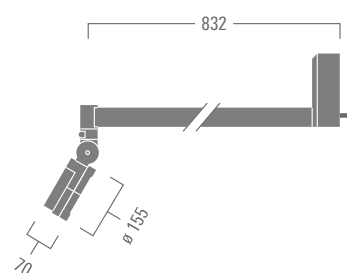
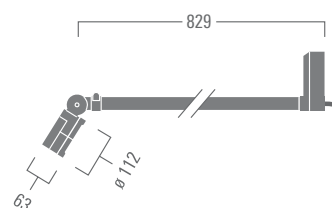
[B] [M] [EE] [EES] [A20]

48 W

4120-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 163

FLD100

Internal optical accessories

Max. 1 internal accessory



Wallwash lens
for [M]



Linear spread lens
for [M] [EE] [EES]



Flood lens
for [M] [EE] [EES]



Glare shield
for [B] [M] [EE] [EES]



Snoot
for [B] [M] [EE] [EES]

Mounting Accessories



Short post
Matching planted root to be ordered separately

Planted root
Galvanised steel



Ground spike
Stainless steel VA

FLC100 / FLC100 Wall bracket

Internal optical accessories

Max. 1 internal accessory

External optical accessories

Max. 1 external accessory



Wallwash lens
for [M]



Linear spread lens
for [M] [EE] [EES]



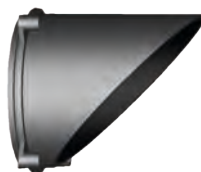
Flood lens
for [M] [EE] [EES]



Honeycomb louvre
for [EE]



Wire guard
for [B] [M] [EE] [EES]



Glare shield
for [B] [M] [EE] [EES]



Snoot
for [B] [M] [EE] [EES]

Mounting Accessories



Short post
Matching planted root to be ordered separately

Planted root
Galvanised steel



Ground spike
Stainless steel VA



Our Lady's Cathedral

A Sculpturally Detailed Gem

How do you set the stage for a gem of Flemish-Brabantine architecture?

Antwerp's answer involves the skilful application of an ensemble of WE-EF FLC200 series projectors. Recessed into the ground, WE-EF ETC100-GB series luminaires illuminate the buttresses of the naves and apse as well as the portals – with finely aligned precision made possible through their gimbal-mounted luminaire modules. Integrated via appropriate driver interfaces, the WE-EF luminaires are controlled by a DMX light management system for different lighting scenarios.



Our Lady's Cathedral

Antwerp (BE)

Project owner: City of Antwerp

Lighting design: Susanna Antico Lighting Design Studio, Milan, in collaboration with arch. Gad Giladi, Lighting Designer and with input from arch. Helena Gentili, Lighting Designer, arch. George Balan, Lighting Designer and Mathieu Cieters, Graphic Designer



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	FLC201: Electronic converter required, to be ordered separately FLC210-FLC260: Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	One cable gland. FLC220-FLC260: Second gland for through wiring on request
Control:	FLC220-FLC260: Optional DALI version available. To be specified at time of ordering

FLC201	CLASS III	IP66	IK07
FLC210- FLC260	CLASS I	IP66	IK07

Leieboorden
Kortrijk (BE)

Available distributions:
[B] [M] [E] [EE] [EES] [A20]

Standard colours:

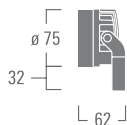




- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [E] Symmetric, narrow beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'

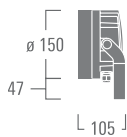
FLC201

[B] [M] [E] [EE] [EES]
6 W
530-630 lm
Max. 1 external accessory



FLC210

[B] [M] [E] [EE] [EES]
6-12 W
630-1410 lm
Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC220

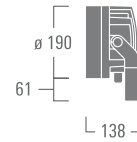
[B] [M] [E] [EE] [EES] [A20]

12-26 W

1200-2600 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC230

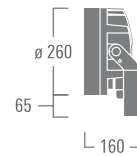
[B] [M] [E] [EE] [EES] [A20]

24-52 W

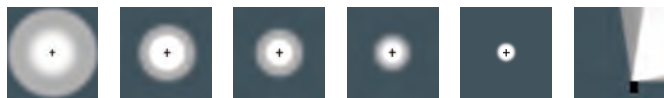
2450-5260 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_a = 25^\circ\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC240

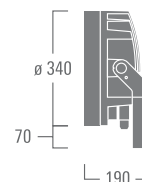
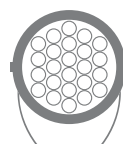
[B] [M] [E] [EE] [EES] [A20]

48-104 W

4900-10520 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC260

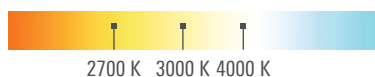
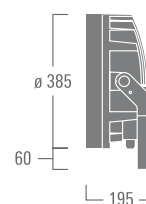
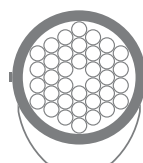
[B] [M] [E] [EE] [EES] [A20]

72-155 W

7350-15780 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 194



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	FLC201-FLC210: Electronic converter required, to be ordered separately FLC220-FLC260: Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	One cable gland. FLC220-FLC260: Second gland for through wiring on request
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 372
Control:	DALI

FLC201- FLC210	CLASS III	IP66	IK07
FLC220- FLC260	CLASS I	IP66	IK07

Kimpton Langsuan Village
Bangkok (TH)
Architect: Plan Architects

Available distributions:
[B] [M] [E] [EES] [A20]

Standard colours:

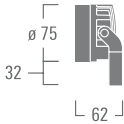




[B] Symmetric, wide beam
[M] Symmetric, medium beam
[E] Symmetric, narrow beam

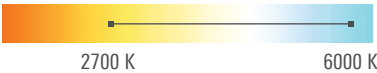
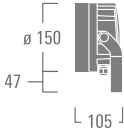
FLC201-TW

[B] [M] [E]
4 W
340-360 lm
Max. 1 external accessory

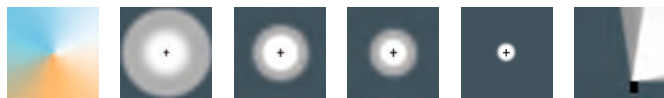


FLC210-TW

[B] [M] [E]
11 W
1040-1080 lm
Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC220-TW

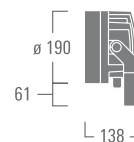
[B] [M] [E] [A20]

22 W

2220-2280 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC230-TW

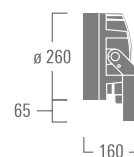
[B] [M] [E] [EES] [A20]

24-44 W

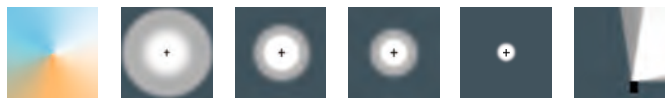
3660-4520 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC240-TW

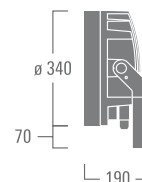
[B] [M] [E] [EES] [A20]

48-88 W

7320-9040 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC260-TW

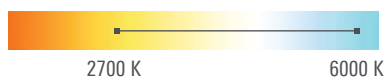
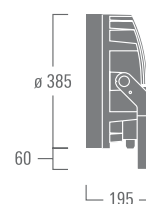
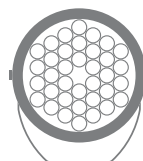
[B] [M] [E] [EES] [A20]

72-132 W

10990-13570 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 194

How to light a bridge

Any imposing daytime landmark such as a cable-stayed bridge deserves to be given an equally imposing presence after sunset.

Having access to projectors with a choice of high-precision optics allows the lighting professional to minimise light spillage while aiming the light selectively and precisely to where it is intended.

Light surface finishes are actually helpful for the illumination of any type of structure, and they lend themselves particularly well to tunable white applications.





WE-EF Tunable White Technology

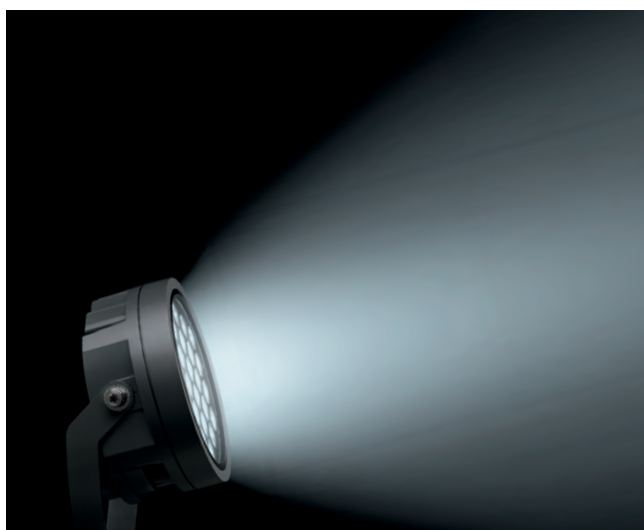
For optimum photometric performance, multiple arrays of white LEDs of different colour temperatures are joined into one optical system. Tuning these different types of LEDs through separate control channels allows infinite variation from warm to neutral to cool white light as well as smooth dimming at any chosen colour temperature.

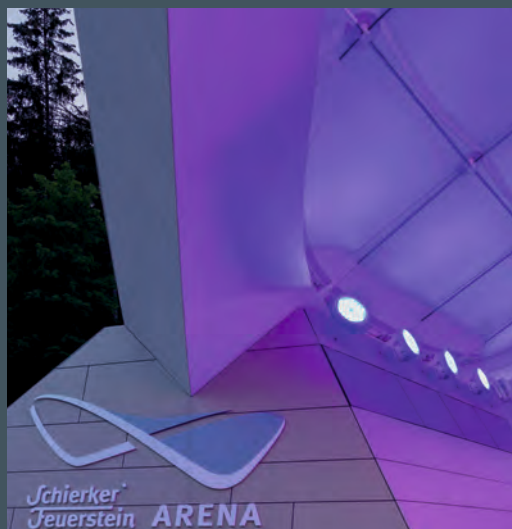
As a consequence of higher luminous efficacy (i.e., lumens per watt) of cool white LEDs over their warm white counterparts, conventional systems typically display a noticeable drop or increase in brightness when the colour temperature is being adjusted. WE-EF Tunable White Technology

masters this problem through smart control circuitry that stabilises the luminous flux throughout the entire 2700 K - 6000 K tuning range.

Illuminated with different colour temperatures, the colours and textures of surfaces, vegetation and other media are perceived differently.

Tunable white luminaires can be used to showcase private and public spaces, architecture and landscapes, in ever-changing ways – be it for special events, during the course of a night or with the change of seasons.





- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Corrosion protection:** 5CE, including PCS hardware
- Driver:** FLC210: Electronic converter required, to be ordered separately
FLC220-FLC260: Integral EC electronic converter
- Main lens:** Safety glass
- Gasketing:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** One cable gland.
FLC220-FLC260: Second gland for through wiring on request
- Technology:** WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%;
refer to page 373
- Control:** DMX, DMX wireless; refer to page 196

FLC210	CLASS III	IP66	IK07
FLC220- FLC260	CLASS I	IP66	IK07

Feuerstein Arena

Schierke (DE)

Architect: Graft Gesellschaft von Architekten

Lighting design: Jackbenimble

Available distributions:

[B] [M] [E] [EES] [A20]

Standard colours:

RAL 9004	9006	9007	7016	9016

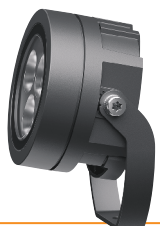
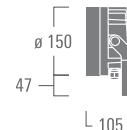


[B] Symmetric, wide beam

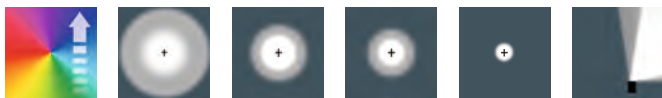
[M] Symmetric, medium beam

FLC210-CC

RGBW [B] [M]	RGBA [B] [M]
12 W	12 W
750-780 lm	610-640 lm
Max. 1 external accessory	



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC220-CC

RGBW
[B] [M] [E] [A20]

24 W

1330-1650 lm

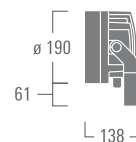
RGBA
[B] [M] [E] [A20]

24 W

1070-1330 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC230-CC

RGBW
[B] [M] [E] [EES] [A20]

48 W

2600-3200 lm

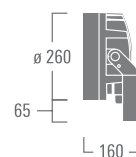
RGBA
[B] [M] [E] [EES] [A20]

48 W

2100-2590 lm

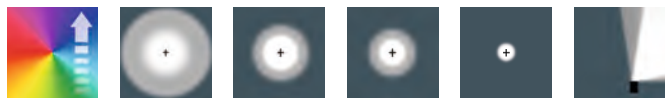
Max. 1 internal accessory

Max. 1 external accessory



RGBW / RGBA

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 194



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

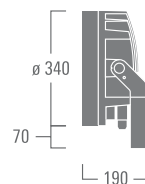
[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash

FLC240-CC

RGBW
[B] [M] [E] [EES] [A20]
96 W
5200-6410 lm
Max. 1 internal accessory
Max. 1 external accessory

RGBA
[B] [M] [E] [EES] [A20]
96 W
4200-5180 lm
Max. 1 internal accessory
Max. 1 external accessory



FLC260-CC

RGBW [B] [M] [E] [EES] [A20]

144 W

5877-9610 lm

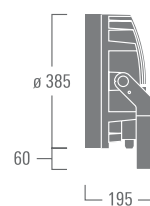
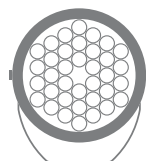
RGBA [B] [M] [E] [EES] [A20]

144 W

6310-7780 lm

Max. 1 internal accessory

Max. 1 external accessory



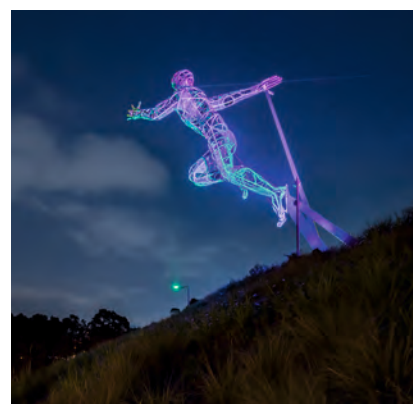
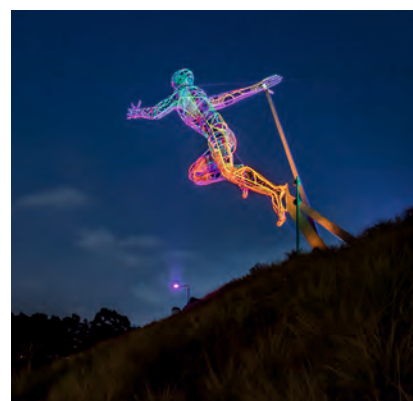
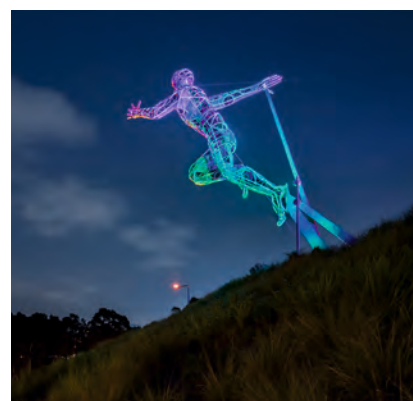
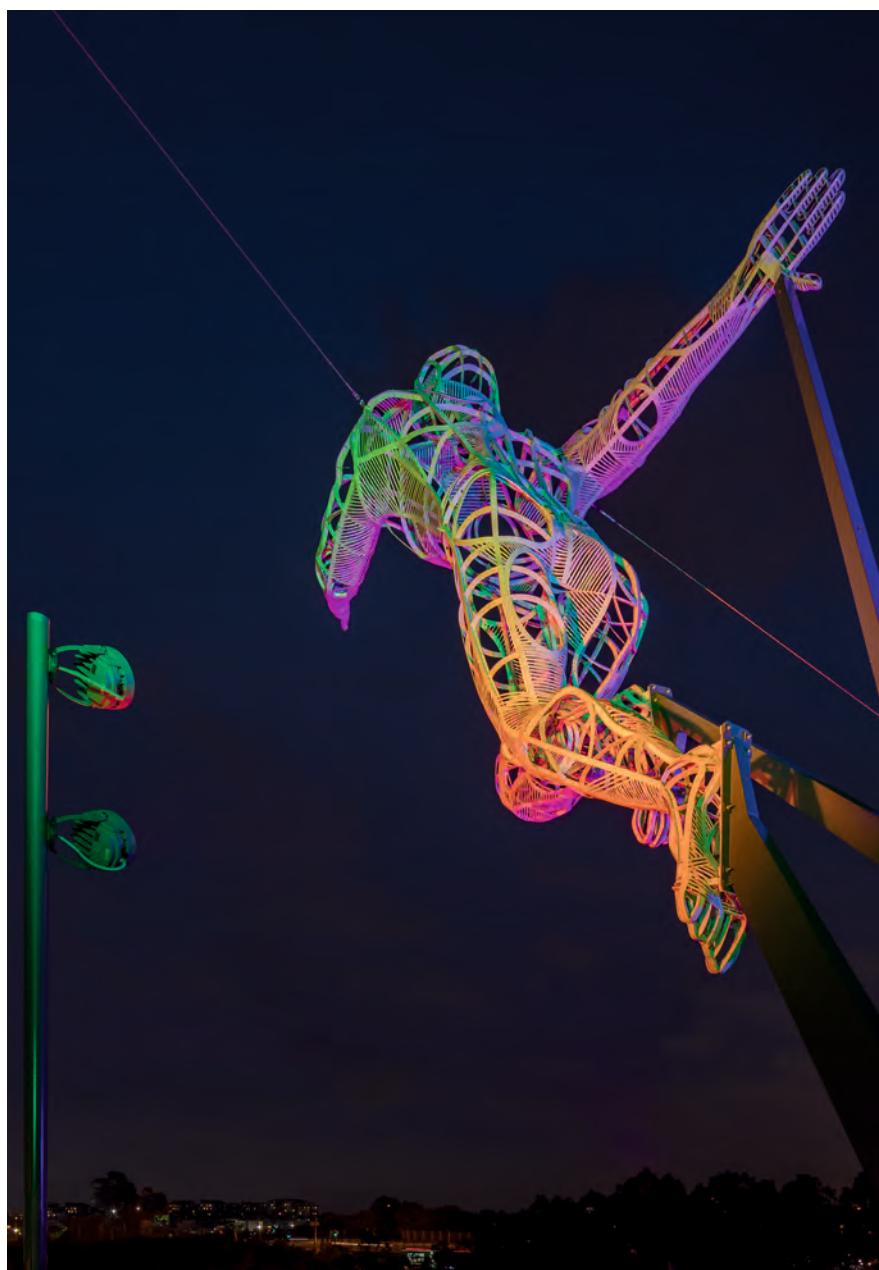
RGBW / RGBA

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to page 194

Olympic Spirit

Designed by artist Dominique Sutton, a 16-metre high sculpture was airlifted and installed atop Sydney's Centrepoint Tower prior to the 2000 Olympic Games. Fast forward to 2020 – The Gymnast and The Paralympic Basketballer have found a new home in Canberra, whereas The Sprinter made his/her way to the M4 East Legacy Project near Sydney Olympic Park.

Installing the eight-tonne sculpture on a steep hill posed challenges not only to the structural engineers, but also to the lighting consultants. The complexity of both, the sculpture and the terrain, called for high-performance projectors that had to meet a host of stringent criteria. With their sophisticated optics that deliver outstanding colour mixing as well as tight and precise beam control, WE-EF FLC200-CC RGBW colour changers were the obvious choice for this demanding installation.



The Sprinter Sculpture
Sydney (AU)
Lighting design: ADP
Artist: Dominique Sutton

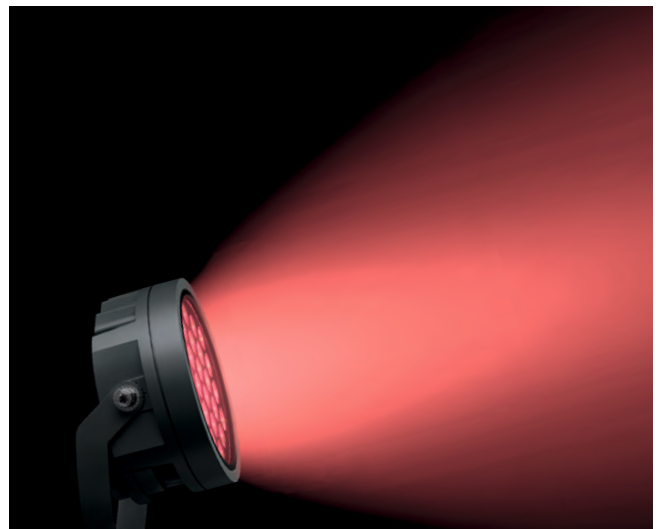
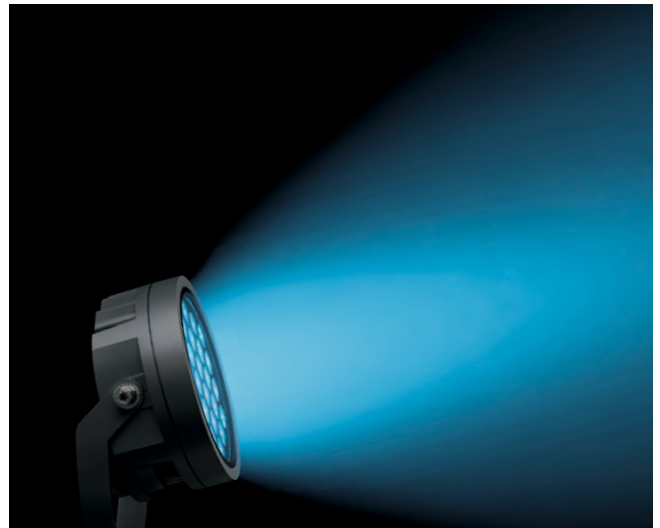
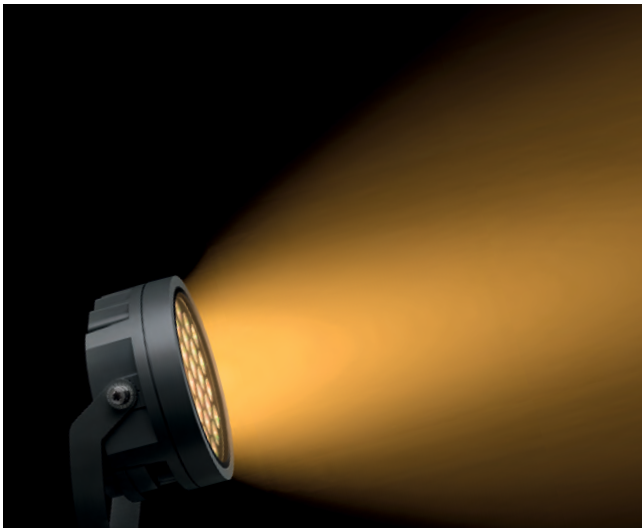


WE-EF Colour Boost Technology

The FLC200-CC colour changer is just one out of numerous luminaires that employ WE-EF's proprietary Colour Boost Technology for significantly enhanced, dynamic lighting effects. By selectively controlling each individual colour channel, overall luminous flux is increased by up to 40%.

Conventional RGBW and RGBA systems typically distribute the maximum permissible electrical load evenly over the four available channels, with

each receiving no more than 25% ($4 \times 25\% = 100\%$). Generally, however, in most colour mixing scenarios just three of the four channels get actively used. Consequently, one quarter of the available electrical power would go unused – this is where the WE-EF Colour Boost Technology comes in: Maximum power given to each of the active channels increases from 25% to 33% ($3 \times 33\% \sim 100\%$). While the luminaire's electronics safeguard the LEDs against overload, the overall luminous flux – depending on the colours used – is boosted by up to 40%.



**Main lens**

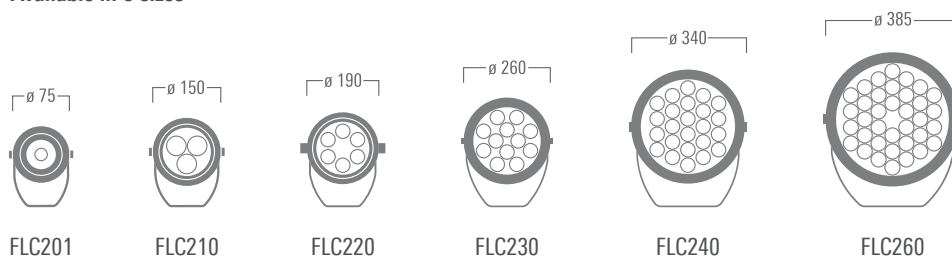
- Safety glass
- 'Flush sealing' helps prevent accumulation of water, dust and debris when aimed vertically upwards

IOS® Innovative Optical System

- Precision manufactured optical system
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- High efficiency within the 50% 'half beam' angle
- Minimum light spillage beyond the 10% 'field' angle

CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated silicone rubber
- Provides long-term, maintained, high IP ratings

Available in 6 sizes



IOS® Innovative Optical System

All WE-EF lens systems are developed in-house.



OLC® One LED Concept

WE-EF's OLC® prevents shadowing from any obstruction on the main lens.

LED circuit board

- High thermal conductivity material
- Optimised heat sinking for long-term, high-level LED performance and operational life

Driver

- Integral EC electronic converter in thermally-separated compartment
- High voltage surge protection

Cable entry

- One cable gland. Second gland for through wiring on request





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	FLC210: Electronic converter required, to be ordered separately FLC220-FLC230: Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	Spherical flat convex lens system
Mains connection:	One cable gland. FLC220-FLC230: Second gland for through wiring on request
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Tramway T4
Lyon (FR)
Lighting design: Ilex

Available distributions:
[GP] [ZP] [FP]

Standard colours:






 RAL 9004 9006 9007 7016 9016



gobo

[GP] for gobo projections

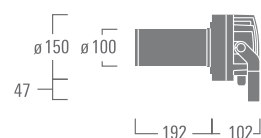
[ZP] for zoom-spot applications

[FP] for polygon framing applications

FLC210 PP

[GP] [ZP] [FP]

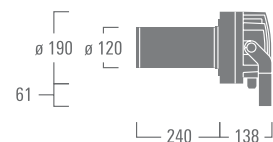
18-26 W
660-1835 lm



FLC220 PP

[GP] [ZP] [FP]

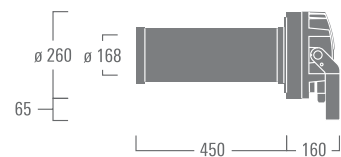
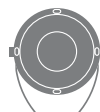
24-37 W
959-2592 lm



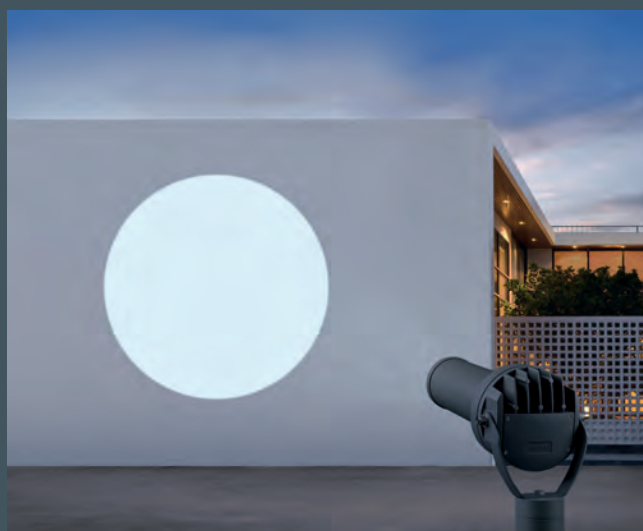
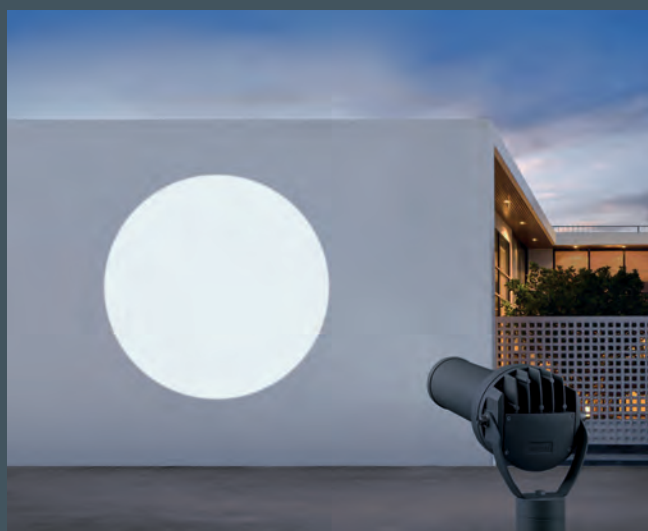
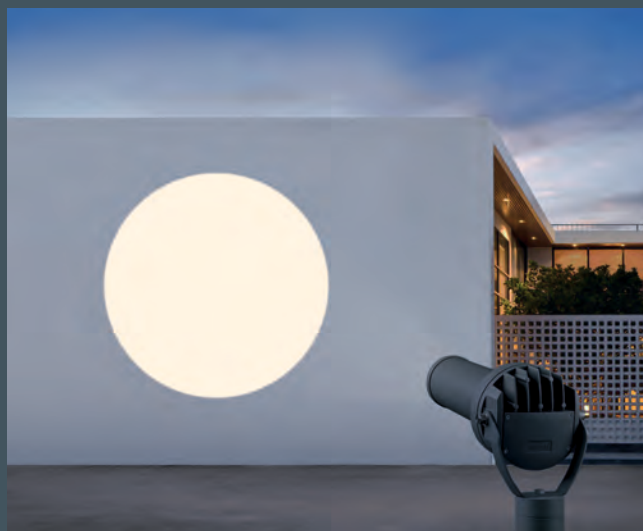
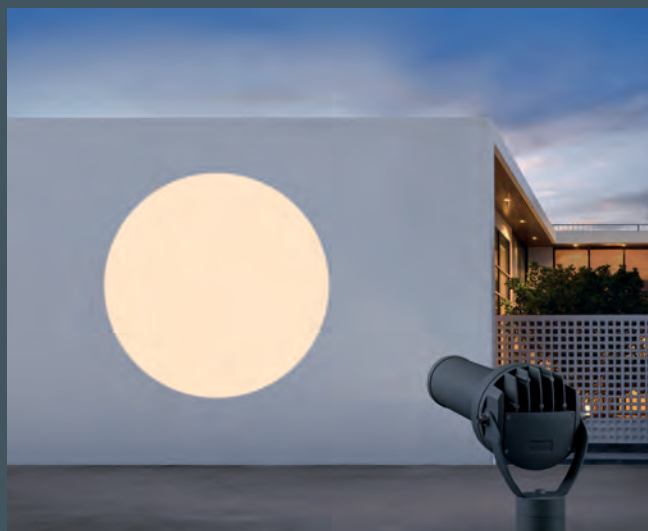
FLC230 PP

[GP] [ZP] [FP]

36-52 W
1264-3253 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 195



Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

Driver: FLC210: Electronic converter required, to be ordered separately
FLC220-FLC230: Integral EC electronic converter

Main lens: Safety glass

Gasketing: Silicone CCG® Controlled Compression Gasket

Optics: Spherical flat convex lens system

Mains connection: One cable gland.

FLC220-FLC230: Second gland for through wiring on request

Technology: WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K;
refer to page 372

Control: DALI

CLASS
I

IP66

IK07

Available distributions:
[GP] [ZP] [FP]

Standard colours:

RAL 9004 9006 9007 7016 9016



[GP] for gobo projections

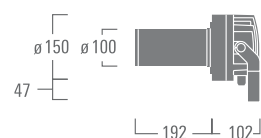
[ZP] for zoom-spot applications

[FP] for polygon framing applications

FLC210-TW PP

[GP] [ZP] [FP]

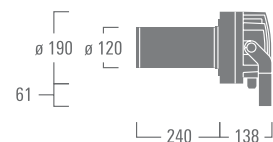
10 W
190-550 lm



FLC220-TW PP

[GP] [ZP] [FP]

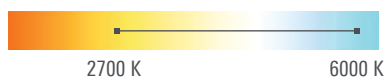
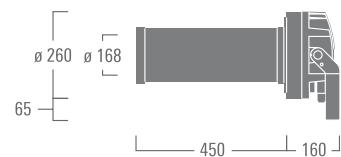
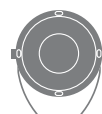
18 W
290-750 lm



FLC230-TW PP

[GP] [ZP] [FP]

44 W
1004-2169 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 195



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	FLC210: Electronic converter required, to be ordered separately FLC220-FLC230: Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	Spherical flat convex lens system
Mains connection:	One cable gland. FLC220-FLC230: Second gland for through wiring on request
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 373
Control:	DMX, DMX wireless; refer to page 196

CLASS
I

IP66

IK07

Molitor Hotel
Paris (FR)

Available distributions:
[GP] [ZP] [FP]

Standard colours:



RAL 9004 9006 9007 7016 9016



[GP] for gobo projections

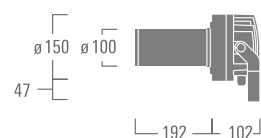
[ZP] for zoom-spot applications

[FP] for polygon framing applications

FLC210-CC PP

RGBW
[GP] [ZP] [FP]
15 W
170-490 lm

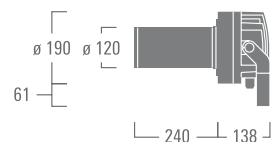
RGBA
[GP] [ZP] [FP]
15 W
140-420 lm



FLC220-CC PP

RGBW
[GP] [ZP] [FP]
24 W
260-670 lm

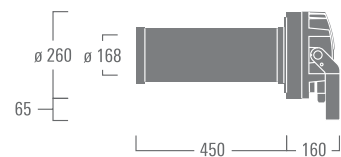
RGBA
[GP] [ZP] [FP]
24 W
220-570 lm



FLC230-CC PP

RGBW
[GP] [ZP] [FP]
48 W
742-1603 lm

RGBA
[GP] [ZP] [FP]
48 W
600-1297 lm



RGBW / RGBA

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 195

High-precision, spherical flat convex lens system, for versatile field adjustment

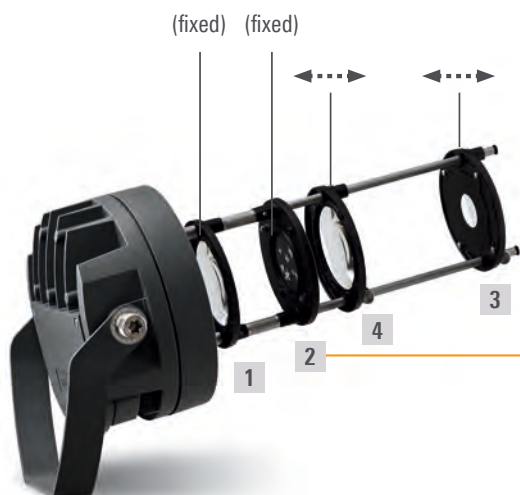
- The unique projector lens [1] delivers uniform illuminance across the projected image
- The projected image can be enlarged or reduced in size as well as focused on-site
- The dimensions of the projected image are dependent on the distance between the projector and target surface, the image or aperture size on the dedicated projection tool [2] as well as the setting of the zoom lens [3]

[1] Projector lens; fixed, factory-set position

[2] Dedicated projection tool; fixed, factory-set position

[3] Zoom lens; position on alignment rods can be field-adjusted, for reduced or enlarged image size

[4] Focusing lens; position on alignment rods can be field-adjusted for sharpening of the projected image



For each type of profile projector, one dedicated projection tool [2]

FLC230 PP [GP] Gobo Projector

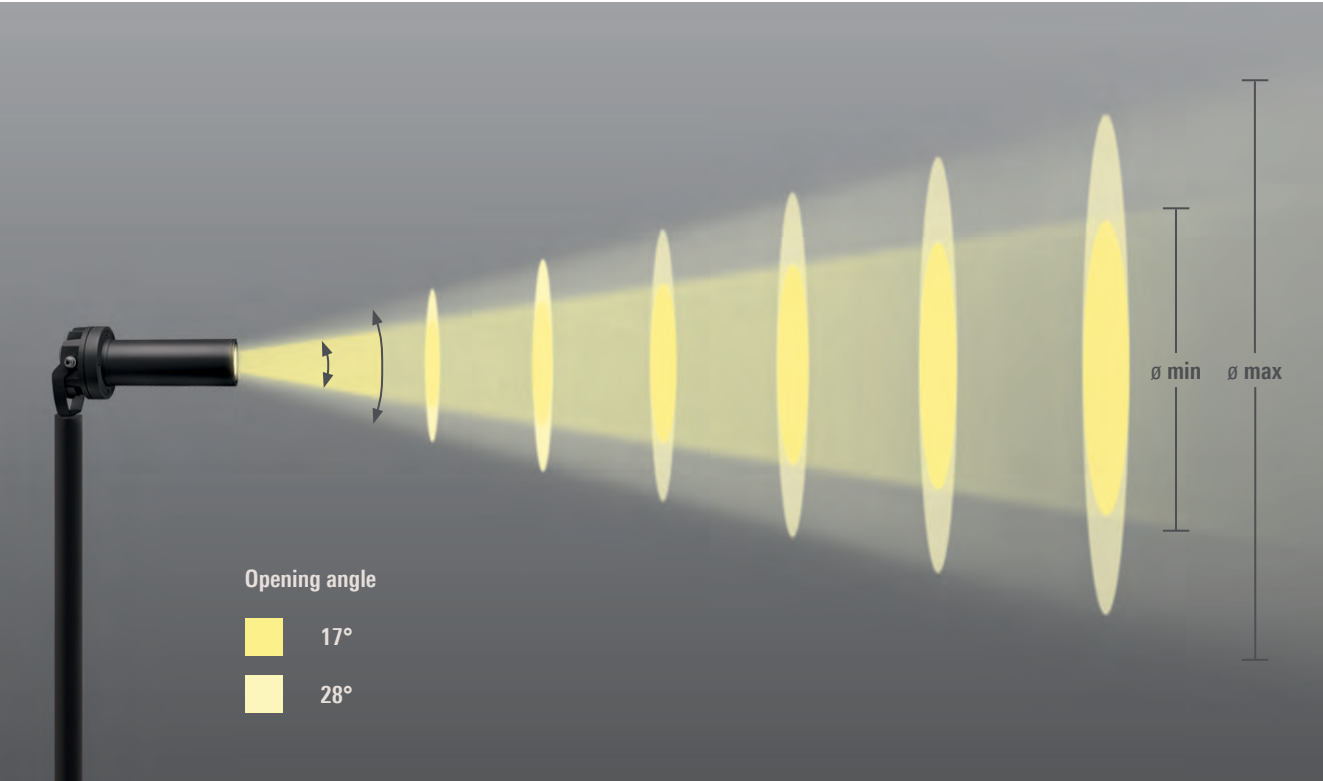
- Gobo motif available on request (laser-cut steel or printed glass)
- Outside diameter 86 mm
- Image diameter max. 60 mm
- Factory-preset for a target surface distance of 10 m

**FLC230 PP [ZP] Zoom-Spot Projector**

- Factory-preset at an opening angle of 28°, for a target surface distance of 10 m

**FLC230 PP [FP] Framing Projector**

- Factory-preset for a target surface distance of 10 m



FLC230 PP [ZP] Projector

Diameter of projected spot in relation to distance between projector and target surface as well as opening angle
(adjustable from 17 to 28 degrees by means of zoom lens [3])

Distance (m) Projector – spot	5	10	15	20	25	30
min. - max. diameter (m) Projected spot	1.5-2.5	3.0-5.0	4.5-7.5	6.0-10.0	7.5-12.5	9.0-15.0

**FLC200 PP [GP]**

Gobo Projectors

Gobo motifs available on request

**FLC200 PP [ZP]**

Zoom-Spot Projectors

17° - 28° adjustable opening angle

**FLC200 PP [FP]**

Framing Projectors

Adjustable polygon framing shutter

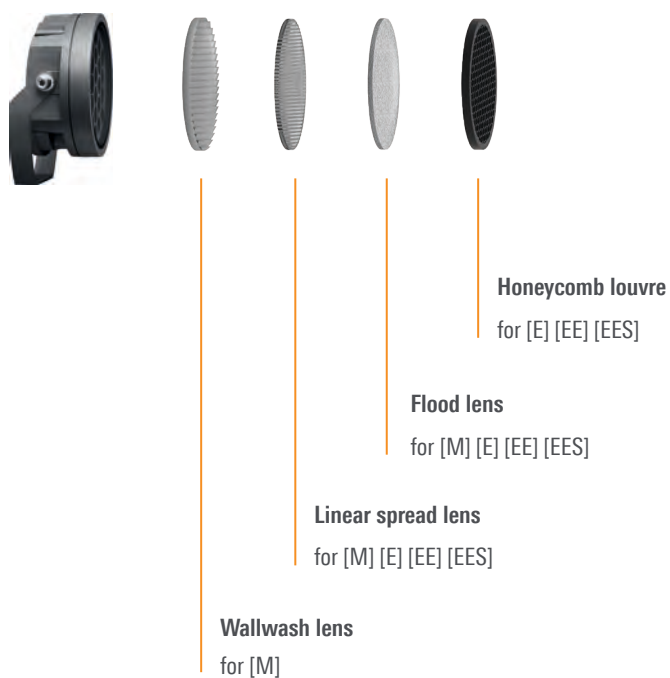


Saint Bruno Church of Voiron
Voiron (FR)
Project Manager: INGELUX

FLC200
FLC200-TW
FLC200-CC

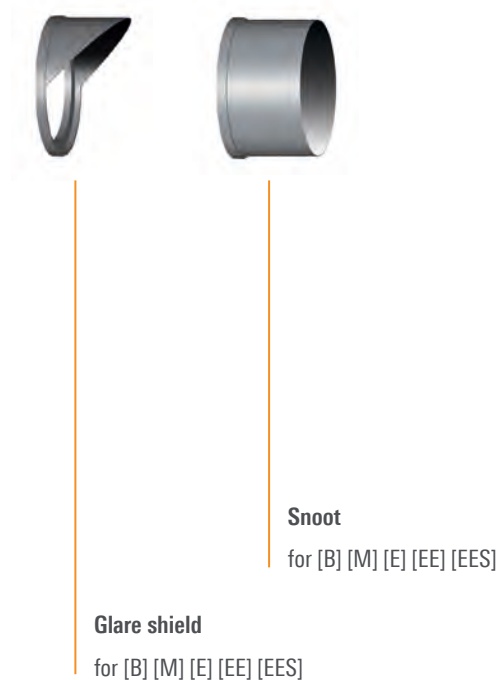
Internal optical accessories

Max. 1 internal accessory



External optical accessories

Max. 1 external accessory



FLC200

Fitted with optional glare shield; provides cut-off glare control in one plane only; alignable in 90° steps



FLC200

Fitted with optional snoot; provides cut-off glare control in all planes; recommended for downward aiming only

FLC200
FLC200-TW
FLC200-CC

FLC200 PP
FLC200-TW PP
FLC200-CC PP

Mounting Accessories



* Not available for FLC201



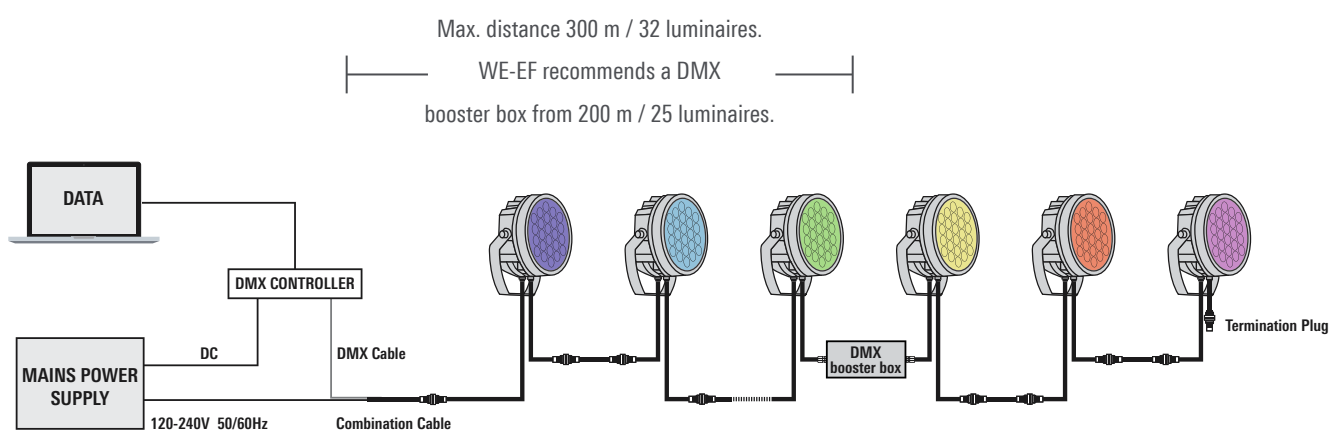
FLC200
Mounted on optional pole clamp; suits diameters of 76 mm to 133 mm

Hardwired DMX

Each FLC200-CC colour changer features a DMX control interface. As standard the FLC200-CC can be supplied with DMX and power cables in varying lengths, please specify when ordering.

