Schréder
Experts in lightability™

ROAD

# VOLTANA EVO

PRO FLEX™

LENSO FLEX™ 2

## The compact, cost-effective LED solution for your urban spaces

Create a lighting set that efficiently fits into your urban landscapes and reduces energy consumption without compromising on lighting levels with the VOLTANA EVO. This new generation of the well-known VOLTANA range is the ultimate compact solution delivering the right lumen package for your urban spaces while considerably reducing energy costs for the fastest return on investment.

VOLTANA EVO is a low-weight lighting solution designed for side-entry mounting. As an option, an adapter piece for both post-top and side-entry mountings is available, allowing VOLTANA EVO to be fitted in all kinds of poles and easing the installation. It can be adapted on-site thanks to a stepped inclination system allowing the photometry to be optimised.

With its compact design and lighting technology, the VOLTANA EVO luminaire is a sustainable, cost-effective LED solution that guarantees basic urban lighting needs, generates energy savings, and reduces the ecological footprint.

IP 66 | IK 09 | IK 10

URBAN & RESIDENTIAL STREETS

SQUARES & PEDESTRIAN AREAS

ROADS & MOTORWAYS

## Concept

The VOLTANA EVO luminaire is composed of a high-pressure die-cast aluminium body and a mounting clamp made of corrosion-resistant steel.

VOLTANA EVO can integrate different photometric engines to meet the needs of various road and urban lighting applications. It can be equipped with ProFlex™ or LensoFlex® photometric engines that ensure the highest efficiency as they maximise the lumen output and provide very extensive light distributions. For ProFlex™ LED engines, the polycarbonate protector is integrated with the lens while the LensoFlex® engine can be secured by a clear flat glass protector.

This luminaire can be mounted using a standard side-entry clamp fixation for Ø42-60mm spigots. Thanks to an incorporated inclination system, the angle can be adjusted on-site. As an option, an adapter piece is available for spigots from Ø42 to Ø76mm for both post-top and side-entry mounting.

VOLTANA EVO is designed to ease installation and on-site maintenance.

Precise on-site adjustment. The inclination angle can be set from -15° to +5° for side-entry mounting, and from -10° to +10° with the post-top adaptor.

## TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- SQUARES & PEDESTRIAN AREAS
- ROADS & MOTORWAYS

## KEY ADVANTAGES

- Cost-effective and efficient lighting solution for a fast return on investment
- Compact design
- ProFlex™ photometric engines offering high efficiency lighting, comfort and safety
- Adjustable inclination on-site
- Side-entry and post-top (with accessory) mounting
- LensoFlex®2 technology offering high performance photometry, comfort and safety

VOLTANA EVO is a low weight luminaire that provides a cost-effective and sustainable lighting solution.

VOLTANA EVO can integrate different photometric engines to meet the needs of various road and urban lighting applications.

## LensoFlex®2

LensoFlex®2 is based upon the addition principle of photometric distribution. Each LED is associated with a specific PMMA lens that generates the complete photometric distribution of the luminaire. The number of LEDs in combination with the driving current determines the intensity level of the light distribution.

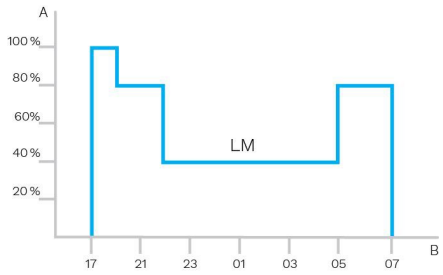
## ProFlex™

The ProFlex™ photometric engine integrates the lenses into a polycarbonate protector. This integration increases the output and reduces the reflection inside the optical unit. The polycarbonate used for the ProFlex™ photometric engine offers essential characteristics such as high optical clarity for a superior light transmission, better impact resistance compared to glass and a long life span with UV-stabilisation treatment. The ProFlex™ concept enables a compact design with a thin optical compartment. It provides extensive light distributions so that the spacing between the luminaires can be increased.

