Schréder
Experts in lightability™

DECORATIVE

PILZEO

Designer : Achilles Design

LENSO FLEX™ 4

Elegant and cost-effective solution with cutting-edge LED technology

The post-top luminaire PILZEO transforms the classic 'mushroom' lantern into a contemporary design. Based on the proven LensoFlex® LED engine, the PILZEO ensures photometric performance to provide safety and well-being in the public space.

The name PILZEO refers directly to the `Pilzleuchte' - literally `mushroom luminaire' - a very popular type of lantern in German-speaking countries. This classical form has been refreshed to provide an aesthetic continuity while generating massive energy savings.

The PILZEO luminaire is adapted to various urban landscapes such as residential areas, parks, squares, bicycle paths and historical urban centres.

IP 66 | IK 08

URBAN & RESIDENTIAL STREETS | BRIDGES | BIKE & PEDESTRIAN PATHS | RAILWAY STATIONS & METROS | CAR PARKS | SQUARES & PEDESTRIAN AREAS

Concept

PILZEO offers a pleasing and modern take on a classic design and has been specifically designed to use LEDs to provide maximised savings in energy and maintenance costs.

The base section and body of the luminaire are made of high-pressure die-cast aluminium while the protector and the top cover are composed of polycarbonate. The design of the PILZEO luminaire guarantees an IP 66 tightness level to maintain performance over time.

The photometric versatility of the PILZEO luminaire, which provides both asymmetrical and symmetrical light distributions, makes it the perfect tool for various lighting applications: pedestrian areas (parks, squares...), bike paths, residential streets, car parks and urban roads.

PILZEO is FutureProof. Both the LED unit and the electronic assembly can be replaced, without any tools, to take advantage of future technological developments.

This connected-ready luminaire is compatible with standard NEMA 7-pin or Zhaga socket, enabling easy access to the digital era of lighting with advanced lighting features that plan, monitor and control outdoor lighting networks.

To facilitate installation, the luminaire is delivered pre-wired.

This connected-ready luminaire is compatible with standard NEMA 7-pin or Zhaga socket

TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS

KEY ADVANTAGES

- Cost effective lighting solution for creation of ambiance
- Elegant design for low height installation
- IP 66 tightness level for long lasting performance
- Tool free access for maintenance
- Based on open and interoperable standards
- Compatible with the Schréder EXEDRA control platform
- Zhaga-D4i certified
- Connected-ready for your future Smart city requirements

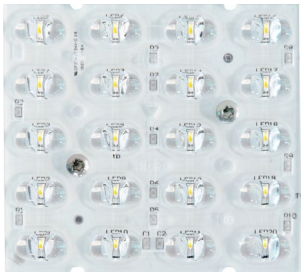
PILZEO is Dark-Sky Approved.

The LED unit and the electronic assembly can be replaced without using any tools.

LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

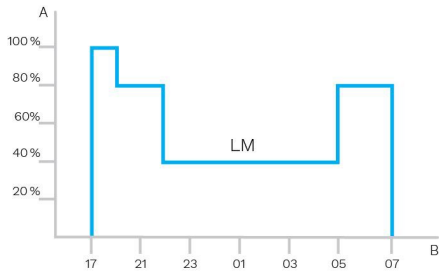
LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.



Custom dimming profile

Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

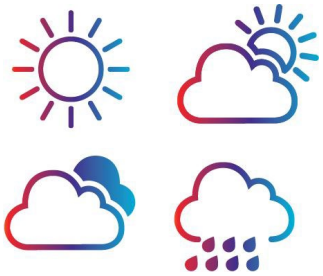
The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



A. Dimming level | B. Time

Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.