Wiring schematic – single layout

The projectors do not need to be opened for installation. Power and data connections are simply made via the junction boxes.



WE-EF can assist with the selection of support equipment for your project.



DMX Controller

The Touch Panel is an intuitive and easy-to-use keypad for one DMX universe.



DMX booster box

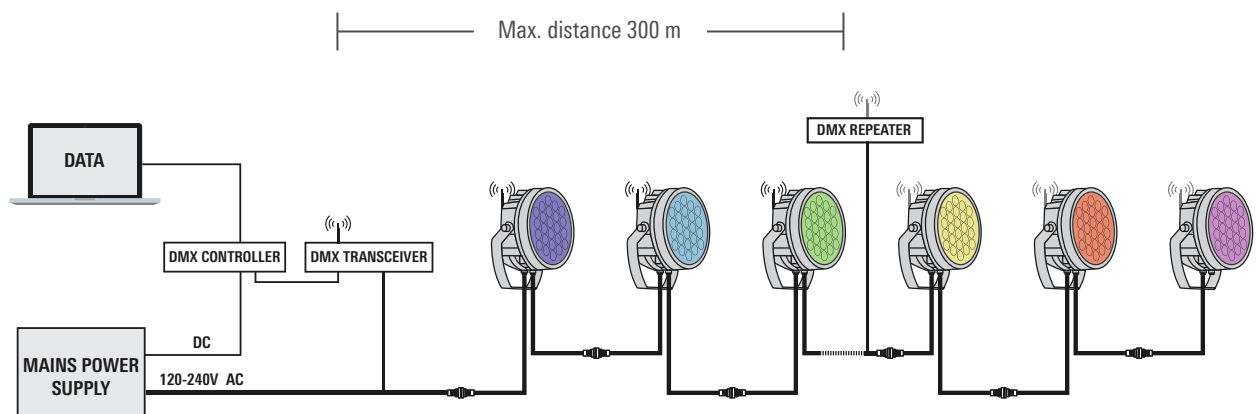
Designed to increase the DMX signal.
(Illustration shows booster without box)

Wireless DMX

Each FLC200-CC colour changer features a DMX control interface. Dedicated FLC200-CC versions for wireless data transmission are available on request. Such a requirement must be specified at the time of ordering.

Wiring schematic

All projectors are equipped with an antenna. Depending on the number, the distance and the local topography, repeaters may have to be used for radio transmission.



WE-EF can assist with the selection of support equipment for your project.



DMX Wireless Antenna



DMX Controller Smart

The (RDM ready) Touch Panel allows for bi-directional data flow for optimal wireless installations.



DMX Transceiver

Wireless transmission of signal up to 300 m



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	The luminaire is factory-sealed and does not need to be opened during installation

CLASS
I

IP66

IK08

Available distributions:
[B] [M] [EE] [EES]

Standard colours:



RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC301

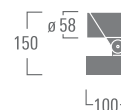
[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311

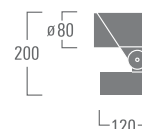
[B] [M] [EE] [EES]

6-9 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321

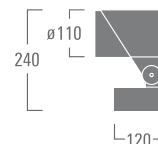
[B] [M] [EE] [EES]

12-18 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331

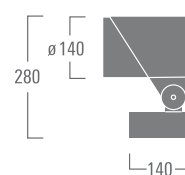
[B] [M] [EE] [EES]

24-36 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341

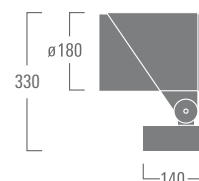
[B] [M] [EE] [EES]

48-72 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_a = 25^\circ\text{C}$
- For accessories, refer to page 203



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: The luminaire is factory-sealed and does not need to be opened during installation

CLASS
I

IP66

IK08

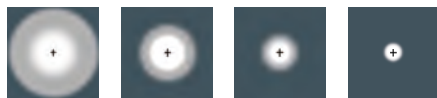
Available distributions:
[B] [M] [EE] [EES]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



FLC301 Wall bracket

[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311 Wall bracket

[B] [M] [EE] [EES]

6 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321 Wall bracket

[B] [M] [EE] [EES]

12 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331 Wall bracket

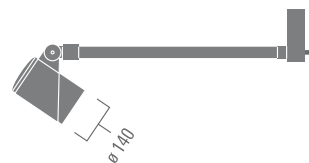
[B] [M] [EE] [EES]

24 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341 Wall bracket

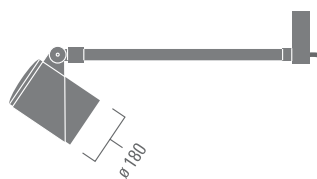
[B] [M] [EE] [EES]

48 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



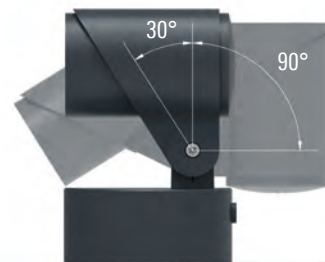
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 203

CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated silicone rubber
- Provides long-term, maintained, high IP ratings

IOS® Innovative Optical System

- In-house CAD design
- Precision manufactured optical system
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- High efficiency within the 50% 'half beam' angle
- Minimum light spillage beyond the 10% 'field' angle

**Vertical aiming****Main lens**

- Safety glass
- 'Flush sealing' helps prevent accumulation of water, dust and debris when aimed vertically upwardst

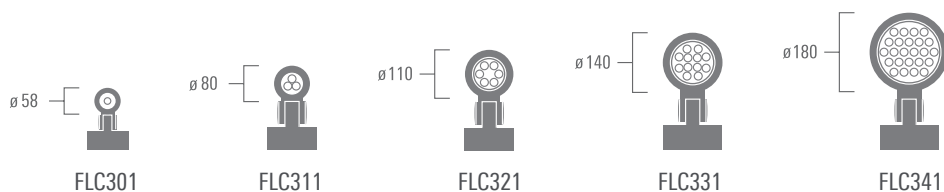
LED circuit board

- High thermal conductivity material

Driver

- Choice for AC mains or 24 VDC power supply
- Integral EC electronic converter

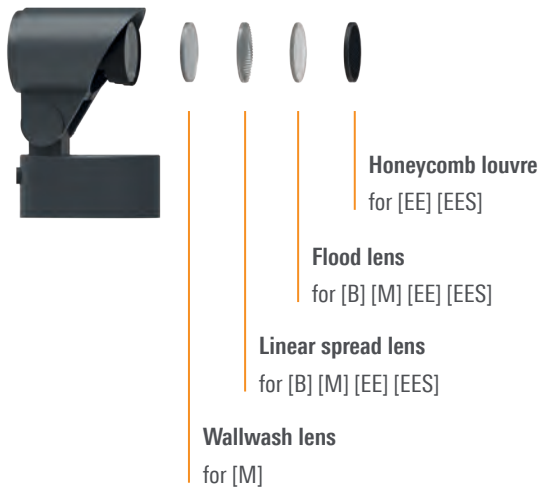
Available in 5 sizes



FLC300

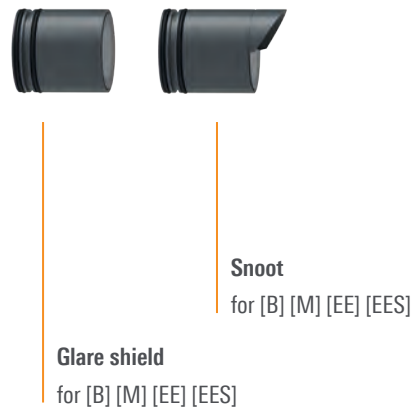
Internal optical accessories

Max. 1 internal accessory



External optical accessories

Max. 1 external accessory



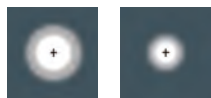
Mounting Accessories





- Luminaire housing: Stainless steel construction
- Corrosion protection: 5CE, including PCS hardware
- Driver:
 - ULC210: Electronic converter required, to be ordered separately
 - ULC230: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Underwater, up to 10 metres. Suitable for continuously submerged applications in all types of pools, including saltwater. The luminaire is factory-sealed and does not need to be opened during the installation. 10 m flexible PVC free cable.
IP68 in-line connector. Installation and operation of these floodlights are subject to national electrical and safety regulations for underwater lighting

ULC210	CLASS III	IP68	IK09
ULC230	CLASS I	IP68	IK10



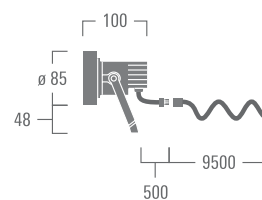
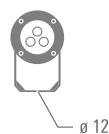
[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

ULC210

[M] [EE]

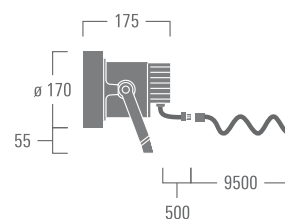
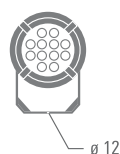
2-3 W
160-310 lm



ULC230

[M] [EE]

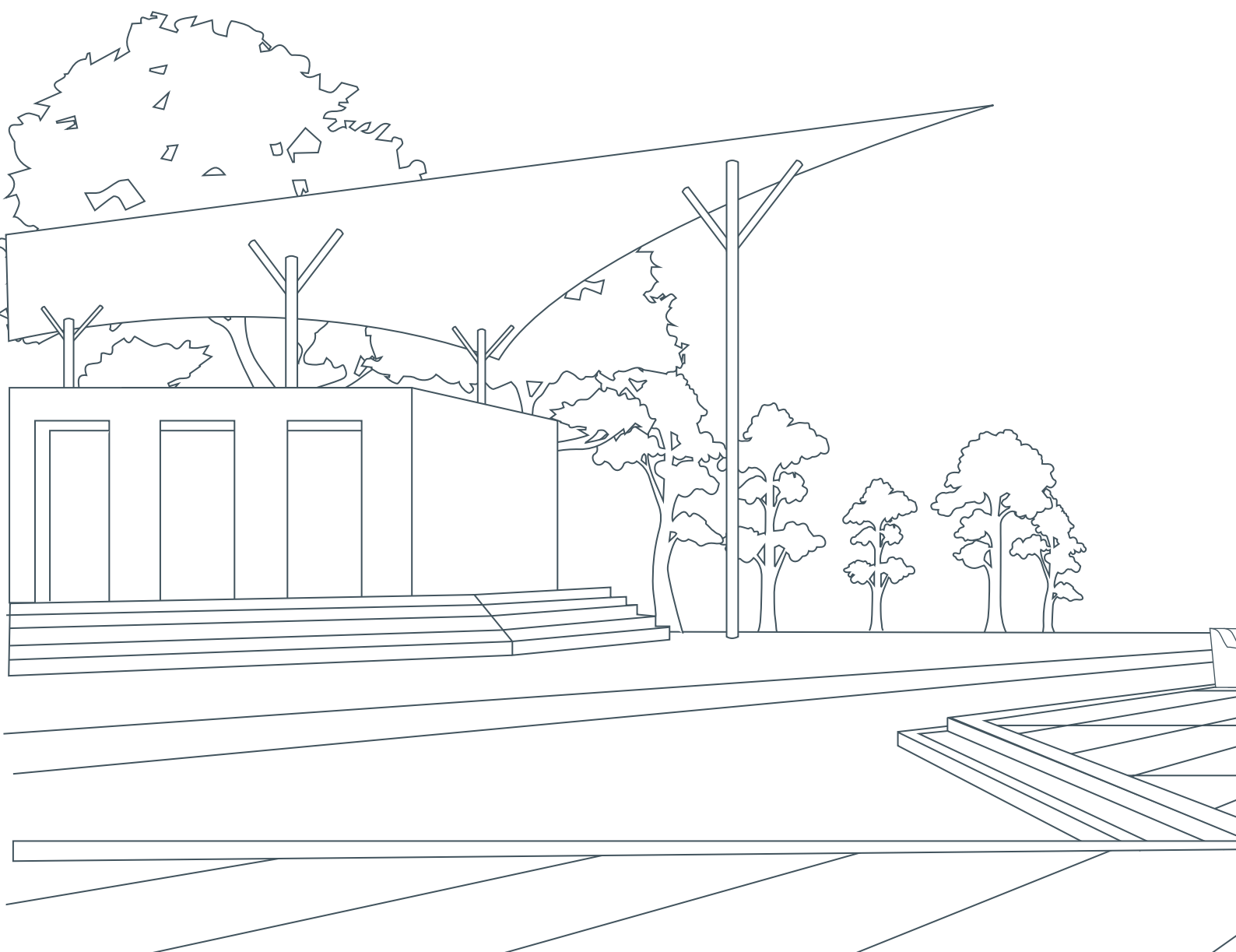
24 W
2450-2540 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

Landscape



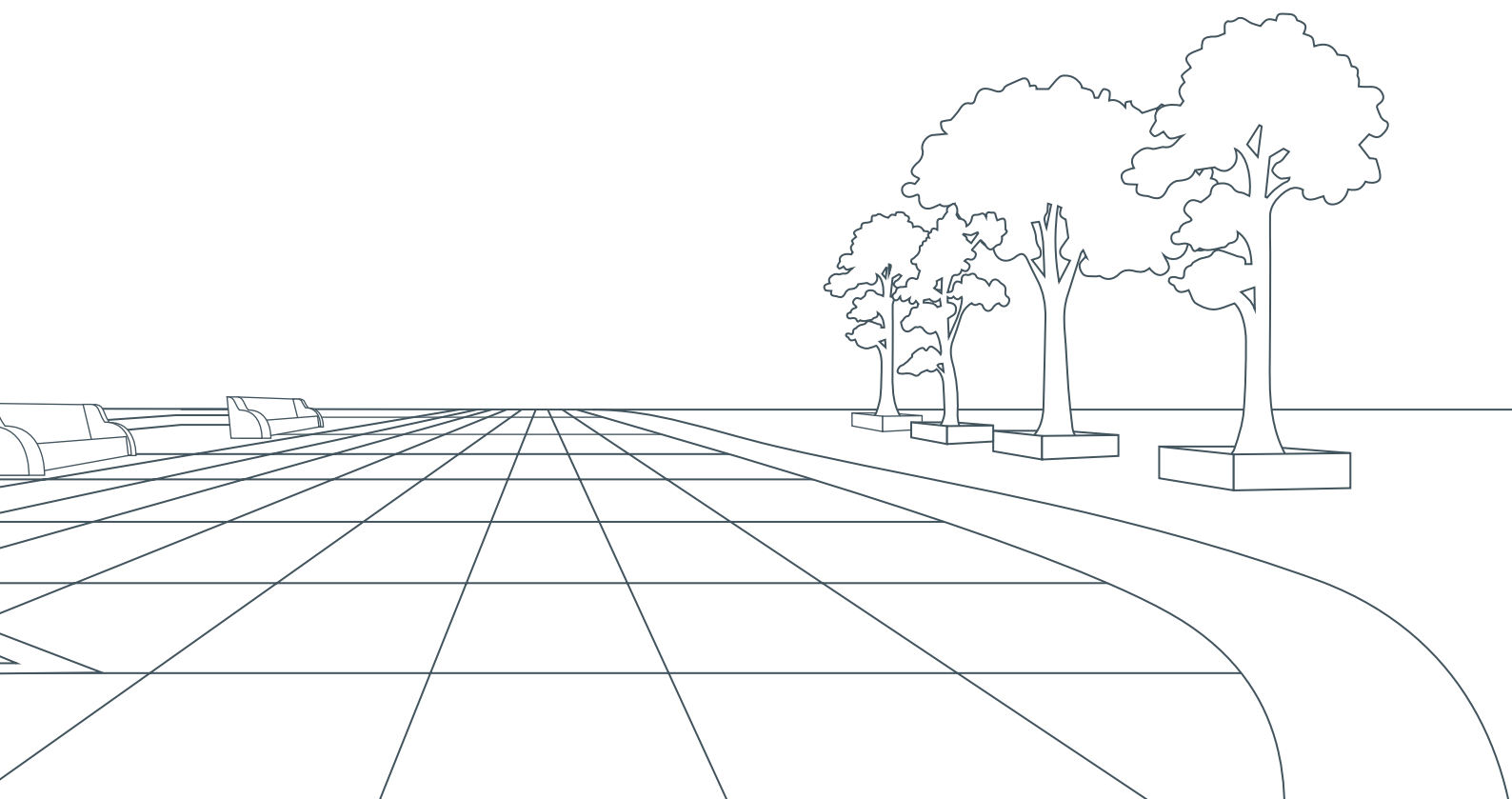
Visual comfort. Orientation. The creation of spaces that make us want to stay. These are the decisive factors when it comes to attractively illuminating open areas, pathways, and walks in parks, gardens or around buildings.

These are the principles that guide us, in our work of designing bollards, pathway luminaires and light columns that ensure nuanced and pleasantly glare-free lighting.

The subtle, clearly proportioned shapes come in a multitude of styles and variations, adding further weight to our argument. After all, these luminaires are also present by day, so they should blend in smoothly with any environment.

After sunset, it's mostly WE-EF's lighting technology that counts, scoring high with the versatility, precision and efficiency of WE-EF lens systems.

Additionally, they remain effective and reliable for not just for one summer, but for many years, thanks to WE-EF's proven 5CE Superior Corrosion Protection System, no matter how bad the weather or how rough the conditions.



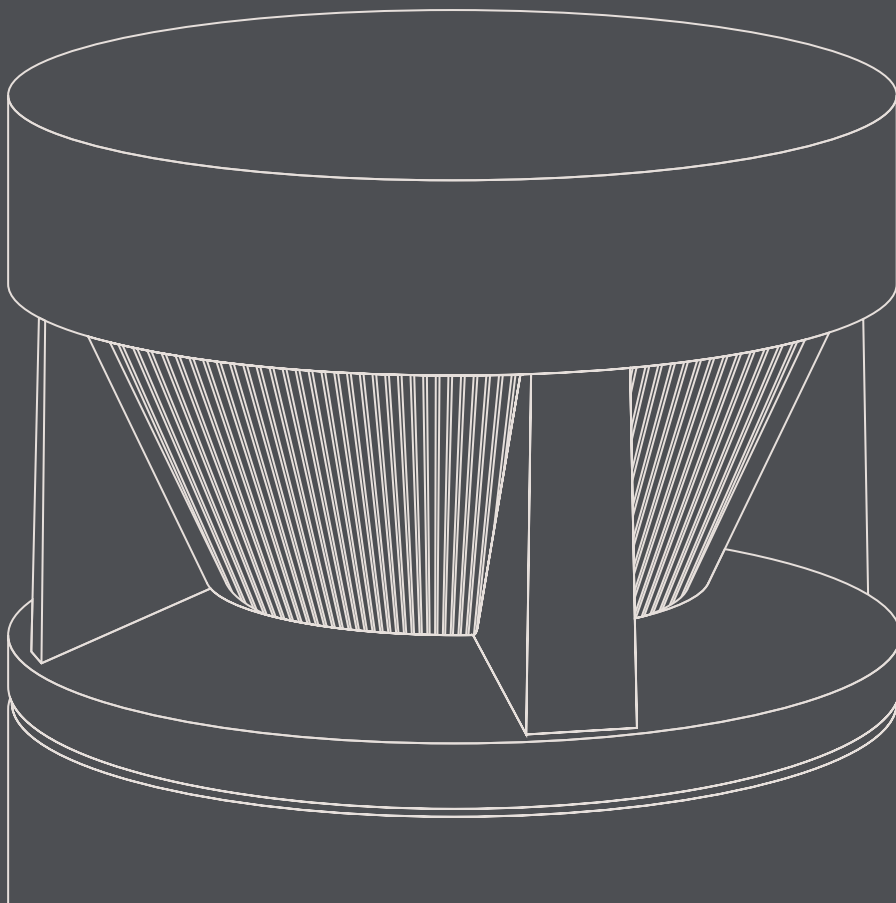


When it comes to creating an atmosphere in exterior areas, bollards and pathway luminaires by WE-EF are always a good choice.

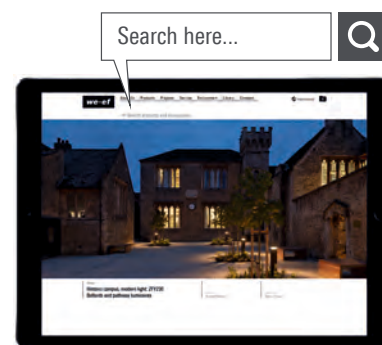
Whether single or in rows, their effective light and attractive shape guarantees a convincing impact. Bollards and pathway luminaires by WE-EF come in a wide variety of shapes and sizes. Well-proportioned and based on a range of clear fundamental geometries, they blend harmoniously with almost any environment. As great aids for ensuring good orientation and secure navigation, they illuminate public parks, paths and squares as well as hotels and housing estates, driveways and private gardens.

In the evening hours, their light makes a significant contribution to creating spaces where people like to spend their time – inviting, pleasant and with just the right amount of brightness. With a wide range of light distributions to choose from, they offer glare-free light for high visual comfort. Many even meet the "Dark Sky" criteria. Due to their efficient lighting technology, the luminaires can be spaced with large intervals without impairing the effect and homogeneity of the light. Furthermore, WE-EF's very own 5CE Superior Corrosion Protection ensures a reliable and durable performance by the luminaires even under the harshest conditions, e.g., in the vicinity of seawater.

Bollards and pathway luminaires



CFY200	212
CTY100	214
KTY200	216
MRY200	220
ZFY200	222
XRX300 / XRY300	226
PSY400	228



Bollards and pathway luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

King's Bruton Boarding School

Historic Campus. Modern Light





Even after more than 500 years, this boarding school in the county of Somerset has managed to keep its finger on the pulse of time, and it shows. The venerable school complex with its meticulously restored historical buildings, atmospheric open spaces and scenic paths is illuminated efficiently and glare control with ZFY230 bollard luminaires by WE-EF. Their unpretentious cylindrical shape is a perfect fit with the campus' harmonious blend of modern and historical elements.

King's Bruton Boarding School

Somerset, Bruton (UK)

Architect: Levitt Bernstein



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Satinised safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Pre-wired post complete with cable connecting box and fuse for mains connection
Control:	Optional DALI version available. To be specified at time of ordering

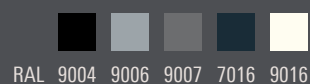
CLASS
I

IP66

IK10

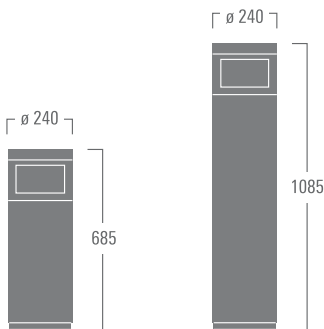
Available distribution:
'Forward throw'

Standard colours:



RAL 9004 9006 9007 7016 9016

CFY259



One-sided 'Forward throw'	Two-sided 'Forward throw'
12-18 W 350-500 lm	24-36 W 690-990 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	Pre-wired post complete with cable connecting box and service door for mains connection
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I






IP55

IK10

Valentine Place London
London (UK)
Owner: Crest Nicholson
Lighting design: Couch Perry Wilkes

Available distribution:
[C60]

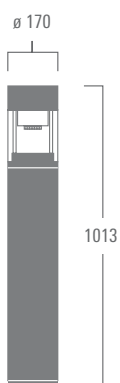
Standard colours:






 RAL 9004 9006 9007 7016 9016



[C60] Symmetric

CTY150



[C60]

17-24 W
1660-2280 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Pre-wired post complete with cable connecting box and fuse for mains connection
Control:	Optional DALI version available. To be specified at time of ordering






CLASS
I

IP66

IK10

Available distributions:
[C60] [R65]

Standard colours:

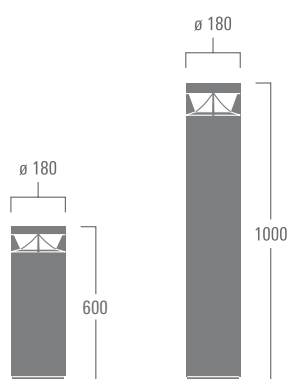





 RAL 9004 9006 9007 7016 9016



[C60] Symmetric

[R65] Rectangular 'side throw'

KTY234



[C60] [R65]

9-26 W

470-960 lm

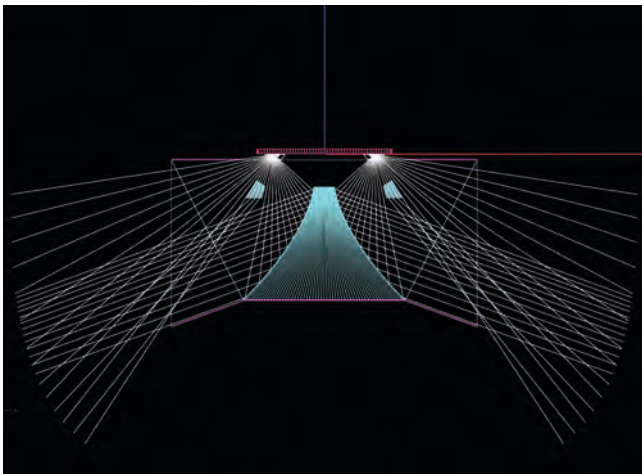
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^{\circ}\text{C}$
- For accessories, refer to www.we-ef.com

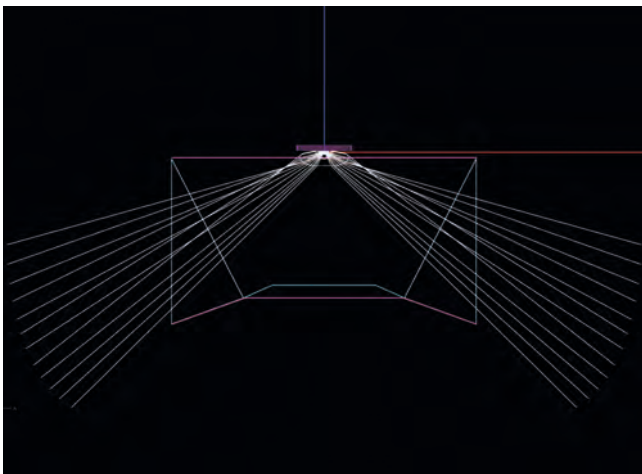
All-round Bollards for Controlled Horizontal and Vertical Illumination

The [C60] symmetric distribution is the highly efficient result of a specifically designed reflector-lens combination. While the '60' refers to the nominal angle of peak intensity from nadir (downward vertical), highly uniform illuminance is achieved at ground level. The [R65] rectangular distribution combines controlled 'forward' with broad 'side throw', allowing for large spacing intervals between luminaires. In addition, a controlled amount of vertical illuminance facilitates facial recognition and similar viewing tasks in an otherwise dark environment, such as public parks etc.



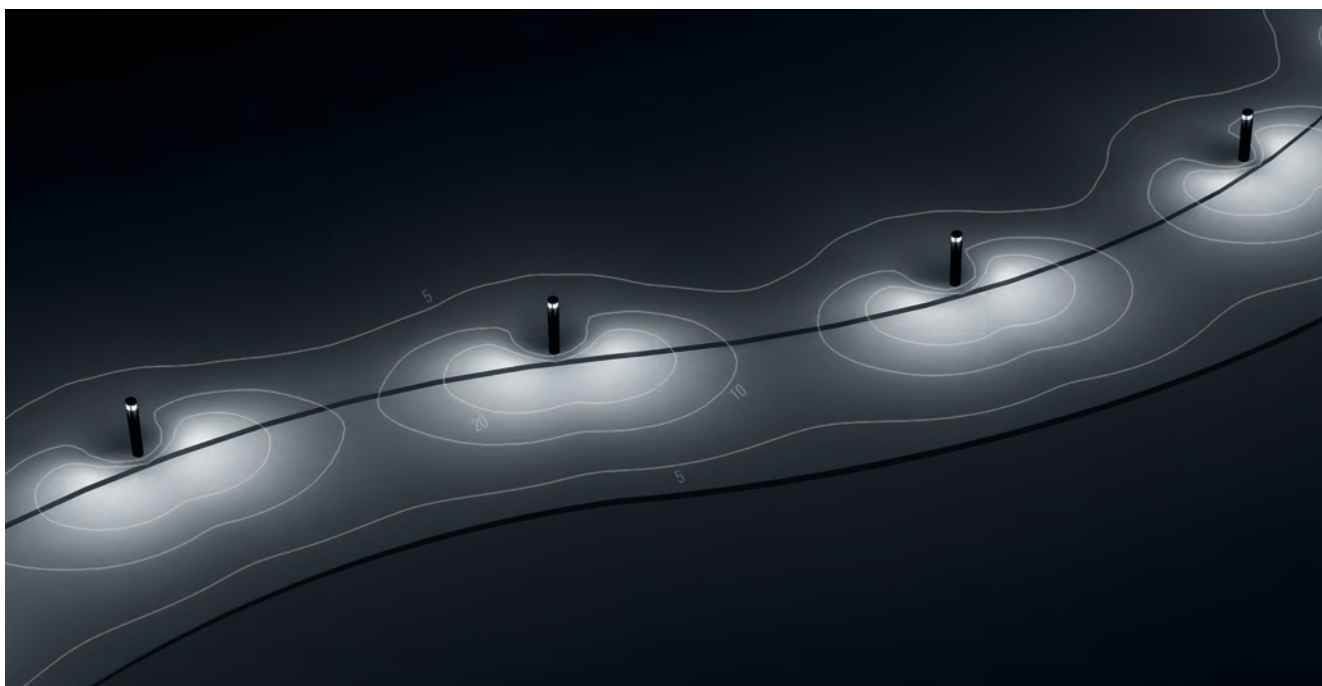
KTY200 series – Ray-tracing

This CAD ray-tracing simulation of the [C60] lens demonstrates the controlled downward light distribution. The refractor lens simultaneously reduces surface brightness and provides a limited vertical illuminance component – facilitating facial recognition



KTY200 series – Ray-tracing

An array of highly effective [R65] optical lenses delivers uniform pathway lighting. The 'eyebrow' prisms restrict high-angle glare – ensuring high visual comfort.



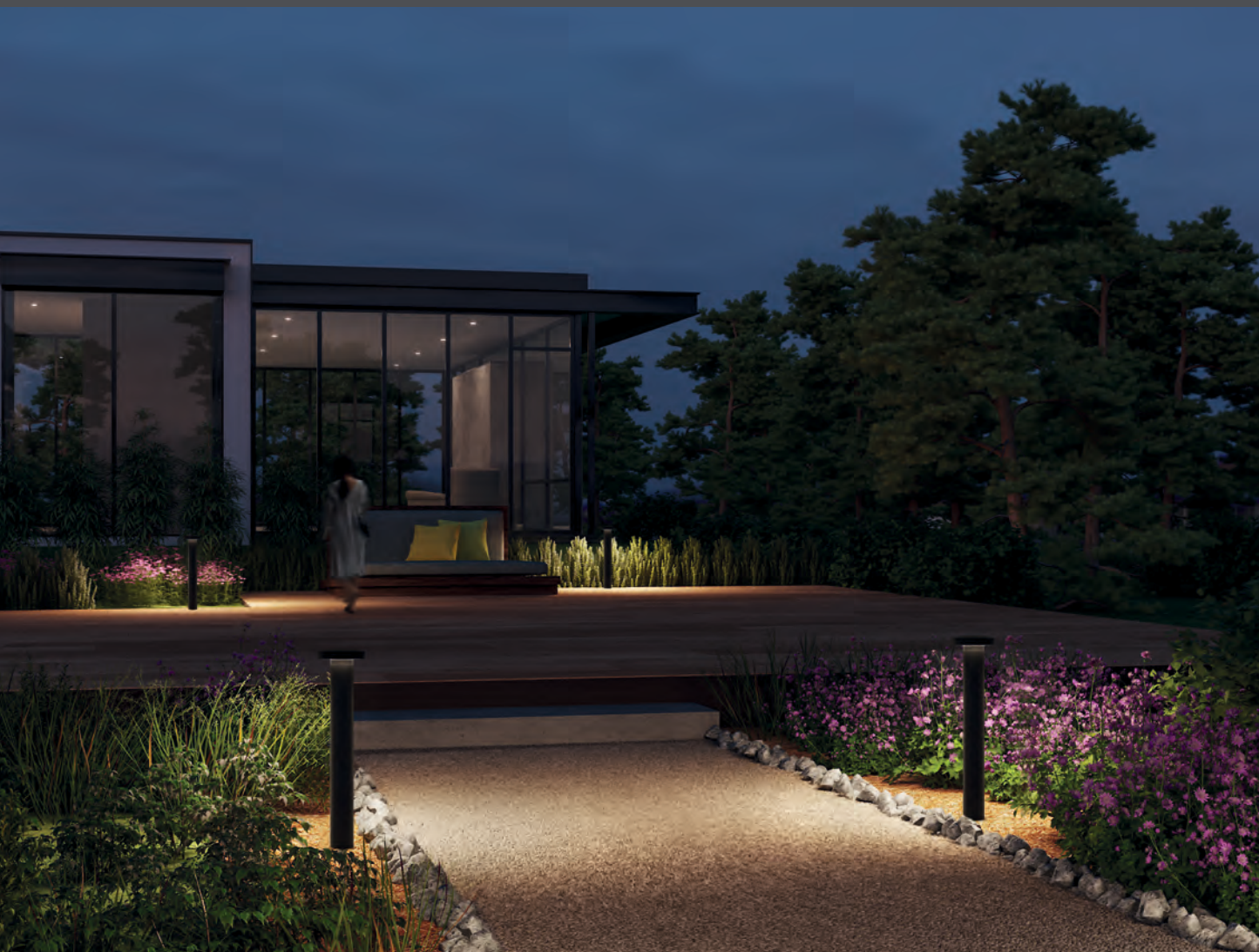
KTY234 [R65] Rectangular 'Side throw'



KTY234 [R65] without...



...and with 180° cut-off shield.