## 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

**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

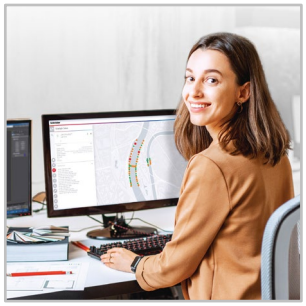
With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- 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

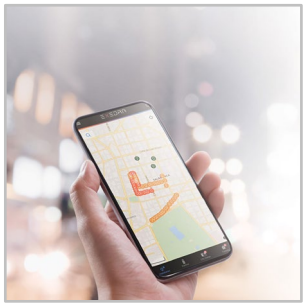
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

## Protected on every side

ISO 27001
BUREAU VERITAS
Certification

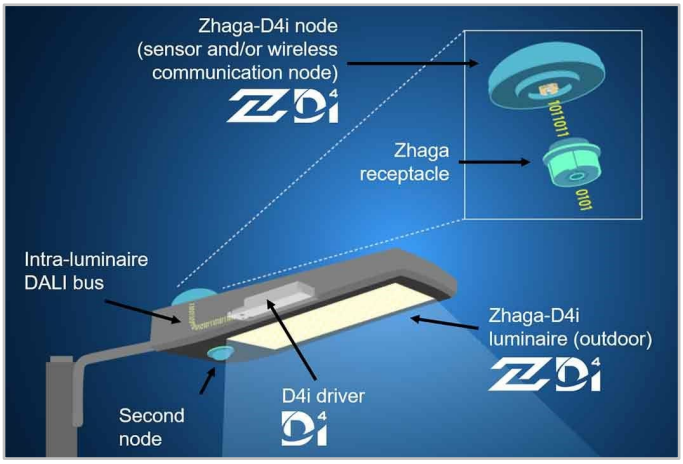
Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schréder EXEDRA meets the requirements for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

**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

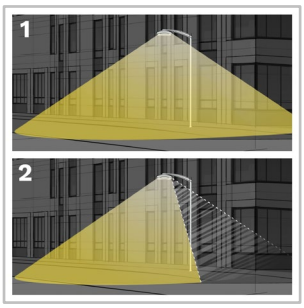
The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.

## 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.

**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.**

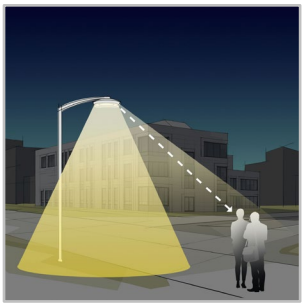
## Direct the light only where it is wanted and needed




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 Dark Sky certified luminaire

The International Dark-Sky Association (IDA) is the recognised authority on light pollution. It provides leadership, tools and resources to industries and companies willing to reduce light pollution. The IDA's Fixture Seal of Approval programme certifies outdoor lighting fixtures as being Dark Sky Friendly. All products approved by this programme must comply with the following criteria:

- The light sources shall have a maximum correlated colour temperature of 3000K;
- Uplight allowance limited to 0.5% of total output, or 50 lumens, with no more than
  10 lumens in the 90-100 degree UL zone;
- The luminaires must have a dimming capability to 10% of full rating;
- The luminaires must be equipped with a fixed mounting option;
- The luminaires must have Safety Certification by an independent laboratory.

This approved Schréder range of luminaires complies with these requirements.

# VOLTANA EVO | CHARACTERISTICS

Schréder

## GENERAL INFORMATION

| | |
|---|---|
| Recommended installation height | 4m to 15m \| 13' to 49' |
| Circle Light label | Score ≥90 - The product fully meets circular economy requirements |
| Driver included | Yes |
| CE mark | Yes |
| ENEC certified | Yes |
| ENEC+ certified | Yes |
| Dark Sky friendly lighting (IDA certification) | Yes |
| Zhaga-D4i certified | Yes |
| UKCA marking | Yes |
| Testing standard | LM 80 (all measurements in ISO17025 accredited laboratory) |