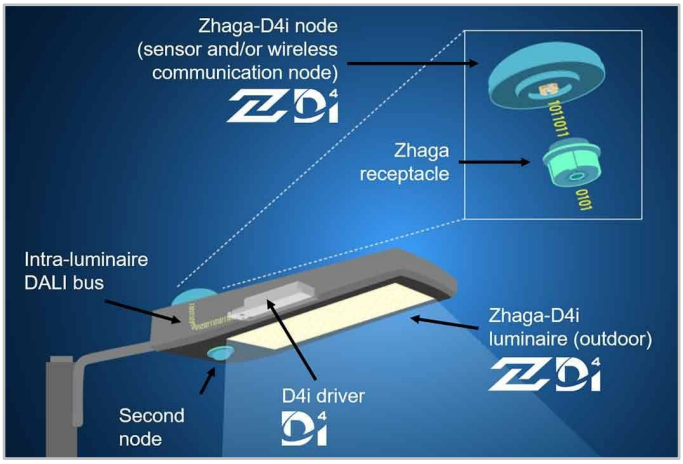


PIR sensor: motion detection

In places with little nocturnal activity, lighting can be dimmed to a minimum most of the time. By using passive infrared (PIR) sensors, the level of light can be raised as soon as a pedestrian or a slow vehicle is detected in the area.

Each luminaire level can be configured individually with several parametres such as minimum and maximum light output, delay period and ON/OFF duration time. PIR sensors can be used in an autonomous or interoperable network.

The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.



Standardisation for interoperable ecosystems

Member of Zhaga

As a founding member of the Zhaga consortium, Schréder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire. According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

Certification program

The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.

Cost-effective solution

A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.

2 sockets: top and bottom

The Zhaga socket is small and suited to applications where aesthetics is essential. The architecture of Zhaga-D4i also foresees the possibility of putting two sockets on one luminaire, allowing for instance, the combination of a detection sensor and a control node. This also has the added value of standardising certain detection sensor communications with the D4i protocol.

Schréder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.

Standardisation for interoperable ecosystems

Schréder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schréder EXEDRA system relies on shared and open technologies. Schréder EXEDRA also relies on Microsoft Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

Breaking the silos

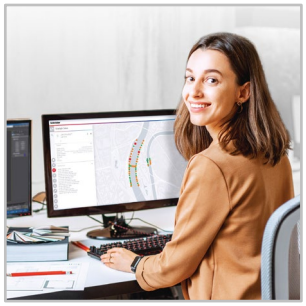
With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface. OWLET IV luminaire controllers, optimised for Schréder EXEDRA, operate Schréder's luminaires and luminaires from third parties. They use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation.

Tailored experience



Schréder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

A powerful tool for efficiency, rationalisation and decision making

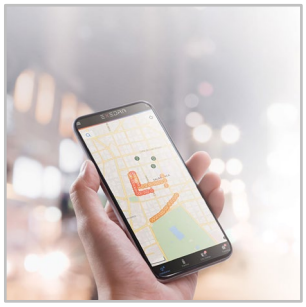
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

ISO 27001
BUREAU VERITAS
Certification

Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schréder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

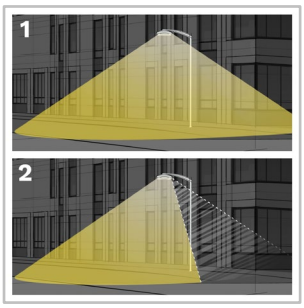
Mobile App: any time, any place, connect to your street lighting



The Schréder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

With the PureNight concept, Schréder offers the ultimate solution for restoring the night sky without switching off cities, while maintaining safety and well-being for people and preserving wildlife. The PureNight concept guarantees that your Schréder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.

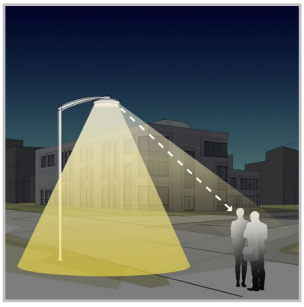
Direct the light only where it is wanted and needed



Schréder is renowned for its expertise in photometry. Our optics direct light only where it is wanted and needed. However, light trespass behind the luminaire might be a key concern when it comes to protecting a sensitive wildlife habitat or avoiding intrusive lighting towards buildings. Our fully integrated backlight solutions easily address this potential risk.