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Luminaire is factory-sealed and does not need to be opened during installation

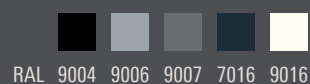
CLASS
I

IP67

IK10

Available distribution:
[C70]

Standard colours:

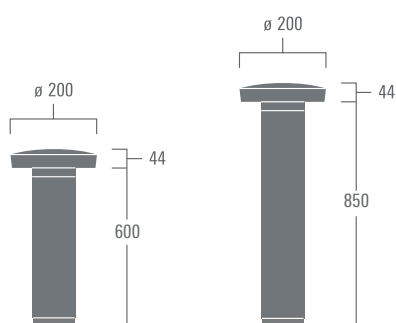


RAL 9004 9006 9007 7016 9016



[C70] Symmetric

MRV224



[C70]

11-15 W
840-1110 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	Pre-wired post complete with cable connecting box and fuse for mains connection
Control:	Optional DALI version available. To be specified at time of ordering

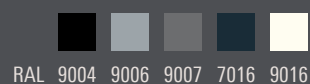
CLASS
I

IP66

IK10

Available distribution:
[C60]

Standard colours:

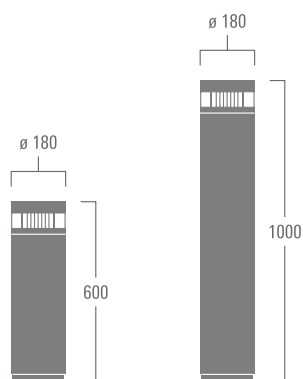


RAL 9004 9006 9007 7016 9016



[C60] Symmetric

ZFY230



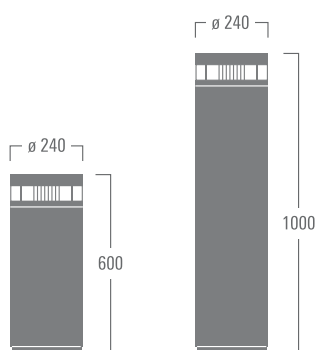
[C60]

12-17 W

760-1140 lm

Max. 1 internal accessory

ZFY250



[C60]

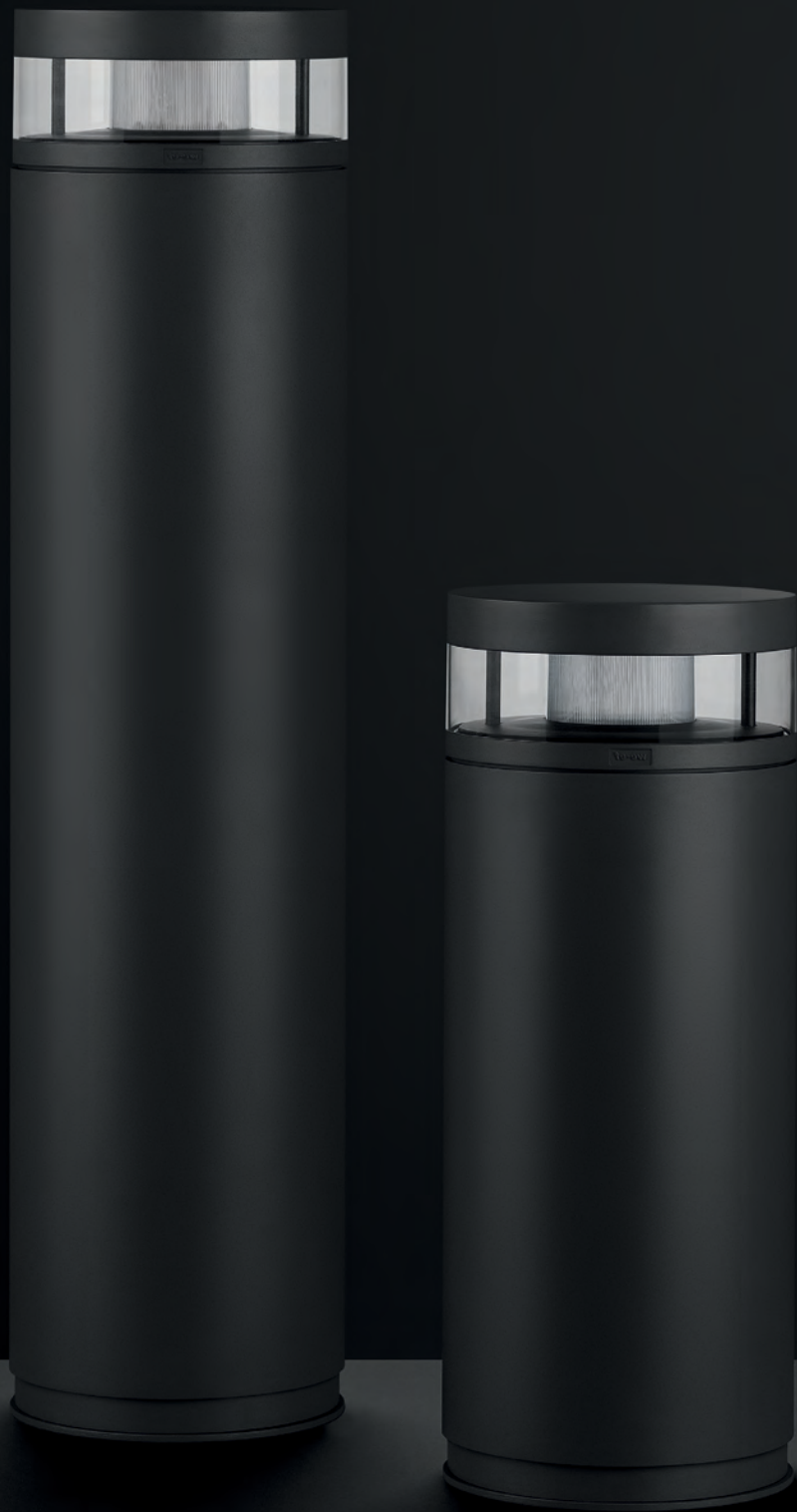
17-24 W

760-1040 lm

Max. 1 internal accessory

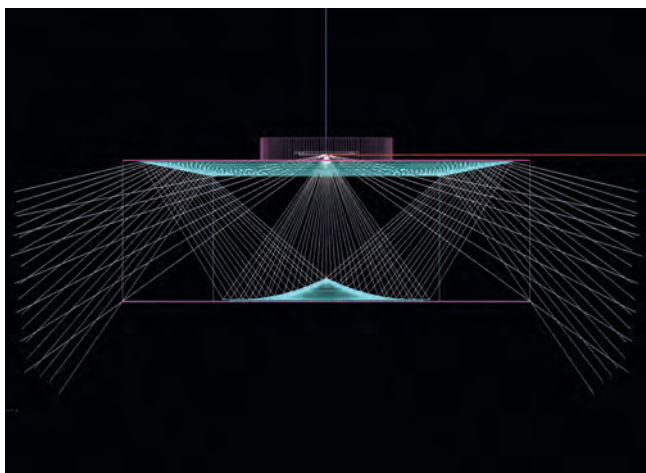


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



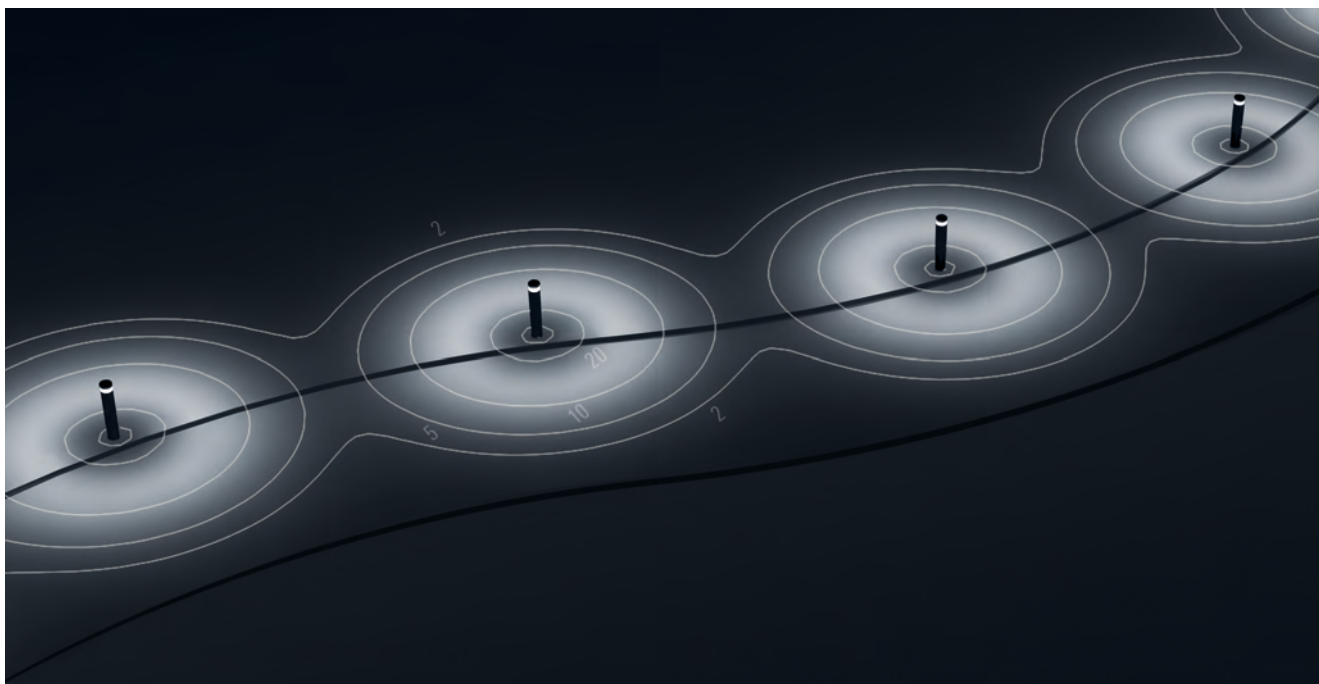
Optical systems for controlled horizontal and vertical lighting

The symmetrical [C60] light distribution consists of a reflector-lens combination that emits the maximum light intensity below 60°. This creates an even and well-defined illuminance distribution near the ground.



ZFY200 series – Ray-tracing

The luminaire's reflector elements produce a controlled downward distribution. An additional refractor lens reduces surface brightness while creating a limited amount of vertical illuminance – all contributing factors to ensuring high visual comfort, facial recognition and public safety.



ZFY230 [C60] Symmetric



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	XRX324 / XRY324: Polycarbonate, UV-stabilised XRX324 / XRY334: Borosilicate glass
Gasketing:	Silicone rubber gasket
Installation:	XRY300 – Pre-wired post complete with cable connecting box and service door for mains connection
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP55

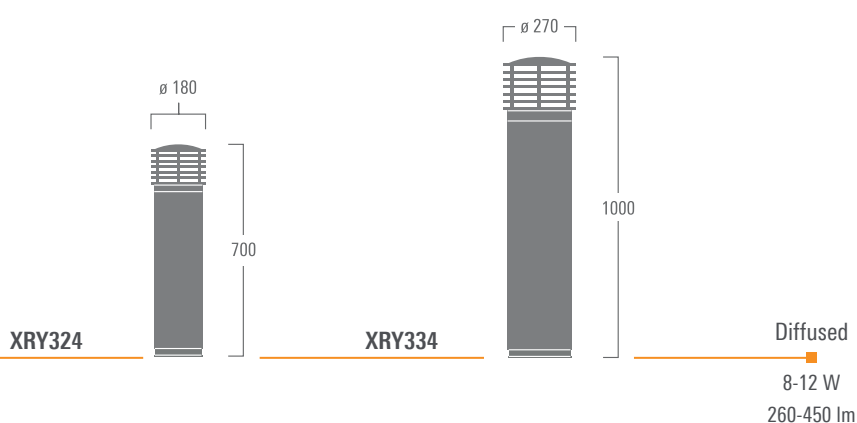
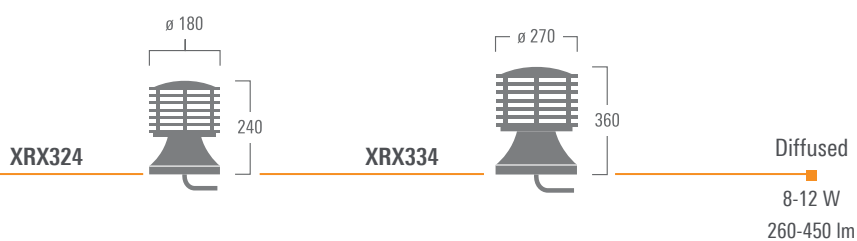
IK10

Available distribution:
Diffused

Standard colours:



RAL 9004 9006 9007 7016 9016



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction Pole section features galvanised steel reinforcement core
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	RFC® Reflection Free Contour
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Pre-wired post complete with cable connecting box and fuse for mains connection
Control:	Optional DALI version available. To be specified at time of ordering






CLASS
I

IP66

IK10

Available distributions:
[R45] [S70] [A60] [R65]

Standard colours:

RAL 9004 9006 9007 7016 9016

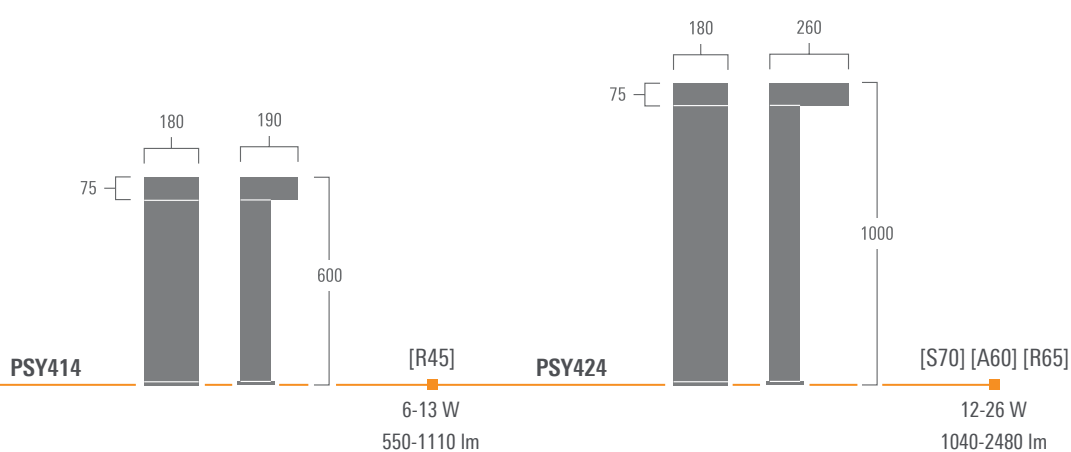


[R45] Rectangular 'forward throw'

[S70] Asymmetric 'side throw'

[A60] Asymmetric 'forward throw'

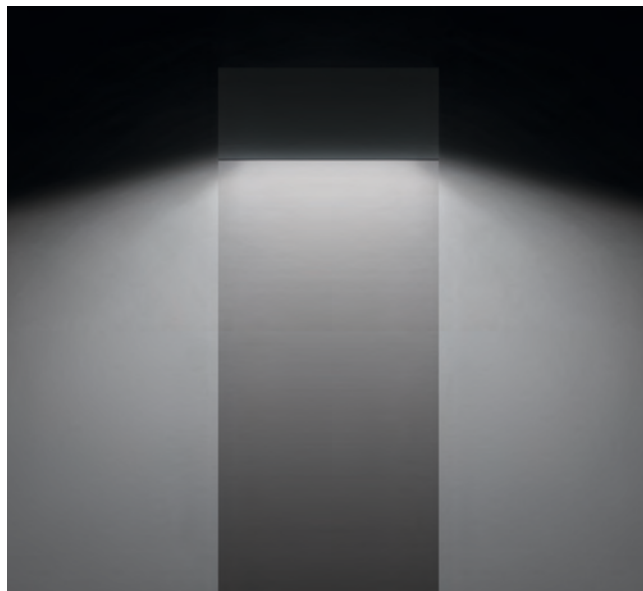
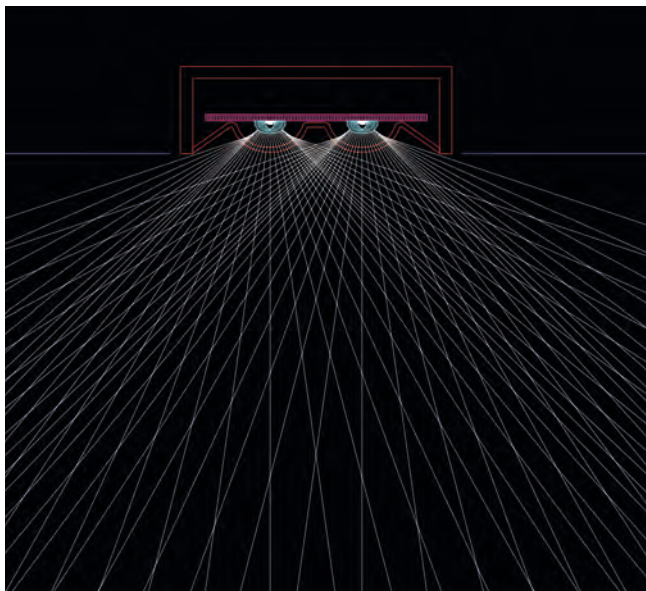
[R65] Rectangular 'side throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

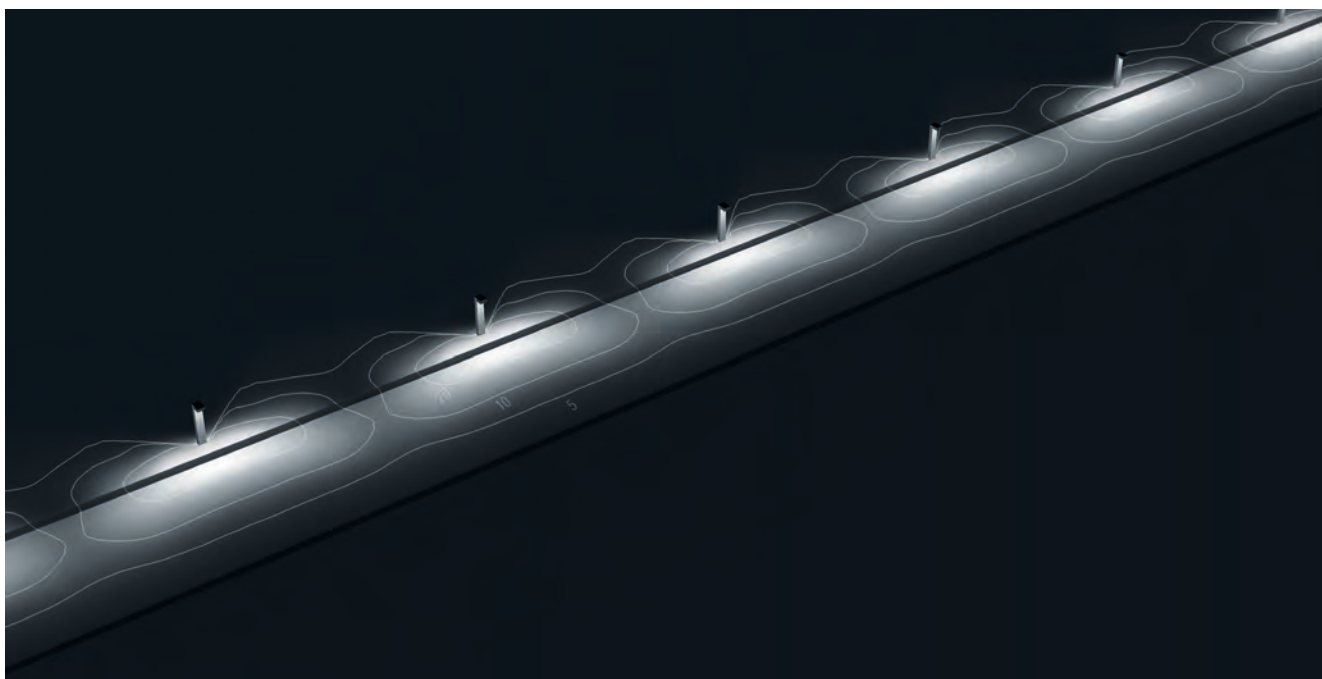
Bright Walks, Dark Skies

WE-EF's versatile, high-performance street and area lighting optics – customised for bollards of 0.6 to 1.0 metre height – deliver first-class illumination for narrow driveways, landscapes, pathways etc. With four different light distributions to choose from – [R45] [S70] [A60] [R65] – a large variety of lighting challenges can be addressed and mastered. At the same time, 100 per cent horizontal cut-off addresses dark sky concerns and safeguards high visual comfort.

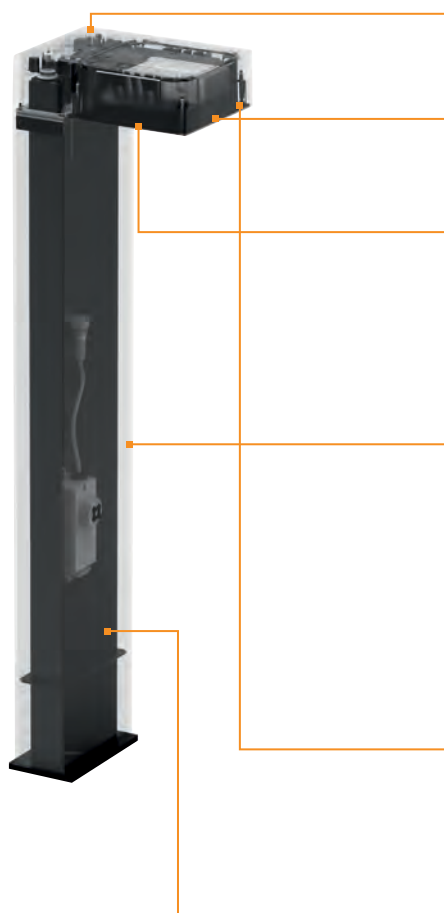


PSY400 series – Ray-tracing

This CAD ray-tracing simulation demonstrates the [R65] optics' broad downward light distribution as well as its glare control qualities. The combined 'side throw' and 'forward throw' of light delivers uniform coverage for large areas.



PSY424 [S70] Asymmetric 'Side throw'



Factory-sealed

Luminaire does not need to be opened during installation



IOS® innovative Optical System

Dark sky compliant



RFC® Main Lens

Reflection Free Contour delivers high light transmission



5CE Superior Corrosion Protection

Five Critical Elements provide outstanding and long-lasting anti-corrosion properties

- Substrate – marine-grade aluminium alloy
- Conversion coating – multi-step pre-treatment
- Powder coating – UV stabilised, architectural grade coating
- PCS hardware – refer to detail below
- Process Control – tightly controlled process and quality checks, up to 3,000-hour salt spray tests



PCS Hardware

- Austenitic stainless steel
- Tough, impregnated polymer coating
- Non-metallic barrier, protects against galvanic corrosion

Anti-vandalism Reinforcement

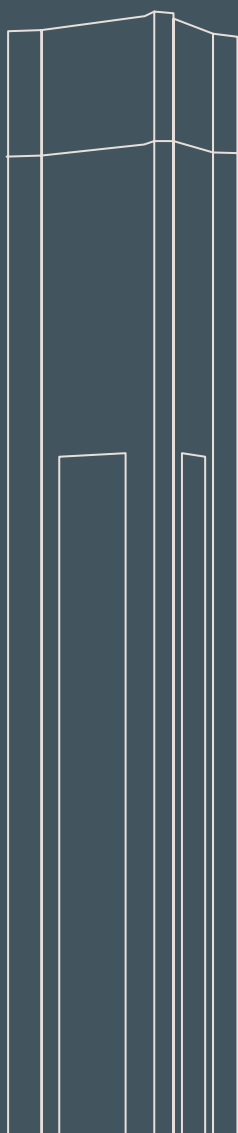
Core structure and surface-mounting flange plate made from hot-dipped galvanised steel



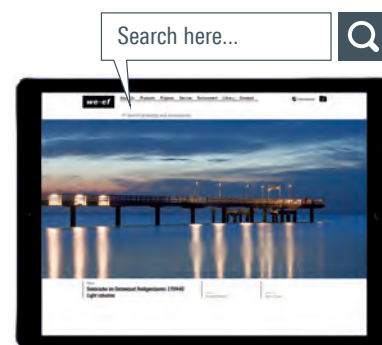
By day, WE-EF's light columns excel at structuring spaces. At night, the power of their purist design joins forces with the functional and atmospheric effect of their light.

WE-EF light columns offer a wide variety of beam characteristics, from symmetrical and asymmetrical to diffused light distributions.

Light columns



LTP400	236
LTM400	238



Light columns

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Pier

Heiligendamm

A Bridge Marked by Light

The lighting concept for Heiligendamm's Baltic seaside pier involves linear WE-EF luminaires integrated into the railing as well as LTM440 light columns, modified for the special requirements of the project. The variation used here applies a ribbon-shaped lens to direct the light onto the pier and reduce stray light on the water surface. Furthermore, WE-EF overcomes the typical weathering and aggressive climate encountered by the sea with its five-stage 5CE Superior Corrosion Protection.

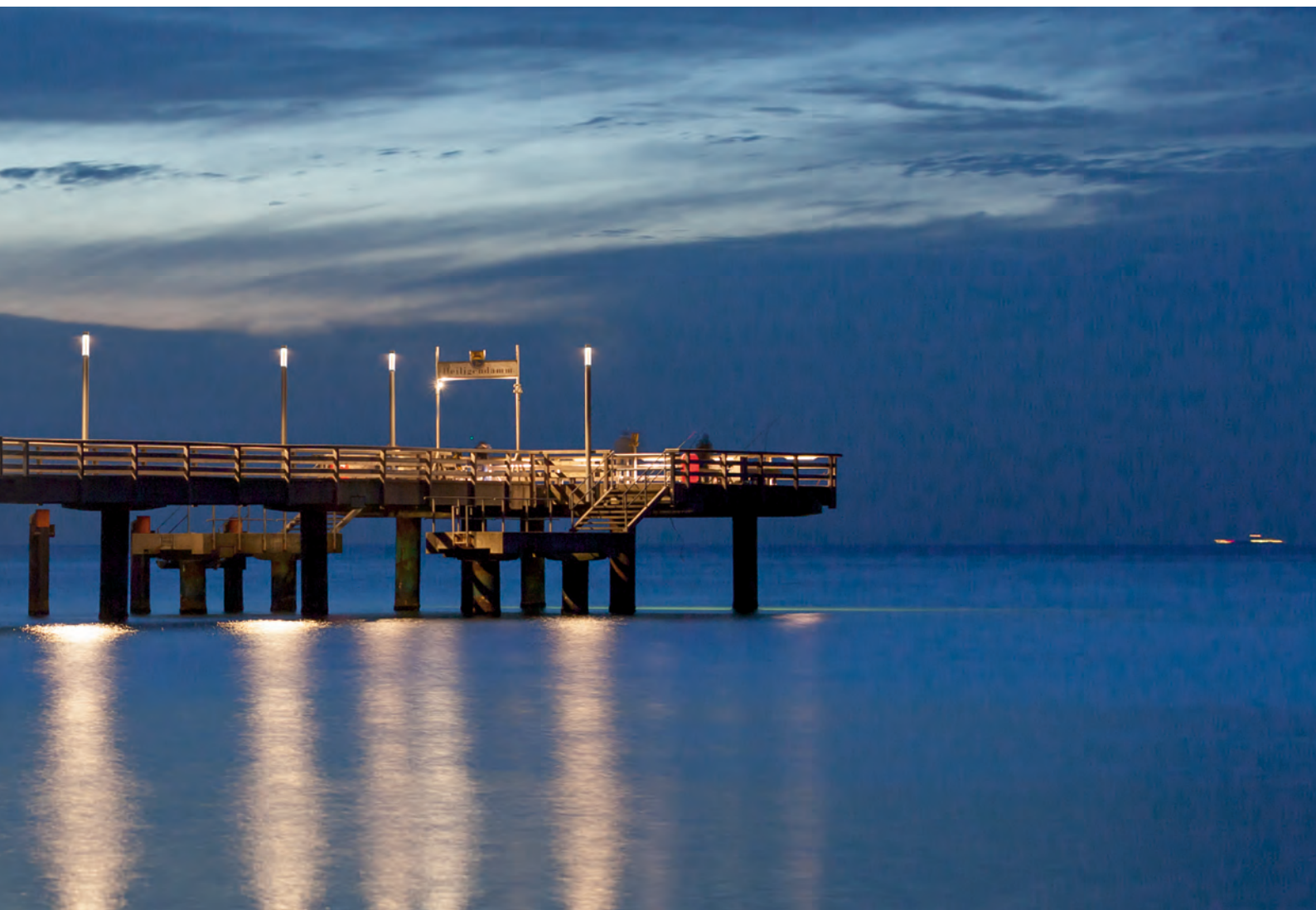


The Pier

Heiligendamm (DE)

Lighting design: Institut für Gebäude + Energie + Licht Planung

Prof. Dr.-Ing. Thomas Römhild, Wismar





- Luminaire housing: Marine-grade, all-aluminium construction
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Prismatic polycarbonate, UV-stabilised 3 x 120° offset
- Gasketing: Silicone rubber gaskets
- Optics: CAD-optimised for superior illumination and glare control
- Mains connection: Service door with fused cable connecting box
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I

IP44

IK10

Eli and Edythe Broad Art Museum
Michigan State University, East Lansing (US)
Architect: Zaha Hadid Architects
Lighting design: ARUP & Peter Basso

Available distribution:
Diffused

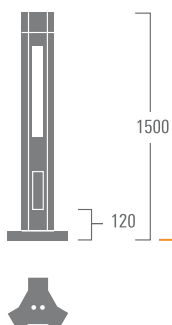
Standard colours:



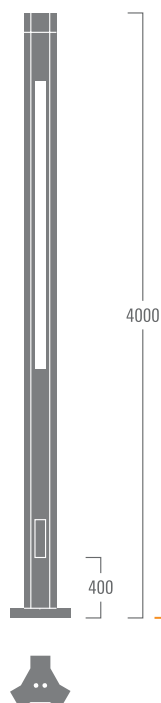



 RAL 9004 9006 9007 7016 9016

LTP434-FT



LTP444-FT



Diffused
37 W
2550 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



- Luminaire housing: Marine-grade, all-aluminium construction
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: LTM440-FT: Polycarbonate, UV-stabilised
LTM444: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
- Mains connection: Service door with fused cable connecting box
- Control: Optional DALI version available. To be specified at time of ordering

LTM440-FT

CLASS
I

IP66

IK10

LTM444

CLASS
I

IP66

IK09

Pfarrzentrum St. Nikolaus
Garching an der Alz (DE)
Architect: Kunze + Seeholzer
Landscape architect: Fischer + Heumann

Available distributions:
[C50] [C60] [S65] [R65]

Standard colours:

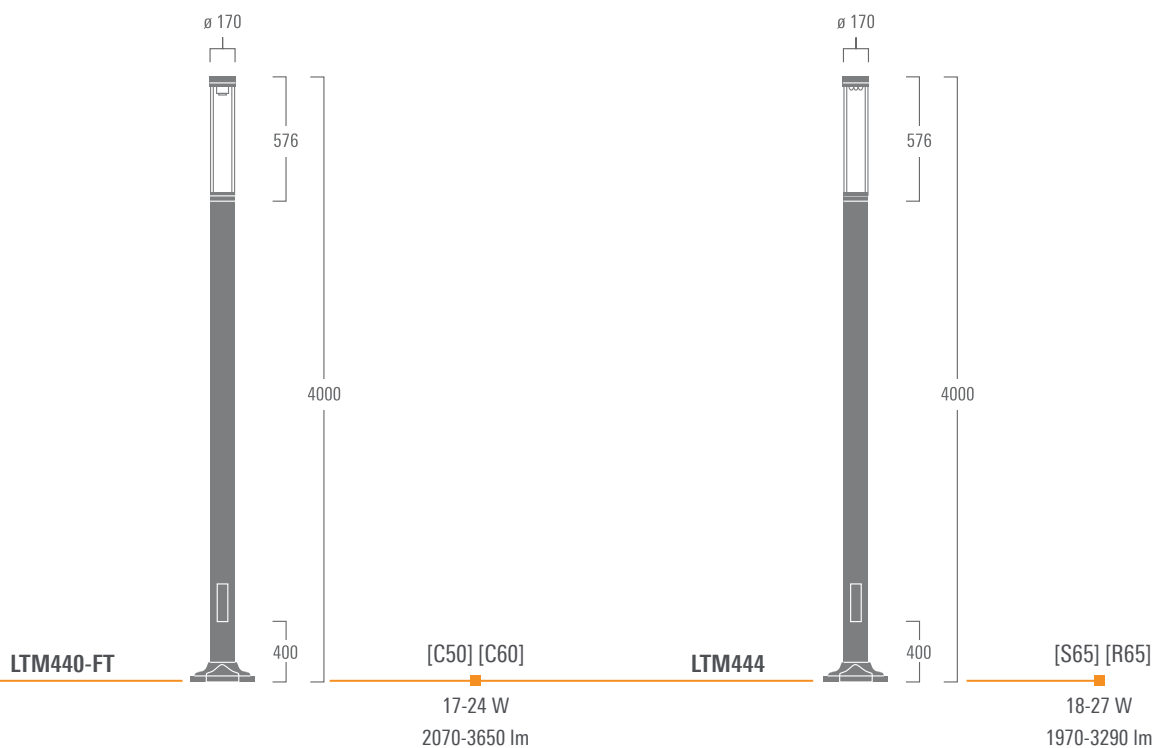
RAL 9004 9006 9007 7016 9016



[C50] Symmetric, controlled
[C60] Symmetric
[S65] Streetlighting
[R65] Rectangular 'side throw'



[C50] [C60] [S65] [R65]



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



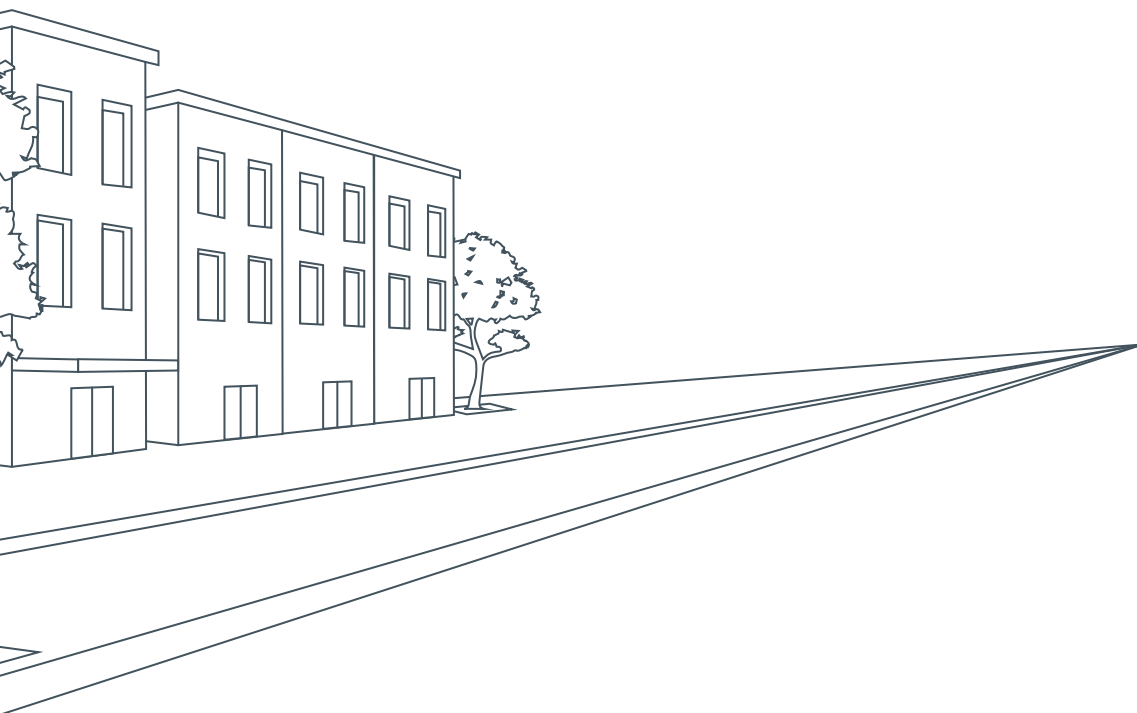
City

Safety and sustainability are imperative when lighting public streets and areas.

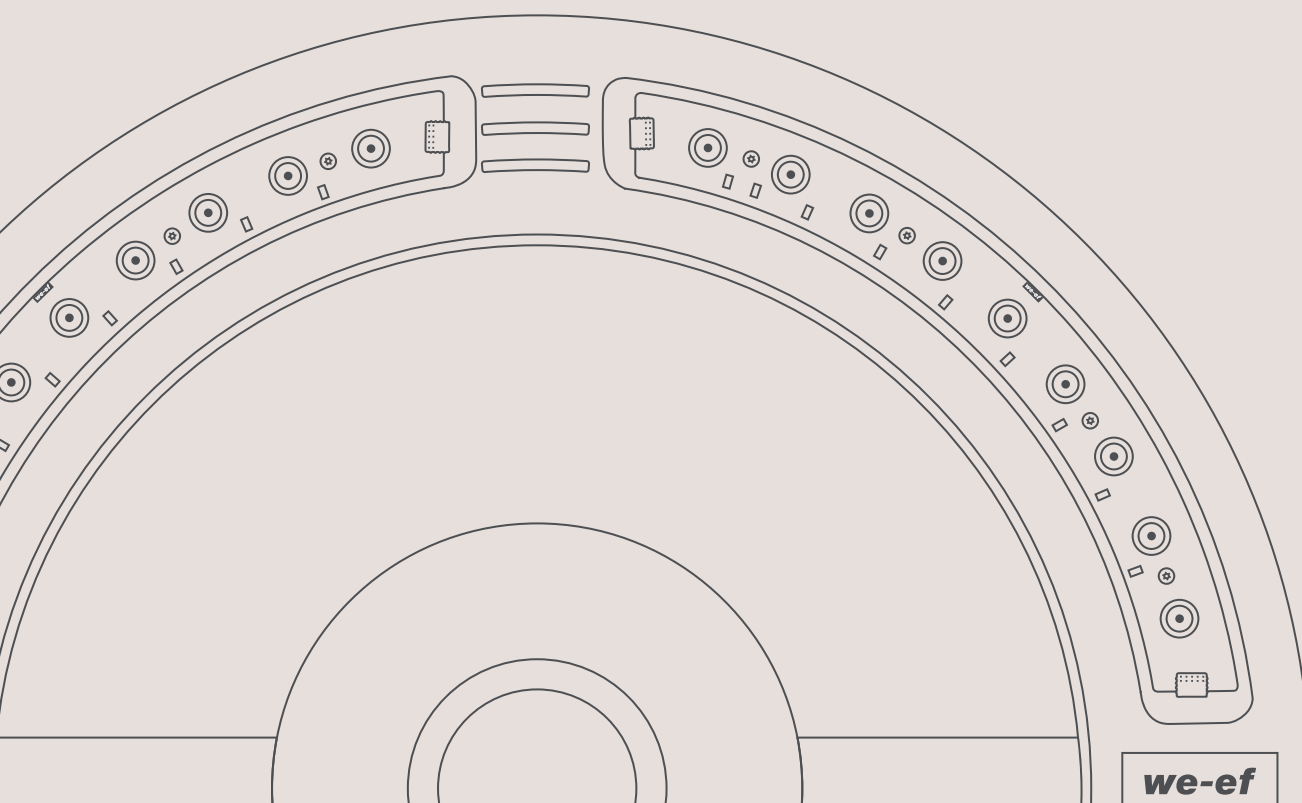
With IOS® Innovative Optical System, state-of-the-art controls and high-quality design, WE-EF luminaires open up new freedoms for creative planners and architects.

Municipal master plans for lighting and sustainability concepts are increasingly shifting the focus to night-time lighting of public streets and areas. After all, this promising field offers the double opportunity to not only save substantial amounts of energy and thus protect the climate, but also to change the cityscape in many positive ways.

With IOS® Innovative Optical System, state-of-the-art controls and high-quality design, WE-EF luminaires open up new opportunities for creative planners and architects. With modern and classic designs that integrate seamlessly with a wide variety of environments, WE-EF luminaires help to create urban areas with exceptional quality of life, where people enjoy their stay by day and by night. Needless to say, longevity and economy go hand-in-hand.



Catenary mounted luminaires

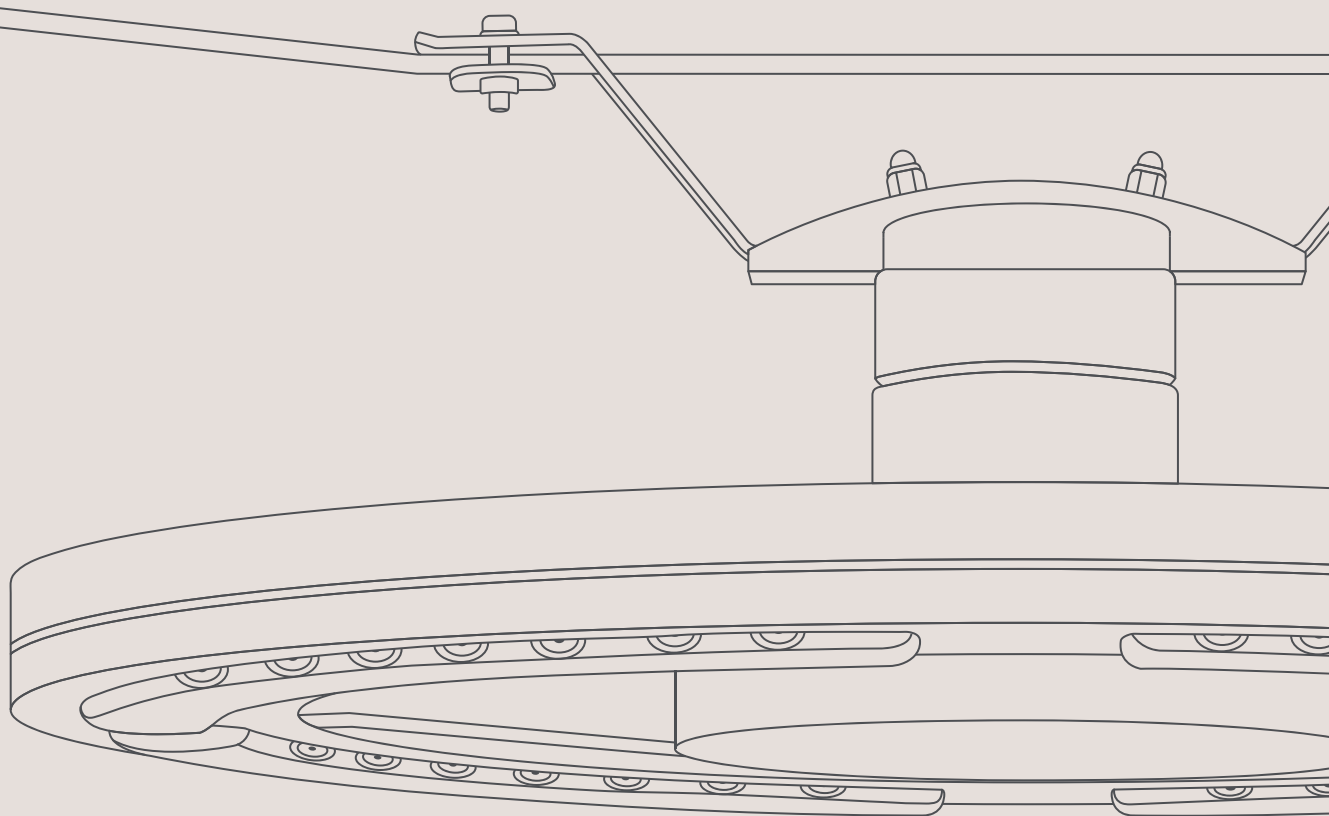


In historical and contemporary cityscapes, catenary luminaires have proven their potential as problem solvers. Mounted on suspension cables, they not only provide lighting, but also play a part in shaping their environment.