## HOUSING AND FINISH

| | |
|---|---|
| Housing | Aluminium |
| Optic | PMMA<br>Polycarbonate |
| Protector | Tempered glass<br>Polycarbonate (with integrated lenses) |
| Housing finish | Polyester powder coating |
| Standard colour(s) | RAL 7035 light grey |
| Tightness level | IP 66 |
| Impact resistance | IK 09, IK 10 |
| Vibration test | Compliant with modified IEC 68-2-6 (0.5G) |
| Access for maintenance | By loosening screws on the bottom cover |

## OPERATING CONDITIONS

| | |
|---|---|
| Operating temperature range (Ta) | -30°C up to +55°C / -22° F up to 131°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 | Custom dimming profile |
| Socket | Zhaga (optional) |
| Associated control system(s) | Schréder EXEDRA |

## OPTICAL INFORMATION

| | |
|---|---|
| LED colour temperature | 3000K (WW 730)<br>4000K (NW 740) |
| Colour rendering index (CRI) | >70 (WW 730)<br>>70 (NW 740) |
| ULOR | 0% |
| ULR | 0% |

*· Meets IDA Dark Sky requirements 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

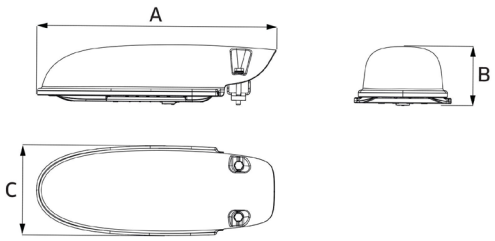
| | |
|---|---|
| All configurations | 100,000h - L95 (high-power LEDs) |

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

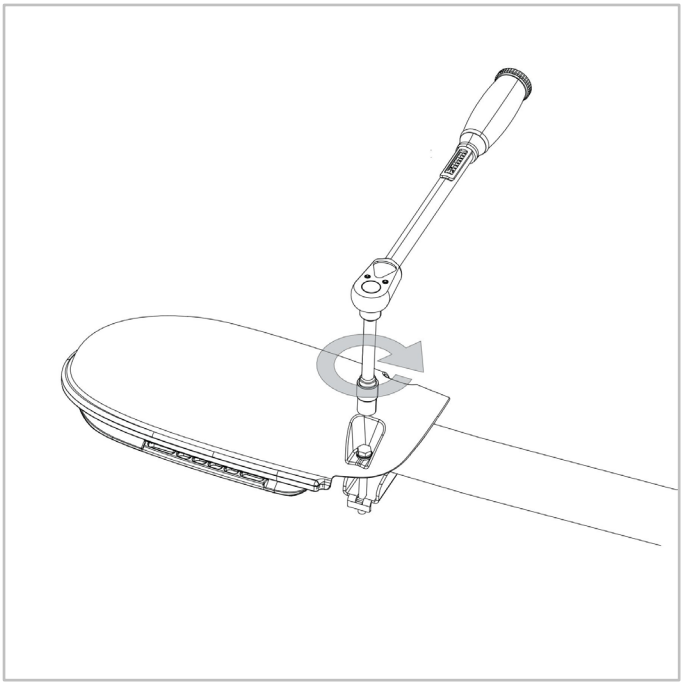
## DIMENSIONS AND MOUNTING

| | |
|---|---|
| AxBxC (mm \| inch) | 416x104x170 \| 16.4x4.1x6.7 |
| Weight (kg \| lbs) | 2.6-2.8 \| 5.7-6.2 |
| Aerodynamic resistance (CxS) | 0.01 |
| Mounting possibilities | Side-entry slip-over – Ø42mm<br>Side-entry slip-over – Ø60mm |

*· For more information about mounting possibilities, please consult the installation sheet.*



## VOLTANA EVO | Side-entry (standard) and post-top (with adapter piece) mounting – 2xM8 screws



VOLTANA EVO 1

Photometry

LENSO FLEX™2

| | Luminaire output flux (lm) | | | | Power consumption (W) | | Luminaire efficacy (lm/W) |
|---|---|---|---|---|---|---|---|
| | Warm White 730 | | Neutral White 740 | | | | |
| Number of LEDs | Min | Max | Min | Max | Min | Max | Up to |
| 8 | 600 | 3800 | 600 | 4300 | 7 | 40 | 142 |