1. Without backlight
2. With backlight

Offer maximum visual comfort to people



Because of the lower installation height compared to road lighting, visual comfort is an essential aspect of urban lighting. Schréder designs lenses and accessories to minimise any type of glare (distracting, discomforting, disabling glare and blinding glare). Our design offices harness a range of possibilities to find the best solutions for each project and ensure that we provide a gentle light that delivers the best night-time experience.

Protect wildlife

If not well designed, artificial lighting can badly affect wildlife. Blue light and excessive intensity can have a damaging effect on all types of life. Blue light radiation has the ability to suppress the production of melatonin, the hormone that contributes to the regulation of the circadian rhythm. It can also alter the behavioural patterns of animals including bats and moths, as it can change their movements towards or away from light sources. Schréder favours warm white LEDs with minimal blue light, combined with advanced control systems including sensors. This enables permanent adaptation of the lighting to the real needs of the moment, minimising disturbance to the fauna and flora.

Choose a DarkSky Approved luminaire

DarkSky International is the recognised authority on light pollution. It provides leadership, tools and resources to industries and companies willing to reduce light pollution. The DarkSky Approved Luminaires Program certifies outdoor lighting fixtures as being Dark Sky Friendly. This luminaire is part of our approved range of luminaires that comply with the Approval Programme and provide light that is environmentally friendly in every way.

GENERAL INFORMATION

FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
ROHS compliant	Yes
DarkSky Approved	Yes
Zhaga-D4i certified	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
UKCA marking	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

HOUSING AND FINISH

Housing	Aluminium Composite materials
Optic	PMMA
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 08
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +40°C / -22°F up to 104°F

· Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
Nominal voltage	220-240V – 50-60Hz
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schréder EXEDRA
Sensor	PIR (optional)

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White WW 722) 2700K (Warm White WW 727) 3000K (Warm White WW 730) 3000K (Warm White WW 830) 4000K (Neutral White NW 740)
Colour rendering index (CRI)	>70 (Warm White WW 722) >70 (Warm White WW 727) >70 (Warm White WW 730) >80 (Warm White WW 830) >70 (Neutral White NW 740)
ULOR	<4%
ULR	<3%

· DarkSky Approved when fitted with LEDs of 3000K or less.
· ULOR may be different according to the configuration. Please consult us.
· ULR may be different according to the configuration. Please consult us.

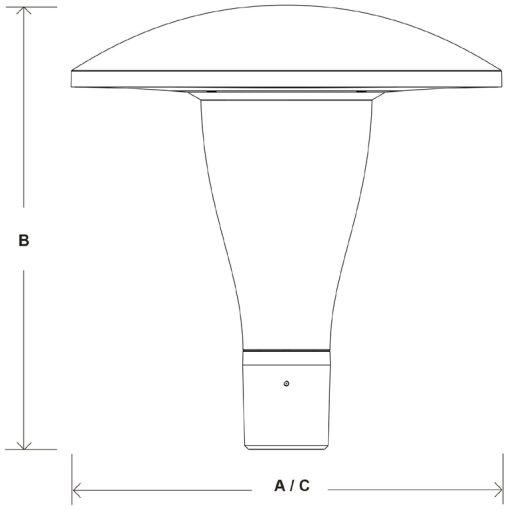
LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90

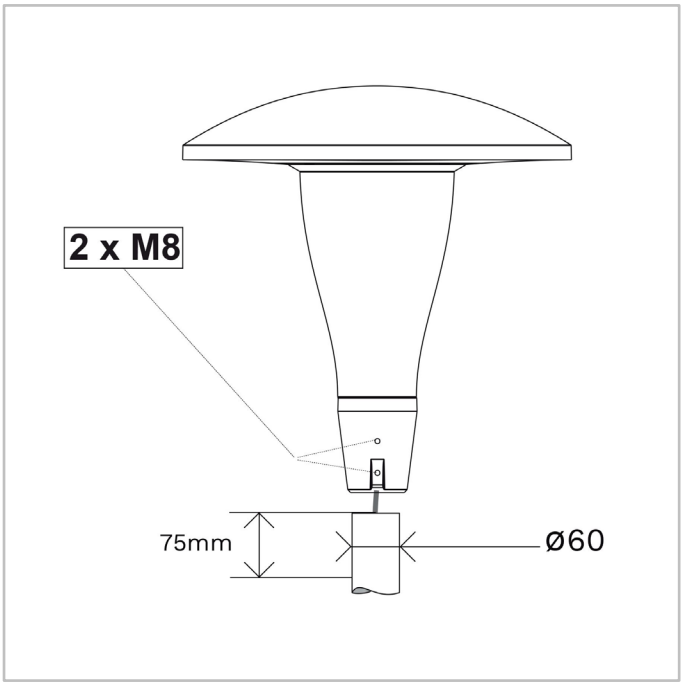
· Lifetime may be different according to the size/configurations. Please consult us.