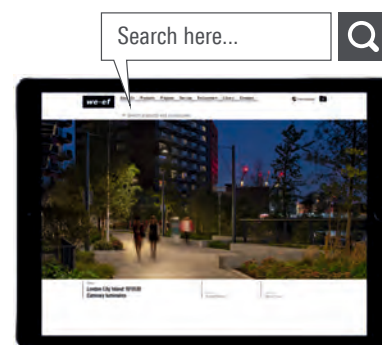
Catenary mounted luminaires allow for central installation above streets, paths, alleys or even squares – in many cases, the optimum lighting position.

In design language as well as in terms of housing quality and available light distributions, WE-EF catenary mounted luminaires are closely based on their respective sister models from the WE-EF pole mounted series.

This allows for the implementation of holistic urban lighting concepts with consistent design features, even in areas such as confined, narrow alleys and labyrinth-style areas with many corners.



ZFS400	246
RFS500	248
CFS500	250
DAS100	252



Catenary mounted luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



London City Island
London (UK)
Lighting design: Zoe Faulkner
of Troup Bywaters + Anders



London City Island

Exclusive Location. Excellent Light

London City Island is a new, car-free quarter created in the loop of the River Lee, right before it flows into the Thames. The new home of the English National Ballet, the city island features many green areas and apartment high-rises. To give the area an attractive and safe feel even after dark, the planners decided to install WE-EF's elegantly shaped RFS500 catenary mounted luminaires as well as matching RFL500 pole mounted luminaires along the island's footpaths and promenades.



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Driver: Integral EC electronic converter
- Corrosion protection: 5CE, including PCS hardware
- Main lens: Polycarbonate, UV-stabilised
- Gasket: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
- Installation: Luminaire is factory-sealed and does not need to be opened during installation.
Includes cable connector, for cable 9-14 mm
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK07

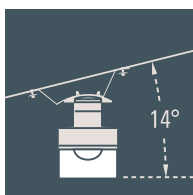
Available distribution:
[C50]

Standard colours:



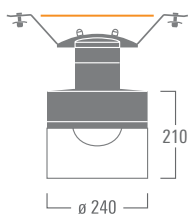


[C50] Symmetric, controlled



+/- 14° levelling bracket

ZFS460



[C50]

24-37 W
3440-5670 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Driver:** Integral EC electronic converter
- Corrosion protection:** 5CE, including PCS hardware
- Main lens:** Non-reflecting safety glass lens, hinged
- Gasket:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** Luminaire is factory-sealed and does not need to be opened during installation.
Includes cable connector, for cable 6-12 mm
- Control:** Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK07

Gare TGV

Belfort-Montbéliard (FR)

Lighting design: Le Point Lumineux

Available distributions:

[S60] [S65] [S70]

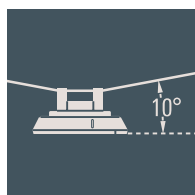
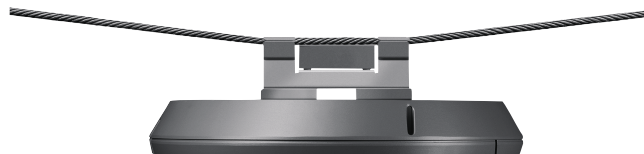
Standard colours:



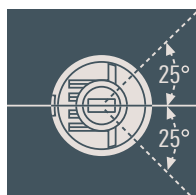
RAL 9004 9006 9007 7016 9016



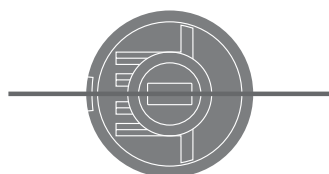
[S60] [S65] [S70] Streetlighting



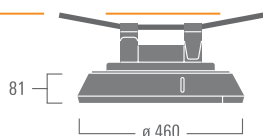
+/- 10° levelling bracket



+/- 25° rotatable



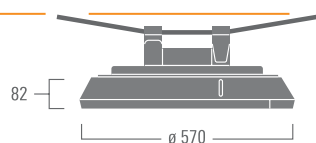
RFS530



[S60] [S65] [S70]

12-48 W
1400-5160 lm

RFS540



[S60] [S65] [S70]

36-96 W
4210-10310 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Driver:	Integral EC electronic converter
Corrosion protection:	5CE, including PCS hardware
Main lens:	PMMA. RFC® Reflection Free Contour main lens
Gasket:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Luminaire is factory-sealed and does not need to be opened during installation. Includes cable connector, for cable 9-14 mm
Control:	Optional WE-EF Eco Step Dim® version available; refer to page 352. Optional P2C Prepare to Connect / R2C Ready to Connect version available; refer to page 358



CLASS
I

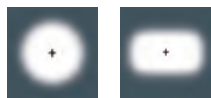
IP66

IK08

Available distributions:
[C50] [R]

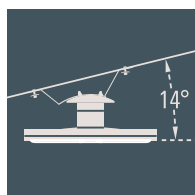
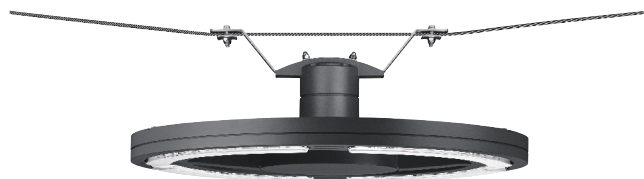
Standard colours:



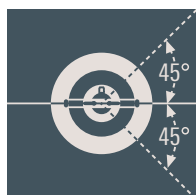


[C50] Symmetric, controlled

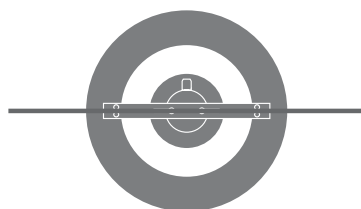
[R] Rectangular



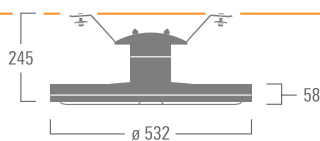
+/- 14° levelling bracket



+/- 45° rotatable



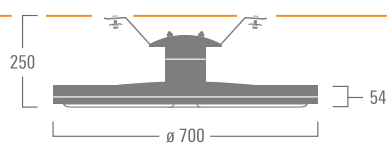
CFS530



[C50] [R]

24-48 W
3020-5300 lm

CFS540



[C50] [R]

36-108 W
4520-12730 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Driver: Integral EC electronic converter
- Corrosion protection: 5CE, including PCS hardware
- Main lens: Safety glass lens
- Gasket: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Luminaire is factory-sealed and does not need to be opened during installation.
Includes cable connector, for cable 2-12 mm
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP66

IK07

Southern House

Croydon (UK)

Landscape architect: LUC

Lighting design: WE-EF UK

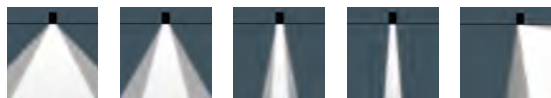
Available distributions:

[B] [M] [EE] [EES] [A20]

Standard colours:



RAL 9004 9006 9007 7016 9016



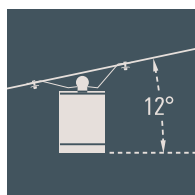
[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



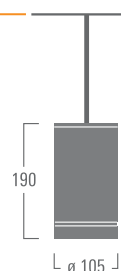
+/- 12° levelling bracket



DAS110-PM

[B] [M] [EE] [EES] [A20]

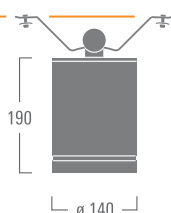
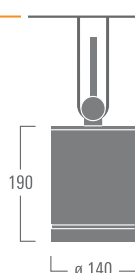
6-12 W
550-1370 lm



DAS120

[B] [M] [EE] [EES] [A20]

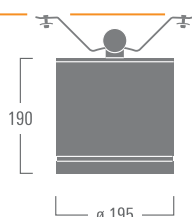
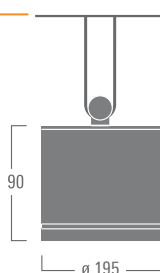
24 W
2040-2610 lm



DAS140

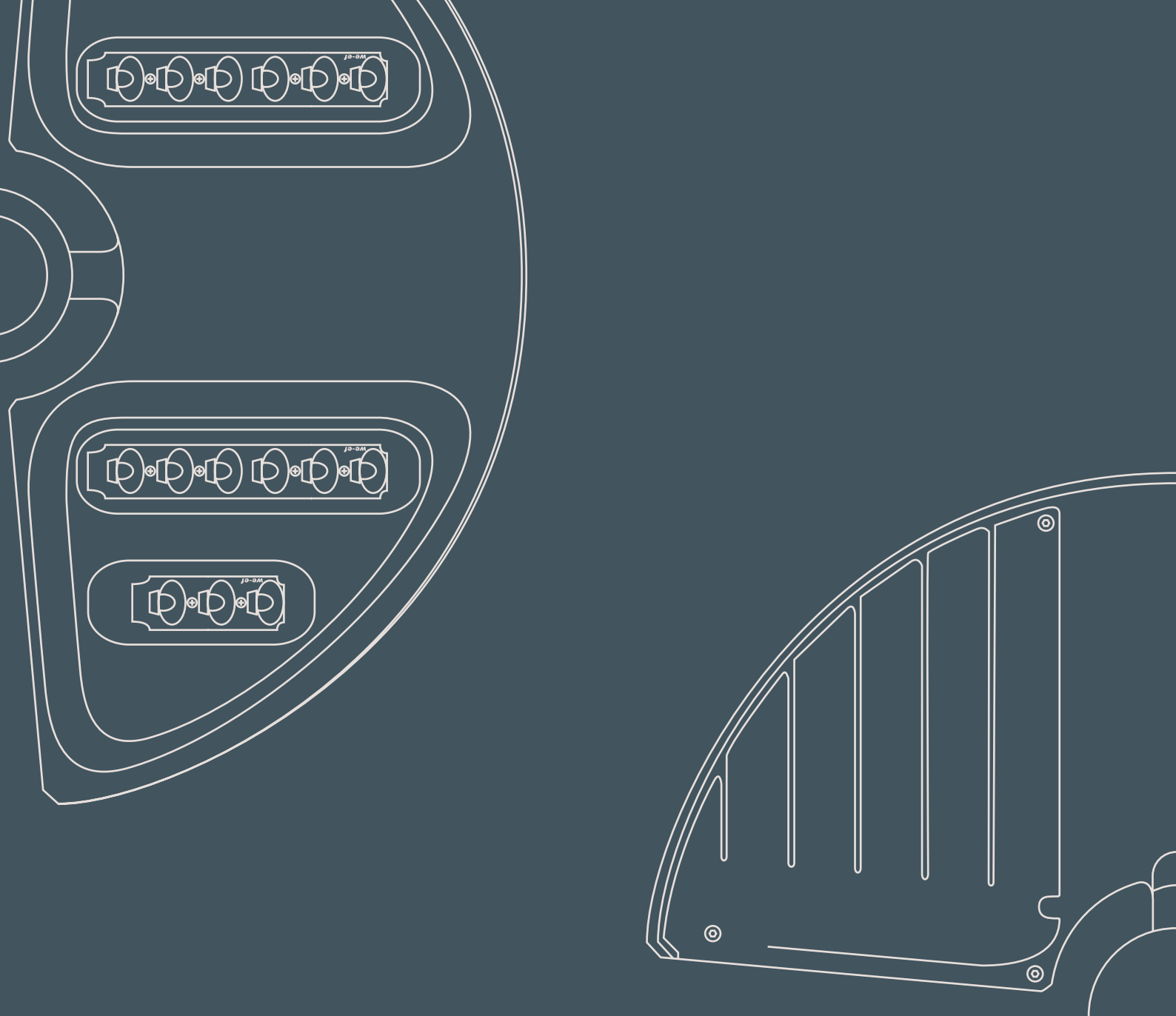
[B] [M] [EE] [EES] [A20]

48 W
4115-5460 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

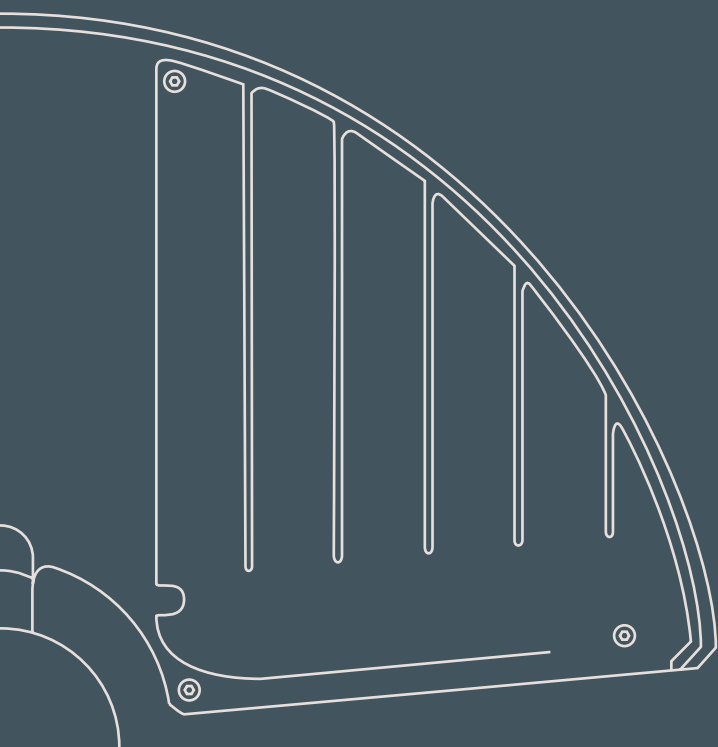


Consistent design language. Optimised, standard-compliant light distribution for almost any conceivable urban situation. Large choice of LED lens types. In terms of quality as well as versatility of the total package, pole mounted luminaires by WE-EF have much going for them.

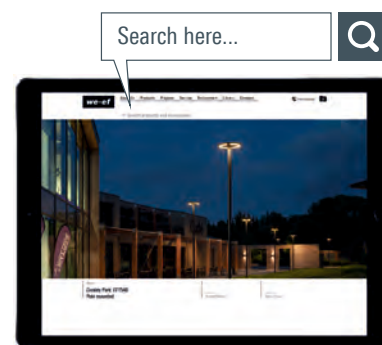
Pole mounted luminaires are the backbone of street and area lighting in urban spaces. Standard-compliant lighting is just as important here as are sophisticated lighting design, visual comfort and sustainability.

WE-EF's very own IOS® Innovative Optical System and OLC® One LED Concept with the multi-layer principle ensure high efficiency, light quality and visual comfort. The Environmental Product Declarations (EPDs) prove the sustainability of the WE-EF pole mounted luminaires.

Pole mounted luminaires



ZFT400-FT	258	RFL500-SE	288
ZFT400	260	VFL500	292
ZAT400-FT	262	VFL500-SE	296
ZAT400	264	PFL500	298
ZA600-FT	266	PFL200	300
RMT300	272	AL500 / ALP500 / AOP500	310
RMM300	274	ASP500 / BSP500	312
RMC300	276	FLA400	318
CFT500	282	FLA700	320



Pole mounted luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

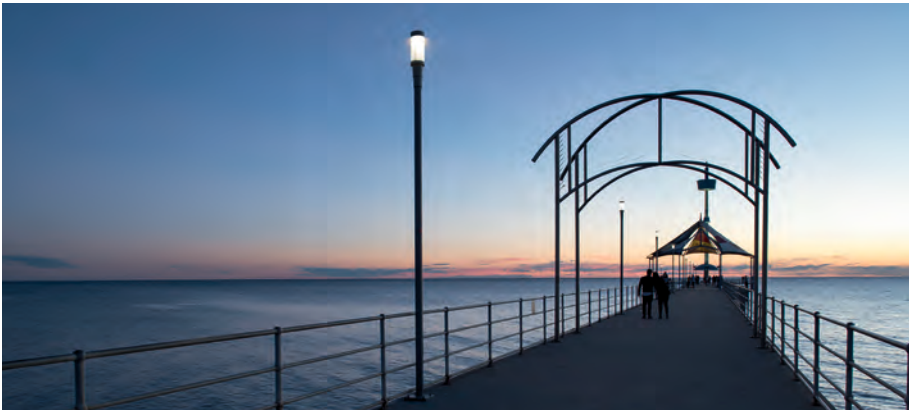
Pole Mounted Luminaires

Light and Design in Urban Space

The effect of pole mounted luminaires on the urban spaces that they illuminate goes way beyond lighting.

By day and by night, their shapes are statements of design. They divide and link spaces and areas, underscore lines and reinforce structures. Designed with meticulous care in all their proportions and every single detail, it is the unobtrusiveness of WE-EF luminaires that makes them so effective.

Based on a variety of clear geometric shapes, they blend harmoniously with both historical and modern environments, sporting a timeless design that is in every respect perfectly prepared for a very long lifecycle — including materials and surfaces.







- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
- Installation: Luminaire is factory-sealed and does not need to be opened during installation.
ZFT430-FT / ZFT440-FT: Optional ø 60 x 80 mm spigot version available.
To be specified at time of ordering
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



ZFT430-FT / ZFT440-FT

CLASS
I

IP66

IK09

ZFT460-FT / ZFT470-FT

CLASS
I

IP66

IK08

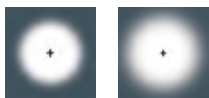
Pedestrian zone
Hof Bayern (DE)

Available distributions:
[C50] [C60]

Standard colours:



RAL 9004 9006 9007 7016 9016



[C50] Symmetric, controlled

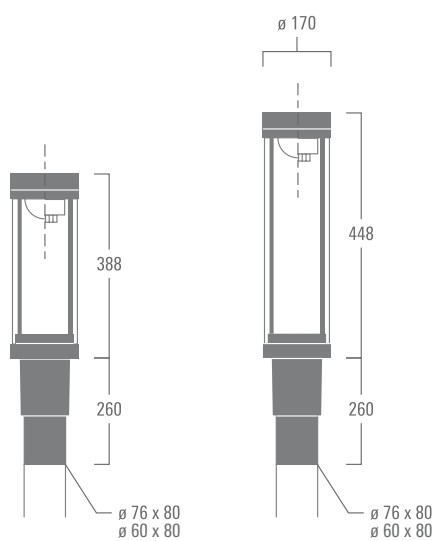
[C60] Symmetric



[C50]



[C60]



ZFT430-FT / ZFT440-FT

ZFT430-FT / ZFT440-FT

[C50] [C60]*

12-24 W

1270-5470 lm

* 1 internal accessory

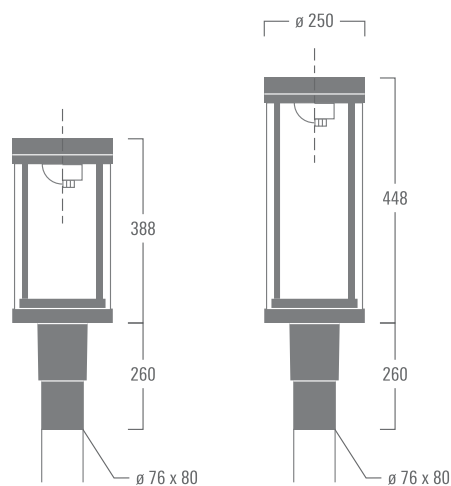
ZFT460-FT / ZFT470-FT

[C50] [C60]*

24-37 W

3150-5150 lm

* 1 internal accessory



ZFT460-FT / ZFT470-FT



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 268



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Luminaire is factory-sealed and does not need to be opened during installation.
ZFT434 / ZFT444: Optional ø 60 x 80 mm spigot version available.
To be specified at time of ordering
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



ZFT434 / ZFT444

CLASS
I

IP66

IK09

ZFT464 / ZFT474

CLASS
I

IP66

IK08

Brighton Jetty
Adelaide (AU)

Available distributions:
[S65] [R65]

Standard colours:

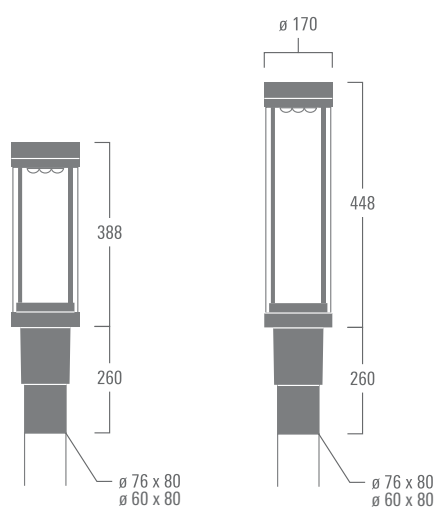


RAL 9004 9006 9007 7016 9016



[S65] Streetlighting

[R65] Rectangular 'side throw'



ZFT434 / ZFT444

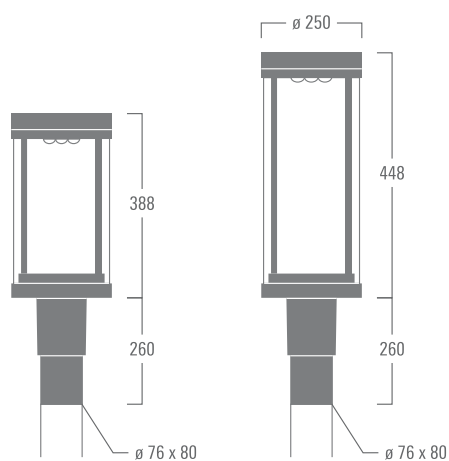
ZFT434 / ZFT444

[S65] [R65]

9-27 W
990-3040 lm

ZFT464 / ZFT474

[S65] [R65]

36-54 W
3770-6340 lm

ZFT464 / ZFT474



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 268



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
- Installation: Luminaire is factory-sealed and does not need to be opened during installation.
ZAT430-FT / ZAT440-FT: Optional Ø 60 x 80 mm spigot version available.
To be specified at time of ordering
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



ZAT430-FT / ZAT440-FT

CLASS
I

IP66

IK09

ZAT460-FT / ZAT470-FT

CLASS
I

IP66

IK08

Available distributions:
[C50] [C60]

Standard colours:



RAL 9004 9006 9007 7016 9016



[C50] Symmetric, controlled

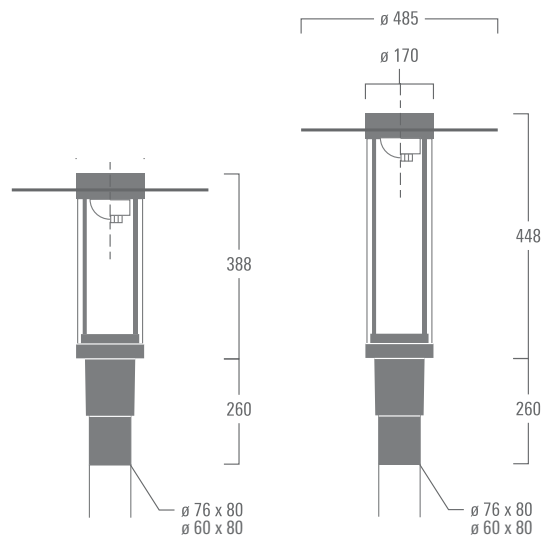
[C60] Symmetric



[C50]



[C60]



ZAT430-FT / ZAT440-FT

ZAT430-FT / ZAT440-FT

[C50] [C60]*

12-24 W

1270-5470 lm

* 1 internal accessory

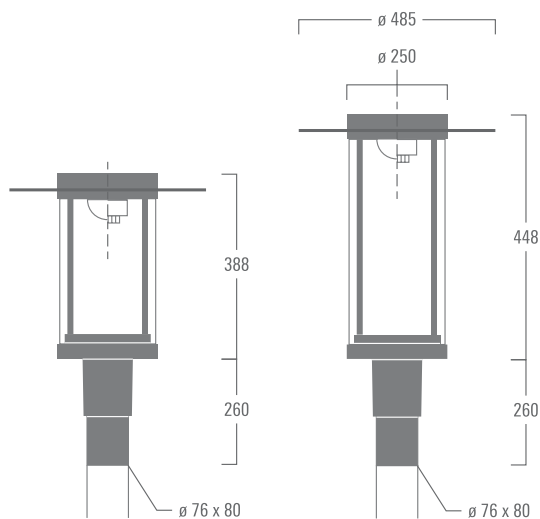
ZAT460-FT / ZAT470-FT

[C50] [C60]*

24-37 W

3150-5150 lm

* 1 internal accessory



ZAT460-FT / ZAT470-FT



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 268

BILDUNGSZENTRUM



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware 5CE+Primer optional
Driver:	Integral EC electronic converter
Main lens:	PMMA
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Luminaire is factory-sealed and does not need to be opened during installation ZAT434 / ZAT444: Optional ø 60 x 80 mm spigot version available. To be specified at time of ordering
Control:	Optional WE-EF Eco Step Dim® version available; refer to page 352



ZAT434 / ZAT444

CLASS
I

IP66

IK09

ZAT464 / ZAT474

CLASS
I

IP66

IK08

Available distributions:
[S65] [R65]

Standard colours:

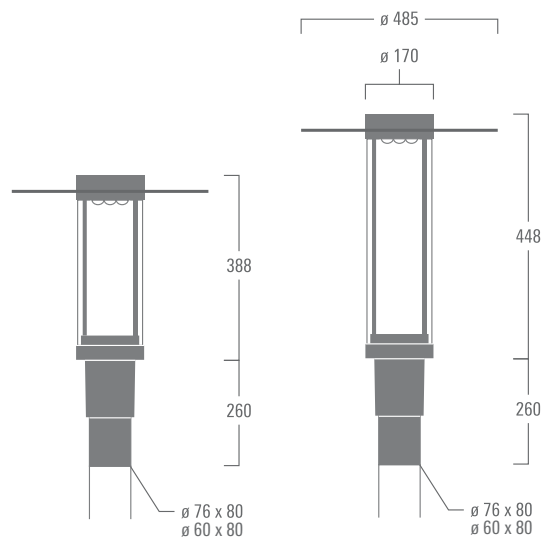


RAL 9004 9006 9007 7016 9016



[S65] Streetlighting

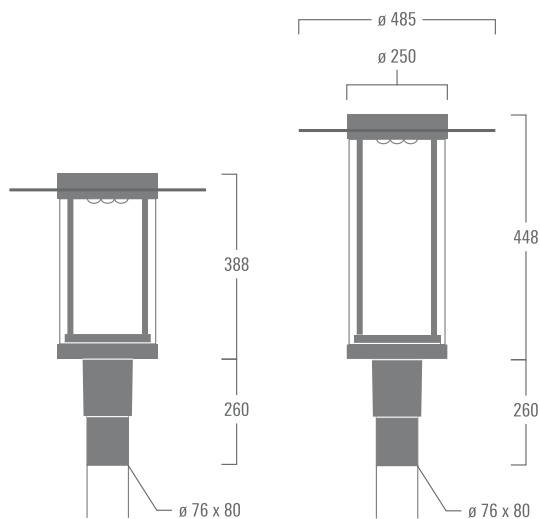
[R65] Rectangular 'side throw'



ZAT434 / ZAT444

ZAT434 / ZAT444

[S65] [R65]

9-27 W
990-3040 lm

ZAT464 / ZAT474

ZAT464 / ZAT474

[S65] [R65]

36-54 W
3770-6340 lm

2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 268



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
- Installation: Luminaire is factory-sealed and does not need to be opened during installation
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP55

IK10

Endeavour Bridge Whitianga
Sydney (AU)

Available distribution:
[C60]

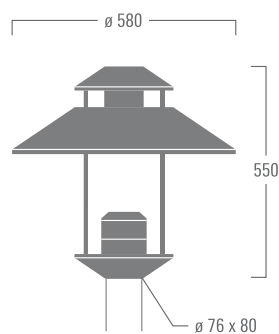
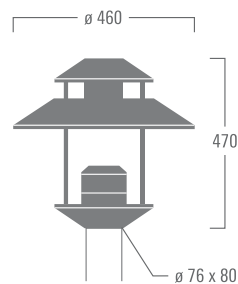
Standard colours:



RAL 9004 9006 9007 7016 9016



[C60] Symmetric



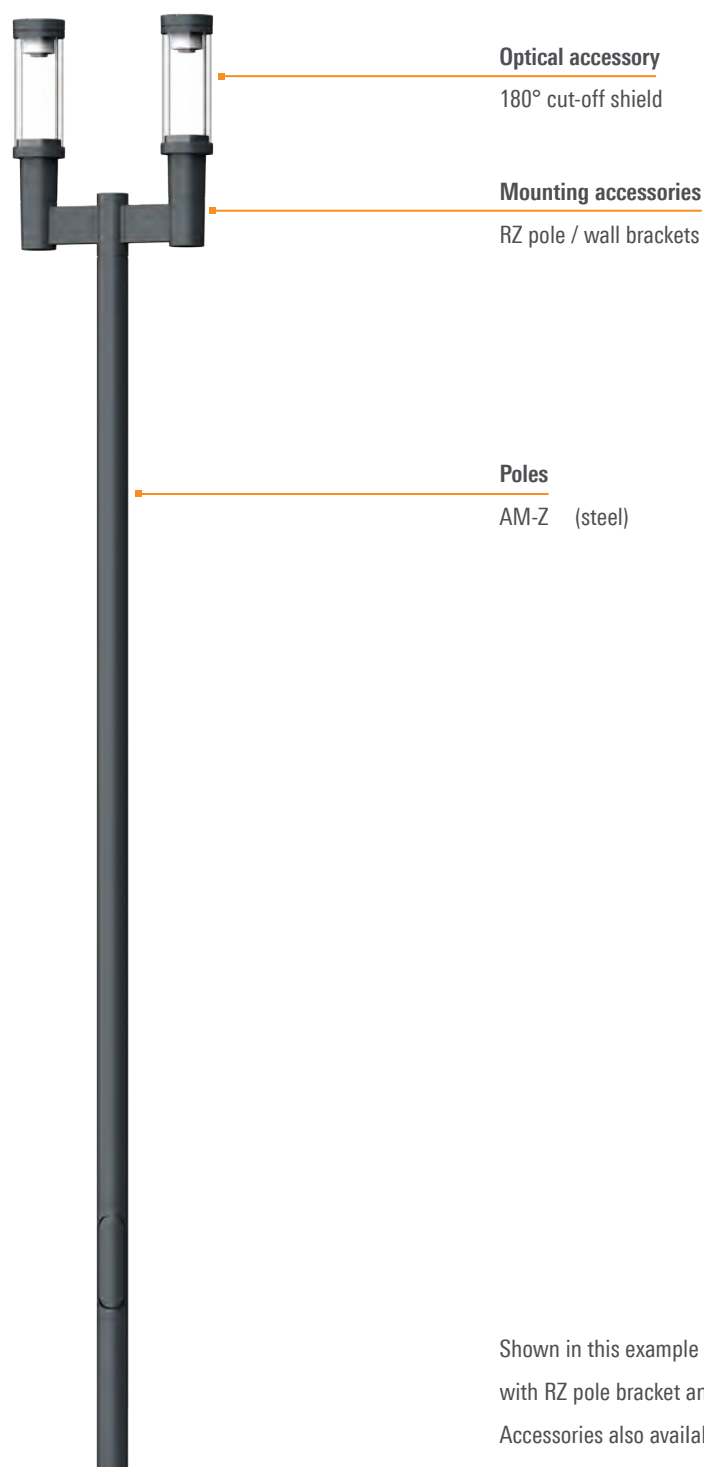
ZA630-FT / ZA640-FT

[C60]

17-24 W
1860-2560 lm
Max. 1 internal accessory

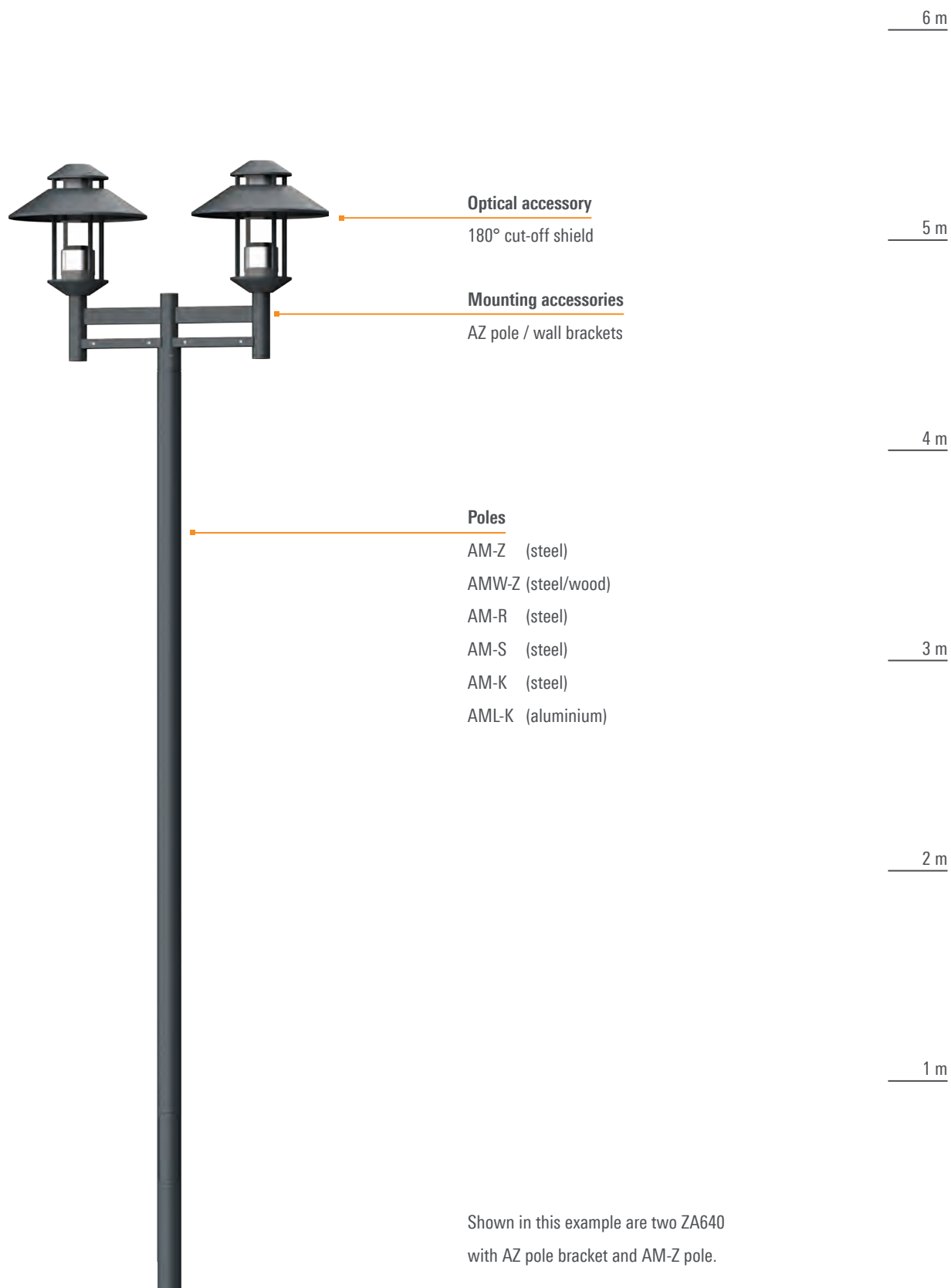


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 269



Shown in this example are two ZFT440
with RZ pole bracket and AM-Z pole.
Accessories also available for ZAT400 series.

- Recommended mounting height 3.0 - 6.0 m



Shown in this example are two ZA640 with AZ pole bracket and AM-Z pole.

▪ Recommended mounting height 3.0 - 6.0 m



RMC320 LED Pole Mounted Luminaires

Flexible and Precise

Just like WE-EF's LED street and area lighting, the RMC320 pole mounted luminaires use a multi-layered variant of WE-EF's specific OLC® One LED Concept technology. Depending on the given lighting task, the RMC320 can be equipped with three different lenses. The option of mounting several luminaire heads on one pole adds to the wealth of possible applications enabled by this approach. Even complex paths and areas can be illuminated with great precision and efficiency.





- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Corrosion protection:** 5CE, including PCS hardware
5CE+Primer optional
- Driver:** Integral EC electronic converter
- Main lens:** RFC® Reflection Free Contour
- Gasketing:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** Luminaire is factory-sealed and does not need to be opened during installation
- Control:** Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK09

Bondi Beach
Sydney (AU)
Lighting design: Lighting, Art + Science

Available distributions:
[P65] [S65] [R65]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[P65] Pedestrian / bicycle lane

[S65] Streetlighting

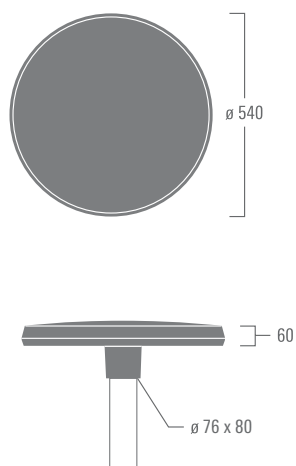
[R65] Rectangular 'side throw'

RMT320

[P65] [S65] [R65]

24-72 W

2800-8660 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 278



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: RFC® Reflection Free Contour
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Luminaire is factory-sealed and does not need to be opened during installation
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK09

Haselünne (DE)

Available distributions:
[P65] [S65] [R65]

Standard colours:



RAL 9004 9006 9007 7016 9016



[P65] Pedestrian / bicycle lane

[S65] Streetlighting

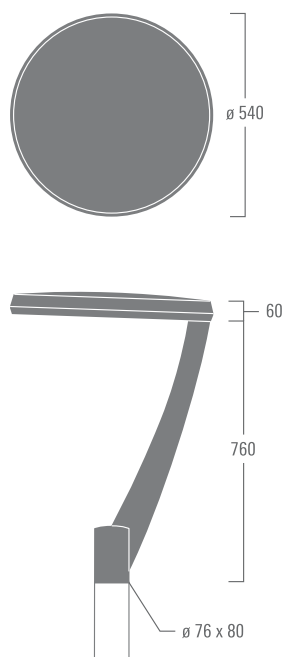
[R65] Rectangular 'side throw'

RMM320

[P65] [S65] [R65]

24-72 W

2780-8630 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 279



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: RFC® Reflection Free Contour
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Luminaire is factory-sealed and does not need to be opened during installation
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK08

Midland Railway Square
Perth (AU)

Available distributions:
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours:






 RAL 9004 9006 9007 7016 9016



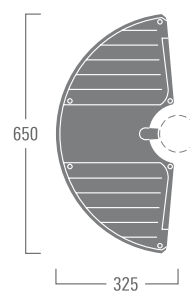
[P65] Pedestrian / bicycle lane
 [S60] [S65] [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



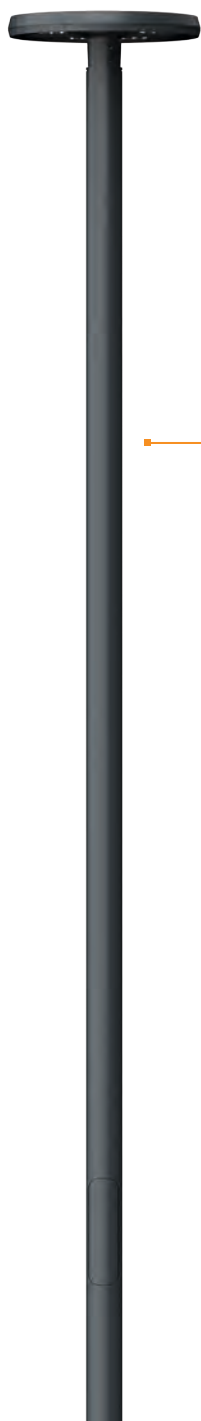
RMC320

[P65] [S60] [S65] [S70] [A60] [R65]

18-54 W
 1960-6310 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 279



Poles

- AM-Z (steel)
- AMW-Z (steel/wood)
- AM-R (steel)
- AM-S (steel)
- AM-K (steel)
- AML-K (aluminium)

Shown in this example is RMT320
with AM-Z pole.