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

VOLTANA EVO 1

Photometry

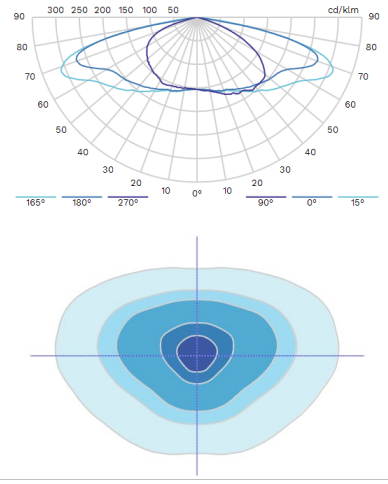
PRO FLEX™

| | Luminaire output flux (lm) | | | | Power consumption (W) | | Luminaire efficacy (lm/W) |
|---|---|---|---|---|---|---|---|
| | Warm White 730 | | Neutral White 740 | | | | |
| Number of LEDs | Min | Max | Min | Max | Min | Max | Up to |
| 6 | 500 | 3000 | 600 | 3200 | 5 | 31 | 131 |
| 8 | 600 | 3800 | 600 | 4300 | 7 | 40 | 142 |
| 16 | 1400 | 6900 | 1600 | 7800 | 12 | 62 | 155 |

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

LENSO FLEX 2

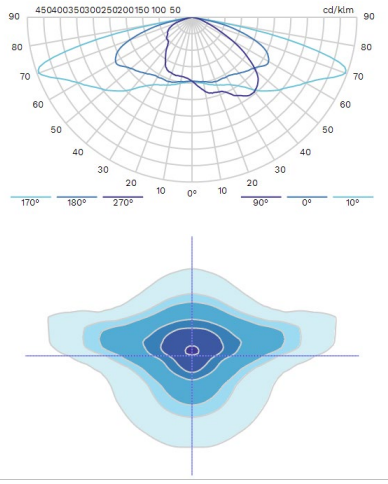
## 5068






LENSO FLEX 2

## 5096



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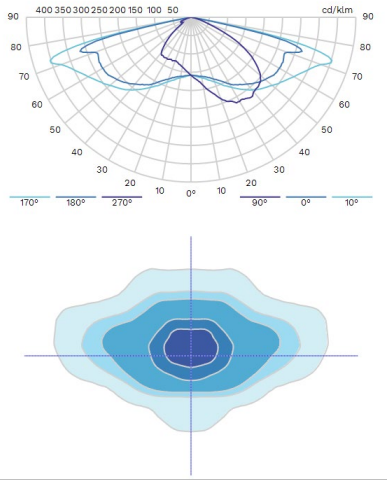




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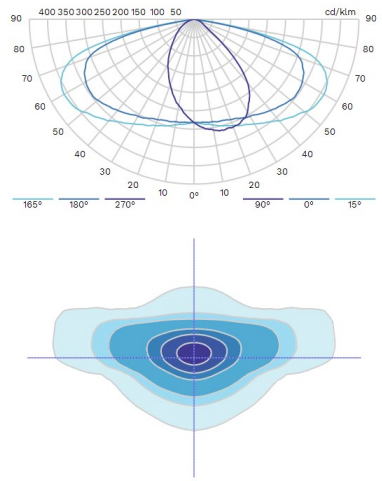




LENSO FLEX 2

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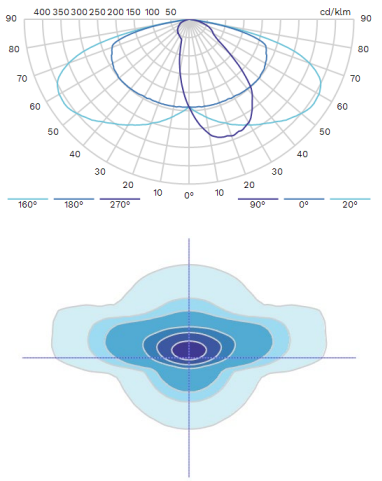