DIMENSIONS AND MOUNTING

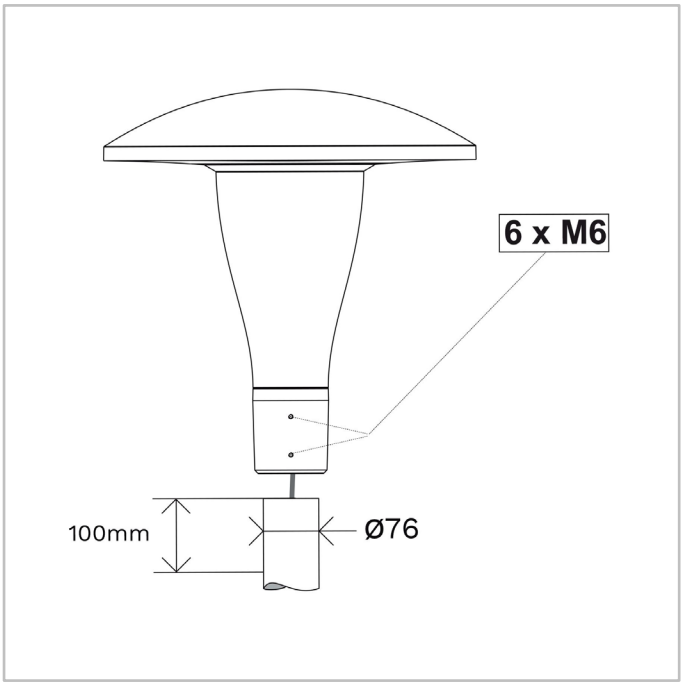
AxBxC (mm | inch)	524x539x524 | 20.6x21.2x20.6
Weight (kg | lbs)	6.7 | 14.7
Aerodynamic resistance (CxS)	0.08
Mounting possibilities	Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm



PILZEO | Slip-over mounting Ø60 mm - 2XM8 screws



PILZEO | Slip-over mounting Ø76 mm - 6XM6 screws



PILZEO

Photometry

LENSO FLEX 4

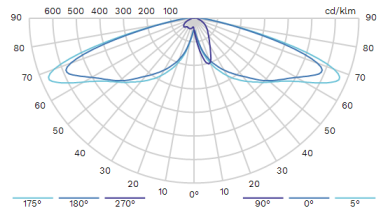
	Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
10	900	2800	1000	3100	1100	3300	1000	3100	1200	3600	10	28	149
20	1300	5500	1500	6000	1600	6400	1500	6000	1700	7000	13	52	164

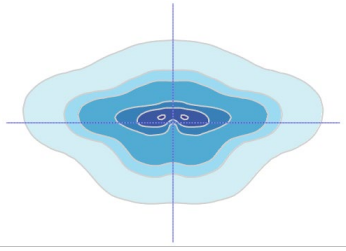
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