▪ Recommended mounting height 3.0 - 5.0 m



▪ Recommended mounting height 3.0 - 5.0 m



Croxley Park

In Balance: Work, Life and Light

Croxley Park is a leading business park with high-quality buildings, amenities and landscaping. Conveniently located near the M25 motorway, Croxley Park is committed to offering the best imaginable work experience for modern businesses and start-ups. Of course, this mission does not neglect the right lighting – the carefully orchestrated illumination concept makes sure that the campus-like facilities are just as welcoming and safe by night as they are by day. WE-EF's CFT500 pole mounted luminaires play an integral role in providing natural-feeling, glare-free light along Croxley Park's many footpaths and open spaces.



Croxley Park
Watford (UK)
Architect: Esa architects



- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Corrosion protection:** 5CE, including PCS hardware
5CE+Primer optional
- Driver:** Integral EC electronic converter
- Main lens:** RFC® Reflection Free Contour
- Gasketing:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** Luminaire is factory-sealed and does not need to be opened during installation
- Control:** Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK08

The Quadrant Mall
Launceston (AU)
Lighting design: Engineering Solutions

Available distributions:
[C50] [R]

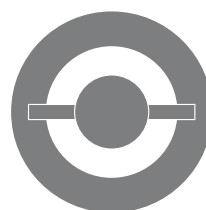
Standard colours:





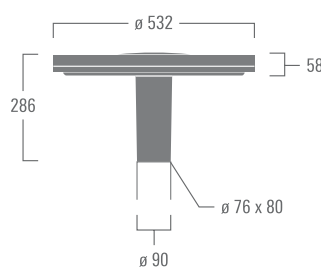
[C50] Symmetric, controlled

[R] Rectangular



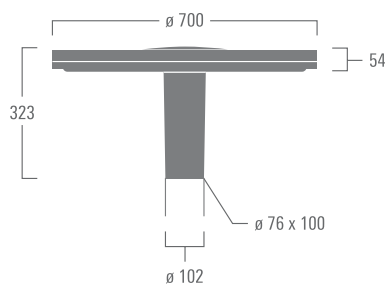
CFT530

[C50] [R]
24-48 W
3010-5300 lm



CFT540

[C50] [R]
36-108 W
4520-12730 lm



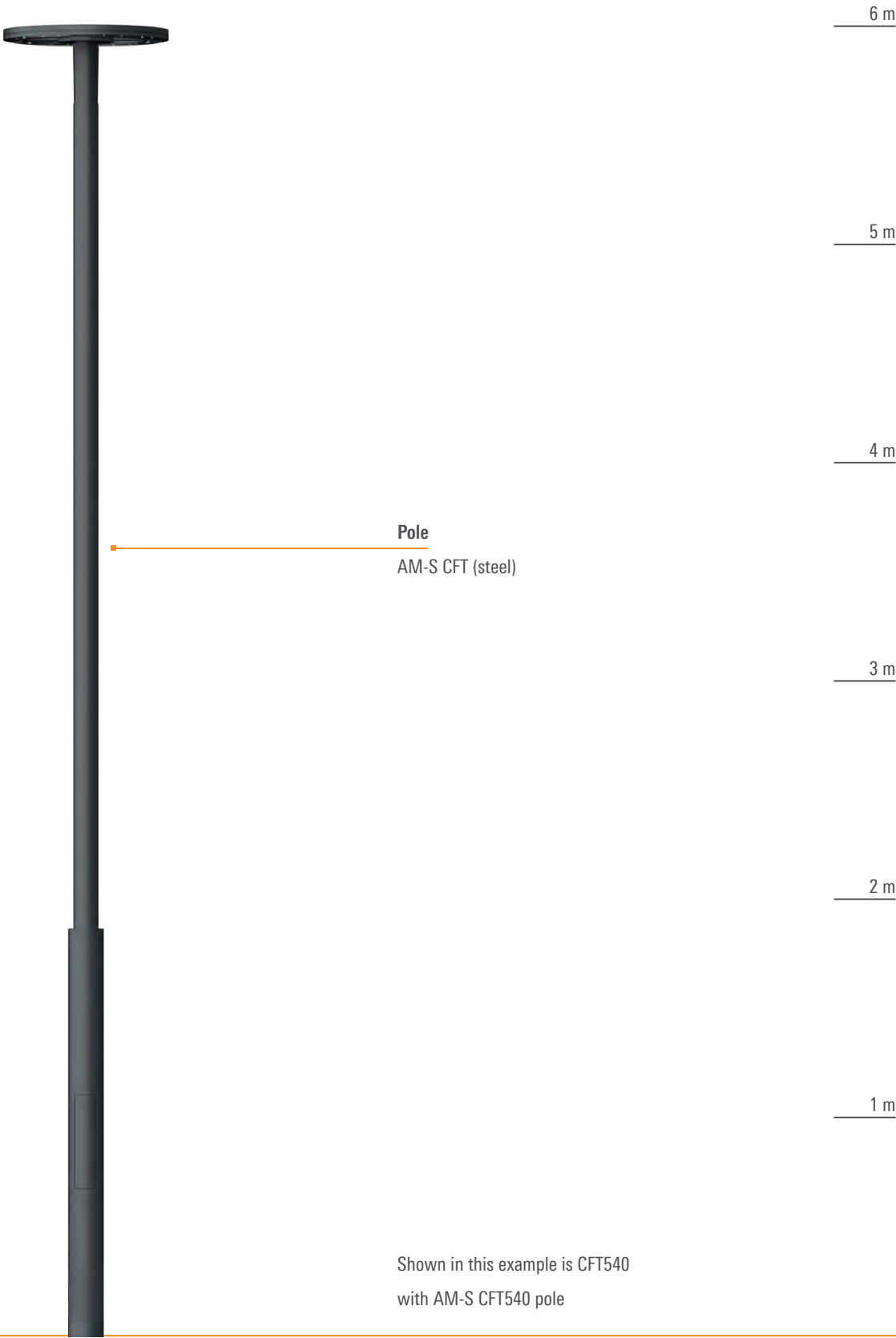
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 285



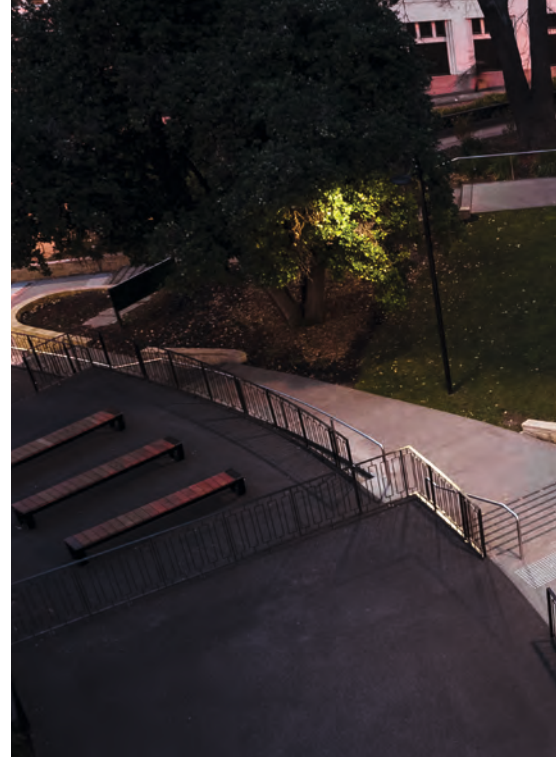
Multiple Award Winner

As a recipient of four prestigious international design awards – Red Dot, Focus Silver, Design Plus and the German Design Award – the CFT500 series luminaire not only convinces users through its futuristic yet timeless aesthetics; it is also packed with technological and environmental features that make it a first choice product for urban and suburban projects of the 21st century.





▪ Recommended mounting height 4.0 - 8.0 m





Franklin Square

A Piece of Urban Renaissance

All over the world, the renaissance of public parks and places as true spaces for living is in full swing. Whether in Copenhagen/Denmark, Boston/USA or Tasmania/Australia, locals and tourists alike rejoice in the new, open-air way of life until late at night. Needless to say, agreeable, efficient lighting is of the essence in conveying an inclusive spirit of security and welcome. The designers of Franklin Square took this to heart and chose to equip the park with high-quality, WE-EF LED pole mounted luminaires that master the challenge of boldly illuminating the park's many fountains, stairways, footpaths and ancient trees.

Franklin Square

Hobart (AU)

Landscape architect: City of Hobart



- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Corrosion protection:** 5CE, including PCS hardware
5CE+Primer optional
- Driver:** Integral EC electronic converter
- Main lens:** Non-reflecting safety glass, hinged
- Gasketing:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** Luminaire is factory-sealed and does not need to be opened during installation
- Control:** Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
I

IP66

IK07

Front de mer
Mers-les-Bains (FR)
Lighting design: Citelum Nord

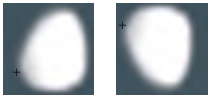
Available distributions:
[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours:






 RAL 9004 9006 9007 7016 9016



[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

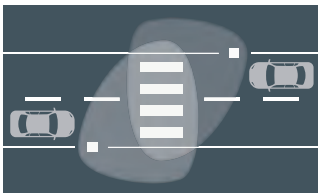


[P65] Pedestrian / bicycle lane

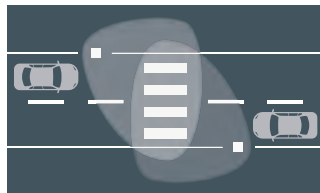
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]



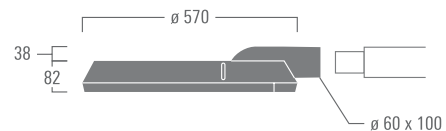
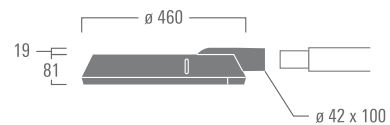
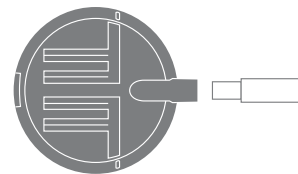
[P45L]

RFL530-SE

[P65] [S60] [S65] [S70] [A60] [R65]

12-72 W
1410-8720 lm

RFL540-SE

[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]36-144 W
4230-17440 lm

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 305



Boardwalk, Koombana Bay

Bunbury (AU)

Lighting Design and Engineering: ETC Consultants



Boardwalk, Koombana Bay

A Beach as a City Figurehead

When planners began to open up Bunbury's Koombana Bay beach for local visitors and tourists, sophisticated landscape and lighting design were only two of three essentials. The third was light. Only a short walk from the city centre, the popular wide beach with its white sand invites strolling by day and by night – thanks to a smart arrangement involving various configurations of WE-EF's VFL540 street and area luminaires on custom-made, slightly inclined poles. In addition to WE-EF's flexible and powerful lighting technology, the almost proverbially high quality of WE-EF's luminaire housings became the decisive factor in the customer's choice.





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware 5CE+Primer optional
Driver:	Integral EC electronic converter
Main lens:	RFC® Reflection Free Contour
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Luminaire is factory-sealed and does not need to be opened during installation. Optional ø 60 x 80 mm spigot version available. To be specified at time of ordering
Control:	Optional WE-EF Eco Step Dim® version available; refer to page 352. Optional P2C Prepare to Connect / R2C Ready to Connect version available; refer to page 358

CLASS
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IK08

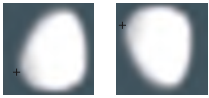
BMW at Messedamm
Berlin (DE)
Architect: Lanz Architekten

Available distributions:
[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours:



RAL 9004 9006 9007 7016 9016



[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

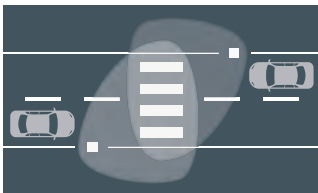


[P65] Pedestrian / bicycle lane

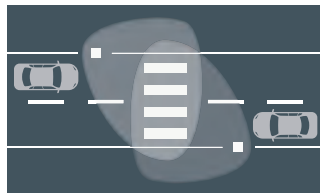
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]

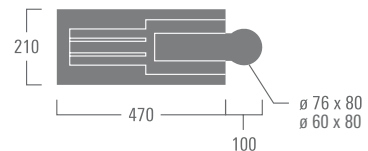


[P45L]

VFL520

[P65] [S60] [S65] [S70] [A60] [R65]

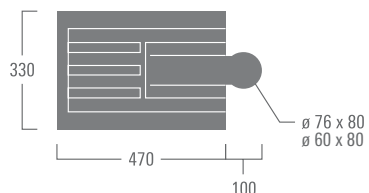
12-36 W
1420-4250 lm



VFL530

[P65] [S60] [S65] [S70] [A60] [R65]

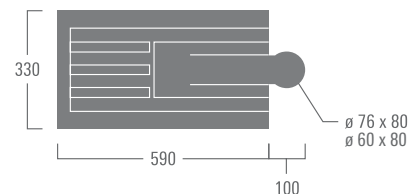
12-72 W
1410-8510 lm



VFL540

[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]

24-126 W
2820-14890 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 306



Constitution Avenue

A Boulevard's New Look

Remodelled and revitalised, Constitution Avenue has evolved into Canberra's premier address, with the highest density of commercial and residential buildings. A string of prestigious awards underscores the quality of its architectural and urban planning. An integral part of the realised vision is a novel lighting concept featuring different varieties of WE-EF's VFL500 LED luminaires on customised poles. In a perfect interplay with the larger VFL540-SE, which illuminate the streets from three-metre booms, WE-EF's VFL530-SE, mounted lower and on shorter booms on the same poles, make sure that cyclists and pedestrians enjoy a light that is every bit as perfect as that provided for motorists.

Constitution Avenue

Canberra (AU)

Lighting design: Lighting Art & Science

Electrical Engineer: Lighting Art & Science and AECOM Canberra

Landscape Architect: Jane Irwin Landscape Architecture





- Luminaire housing:** Marine-grade, die-cast aluminium alloy
- Corrosion protection:** 5CE, including PCS hardware
5CE+Primer optional
- Driver:** Integral EC electronic converter
- Main lens:** RFC® Reflection Free Contour
- Gasketing:** Silicone CCG® Controlled Compression Gasket
- Optics:** CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation:** Luminaire is factory-sealed and does not need to be opened during installation
- Control:** Optional WE-EF Eco Step Dim® version available; refer to page 352.
Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358

CLASS
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II

IP66

IK08

Constitution Avenue

Canberra (AU)

Lighting design: Lighting Art & Science (LA+S)

Electrical engineer: LA+S and AECOM Canberra

Landscape Architect: Jane Irwin Landscape Architecture

Available distributions:

[P45R] [P45L]

[P65] [S60] [S65] [S70] [A60] [R65]

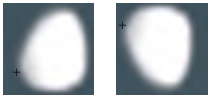
Standard colours:







RAL 9004 9006 9007 7016 9016



[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

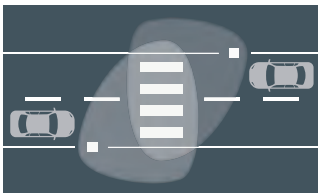


[P65] Pedestrian / bicycle lane

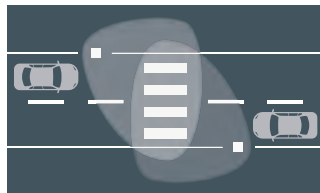
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



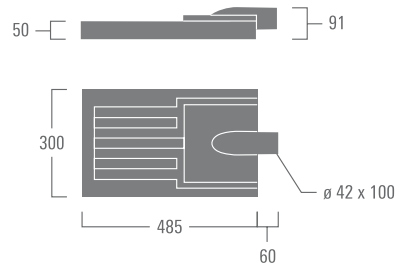
[P45R]



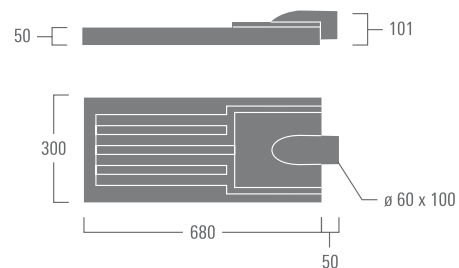
[P45L]

VFL530-SE

[P65] [S60] [S65] [S70] [A60] [R65]

12-72 W
1380-8890 lm

VFL540-SE

[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]36-144 W
4380-17790 lm

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 306



Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

5CE+Primer optional

Driver: Integral EC electronic converter

Main lens: RFC® Reflection Free Contour

Gasketing: Silicone CCG® Controlled Compression Gasket

Optics: CAD-optimised for superior illumination and glare control

OLC® One LED Concept

Installation: Luminaire is factory-sealed and does not need to be opened during installation.

Optional ø 60 x 100 mm side entry version available. To be specified at time of ordering

Control: Optional WE-EF Eco Step Dim® version available; refer to page 352.

Optional P2C Prepare to Connect / R2C Ready to Connect version available;
refer to page 358



CLASS
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IP66

IK08

BMW at Hindenburgdamm
Riller & Schnauck
Berlin (DE)

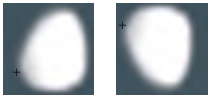
Available distributions:
[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]

Standard colours:



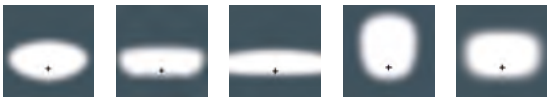



 RAL 9004 9006 9007 7016 9016



[P45R] Pedestrian crossing, for right-hand traffic

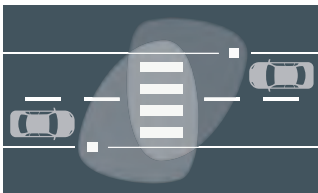
[P45L] Pedestrian crossing, for left-hand traffic



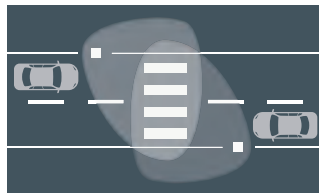
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]

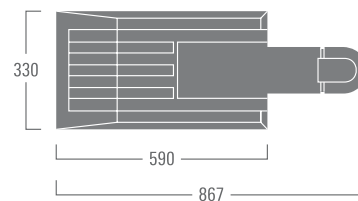


[P45L]

PFL540

[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]

48-144 W
4880-17020 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 307



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
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IP66

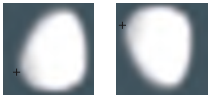
IK08

Woody Point Jetty
Queensland (AU)

Available distributions:
[P45R] [P45L]
[P65] [S65] [A60] [R65]

Standard colours:





[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

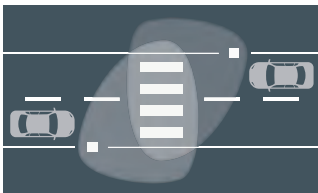


[P65] Pedestrian / bicycle lane

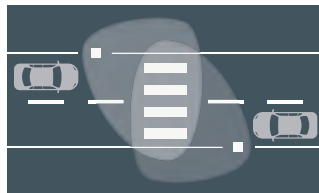
[S65] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]



[P45L]

PFL230

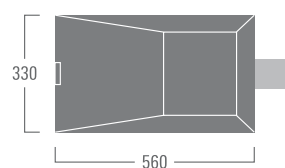
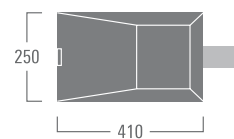
[P65] [S65] [A60] [R65]

12-36 W
1160-3540 lm

PFL240

[P45R] [P45L]
[S65] [A60] [R65]

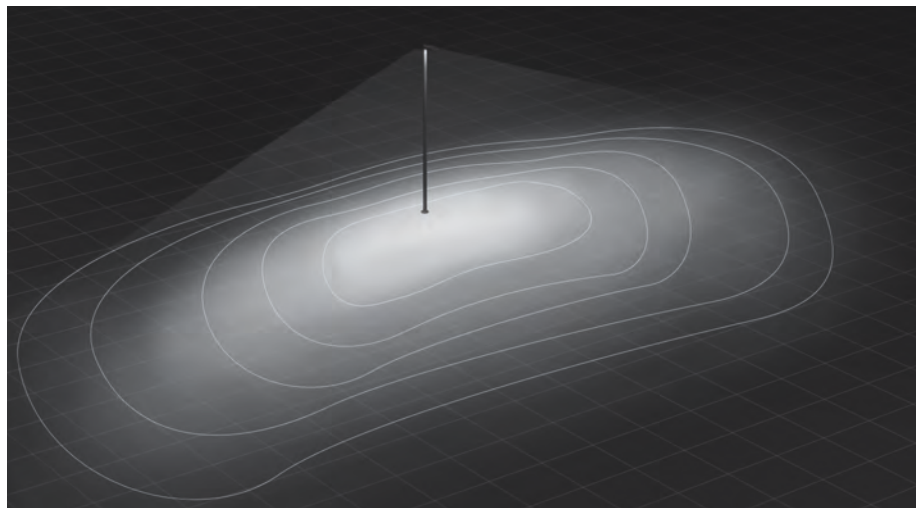
36-72 W
3230-7500 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 307

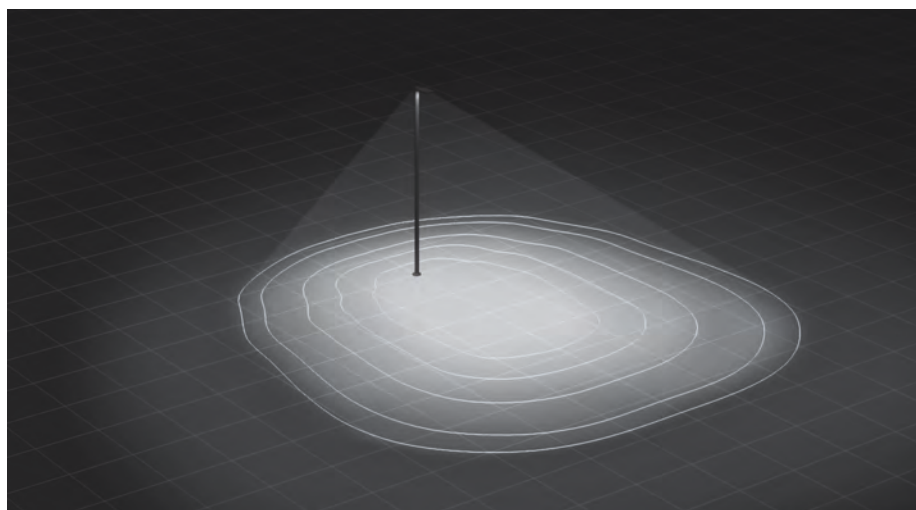
IOS® Innovative Optical System

IOS® optics for street and area lighting applications currently comprise 11 distinctly different versions – for distinctly different applications – and counting. Shown here is a selection of the most frequently used light distributions. For further details, refer to the Technology section on page 362.



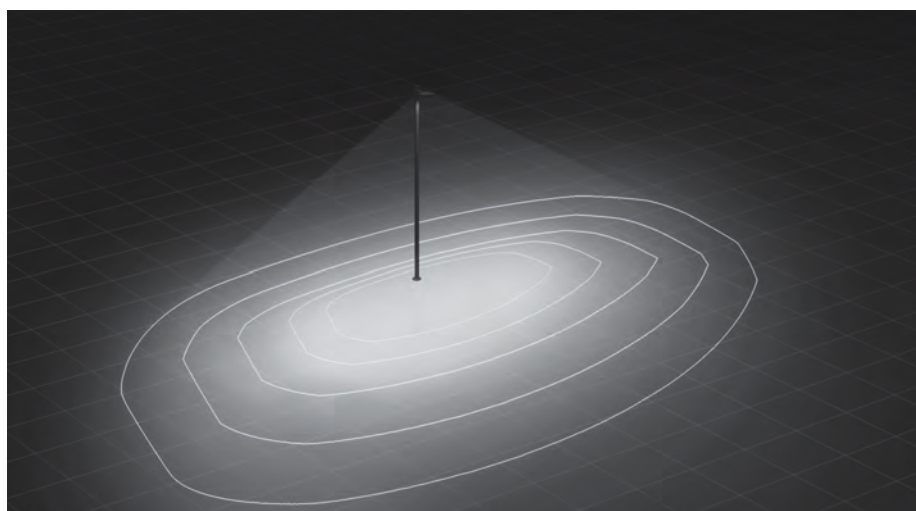
[S70]

Optimised for illuminance-based streetlighting applications (maximum spacing between luminaires).



[A60]

Particularly suitable for area lighting such as car parks etc.



[R65]

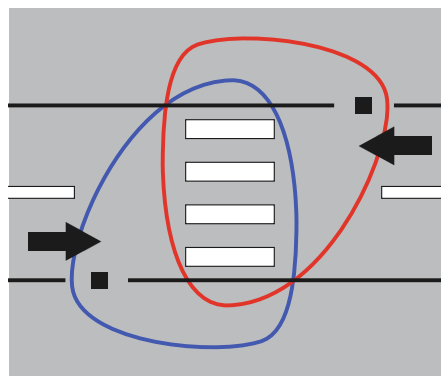
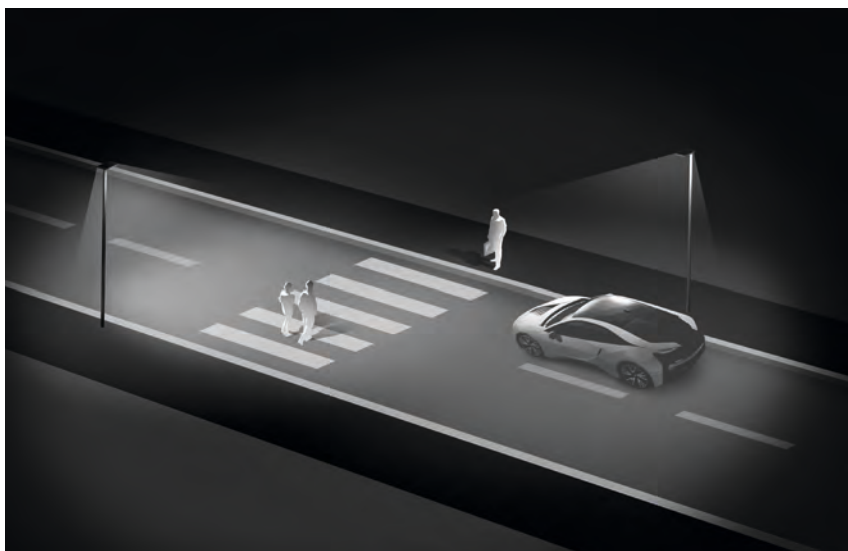
Developed for area lighting applications where a combination of side and forward throw of light is required.

[P45R]

Pedestrian crossing, for right-hand traffic (shown here)

[P45L]

Pedestrian crossing, for left-hand traffic



VFL540 [P45R]

Pedestrian Crossing, Bielefeld (DE)

Right-hand traffic

**[P65]**

Ideal for the lighting of pedestrian and bicycle lanes to EN DIN 13201, Class S2-S4.

Typical spacing between luminaires, 5 to 7 times the mounting height.



Mounting accessories

- RF pole / wall brackets
- RE pole / wall brackets
- RI pole / wall brackets
- RX pole / wall brackets
- TB tilt brackets

Poles

- AM-Z (steel)
- AMW-Z (steel/wood)
- AM-R (steel)
- AM-K (steel)
- AML-K (aluminium)
- AM-V (steel)

Shown in this example is RFL540-SE
with RX pole bracket and AM-Z pole.

▪ Recommended mounting height 3.0 - 6.0 m

6 m

5 m

4 m

3 m

2 m

1 m

Mounting accessories

RV pole / wall brackets
AKV post top fitter

Poles

AML-S (steel)
AMW-Z (steel/wood)
AM-R (steel)
AM-K (steel)
AML-K (aluminium)

Shown in this example is VFL540
with AM-Z pole.

Mounting accessories

RF, RE, RI, RX pole brackets
RE, RI, RX wall brackets
TB Tilt brackets

Poles

AML-S (steel)
AMW-Z (steel/wood)
AM-R (steel)
AM-K (steel)
AML-K (aluminium)
AM-V (steel)

Shown in this example is VFL540-SE
with RX pole bracket and AM-Z pole.

▪ Recommended mounting height 3.0 - 10.0 m







Mounted on Poles Classic in Style

A Piece of Home

For historic and rural areas, WE-EF offers a wide range of luminaire designs that blend harmoniously into the respective environments. Equipped with modern lighting technology, these luminaires have good prerequisites to safely guide people at night for many years, whether in the country, in small old-town alleys or in new development areas.





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP55

IK10

Available distribution:
[C60]

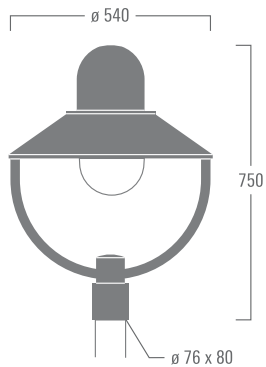
Standard colours:



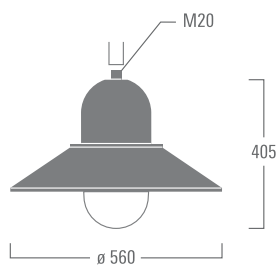
RAL 9004 9006 9007 7016 9016



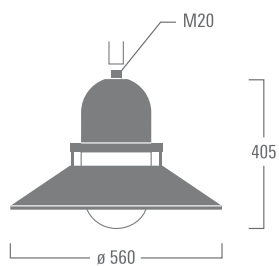
[C60] Symmetric



AL534-FT



ALP534-FT



AOP534-FT



AL534-FT / ALP534-FT / AOP534-FT

[C60]

17-24 W
2100-2890 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 314



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP55

IK10

Available distributions:
[S65] [R65]

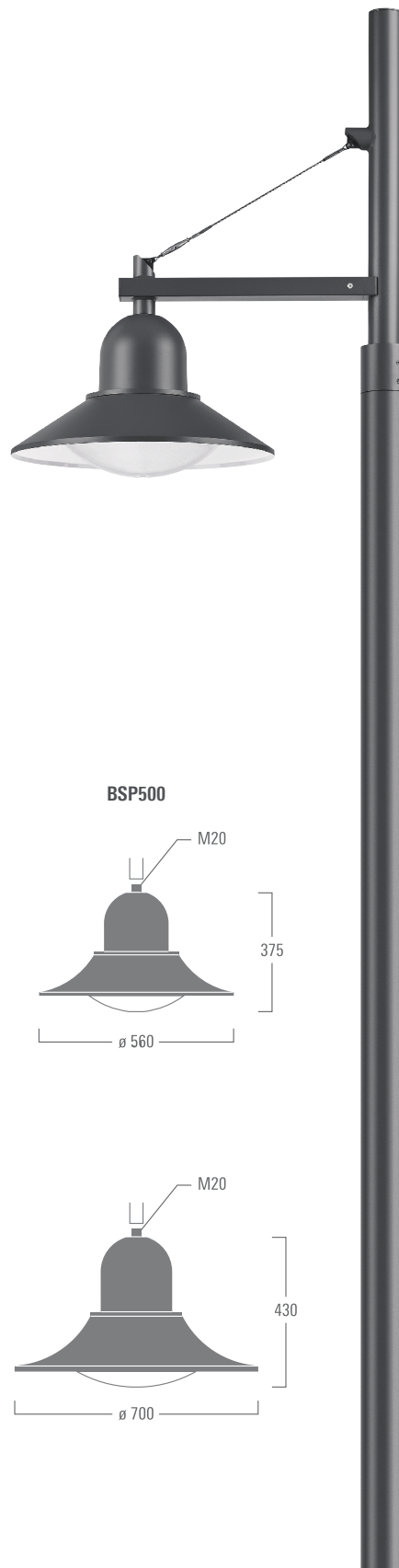
Standard colours:





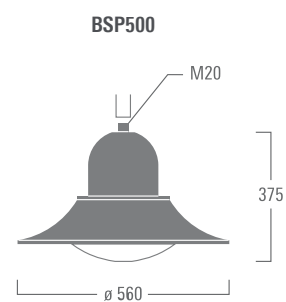
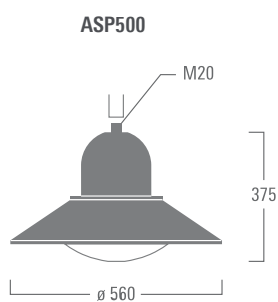
[S65] Streetlighting

[R65] Rectangular 'side throw'



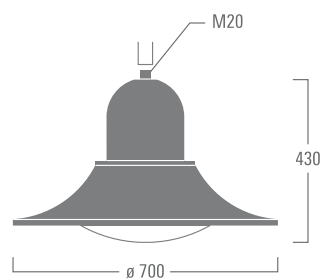
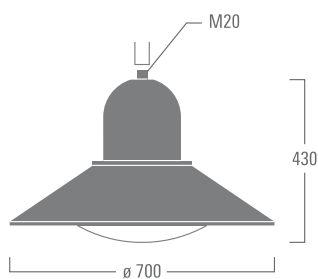
ASP534 / BSP534

[S65] [R65]

24-48 W
2290-5020 lm

ASP544 / BSP544

[S65] [R65]

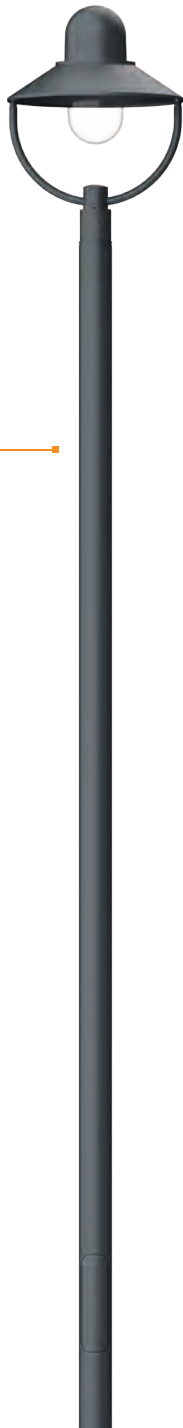
48-72 W
4580-7530 lm

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 315

Poles

- AM-Z (steel)
- AM-R (steel)
- AM-S (steel)
- AM-K (steel)
- AML-K (aluminium)

Shown in this example is AL534
with AM-Z pole.



Mounting accessories

- BA Wall and pole brackets
- BC Wall and pole brackets
- DA Wall and pole brackets
- DB Wall and pole brackets
- DS Wall and pole brackets

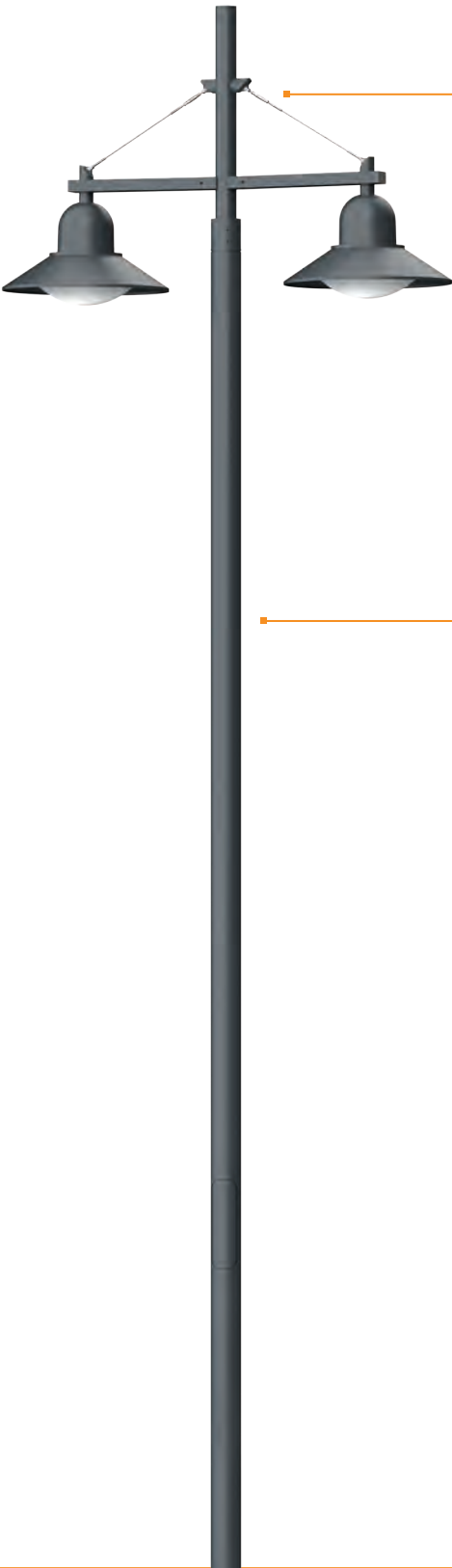
Poles

- AM-Z (steel)
- AM-R (steel)
- AM-S (steel)
- AM-S B (steel)
- AM-K (steel)
- AML-K (aluminium)

Shown in this example is ALP534
with BA pole bracket and AM-Z pole.



▪ Recommended mounting height 3.0 - 4.5 m



Mounting accessories

- BA Wall and pole brackets
- BC Wall and pole brackets
- DA Wall and pole brackets
- DB Wall and pole brackets
- DS Wall and pole brackets

Poles

- AM-Z (steel)
- AM-R (steel)
- AM-S (steel)
- AM-S B (steel)
- AM-K (steel)
- AML-K (aluminium)

Shown in this example are two ASP534 with DS pole bracket and AM-Z pole.

▪ Recommended mounting height 3.0 - 6.0 m

FLA400 / FLA700

Prepared for Oceanic Tasks

Seaside locations are coveted assets. Public spaces that link towns and cities with rivers, lakes and oceans are invaluable. In recent years, many piers and promenades have experienced successful redesigns and revitalisations. The requirements for the materials used and their surface treatment are enormous. With the 5CE superior corrosion protection technology WE-EF has an answer to these challenges.







- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Protractor scale for accurate aiming
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP66

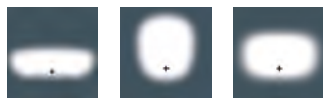
IK08

Available distributions:
[S65] [A60] [R65]

Standard colours:



RAL 9004 9006 9007 7016 9016



[S65] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'

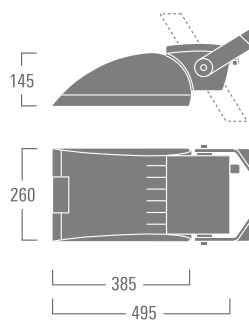
Suitable for downlighting, façade and uplighting applications.