LENSO FLEX 2

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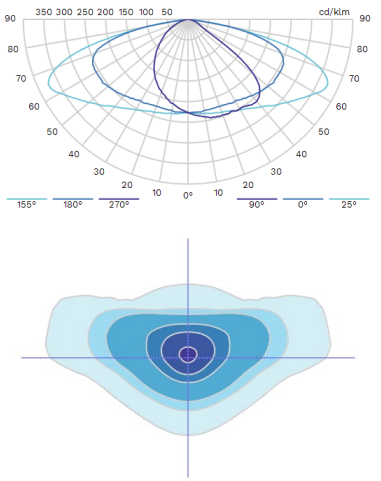




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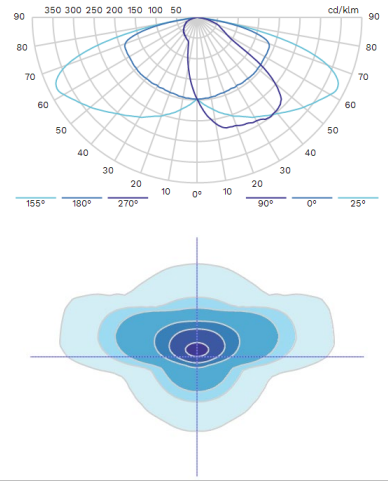




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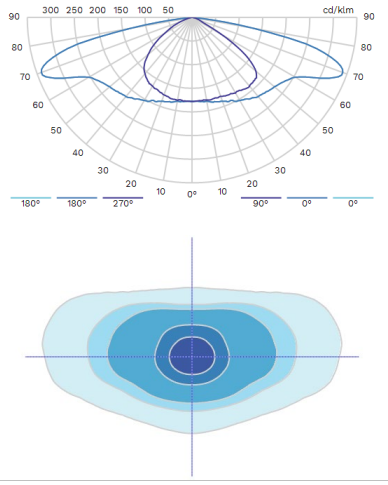




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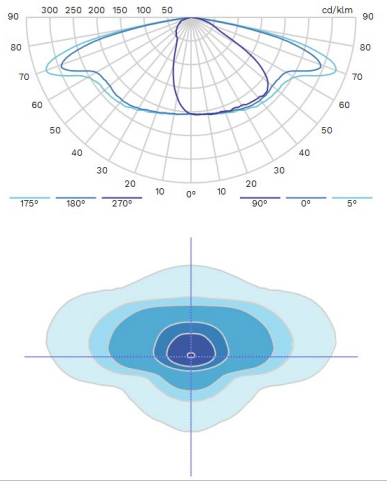

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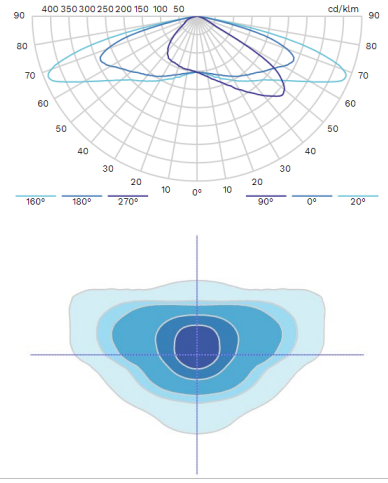


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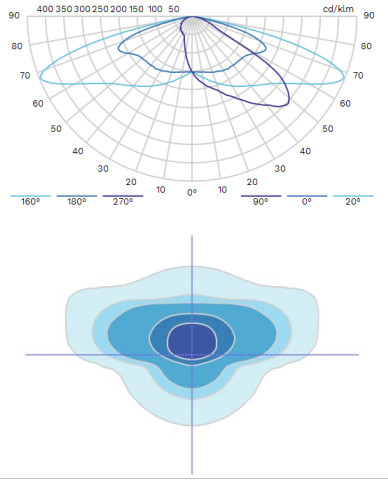