LensoFlex4

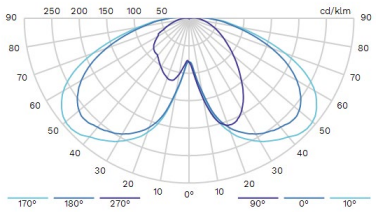
LENSO FLEX™4

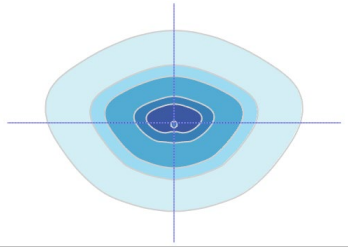
LENSO FLEX™4 5300 Ultra-Narrow



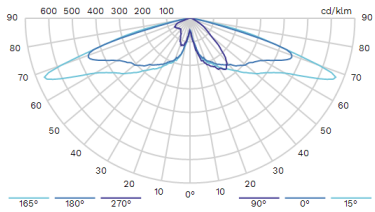


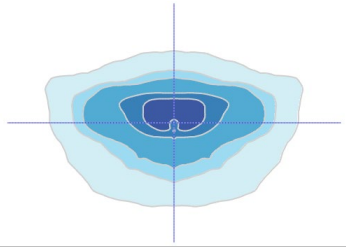
LENSO FLEX™4 5301 Narrow





LENSO FLEX™4 5303 Medium





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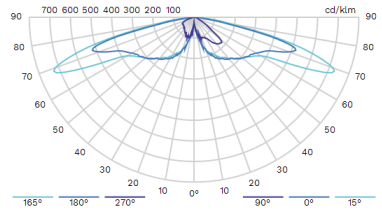

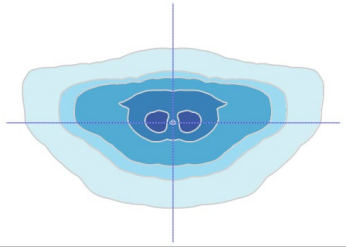

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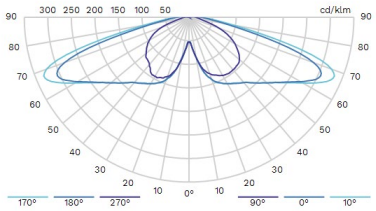
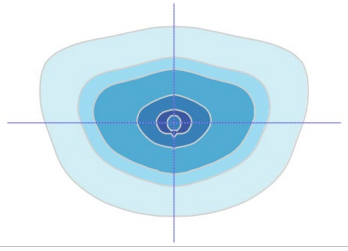
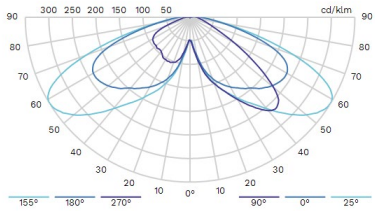
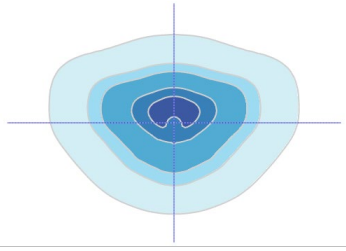


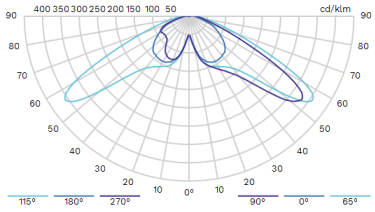


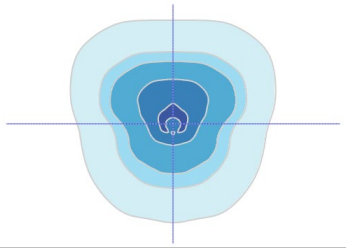
LENSO FLEX™4 5308 Wide



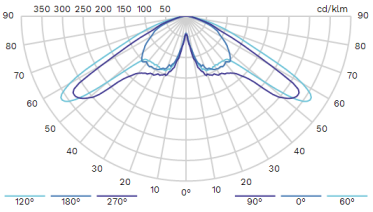


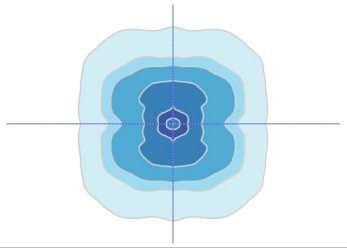
LENSO FLEX 4 5366 **Extra-Wide**





LENSO FLEX 4 50004 **Extra-Wide Symmetrical**





LENSO FLEX 4 5393 **Ultra-Wide**