FLA440

[S65] [A60] [R65]

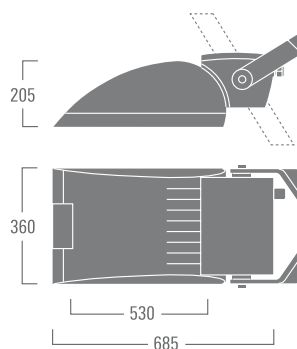
36 W
3230-3550 lm



FLA460

[S65] [A60] [R65]

72 W
6460-7100 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 323



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
5CE+Primer optional
- Driver: Integral EC electronic converter
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Protractor scale for accurate aiming from 0° to 15° above horizontal
- Control: Optional WE-EF Eco Step Dim® version available; refer to page 352



CLASS
I

IP66

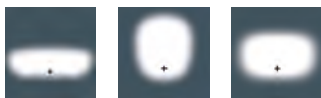
IK08

Exploratorium
San Francisco (US)
Architect: EHDD
Lighting design: David Nelsen & Associates

Available distributions:
[S65] [A60] [R65]

Standard colours:


 RAL 9004 9006 9007 7016 9016



[S65] Streetlighting

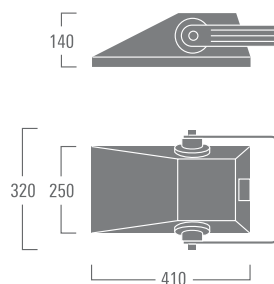
[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



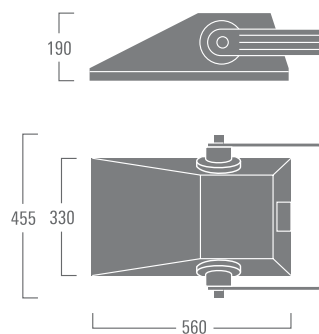
FLA730

[S65] [A60] [R65]

24-54 W
2060-5610 lm

FLA740

[S65] [A60] [R65]

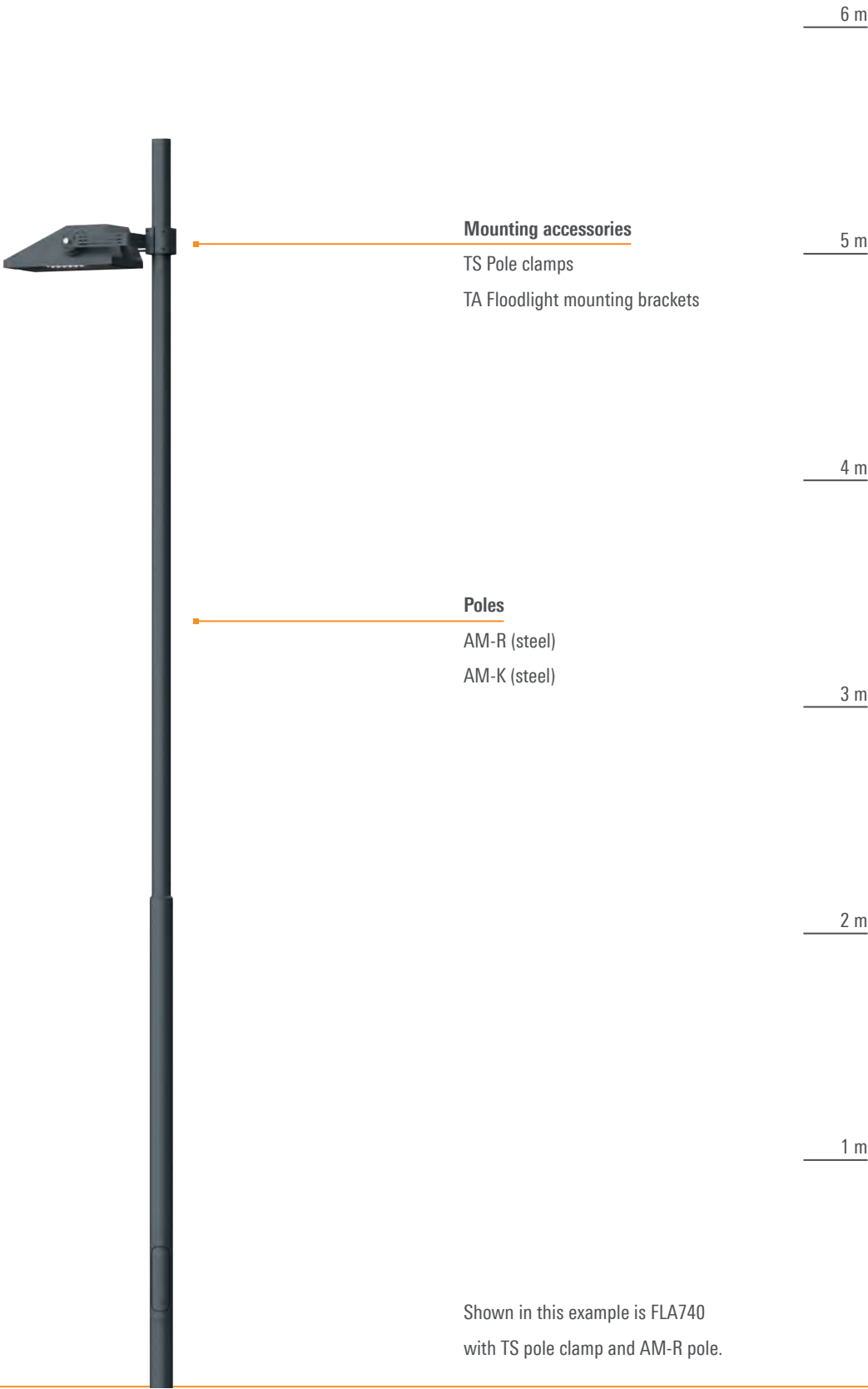
36-72 W
3230-7500 lm

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 323



[A60] Asymmetric 'forward throw'

This type of light distribution is particularly suitable for area lighting applications.



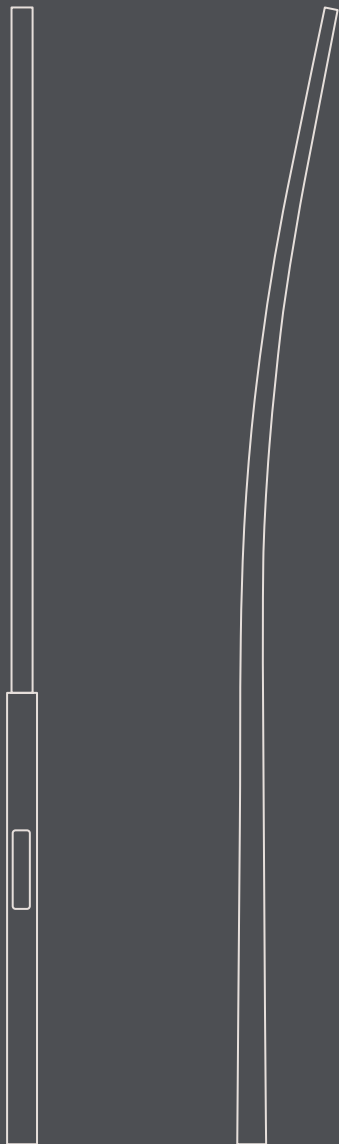
Shown in this example is FLA740
with TS pole clamp and AM-R pole.

▪ Recommended mounting height 2.5 - 12.0 m

Poles

No range of high-quality luminaires would be complete without a selection of matching poles, from the same source.

When combined with the matching luminaires, the various versions of WE-EF poles – made of steel, aluminium or with wooden finishes, constant, stepped or conically shaped – open up a wide range of combinatory options for implementing individual and concise design concepts for illumination in urban spaces.



AM-Z	326
AMW-Z-MA	327
AM-K / AM-K-K	328
AML-K	329
FM-K	330
AM-V	331
AM-R	332
AM-S / AM-S-B	333



Wolke

Für detaillierte Spezifikationen, Produktcodes und
 lateaktuelle Daten, besuchen Sie www.wolkefr.com

Pole construction:	Tubular steel, hot-dipped galvanised
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat
Standard version:	Spigot and planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting flange plate available

Accessories:**Mounting**

- Flange plate
- Anti corrosion sleeve
- Cable protection
- Foundation plate

**AM-Z (Type 1)**

3.0 to 5.0 m

Constant section

**AM-Z (Type 2)**

2.5 to 7.5 m

Constant section

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Standard colours:

RAL 9004 9006 9007 7016 9016

Pole construction:	Mahogany top section, base section tubular steel Hot-dipped galvanised
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat. Mahogany veneer, natural finish and oil-impregnated
Standard version:	Spigot and planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting flange plate available

Accessories:

Mounting

- Flange plate
- Anti corrosion sleeve
- Cable protection
- Foundation plate



AMW-Z-MA (Type 1)
2.5 to 7.5 m
Constant section

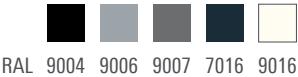


AMW-Z-MA (Type 2)
2.5 to 7.5 m
Constant section

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Standard colours:



Pole construction:	Tubular steel, hot-dipped galvanised
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat, up to a maximum length of H + E < 9.3 m
Standard version:	Planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting flange plate available

Accessories:**Mounting**

- Flange plate
- Anti corrosion sleeve
- Cable protection
- Foundation plate

Spigot

- Post top fitter AK, AKV
- Bracket LS
- Extension bracket AV

**AM-K**

3.0 to 10.0 m

Tapered, seamless

**AM-K-K**

4.0 to 10.0 m

Tapered, seamless

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Standard colours:

RAL 9004 9006 9007 7016 9016

Pole construction:	Tubular aluminium
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat
Standard version:	Spigot and planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting cast base, for installation to a concrete foundation or to a separate planted root available

Accessories:

Mounting

- Cast base
- Planted root for cast base
- Anti corrosion sleeve
- Cable protection



AML-K
3.0 to 6.0 m
Tapered, seamless

Pole construction:	Tubular steel, hot-dipped galvanised. Supplied in two sections for nominal heights of 16 m or above
Standard version:	Planted root included One, two or three service doors with stainless locking screw, depending on application. Suitable for one cable connecting box
Special version:	Climbing rungs from 3 m above ground; on request

Accessories:**Mounting**

- Anti corrosion sleeve
- Cable protection

**FM-K**

10.0 to 18.0 m

Tapered, seamless

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Pole construction:	Tubular steel, hot-dipped galvanised
Corrosion protection:	5CE; 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat
Standard version:	Planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Surface mounting flange plate; on request

Accessories:

Mounting

- Flange plate
- Anti corrosion sleeve
- Cable protection



AM-V
4.0 to 8.0 m
Tapered, curved

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Standard colours:



Pole construction:	Tubular steel, one or two formed step, hot-dipped galvanised
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat, up to a maximum length of $H + E < 9.3$ m
Standard version:	Planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting flange plate available

Accessories:**Mounting**

- Flange plate
- Anti corrosion sleeve
- Cable protection

Spigot

- Post top fitter AK, AKV
- Bracket LS
- Extension bracket AV



AM-R (Type 1)
3.0 to 6.0 m
Stepped



AM-R (Type 2)
6.5 to 10.0 m
Stepped

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

Standard colours:

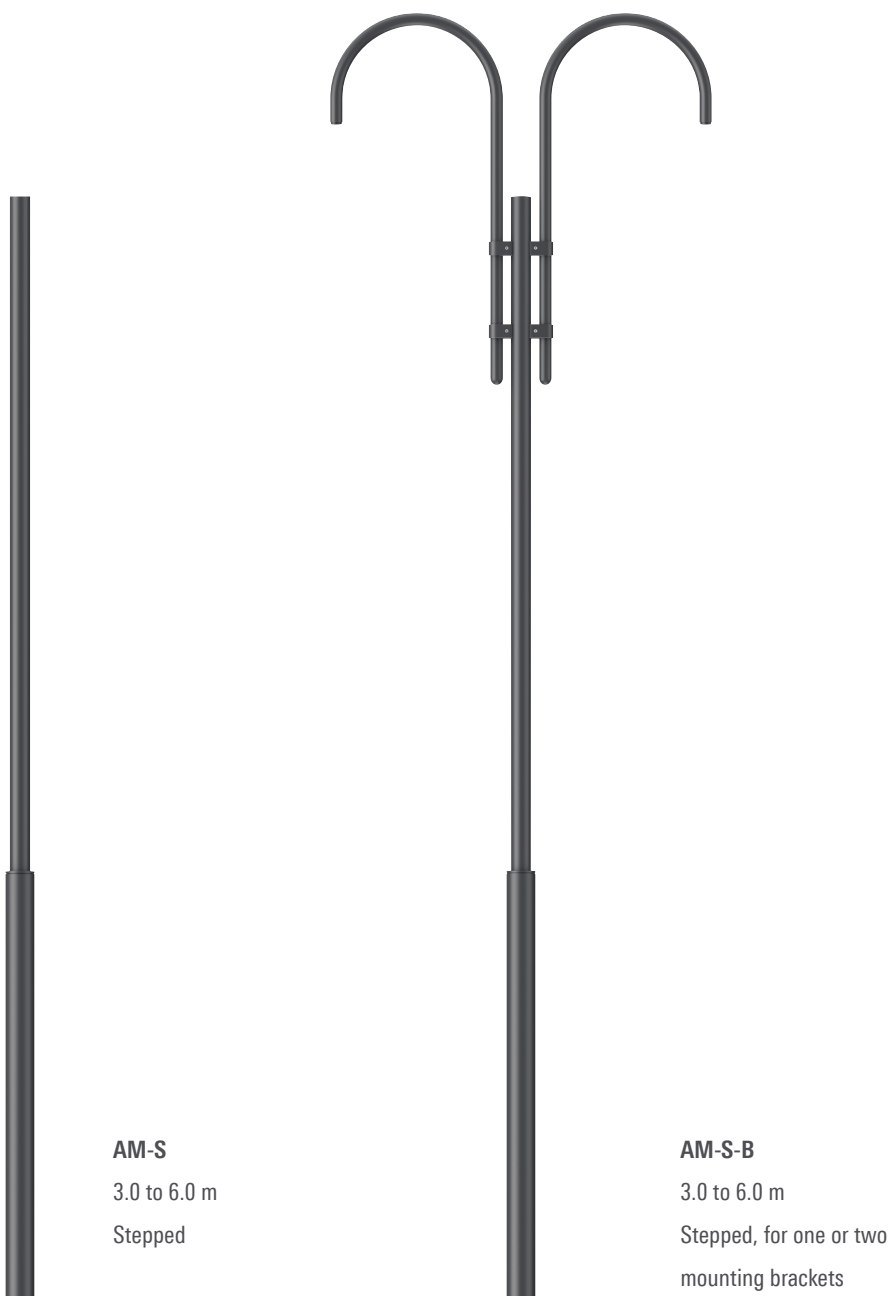
RAL 9004 9006 9007 7016 9016

Pole construction:	Tubular steel, one step, hot-dipped galvanised
Corrosion protection:	5CE, 5CE+Primer optional
Finish:	Chrome-free conversion coating with powdercoat
Standard version:	Planted root included. Service door with stainless locking screw. Suitable for one cable connecting box
Special version:	Optional surface mounting flange plate available

Accessories:

Mounting

- Flange plate
- Anti corrosion sleeve
- Cable protection



AM-S
3.0 to 6.0 m
Stepped

AM-S-B
3.0 to 6.0 m
Stepped, for one or two
mounting brackets

▪ The featured poles have been designed for sale, installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

▪ For electrical accessories, detailed specifications and product codes, refer to www.we-ef.com

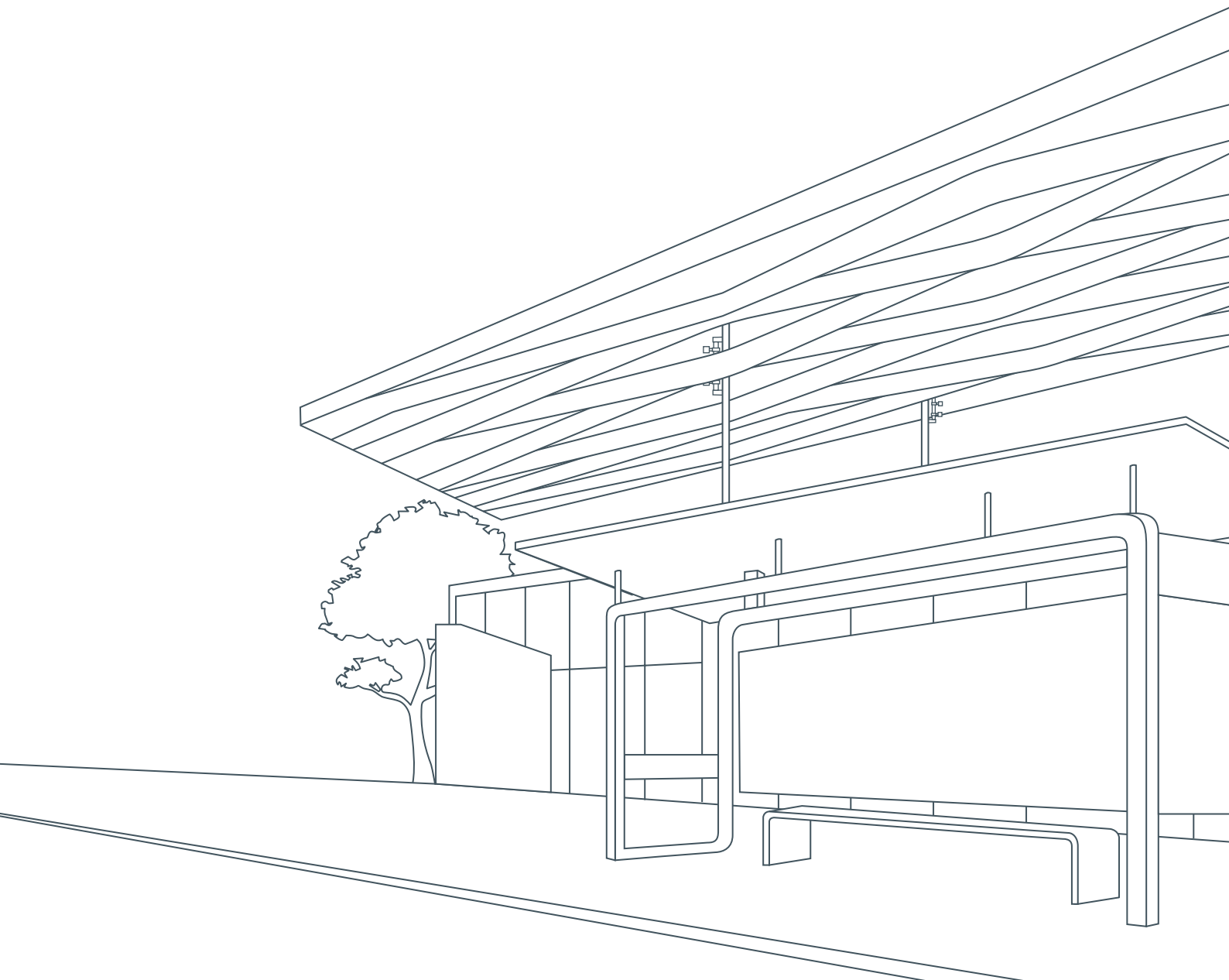
Standard colours:



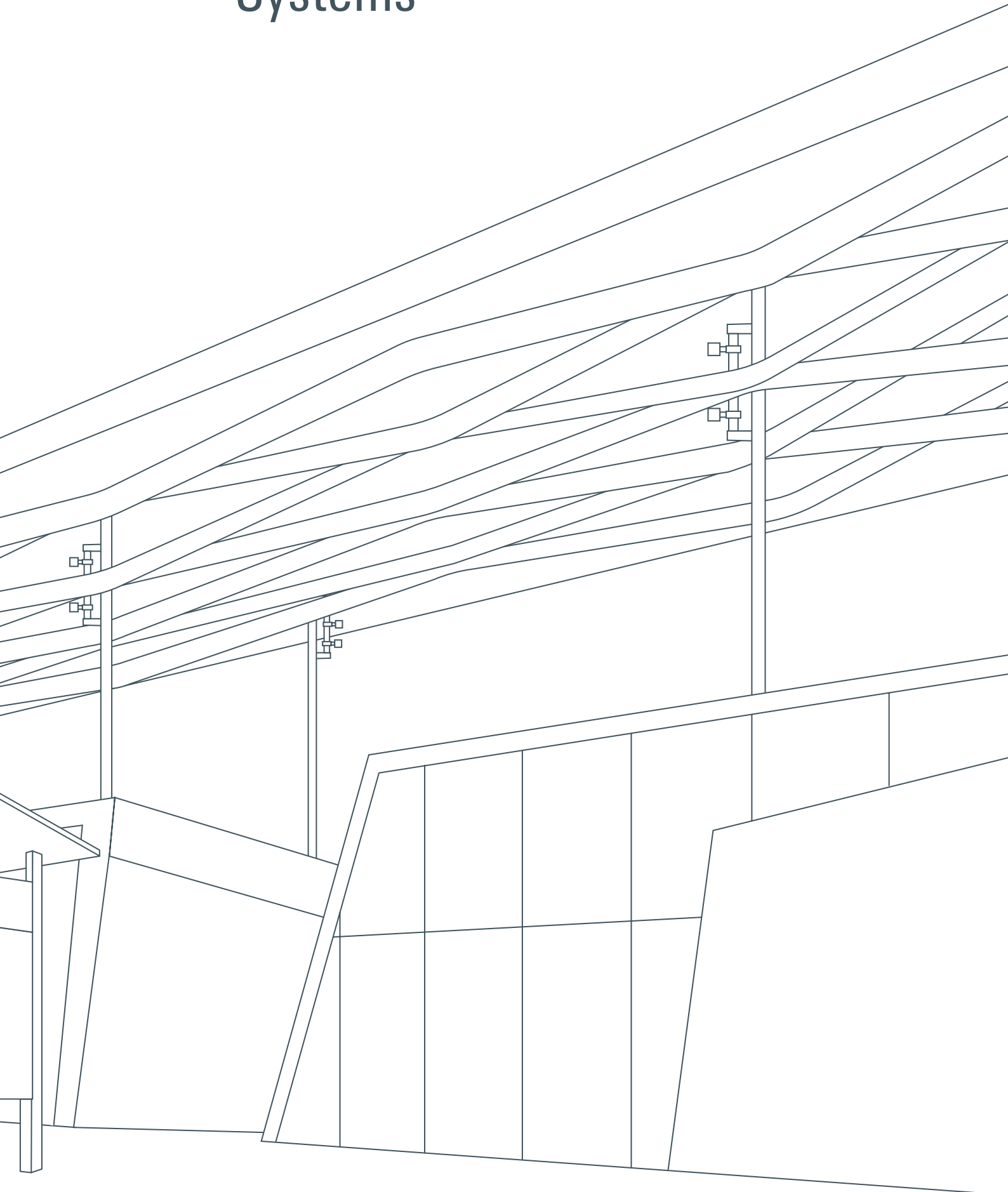
Every city is different. Every lighting task in public space has its own individual character.

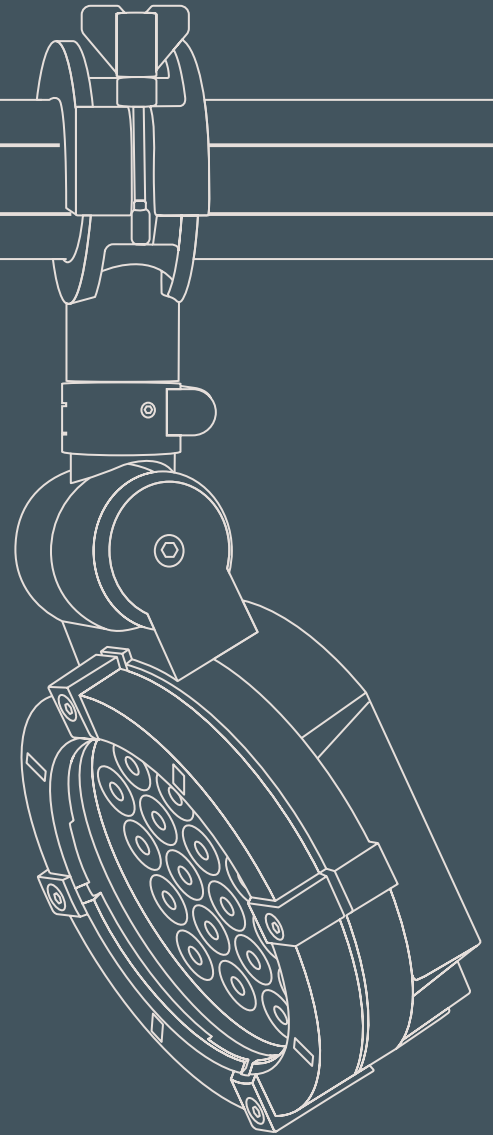
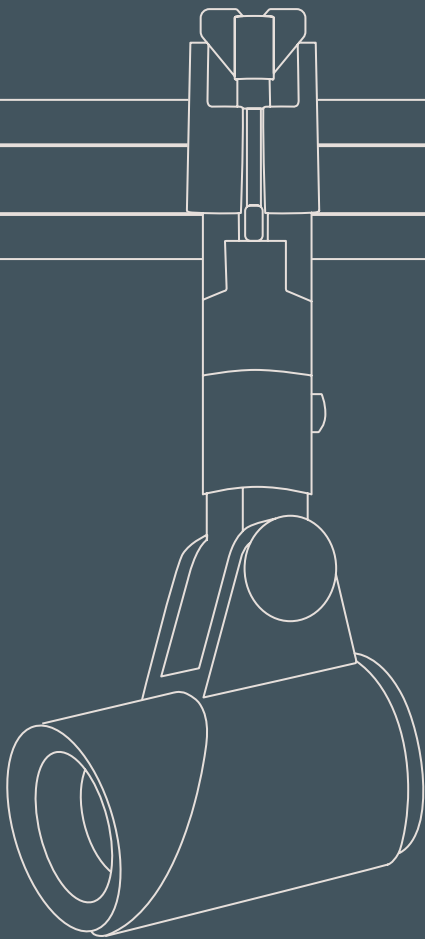
This is a situation that calls for tailored lighting solutions. With WE-EF's systems for outdoor lighting, putting together the perfect ensemble for any given lighting challenge is easy.

These systems consist of carefully curated sets of combinable elements, e.g., for assembly, power supply and lighting technology.



Systems



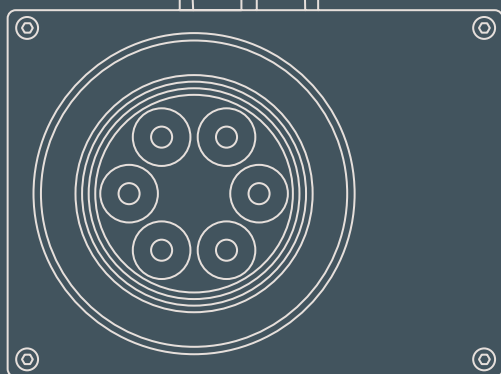


Whenever directional lighting needs to be repeatedly adapted to changing conditions – reconfigured, aligned, readjusted – the flexibility of RAIL66 comes into full play.

WE-EF offers with RAIL66, a flexible, weatherproof rail system for outdoor use. Its robust extruded profiles in different lengths carry up to six matching projectors and supply them with power.

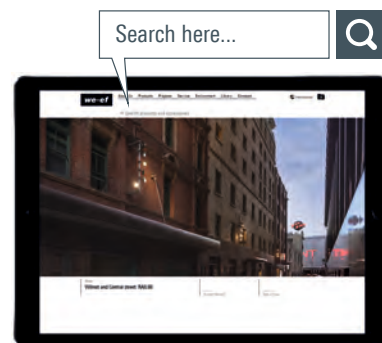
All RAIL66 projectors can be freely positioned and aligned; they do not need to be opened during installation.

There are various installation variants for façades, steel structures and poles as well as a mobile variant as a special version.



RAIL66 System

FLD100	340
FLC100	342
FLC300	344
RAIL66 Universal	346
RAIL66 Cantilever	348



RAIL66 system

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



The Calyx Royal Botanic Garden

Rail System in a Tropical Climate

This airy new glass building in the verdant oasis at the heart of Sydney's Central Business District includes a foyer, exhibition rooms, a shop and various greenhouses. WE-EF's RAIL66 mounting system offers the lighting flexibility needed for such a hub of activity as well as IP66 protection for reliable operation in tropical conditions. RAIL66 FLC100 series projectors installed on the rails provide accentuated lighting in the exhibition areas and general lighting in the garden shop. A customised add-on lens construction permits variable beam angles without having to open the projectors.



The Calyx, Royal Botanic Garden
Sydney (AU)
Architect: PTW Architects and McGregor Coxall
Lighting design: Benjamin Cisterne



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Including 0.4 m of flexible cable enclosed in stainless conduit, in-line connector
and mounting clamp for installation to RAIL66 mounting system
- Control: Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

Available distributions:
[B] [M] [EE] [EES] [A20]

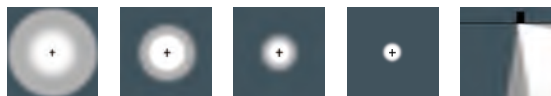
Standard colours:







RAL 9004 9006 9007 7016 9016



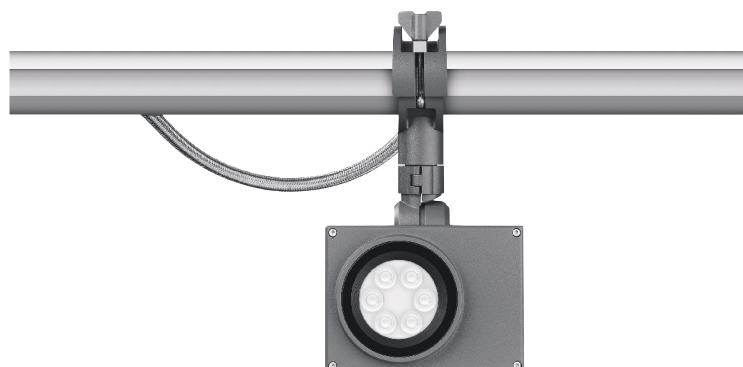
[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



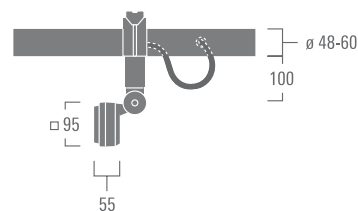
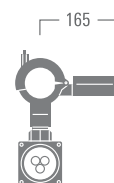
FLD111

[B] [M] [EE] [EES] [A20]

6 W

390-590 lm

Max. 1 internal accessory



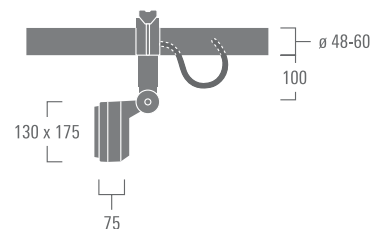
FLD121

[B] [M] [EE] [EES] [A20]

12 W

970-1270 lm

Max. 1 internal accessory



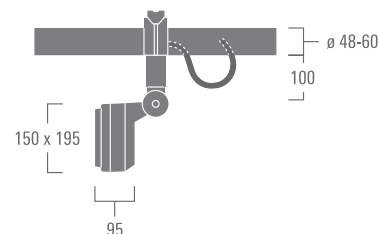
FLD131

[B] [M] [EE] [EES] [A20]

24 W

1940-2530 lm

Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 346



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Including 0.4 m of flexible cable enclosed in stainless conduit, in-line connector and mounting clamp for installation to RAIL66 mounting system
Control:	Optional DALI version available. To be specified at time of ordering

CLASS
I

IP66

IK07

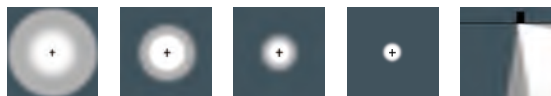
Available distributions:
[B] [M] [EE] [EES] [A20]

Standard colours:






 RAL 9004 9006 9007 7016 9016



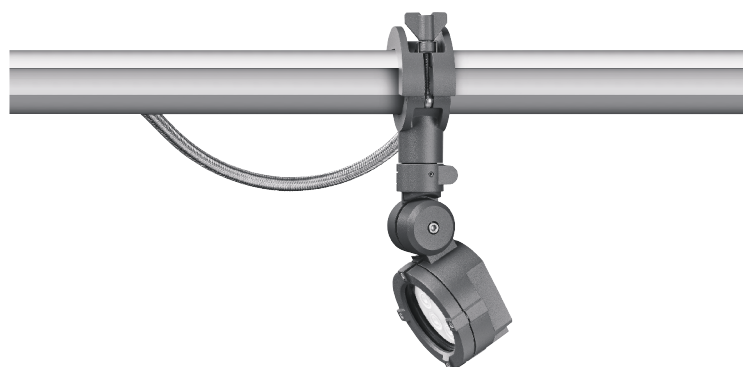
[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

[A20] Asymmetric, wallwash



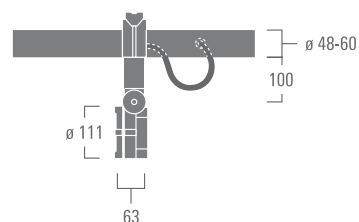
FLC121

[B] [M] [EE] [EES] [A20]

12 W

1140-1370 lm

Max. 1 internal accessory



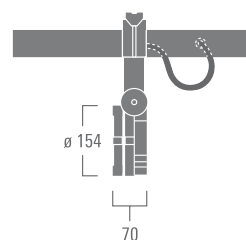
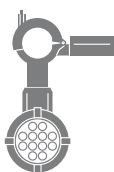
FLC131

[B] [M] [EE] [EES] [A20]

24 W

2280-2610 lm

Max. 1 internal accessory



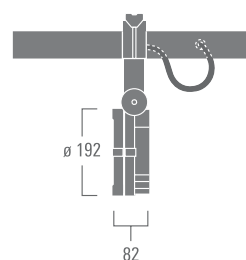
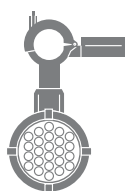
FLC141

[B] [M] [EE] [EES] [A20]

48 W

4570-5460 lm

Max. 1 internal accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 346



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: Including 0.4 m of flexible cable enclosed in stainless conduit, in-line connector and mounting clamp for installation to RAIL66 mounting system

CLASS
I

IP66

IK08

Available distributions:
[B] [M] [EE] [EES]

Standard colours:



RAL 9004 9006 9007 7016 9016

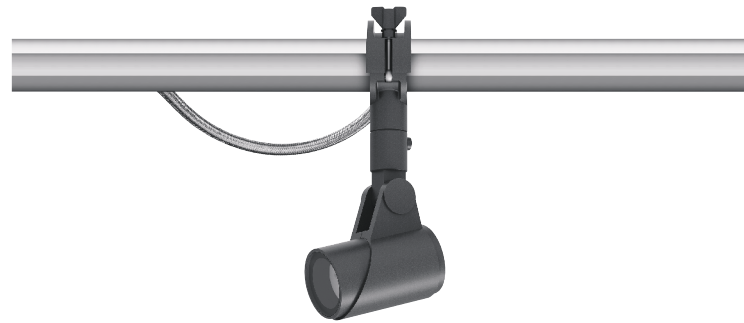


[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



FLC301

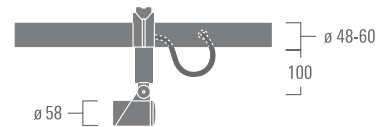
[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311

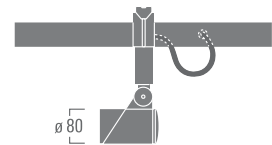
[B] [M] [EE] [EES]

6 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321

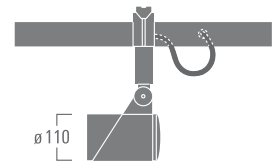
[B] [M] [EE] [EES]

12 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331

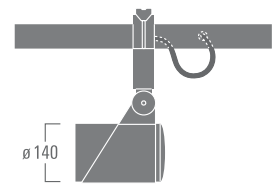
[B] [M] [EE] [EES]

24 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341

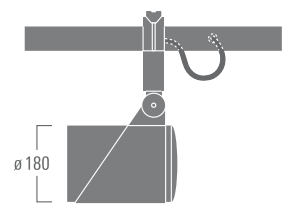
[B] [M] [EE] [EES]

48 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 346



RAIL66:	Marine-grade, all-aluminium construction Anodised rail extrusion
Corrosion protection:	5CE, including PCS hardware
Gasketing:	Silicone rubber gasket
Installation:	In any desired orientation, on walls and columns, under roof and ceiling structures etc.
Mains connection:	Concealed termination chamber Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets

IP66

Standard colours:

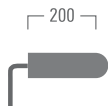


RAL 9004 9006 9007 7016 9016



RAIL66 UNIVERSAL

2-3 projectors



3-4 projectors



4-6 projectors





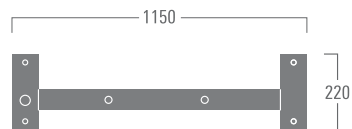
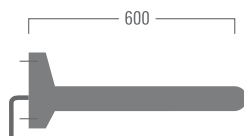
RAIL66:	Marine-grade, all-aluminium construction Anodised rail extrusion
Corrosion protection:	5CE, including PCS hardware
Gasketing:	Silicone rubber gasket
Installation:	Horizontal wall mounting
Mains connection:	Concealed termination chamber Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets

IP66

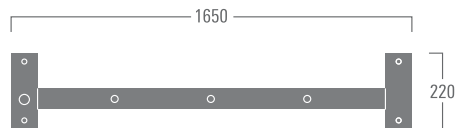


RAIL66 CANTILEVER

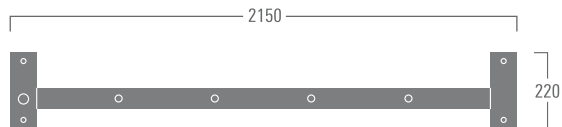
2-3 projectors



3-4 projectors

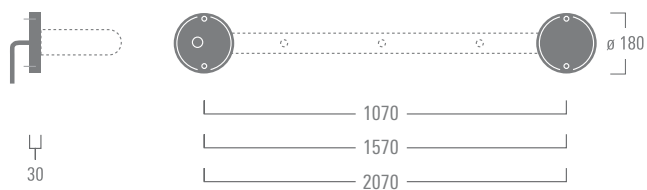


4-6 projectors

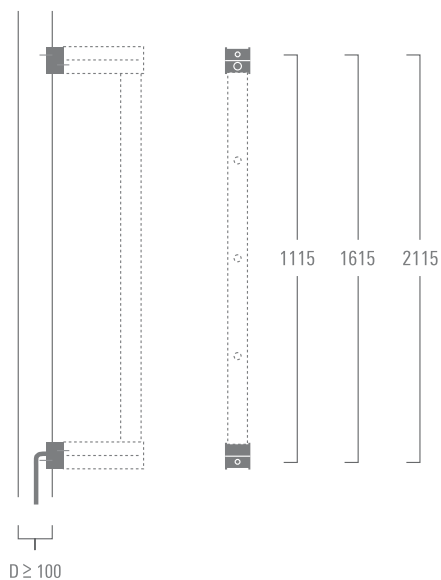


Mounting accessories

for RAIL66 UNIVERSAL



Flat surface fitters (pair) – provide enhanced mounting surface coverage and facilitate concealing of a recessed junction box.



Column fitters (pair) – allow installation to pipe structures and columns of (minimum) 100 mm diameter.

RAIL66

Adjustable directional lighting system. IP66 rated for operation in demanding outdoor environments.



RAIL66 UNIVERSAL

For installation in any desired orientation, on walls, columns, structures, etc.

- [1] One single cable entry provides mains voltage connection for up to six projectors.
Concealed termination chamber.
- [2] Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets.
- [3] The projector's die-cast aluminium clamp attaches to the rail. Matching clamp/rail details facilitate either perfect alignment of several projectors in one row, or precise offset in increments of 90 degrees.
- [4] Extensive horizontal and vertical aiming range for practically infinite directional adjustment.



RAIL66 CANTILEVER

CANTILEVER outreach of 600 mm particularly suitable for wallwash and signboard lighting applications.



ECO STEP DIM®

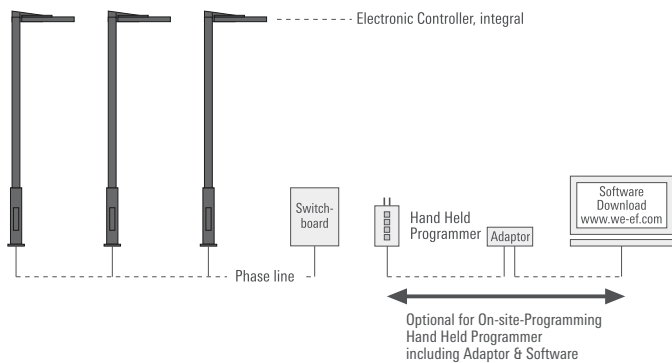


An electronic controller is fitted in the luminaire to reduce luminous flux and power to a preset value, ex-factory.

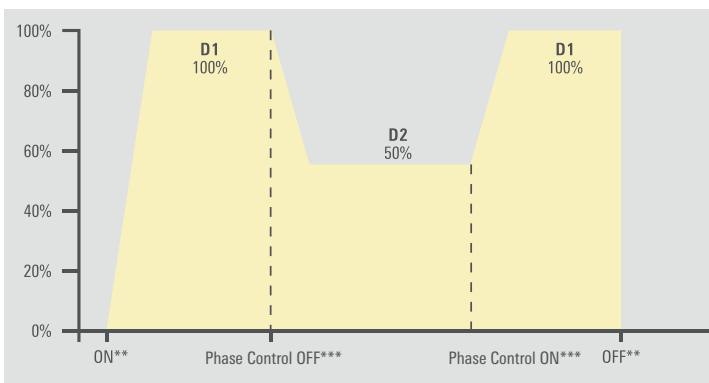
Features

- Control phases (L') such as those that are, for example, used in networks using luminaires with two conventional lamps is required to activate the switch
- One dimming level can be programmed. This is done ex-factory. Luminous flux is reduced from 100 per cent to 55 per cent, and input is reduced to 50 per cent (standard programming). Other dimming levels can also be programmed on request
- Other customer-specific requirements, such as adapting the dimming behavior for the twilight period or gradual dimming can be programmed
- The system can be activated (on/off) via a photocell or timer
- Standard: Positive logic supply phase and control phase = 100 per cent light
- Optional: negative logic supply phase without control phase = 100 per cent light

Eco Step Dim® Basic – Schematic



Eco Step Dim® Basic – Standard Programming*



* For customised programming at the factory, please contact WE-EF directly

** ON/OFF defined by user, using a dimmer switch (photocell) / timer

*** Cycle times for the phase are defined by the user

ECO STEP DIM®

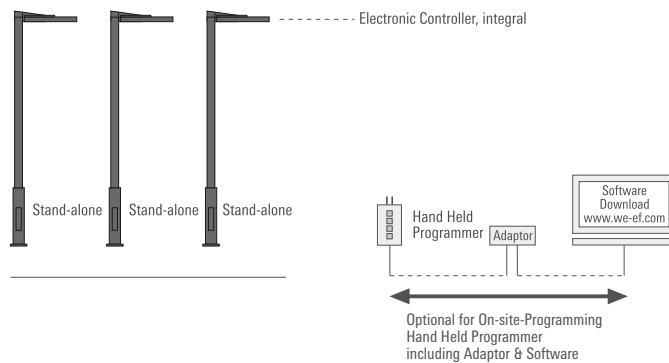


A factory-programmed, multi-step electronic controller is fitted in the luminaire for reducing the luminous flux and input.

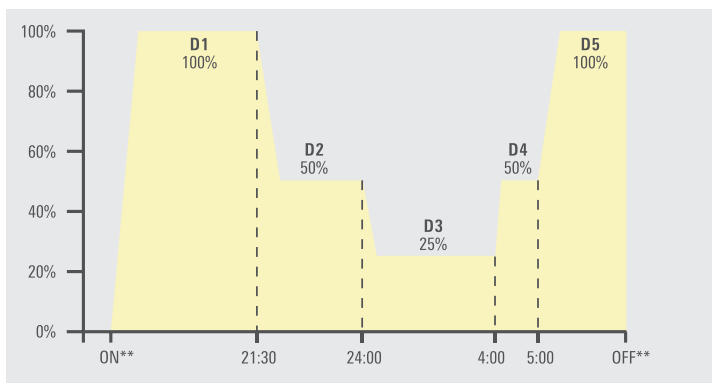
Features

- No separate power source (control phase) required for dimming control. The luminaire is operated in stand-alone mode
- Five dimming levels can be programmed. This is done ex-factory. The programming is either according to the specification or on the basis of WE-EF experience (standard programming). Subsequent reprogramming is possible on site
- The luminaires are switched on and off via a photocell or timer

Eco Step Dim® Advanced – Schematic



Eco Step Dim® Advanced – Standard Programming*



* For customised programming at the factory, please contact WE-EF directly

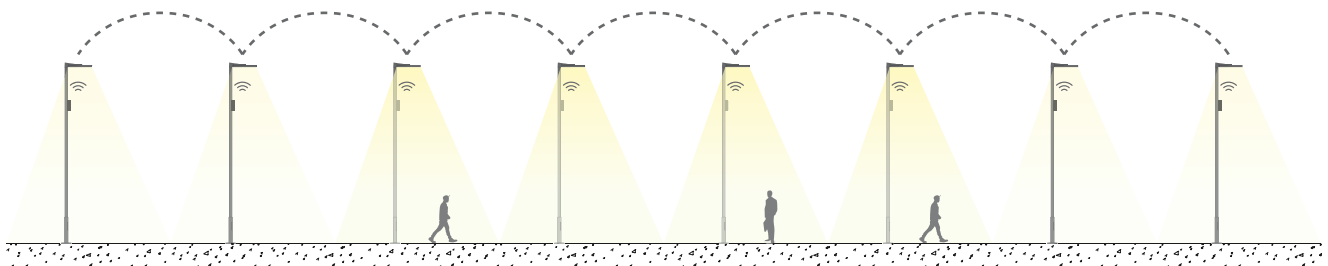
** ON/OFF defined by user, using a dimmer switch (photocell) / timer

ECO STEP DIM®



The right light at the right place. Eco Step Dim® Motion is a system based on motion data captured by PIR sensors (passive infrared). If no movements are detected, Eco Step Dim® Motion dims the luminaires or groups of luminaires according to a programmed setting, to a lower lighting level, for example 20 per cent.

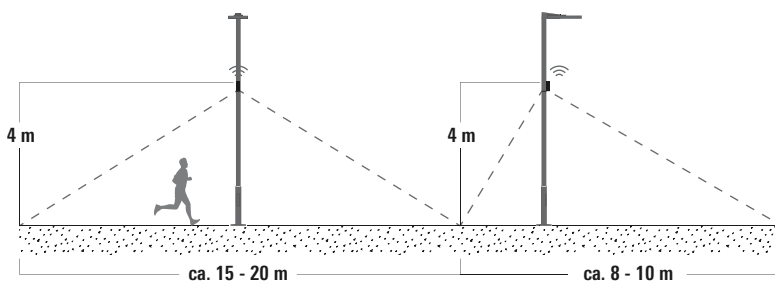
Eco Step Dim® Motion is a wireless system for controlling street and area lighting luminaires. The motion sensors are usually attached directly to the pole. The luminaires are connected to each other via wireless protocol and are controlled via DALI.



Eco Step Dim® Motion reacts to movement/presence. It allows communication by the luminaires with each other. Ideal for footpaths, bicycle paths or residential streets.

If no presence is detected at a location, the luminaires are automatically dimmed. When a presence is detected, the light level for a given number of luminaires is increased to a predefined level, e.g., 100 per cent. They remain at this level behind the person or persons moving through the area for a predefined period.

The system is easy to configure with an Android app and a Bluetooth dongle on site. The system is bi-directional. All luminaires serve as both master and slave, and control and communicate with each other. After initial configuration, connect only with one luminaire to reach all the luminaires.

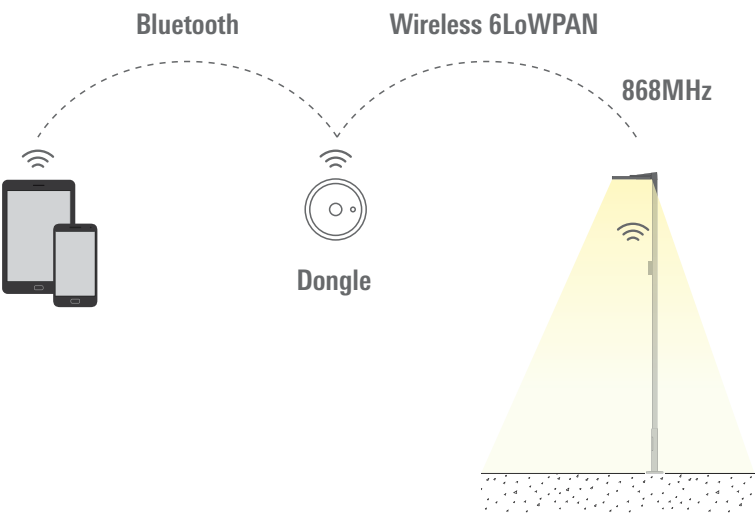


Analog sensor PIR 110° / 116°, recommended installation height 4 m.

Commissioning

Luminaires that are delivered to a project are programmed during commissioning, with both project specific information, e.g., project name and site, as well as default settings for lighting control.

The default settings for lighting control enable each luminaire to function correctly from initial installation until the system has been correctly configured.

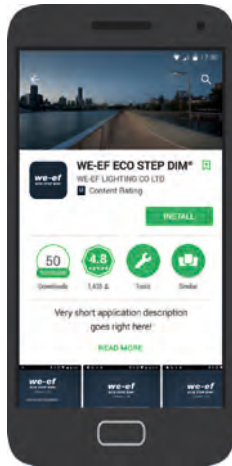


Default settings	Value
Enable presence sensor	On
Dim light level	20 %
Max. light level	100 %
Delay time	60 sec

Communication method for commissioning and installation

ECO STEP DIM®

Eco Step Dim® Motion is configured on the system side with a 15-digit password, the Eco Step Dim® Motion App and a Bluetooth dongle.



Android app for commissioning and installation



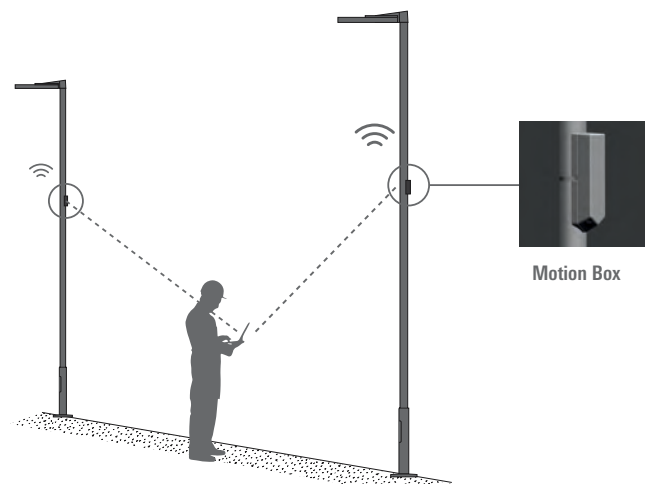
Dongle for secure communication.

Acts as an interface between Android devices and the GLow PAN.

With the Eco Step Dim® Motion light management system, WE-EF provides a 2 stage system to realize a variety of control options.

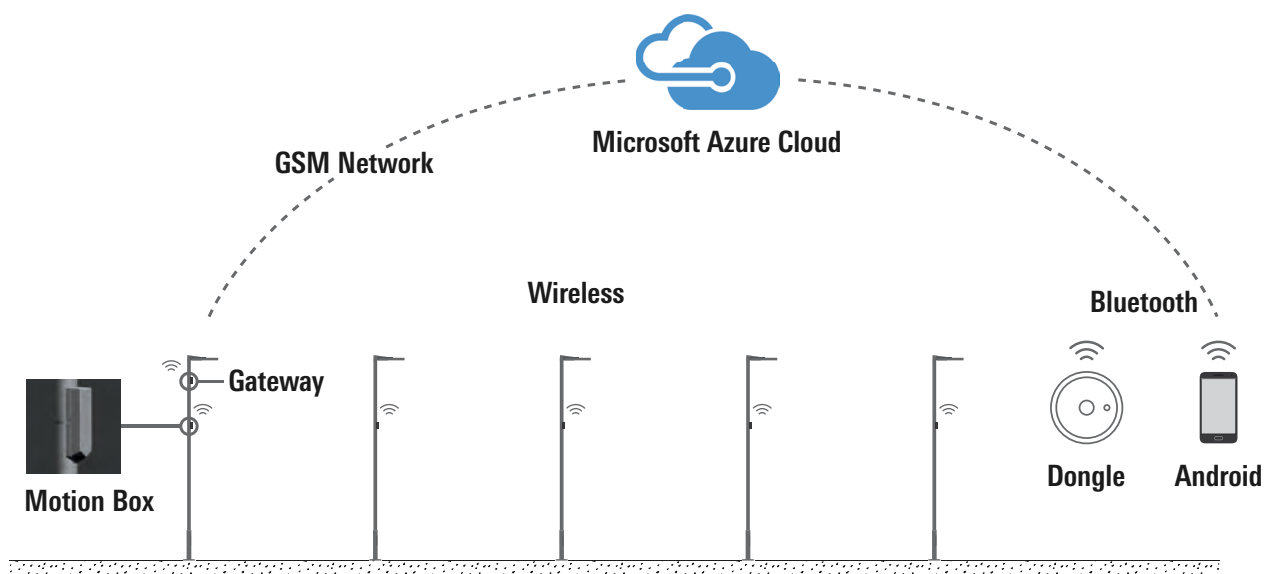
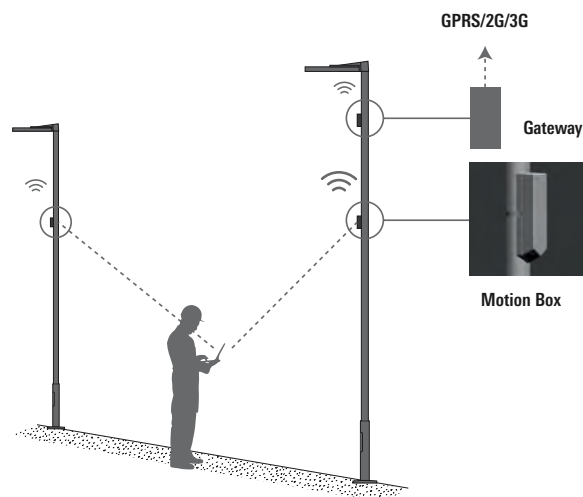
Features and benefits of linking

- Several luminaires connected via wireless protocol.
- Data exchange/transmission between the luminaires
- Android device and dongle
- Wireless communication 128-bit encryption
- Luminaire information (firmware, programs, date etc.)
- Records (voltage, burning hours, power factor, temperature etc.)
- Luminaire groups can be formed
- Adjustable amount of light (high and low), depending on presence/time
- Adjustable ramps between the light levels
- Settings can be inherited
- In-Motion Box Integrated GPS, temperature and impact sensor
- Recommended maximum distance between luminaires is 100 metres
- Access to all luminaires from one luminaire for commissioning and installation
- Firmware update via wireless protocol



Features and benefits of connection

- Luminaires connected to a light management system via gateway
- All settings possible via GPRS/2G/3G
- Data held in Microsoft Azure Cloud
- Access with the online Dashboard software from any point
- Reports on energy consumption, switching cycles, traffic density, error messages etc. can be called up on the Dashboard
- Error messages etc. can be emailed
- 500 controllers can be managed via one gateway
- The light management Eco Step Dim® Motion can, following technical clarification, be integrated into other light management systems

Connected

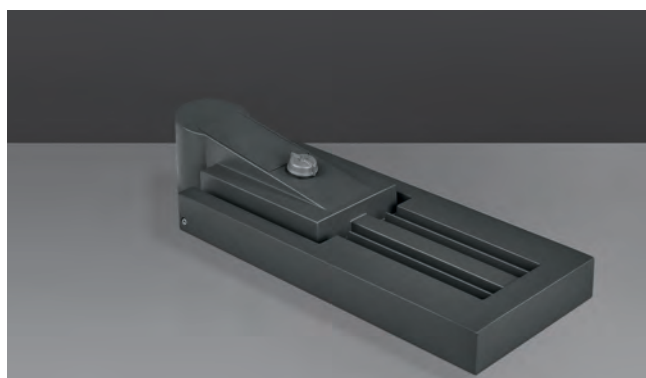
New light management system for WE-EF street and area lighting luminaires. WE-EF's P2C – Prepare to Connect and R2C – Ready to Connect offer unlimited freedom in deciding when to install new luminaires as well as apply retrofit solutions. Luminaires that follow these concepts are extremely well-made and ready for anything.

Prepare to Connect – P2C



- The products are designed to accommodate the necessary equipment for integration into a light management system
- A Zhaga Book 18 interface is already installed ex-works. The interface is covered with a robust protective cap, and protection class IPX6 is maintained
- After choosing the light management system, a suitable 'intelligent' LED driver needs to be installed in the luminaire

With a P2C luminaire, the housing does not have to be re-worked later. It saves costs for possible subsequent engineering adjustments and maintains the high degree of protection. Retrofitting on site is inexpensive, without having to disassemble the luminaire.



Factory-installed standardised Zhaga Book 18 interface with robust protective cap, protection class IPX6



Remove the protective cap

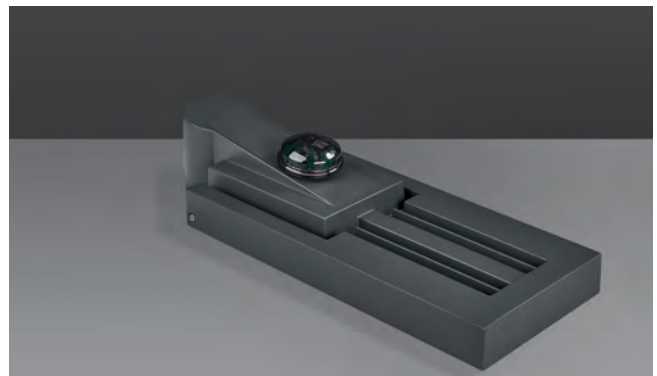
Ready to Connect– R2C

- R2C products are equipped with interfaces, ready for integration into a light management system
- A Zhaga Book 18 interface is installed ex-works. The interface is covered with a robust protective cap, and protection class IPX6 is maintained
- The luminaires are completely pre-wired and equipped with a DALI LED driver

Depending on the choice of light management system, a corresponding controller must be available for commissioning and attachment to the standardized Zhaga Book 18 interface ("plug'n play" system).



Connect the controller



Luminaire is now ready for use

Suitable luminaires for P2C Prepare to Connect and R2C Ready to Connect



ZFS400



RFS500



CFS500



RMT300



RMM300



RMC300



CFT500



RFL500-SE



VFL500



VFL500-SE



PFL500

Surge protection

WE-EF LED pole mounted and catenary lighting luminaires are fitted with electronic converters featuring 6/6 kV surge protection in accordance with EN 61000-4-5. For comprehensive protection of the luminaire against lightning and electrical surges (high-risk areas), primary (type 1) and secondary (type 2) surge arrestors, such as the WE-EF SP20, must be installed into the power supply (sub-distributor/switch board). For installations in such high-risk areas, the optional WE-EF SP10 (type 3, 10 kV) surge protection accessory is recommended. If the surge protector has been triggered, the luminaire is automatically disconnected from the mains.

The technical planner/installer is responsible for the proper selection, sizing and installation of the surge protection modules that must be provided on site.



IOS® Innovative Optical System



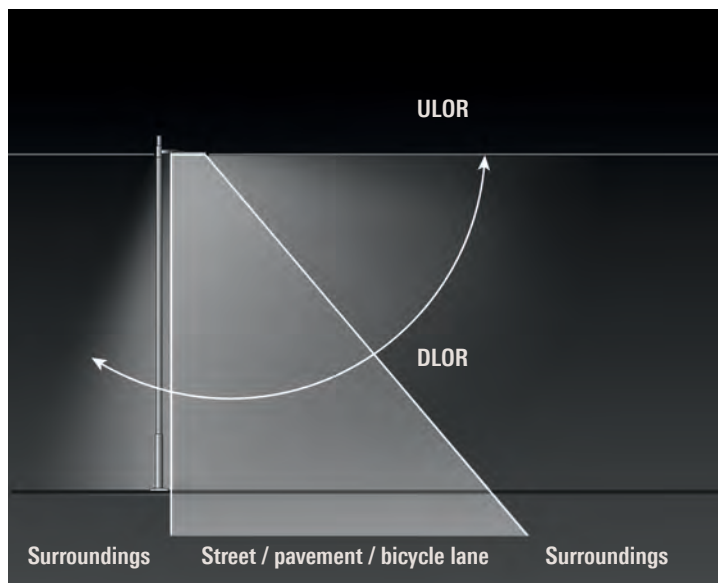
The IOS® system is a fundamental part of the WE-EF development philosophy.

The main features of the IOS® system are:

- In-house CAD design
- Tooling exclusive to WE-EF
- Precisely manufactured optical systems exclusive to WE-EF
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- Optional optical accessory toolkit

In street and area lighting applications, IOS® features full cut-off light distribution in compliance with European standard EN 13201 (Class G3-G6):

- Zero light emission above the 90° horizontal
- Tightly controlled 'candela' intensities in the critical high-angle glare zone at 80°-90° (from nadir)
- Solutions to light trespass and dark skies concerns

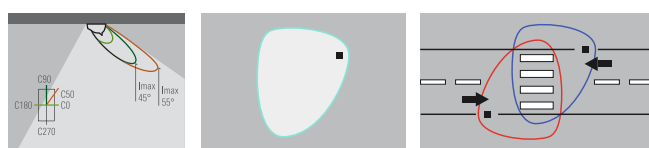


The main purpose of an optical system is to direct light onto a specified target surface. Particularly in streetlighting applications, any amount of light that is emitted above the horizontal, must be considered not merely as being wasteful, but equally so as polluting the night sky. The Upward Light Output Ratio (ULOR) is a measure of how much light escapes from a luminaire into the sky. Obviously, a ULOR of zero per cent is desirable. The better the optical system, the lower the burden on our environment.

[P45R] and [P45L] Lenses – Pedestrian crossing distribution

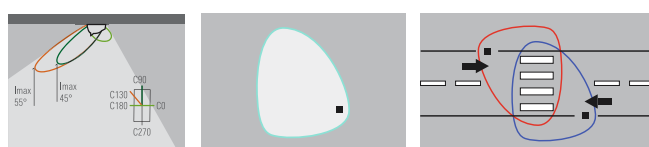
- Optimised for illuminance-based design work (maximum spacing), the '45' references the nominal angle of peak intensity from nadir (downward vertical)
- No light above the 90° horizontal (ILE Class E1/E0).

Ideal for the illumination of pedestrian crossing to EN DIN 13201, Class S2-S4



[P45R]

right-hand traffic



[P45L]

left-hand traffic



Shown in this example are two VFL540 with [P45L] pedestrian crossing, for left-hand traffic

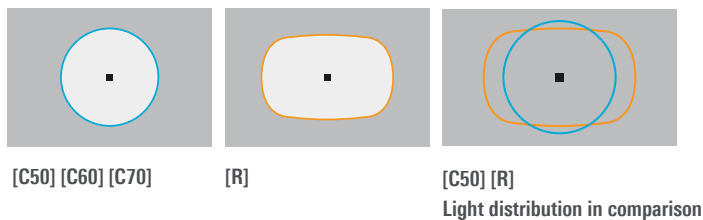
[C50] [C60] [C70] and [R] Lenses – Symmetric and rectangular distribution

- Optimized for illuminance-based design work (maximum spacing) with good visual comfort
- For [C50] [C60] and [C70], maximum angle of peak intensity through C0 50°, C0 60° and C0 70° respectively
- For [R], maximum angle peak intensity through C0 65°, C90 45°.

The [R] distribution has a forward to side ratio of 1:2

- No light above the 90° horizontal (ILE Class E1/E0).

Ideal for lighting public spaces where both uniformity and visual comfort are critical factors



Shown in this example are CFT540 with [R] Rectangular distribution

[P65] Lens – Pedestrian / bicycle lane distribution

- Optimised for illuminance-based design work (maximum spacing).

The 65-70° references the nominal angle of peak intensity from nadir (downward vertical)

- No light above the 90° horizontal (ILE Class E1/E0)

Ideal for pedestrian and bicycle lanes according to the criteria for illuminance EN DIN 13201, Class S2-S4.



[P65]



Shown in this example are PFL540 with [P65] Pedestrian / bicycle lane distribution.

[S60] and [S65] Lenses – Streetlighting distribution

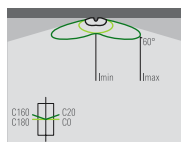
- Optimised for luminance-based design work (high visual comfort).

The '60' references the nominal angle of peak intensity from nadir (downward vertical)

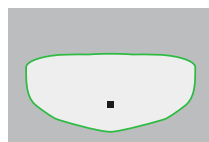
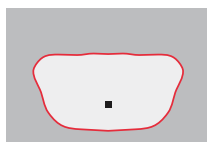
- No light above the 90° horizontal (ILE CLASS E1/E0).

Ideal for streetlighting according to the criteria for luminance EN DIN 13201, Class M3-M6.

For a one-sided arrangement, guaranteed spacing = $5.5 \times \text{MH UI} \geq 0.4$, $T_i < 15$ per cent



[S60]



[S65]



Shown in this example are RMC320 [S60] Streetlighting distribution

[S70] Lens – Streetlighting distribution

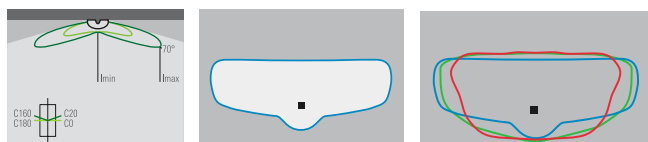
- Optimised for illuminance-based design work (maximum spacing).

The '70' references the nominal angle of peak intensity from nadir (downward vertical)

- No light above the 90° horizontal (ILE CLASS E1/E0).

Ideal for streetlighting according to the criteria for illuminance EN DIN 13201, Class S1-S6.

For a one-sided arrangement, guaranteed spacing = 7-9 MH Uniformity $U_0 \geq 0.2-0.4$,
with good visual comfort (the norm does not provide specific values for glare limitation)



[S70]

[S60] [S65] [S70]

Light distribution in comparison

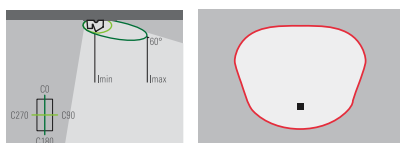


Shown in this example are RFL540 [S70] Streetlighting distribution

[A60] Lens – Asymmetric 'forward throw' distribution

- Nominal angle of peak intensity through C0 60-65°
- Rearward spill limited to an angle of 10°
- No light above the 90° horizontal (ILE CLASS E1/E0)

Ideal for lighting public spaces where visual comfort (glare limitation) is a critical factor.

**[A60]**

Shown in this example are VFL540 [A60] Streetlighting distribution

[R45] and [R65] Lenses – Rectangular 'side throw' distribution

- Optimised for illuminance-based design work (maximum spacing).

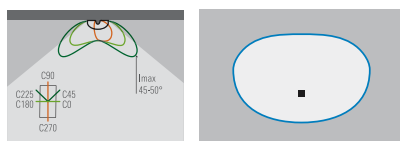
The '45' or '65' references the nominal angle of peak intensity from nadir (downward vertical)

- Rearward spill limited to an angle of 10°
- No light above the 90° horizontal (ILE CLASS E1/E0).

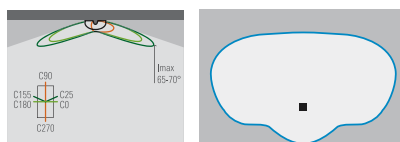
Ideal for streetlighting according to the criteria for illuminance EN DIN 13201,

Class S1-S6. For a one-sided arrangement, guaranteed spacing = 4-5 MH Uniformity for [R45] and 7-9 MH Uniformity for [R65]

$U_0 \geq 0.2-0.4$, with good visual comfort (the norm does not provide specific values for glare limitation)



[R45]



[R65]



Shown in this example are RMT320 [R45] Streetlighting distribution

WE-EF LED lens systems follow the approach of the 'multi-layer' principle. Each individual LED illuminates the same area, thus creating so-called lighting layers. The sum of all these layers results in a uniform and efficient illumination.

The multi-layer principle has the following advantages:

- Light is strictly controlled, and any light pollution is kept to an absolute minimum through the exact aiming of the LEDs
- The system ensures through modular engineering that groups of LEDs can be simply and quickly exchanged
- If one LED fails and the light level drops, uniformity is retained
- OLC® technology has been developed with the future in mind; when more efficient LEDs become available, they can simply be retrofitted

The OLC® technology (multi-layer principle) is the ideal method for achieving a uniform and energy saving lighting solution, particularly for street and area lighting, providing the highest level of safety in ensuring that the failure of individual LEDs does not lead to an adverse effect in the lighting. It balances the needs for safety with visual comfort and energy savings.



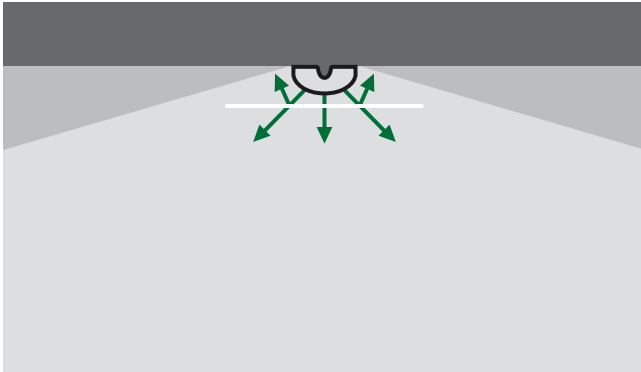
WE-EF's multi-layer technique – 100% light



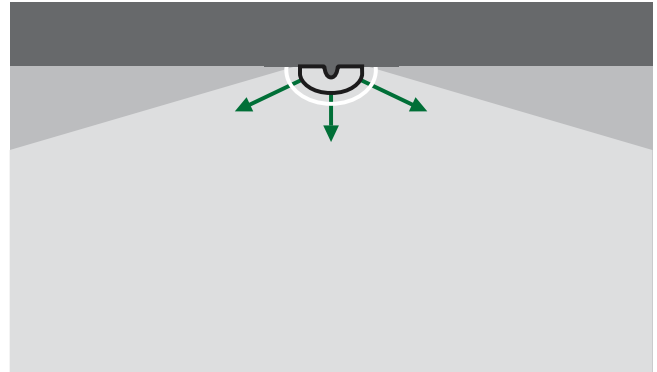
WE-EF's multi-layer technique – 70% light

To further improve the efficiency of street and area lighting luminaires, WE-EF has developed the RFC® technology. (RFC® stands for "Reflection Free Contour.")

The conventional flat-glass panel or cover is replaced by a UV-stabilised panel that has a surface that is contoured in a way that imitates the shape of the OLC® lens; the goal is to minimize the loss of light that normally occurs due to internal reflection.



Standard light distribution



Light distribution using RFC® technology



The contour of the main lens follows the shape of the individual LED lens, thereby minimising internal reflections within the luminaire.

- In the case of the [S60] lens, at the critical 60° (downwards vertical), 20% of the light with a conventional flat glass cover is reflected internally. With the [S70] lens, at the critical 70°, it is 30%. These losses are virtually eliminated by the RFC® technology.
- With the [S60] lens, this means a slight increase in the spacing (0.25 x mounting height). In the case of the [S70] lens, spacing has increased significantly (0.5 to 1.0 x mounting height).

Tunable White Technology

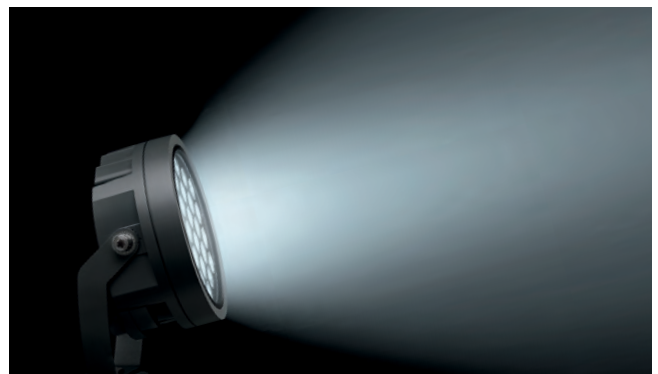
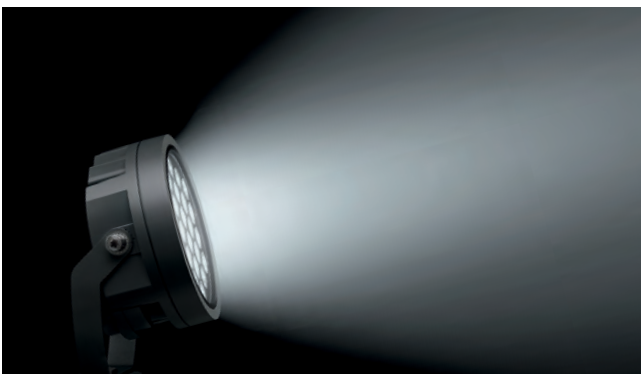
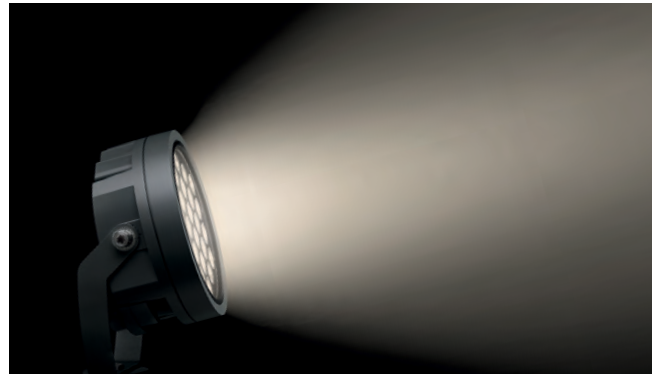
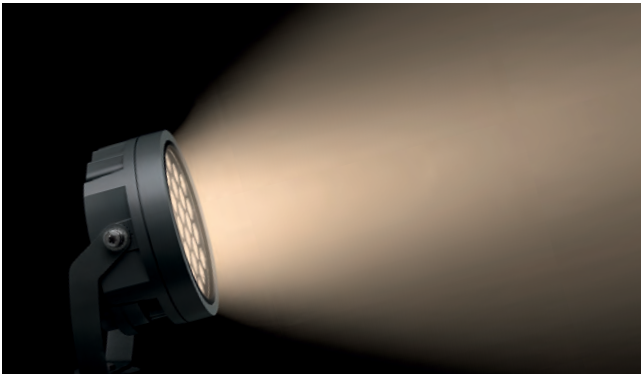


Tunable White Technology combines white LEDs of different colour temperatures and enables them to be controlled separately. As a result, in addition to being able to dim their luminous flux up and down, tunable white luminaires can also vary infinitely between warm white, neutral white and cool white light. This functionality can be used to program light progression – for example, based on the dynamics of daylight. Indoors, tunable white luminaires can promote wellbeing and performance.

Outdoors, tunable white opens up new aesthetic and functional possibilities. For example, the use of dynamically changing light colours

can attract attention and facilitate orientation – as a result of a change in colour temperature, increased attention could be drawn to stairs, thus directing the flow of visitors.

Tunable white outdoor lighting could vary with the changing seasons, presenting vegetation in different ways or changing during the course of a night and creating different atmospheres in one place. The colours and textures of surfaces are perceived differently with different colour temperatures, and tunable white luminaires can be used to showcase architecture in ever-changing ways.



Colour Boost Technology

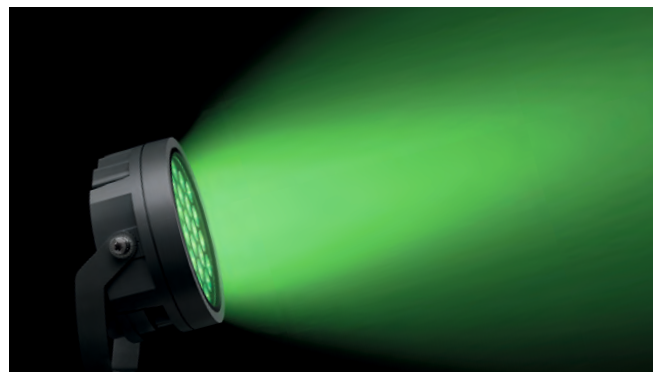
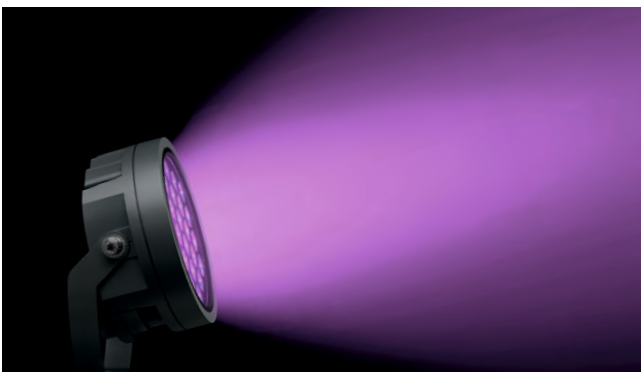
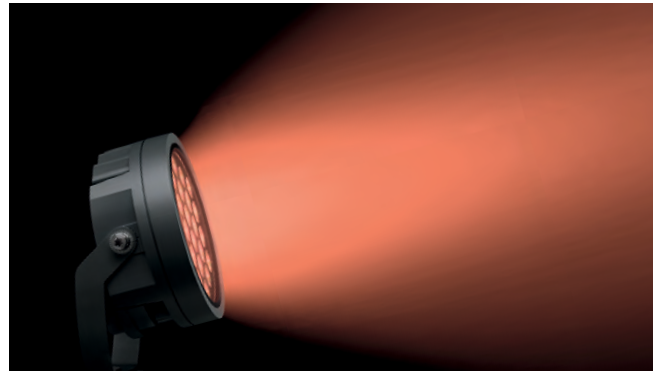
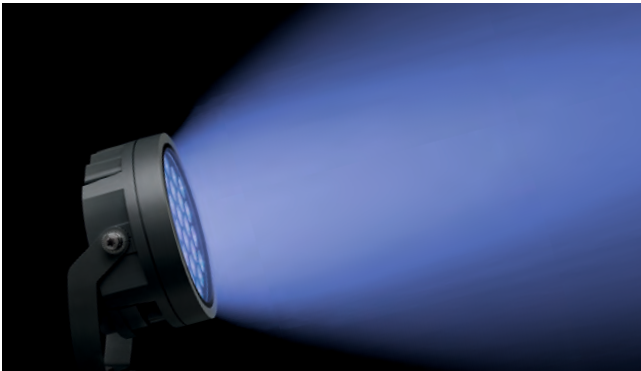


WE-EF Colour Boost Technology enables four-channel colour mixing, with 30% to 40% higher overall luminous flux than the usual standard. The lens optics developed by WE-EF, and matched to the coloured LEDs, enable homogeneous colour mixing, smooth colour transitions, high efficiency and maximum control of the light.

With four-channel colour mixing, the available electrical power of the projector is normally distributed evenly across all four channels. This means that a maximum of 25% of the electrical power is available to each channel. As a rule, however, a maximum of three channels are used for colour mixing. This means that only a maximum of 75% of the electrical power is available to them.

This is where WE-EF Colour Boost Technology comes in. When only three channels are used, it distributes 100% of the electrical power to the three active channels, so that 33% instead of 25% of the total electrical power is available to each channel.

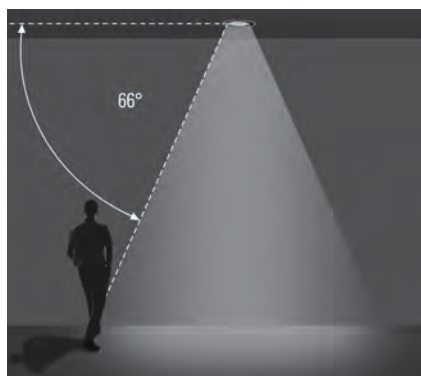
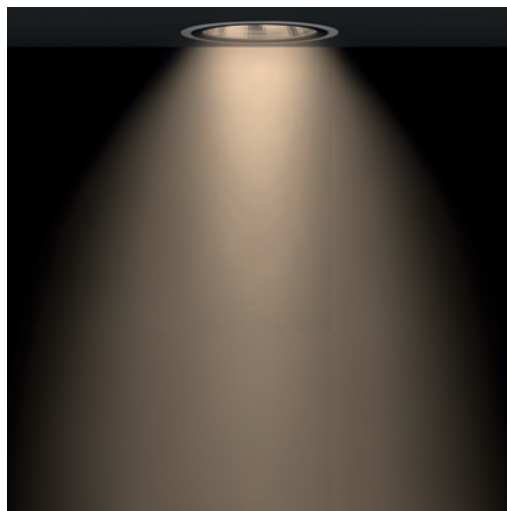
Depending on the colours used, this increases the overall luminous flux by up to 40%. In order to ensure optimum operating parameters for the LEDs at all times, and to avoid overloading, the built-in driver reliably limits the respective rated current per channel. If the maximum rated current per colour in a four-channel operation is set at 100%, dynamic power management can increase this to a maximum of 140%.



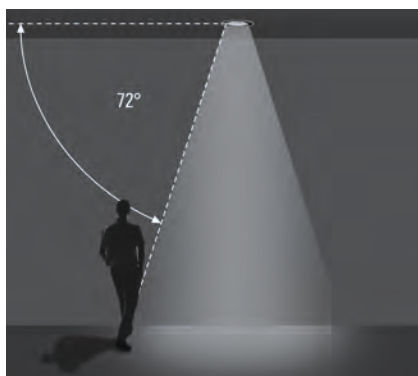
Darklight Technology



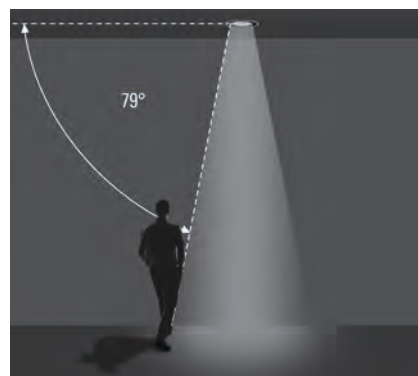
For all applications where visual tasks place particularly high demands on lighting quality, WE-EF has developed the DOC100 Darklight downlights. A two-part reflector combination ensures that no direct light is emitted within the cut-off angle, and prevents people from looking directly into the light source. The result is consistent and effective limitation of both direct glare and reflected glare on smooth surfaces such as displays and monitors. Seen from below, part of the luminaire's reflector appears as a luminous ring with moderate luminance.

**[B] Wide beam**

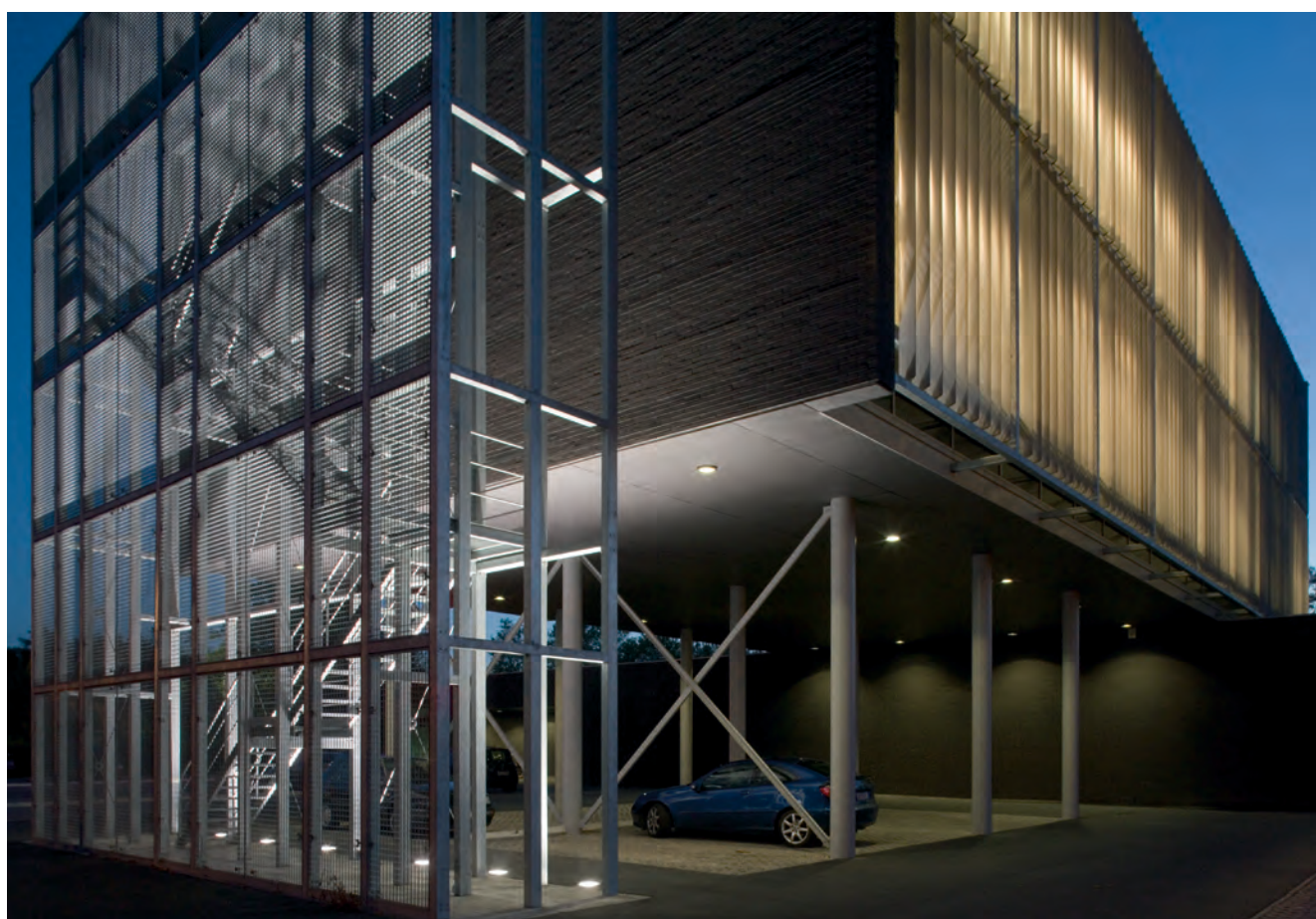
66° shielding angle

**[M] Medium beam**

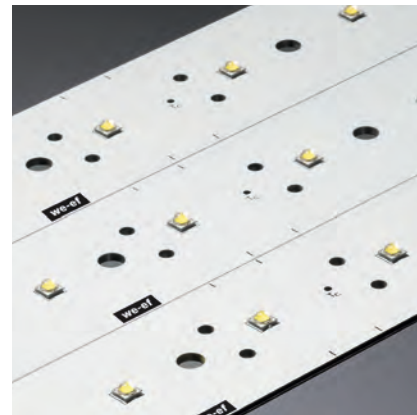
72° shielding angle

**[E] Narrow beam**

79° shielding angle

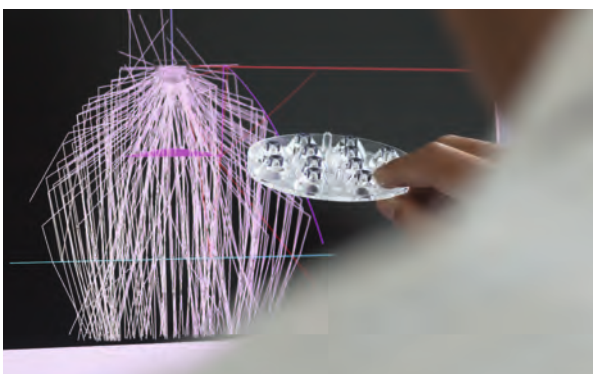


The development of high-quality and efficient LED lenses is one of WE-EF's core competencies. WE-EF possesses the expertise for design, engineering and production. WE-EF is able to apply its expertise gained from long experience in the development and operation of LEDs. For example, at the SONY Center in Berlin, in 2004, WE-EF was involved in one of the first major LED projects. It was an invaluable advantage, both in understanding today's possible LED technology and in converting this knowledge into innovative lighting solutions.



The LED boards in all WE-EF luminaires can be individually exchanged without special tools. All components of the luminaires are engineered for reliability and longevity.

CAD design, optical simulations, prototypes, verification and injection moulding tooling are all used in WE-EF's development and production facilities. A prototype is prepared in WE-EF's tooling shop for every LED lens type, which is then measured and optimised. WE-EF LED boards fitted with high-quality LEDs, which have narrowly-defined binning tolerances, guarantee high visual comfort.



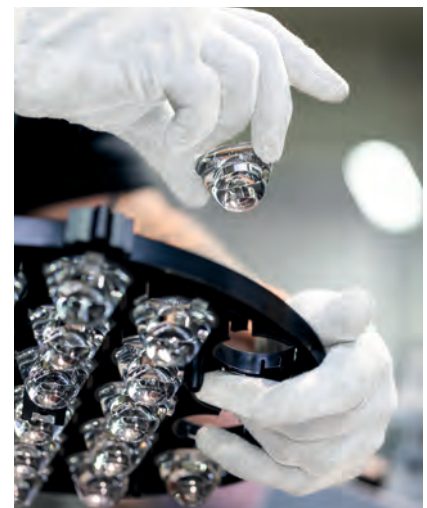
Thermal management

Long service life and maximum efficiency can only be achieved with perfectly co-ordinated thermal management. WE-EF products discharge the heat generated by the LEDs through the enclosure that contains a built-in heat sink. As part of a first development step, thermal conditions are simulated with the relevant computer programs and optimized at a theoretical level. Once this optimisation process is complete, prototypes are produced for each luminaire, which are then subjected to intensive testing until they provide results that meet the requirements for optimised heat discharge with maximum service life and minimal reduction in luminous flux.



LED – Light Emitting Diodes

As a luminaire manufacturer, WE-EF aims to shape the thermal conditions in the luminaires to ensure that the LEDs are operated at the optimum working point and that overloads can be avoided. The product data sheets of the LED manufacturers, which are based on the results of tests and mathematical calculations, form the foundation for ensuring that these tasks can be performed successfully. An assessment of whether an LED in a luminaire is being operated in an optimum manner, and the effects on service life and reduction in luminous flux, is much more complex than for conventional lamps. Such an assessment therefore requires more attention. WE-EF started its first tests in 2008. New luminaires with new LEDs are constantly being added. That is why WE-EF can fall back on empirical values of more than 60,000 hours of operation. The findings from these test series are the basis for further innovations.



Definitions

The terms and definitions used in this section are based on the document entitled 'Guidelines for project design safety in LED lighting' (Leitfaden Planungssicherheit in der LED-Beleuchtung), published by the German Electrical and Electronic Manufacturers' Association (ZVEI) in March 2020.

Rated input power P (W): The effective input of a luminaire, comprising the power consumption of all components integrated in the luminaire.

Rated luminous flux ϕ_v (lm): The total radiant flux of a luminaire in its visible range, also known as the initial luminous flux.

Luminaire efficacy η_v (lm/W): The quotient of the rated luminous flux and the rated input power.

Rated ambient operating temperature T_a (°C): The ambient temperature at which a luminaire can be operated whilst still maintaining all safety-relevant parameters. In this catalogue, $T_a = 25^\circ\text{C}$. However, please note that the majority of the luminaires listed have a significantly higher rated temperature (T_a). Contact WE-EF to request data for a particular luminaire.

Rated ambient performance T_q (°C): The maximum ambient temperature at which a luminaire reaches the specified values for luminous flux and service life, for example. All of the data in this catalogue are based on a rated ambient T_q of 25°C .

Rated service life $L_x B_y$ (h): The number of hours after which: (a) A group of LED luminaires have dropped to a luminous flux of x (%); and (b) A number y (%) of LED luminaires have dropped below the specified luminous flux.

Example:

Requirement $L_{70}B_{10} - 60,000$ h means that after 60,000 hours the group of LED luminaires in question must still provide 70% of the initial luminous flux, whereby 10% of the LED luminaires in question are permitted to provide less than 70% of the initial luminous flux.

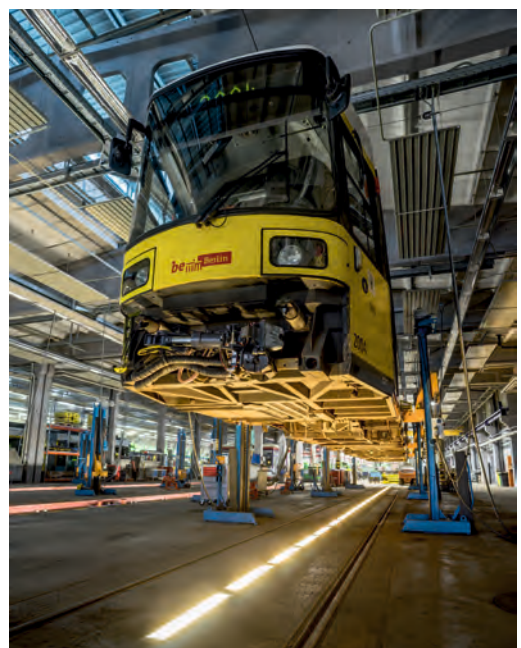
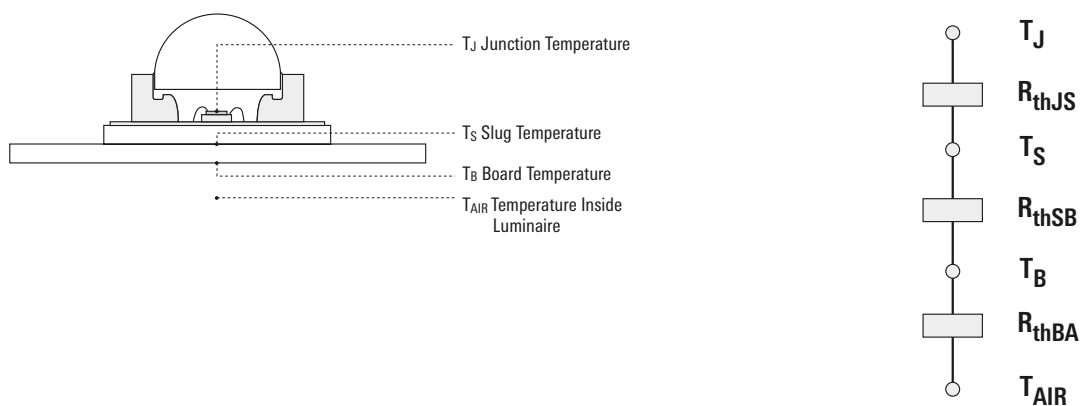
Luminous flux

The luminous flux values listed in this catalogue refer to so-called rated luminous flux levels. The junction temperature increases differently once the LEDs are in operation inside a luminaire. Depending on the LED used the LED manufacturers state maximum junction temperature T_J of approx. 125°C to 150°C . This temperature is set at a maximum 95°C at a rated ambient performance T_q of 25°C for the WE-EF luminaires shown in this catalogue.

This heating up of the LEDs leads to a change in luminous flux, hence a decrease in the luminous flux which must be recorded when the luminaire is measured in the lighting laboratory. All of the technical lighting data published by WE-EF take this context into account. It means that technical lighting computer calculations using original WE-EF technical lighting data, such as data that are available worldwide via DIALUX, also render these correlations correctly. Current information regarding the luminous flux that can be achieved during the operation of the luminaire can be obtained from www.we-ef.com.

Thermal resistance (R_{th})

One of the main focus areas of LED developments in recent years has been, and still is the reduction in thermal resistance $R_{th} = R_{thJS} + R_{thSB} + R_{thBA}$ (resistance between an LED's junction temperature and the ambient temperature). The lower the resistance, the smaller the LED's thermal load. This leads to higher luminous flux and reduced ageing, and hence to a longer service life. A luminaire manufacturer can influence thermal resistance by: (a) developing optimized cooling elements for specific applications, guaranteeing clean and level contact surfaces between the LED circuit board and the heat sink; and (b) selecting materials with very high thermal conductivity for the LED circuit boards (for example, aluminium).



5CE Superior Corrosion Protection



A decisive quality feature for exterior luminaires is their resistance to corrosion.

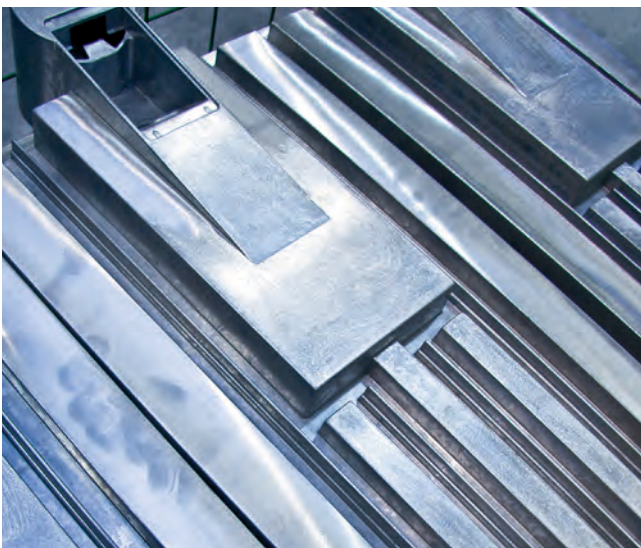
Outstanding and long-lasting anti-corrosion properties can only be achieved by a comprehensive, integrated approach. The result of many years of research and development, hands-on testing and experience, WE-EF's unique 5CE system encompasses five critical elements:

1. Substrate
2. Conversion coating
3. Powder
4. PCS hardware
5. Process control

1. Substrate

A marine grade, low copper content aluminium alloy is used for all WE-EF above-ground luminaires. Typical alloy composition is:

Cu	≤	0.1 %	Zn	≤	0.1 %
Mg	≤	0.1 %	Pb	≤	0.1 %
Si	=	10.0-13.5 %	Sn	≤	0.05 %
Fe	≤	1.0 %	Ti	≤	0.2 %
Mn	≤	0.5 %	Al	=	Balance
Ni	≤	0.1 %			



2. Conversion Coating

The multi-step pre-treatment and conversion coating process for WE-EF housings includes degreasing, deoxidizing, etching and, depending on the product, zirconium conversion coating. It is considered the most effective conversion coat available for aluminium substrates.

The zirconium conversion coating process comprises:

- Acid degreasing/etching
- Counterflow clear water rinse;
- Demineralized water rinse;
- Zirconium (+polymer) conversion coating (3-10 mg/m²);
- Hot air-drying.

Strict controls are constantly maintained over the parameters of every step in each process, such as purity, pH, chemical concentrations, temperature etc.

This ensures the best achievable substrate penetration and uniformity of the conversion coat, thereby ensuring optimum corrosion resistance and powder-coat adhesion.

3. Powder

WE-EF uses special UV-stabilised, architectural grade polyester powder, which is electrostatically applied (60-100 µm) and oven cured at ~ 200°C. The grade of polyester powder applied is based on saturated polyester resins. Combined with UV-resistant cross-linking agents and selected pigments, it features outstanding resistance to atmospheric ageing and UV light exposure. Properly applied to a suitable metal substrate, the resulting powdercoat finish exhibits excellent outdoor durability, and complies with German GSB and European QUALICOAT standards.



4. PCS Hardware

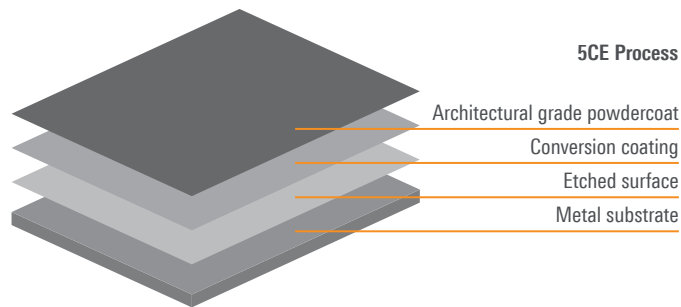


In the context of 5CE, WE-EF only uses hardware made from austenitic stainless steel, and additionally sealed with a tough, impregnated polymer coat that fulfills two functions:

- Reduced friction between male and female thread causes tighter fit between connected parts.
- Non-metallic barrier between the two metals, aluminium and steel, prevents galvanic corrosion that otherwise occurs when metals of dissimilar electro-negativities are in contact.



PCS hardware



5CE Process

5. Process Control

All materials and production steps at WE-EF are part of a tightly controlled process under ISO9001 quality assurance. It includes ongoing spectrometer analysis of aluminium alloy used, daily checks of chemical concentration in the pre-treatment phase, quality control checks on finished parts, up to 2,000 hours salt spray exposure tests etc.

Salt spray testing



The Final Product

Customers and users of WE-EF products can count on the final result being a quality commodity of excellent corrosion resistance that can be serviced after years of operation, and features a powdercoat finish of outstanding adhesion and colour stability.

5CE+Primer



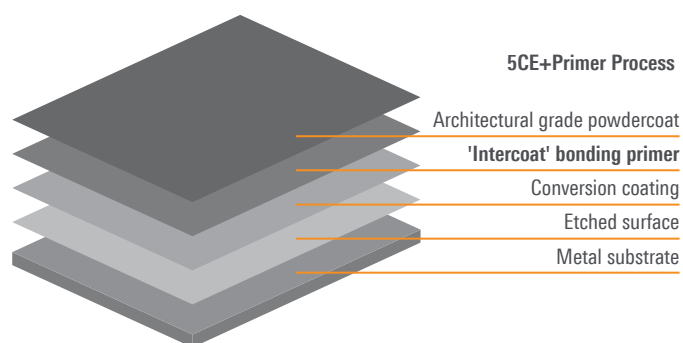
+Primer

For installations where corrosion protection over and above the 5CE system is required, 5CE+Primer introduces an additional element to the process:

1. Substrate
2. Conversion coating + Primer
3. Powder top coat
4. PCS hardware
5. Process control

Primer

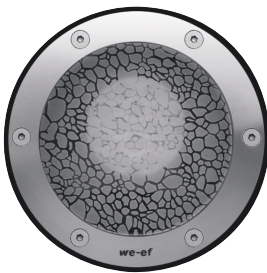
Immediately after conversion coating, a specially formulated 'intercoat' bonding, epoxy primer is electrostatically applied (80-100 μm), and initially semi-cured in a 180°C oven. Following the subsequent application of the polyester powder top coat, full curing and essential 'intercoat' bond is achieved at 200°C. Top coat and primer are perfectly merged. The 5CE+Primer anti-corrosion technology is available on request for most luminaires from the WE-EF range.



ASC Anti-Slip Coating for Inground Uplights



A translucent, tough and highly abrasion resistant ceramic material is fused into the surface of the luminaire's safety glass lens. Slip resistance, as required in pedestrian traffic and wet environments, conforms with DIN 51130 (class R10) and AS/NZS4586:1999 (class V). Corresponding tests were performed at the German BIA and the Australian CSIRO institutes.



ETC100/300-GB series
(gimbal) with ASC

Arranged in a stochastic (irregular) pattern, the ASC Anti-Slip Coating has only a moderate effect on the luminaire's light distribution and LOR (light output ratio).

Lenses and Diffusers

Toughened safety glass, borosilicate glass, ceramic glass, acrylic (PMMA), UV-stabilised polycarbonate (PC) and polyethylene (HDPE) are used throughout the WE-EF product range.

Gasketing

Weatherproof and non-ageing silicone rubber is used extensively, thereby providing excellent sealing qualities in corrosive and high temperature environments. A number of luminaires are also designed with CCG® (Controlled Compression Gasket) technology for a maintained protection rating.

Voltage

WE-EF luminaires and electrical accessories are supplied ready for connection to a 230 V 50 Hz supply. Control gear for other voltages and frequencies is available on request.

Electrical Protection

German and European industrial standards DIN EN 60598, specify electrical protection and IP classification of luminaires. WE-EF products comply with these standards as well as with equivalent international standards. WE-EF luminaires conform to electrical protection class I. The compulsory earthing terminal is marked with the symbol \oplus . In the event of a fault, a correctly installed luminaire will cause the circuit protection device to trip. Special luminaire versions with protection according to Class II are available on request.

Ambient Temperatures

WE-EF range of products is generally designed for operation at 25°C. For installations where excessive ambient temperatures exist, special luminaires and equipment can be supplied on request.

Standards

WE-EF luminaires, floodlights and lighting columns are designed to conform with present DIN EN and VDE standards. Furthermore, all luminaires manufactured for the European market bear the CE standards conformity mark. WE-EF is constantly developing and improving its products. The technical information given, including data and designs, can be subject to change without prior notice. The dimensions and weights stated are approximate values, subject to manufacturing tolerances. Special finishing, execution and construction are available on request.



As with all components, electronic converters (drivers) are engineered for reliability and longevity.

IP Classification

The international Protection Code (IP) classifies luminaires according to their protection against the ingress of dust, solid foreign bodies and water.

- IP1X Protection against solid objects of diameter greater than 50 mm
- IP2X Protection against finger touch and solid objects of diameter greater than 12 mm
- IP3X Protection against solid objects of diameter greater than 2.5 mm
- IP4X Protection against solid objects of diameter greater than 1.0 mm
- IP5X Complete protection against solid objects and harmful dust deposits (dust-proof)
- IP6X Total protection against dust (dust-tight)
- IPX1 Protection against vertically dripping water (drip-proof)
- IPX2 Protection against dripping water up to 15° from the vertical
- IPX3 Protection against spraying water or falling rain up to 60° from the vertical (rain-proof)
- IPX4 Protection against splashing water from any direction (splash-proof)
- IPX5 Protection against water jets from any direction (jet-proof)
- IPX6* Protection against heavy seas or powerful water jets
- IPX7* Protection against the effects of immersion (watertight-immersible)
- IPX8* Protection against submersion (pressure watertight-submersible)

The combination of both numerals describes the IP classification of a luminaire.

All WE-EF luminaires are marked accordingly, e.g., IP66 (dust-and water jet-tight).

* WE-EF luminaires that comply with IPX7 and/or IPX8 are always additionally tested to meet IPX6 requirements under DIN EN 60598. This is because the test conditions and procedures for IPX7 and IPX8 differ significantly from those for IPX6, and compliance for all is not automatically assured.



IK-Classification

DIN EN 50102 classifies the degrees of protection that luminaires provide against external mechanical impacts.

- IK01 Protection against 0.14 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer)
- IK02 Protection against 0.20 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer)
- IK03 Protection against 0.35 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer)
- IK04 Protection against 0.50 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer)
- IK05 Protection against 0.70 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer)
- IK06 Protection against 1 J (joules) impact energy (equivalent to specified impact from 0.5 kg polyamide hammer)
- IK07 Protection against 2 J (joules) impact energy (equivalent to impact of 0.5 kg steel weight dropped from 400 mm height)
- IK08 Protection against 5 J (joules) impact energy (equivalent to impact of 1.7 kg steel weight dropped from 300 mm height)
- IK09 Protection against 10 J (joules) impact energy (equivalent to impact of 5.0 kg steel weight dropped from 200 mm height)
- IK10 Protection against 20 J (joules) impact energy (equivalent to impact of 5.0 kg steel weight dropped from 400 mm height)

Factory-sealed

Faster, safer, easier: If you are looking for a way to save money and nerves during installation, WE-EF's factory-sealed luminaires are a boon – for customers, planners and installers alike. Genuine ease of installation and maintenance always starts with design – an area profoundly affected by the paradigm shift in exterior lighting brought about by LED technology.

Today, accessibility for lamp replacement is no longer decisive. High-quality LED technology ensures maintenance-free operation over many years, as long as the housings are up to their job – keeping optical and electronic components safe in all conditions. With WE-EF, they are safe. Part of WE-EF's luminaires are delivered factory-sealed and do not need to be opened for installation.

Their seal is permanently maintained, ensuring optimum compliance with the specified protection class (IP). When it comes to electrical connection, flexibility is the rule with WE-EF's ready-to-connect luminaires. Pre-installed connecting cables with a free end are just as possible as plug connectors or discrete connection boxes. The bottom line: No matter what your application is, WE-EF luminaires are optimised for quick, easy and safe installation, allowing technicians to work much more efficiently – and easing the minds of planners and operators alike.

Luminaires to rely on provided by WE-EF – full performance, trouble-free. Permanently. Should there ever be the need for maintenance, sophisticated parts such as PCS-coated, stainless-steel fasteners ensure easy loosening of mounting connections – even after many years and in the harshest weather, e.g., in coastal conditions – even after many years and in the harshest weather, e.g., in coastal conditions.



Installation

Installation instructions are provided with all WE-EF products.

Suitably qualified personnel must be engaged for the installation and maintenance in compliance with the latest applicable regulations and relevant legislation.



Factory-sealed luminaires do not need to be opened during installation.



The longevity of our products is a major asset for our customers – and, at the same time, a significant contribution to the protection of our environment: Durable products need to be replaced and recycled far less often, saving energy and resources.

Design and engineering

The timeless design of WE-EF luminaires is a reflection of their longevity. The way we see it, environmentally-friendly engineering that accepts and masters the challenges of our times involves selecting materials and processes according to ecological criteria, high IP protection classes, efficient thermal management and IOS® Innovative Optical Systems. The development of high-quality, efficient reflector and lens technologies meeting these standards – IOS® – is one of WE-EF's core competences.

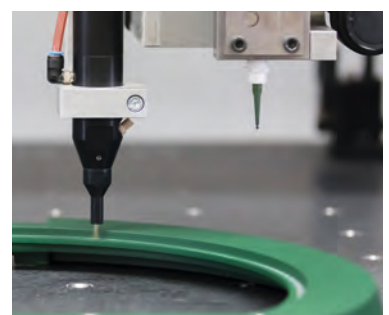
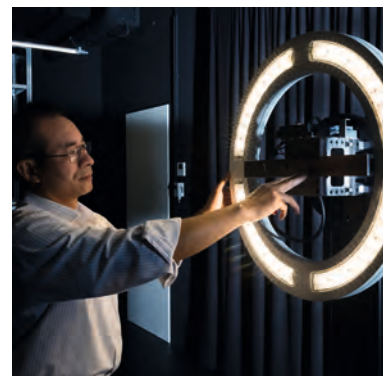
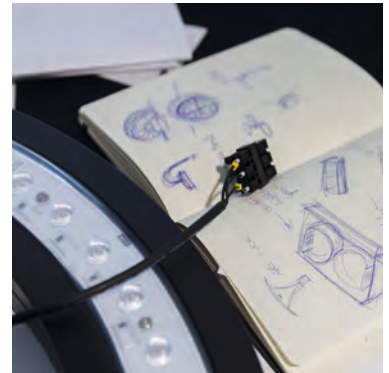
Meeting international lighting and safety standards comes as naturally to our luminaires as matching the requirements of the Dark Sky organisations. It is one of the reasons why we constantly invest in research and development.

Production

"Made by WE-EF" is more than just a phrase – it is the summation of the philosophy behind our high production depth.

Our means of manufacturing range from tool-making for die-casting and injection moulding equipment to aluminium die-casting, CNC production, CNC sheet metal working, powder coating and pole production to pre- and end-assembly.

To meet our high-quality standards, we continuously invest in tools, production facilities and the training of our staff.



Application

By using innovative light sources in combination with appropriately adapted optics, we achieve the optimum product characteristics for any given application.

In street and area lighting, for example, high light output ratios and wide beam angles minimise the number of light points required – while at the same time ensuring the compliance with relevant glare limitation requirements.

The result is significantly reduced costs for installation and maintenance, less CO₂ due to reduced energy and resource consumption, and greater lighting comfort.

Recycling

More than 90% of the materials used for WE-EF luminaires can be recycled.

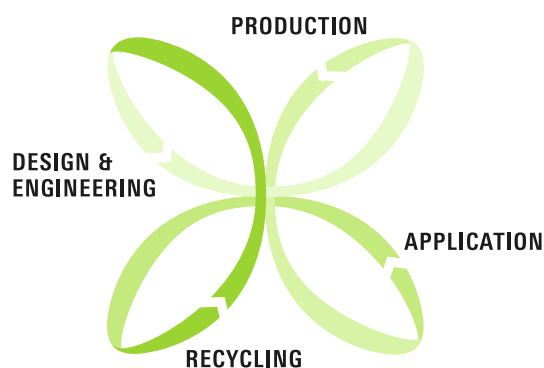
Our luminaire housings are made of pure, recycled, low-copper aluminium – an aluminium alloy that can be recycled repeatedly without loss of quality.

Life-cycle assessment

WE-EF was one of the first organisations in the lighting industry to provide EPDs (Environmental Product Declarations) in accordance with ISO 14025 and EN 15804 standards. These EPDs entail detailed documentation on the environmental footprint of our outdoor luminaires over all phases of their life cycle. To compile the required information, we collaborate closely with external specialists in life-cycle analysis.

EPDs are product-specific data sheets that contain verifiable and easily comparable information on the environmental impact of any given product. They document this impact not only for the time in which the product is actively used, but across its entire life cycle, from raw material extraction to recycling. For investors, operators and designers who care for the sustainability of their projects, this information is vital for sourcing decisions.

Prime concern of this life-cycle assessment are luminaires for street and area lighting. The EPDs for these luminaires as well as detailed additional information and environmental performance statements are available online at our website.

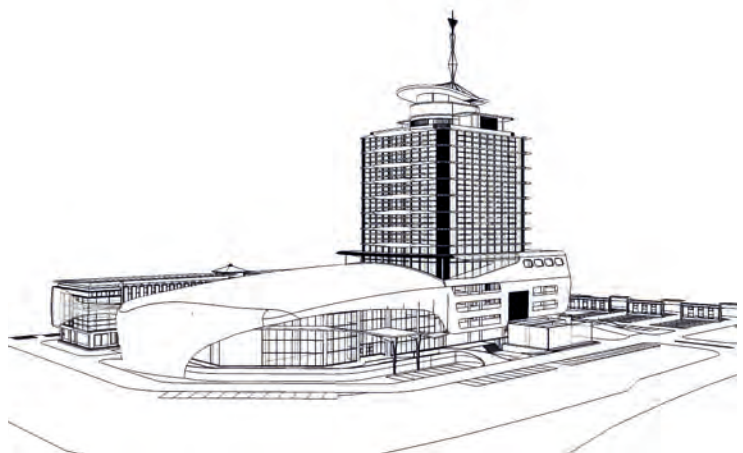
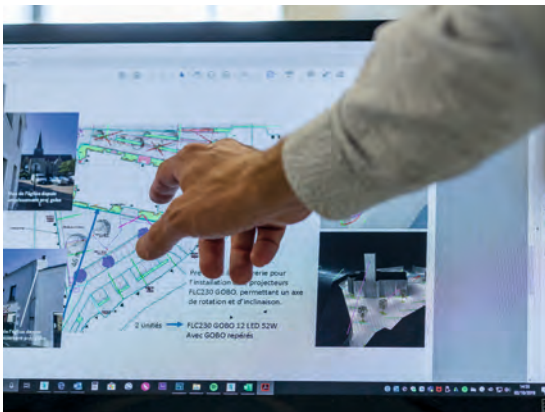


Planning Support

Comprehensive service for all who plan and use exterior lighting is an integral part of WE-EF's portfolio – face-to-face as well as online. Are you involved in the design, planning and construction of lighting systems – as a project engineer, lighting designer or member of other professions.

Do you wish to implement lighting projects smoothly and professionally – while making the most of the vast possibilities offered by WE-EF products?

We are glad to help! Do not hesitate to get in touch and discuss your project with WE-EF's experts. For an up-to-date list of our worldwide sales partners as well as extensive technical and lighting information and tools (such as product specifications or photometric data), WE-EF's DIALux Plug-In or Revit Files as BIM data, please visit our website at: www.we-ef.com.



Specials / Custom Solutions

Exterior lighting concepts tailored to specific cities or situations often require technical solutions that are as specific as the projects they illuminate. To perfectly fit special mounting situations or to meet individual design requirements, WE-EF luminaires can be modified on request, right on the factory floor. What's even more interesting for lighting designers and users alike are the possibilities for custom designs with bespoke lighting properties that are opened up by WE-EF's lighting know-how and diverse selection of high-precision optical components. One example is the use of sophisticated multi-lens combinations in a single luminaire to create truly unique light distributions.

Do not hesitate to contact WE-EF's experts for further information – we always appreciate a fresh challenge!



Alexandrinenplatz
Bad Doberan (DE)
Owner: Stadt Bad Doberan

Standards, regulations, sizes and units

Any responsible planning starts with standards and regulations.

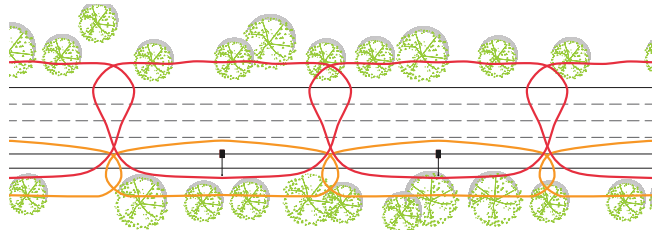
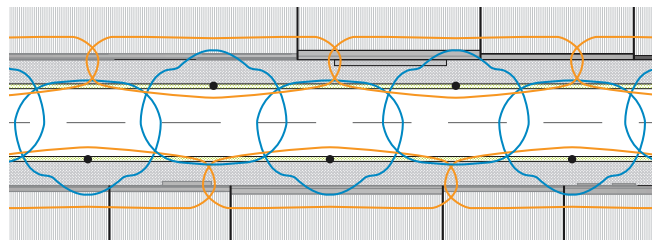
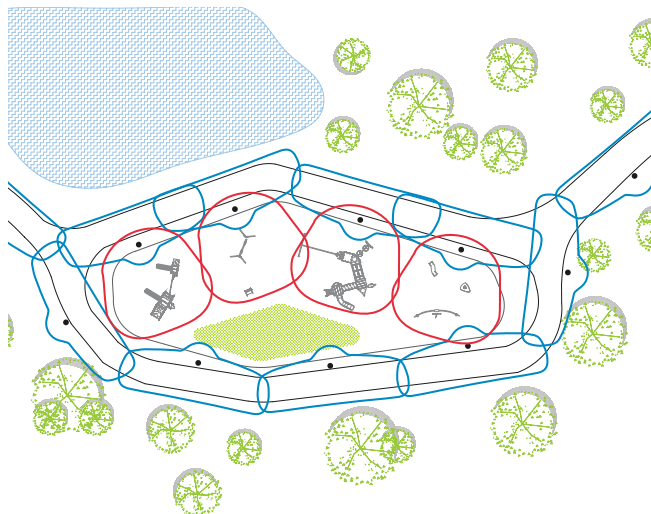
However, when it comes to planning light, there is always a crucial component that is just as important as economy and ecology, and just as fundamental as the technical requirements listed in specs and standards sheets. It's called emotion. As an essential part of architecture, light affects our emotions in a way few other factors can. That's why it has to be applied with meticulous care and measure – accentuated or uniform, glare-free, with the perfect hue and in the right quantity.

Depending on the task, the following standards should be observed:

DIN EN 12464 Workplace lighting

DIN EN 12193 Sports facility lighting

DIN EN 13201 Streetlighting





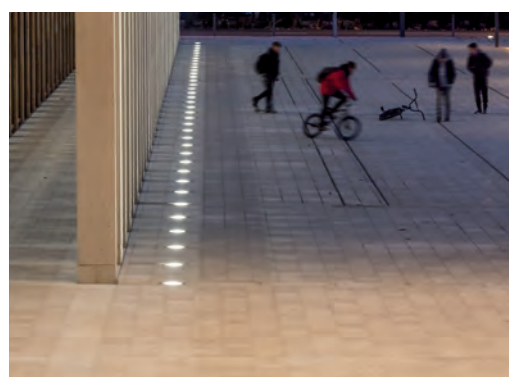
Constitution Avenue

Canberra (AU)

Lighting design: Lighting Art & Science

Electrical Engineer: Lighting Art & Science and AECOM Canberra

Landscape Architect: Jane Irwin Landscape Architecture



RMCC RheinMain CongressCenter
Wiesbaden (DE)
Architect: Ferdinand Heide Architect BDA
Lighting design: Day & Light Lichtplanung

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Product specifications given in this catalogue reflect the status as of July 2020.
Errors and omissions are excepted. Data given can be subject to change without prior notice.

The conditions of sale, as published in WE-EF's current price lists and/or business forms, apply. Export transactions require special agreements, particularly with regard to shipment and payment.

Catalogue

European Edition 2020

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AM-K / AM-K-K	328	FLC200-CC PP	188	VFL500	292
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ETV100-CC	70	STI200	98		
ETV100-TW	68	STL100	82		
FLA400	318	STL200	94		
FLA700	320	STO100 / STI100	86		
FLC100	158	STO200	90		
FLC100 RAIL	342	SVL100	84		
FLC100 Wall bracket	160	SVL200	96		
FLC200	166	SVO200	92		
FLC200 PP	184	TRO200	80		

 RAL 9004 Signal black	 RAL 7012 Basalt grey
 RAL 9006 White aluminium	 RAL 7015 Slate grey
 RAL 9007 Grey aluminium	 RAL 7022 Umbra grey
 RAL 7016 Anthracite grey	 RAL 7024 Graphite grey
 RAL 9016 Traffic white	 RAL 7030 Stone grey
 RAL 1015 Light ivory	 RAL 7032 Pebble grey
 RAL 3002 Carmine red	 RAL 7035 Light grey
 RAL 3004 Purple red	 RAL 7037 Dusty grey
 RAL 3005 Wine red	 RAL 7043 Traffic grey
 RAL 3011 Brown red	 RAL 7045 Telegrey 1
 RAL 3020 Traffic red	 RAL 8004 Copper brown
 RAL 5003 Sapphire blue	 RAL 8017 Chocolate brown
 RAL 5004 Black blue	 RAL 8019 Grey brown
 RAL 5014 Pigeon blue	 RAL 9005 Jet black
 RAL 5023 Distant blue	 RAL 9010 Pure white
 RAL 6005 Moss green	 RAL 9018 Papyrus white
 RAL 6009 Fir green	 DB 501
 RAL 6011 Reseda green	 DB 502
 RAL 6012 Black green	 DB 701
 RAL 6021 Pale green	 DB 702
 RAL 7006 Beige grey	 DB 703
 RAL 7011 Iron grey	

WE-EF colours: Fine textured RAL 9004 signal black, RAL 9006 white aluminium, RAL 9007 grey aluminium, RAL 7016 anthracite grey, RAL 9016 traffic white are standard colours where stated in product specifications.

WE-EF luminaires may be ordered in any of the wide variety of available RAL and DB colours.



Outstanding and long-lasting anti-corrosion properties can only be achieved through a comprehensive, integrated approach – the result of many years of research and development, hands-on testing and experience. The WE-EF 5CE system encompasses five critical elements:

- Substrate
- Conversion coating
- Powder
- PCS hardware
- Process control

All materials and production steps are part of a tightly-controlled process under ISO 9001 quality assurance.

The colour shades and gloss levels are for guidance only. For accurate colour matching, use the official 840-HR (semi-gloss) and 841-GL (gloss) reference charts. **Valid from July 2020**

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