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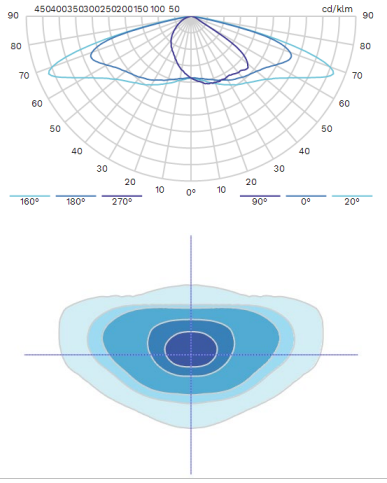


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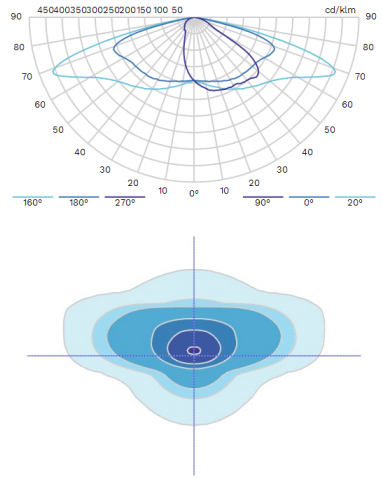


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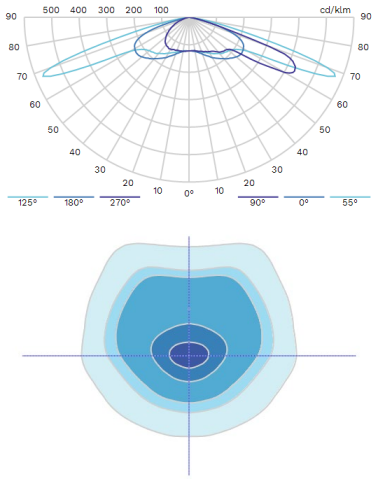


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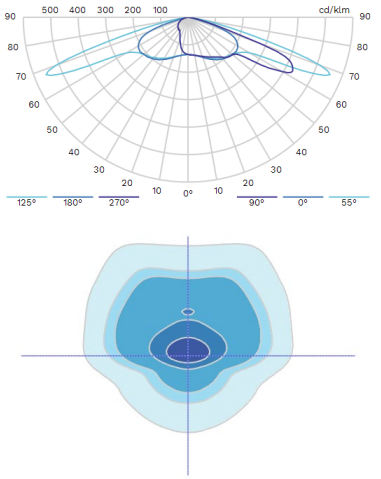


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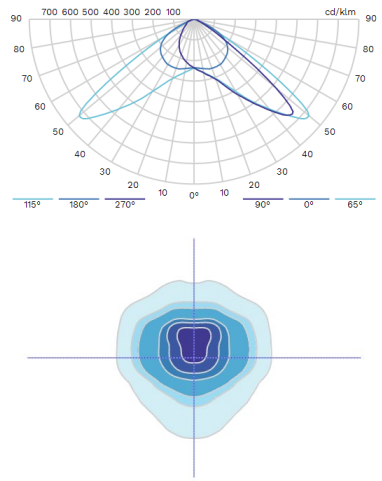


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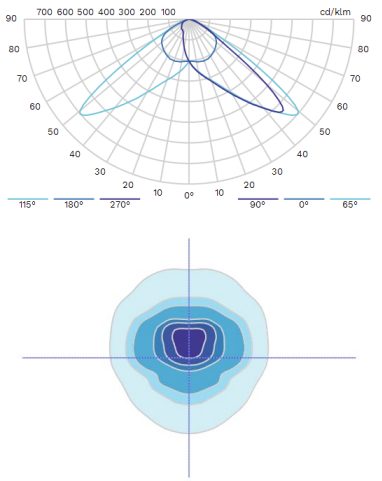


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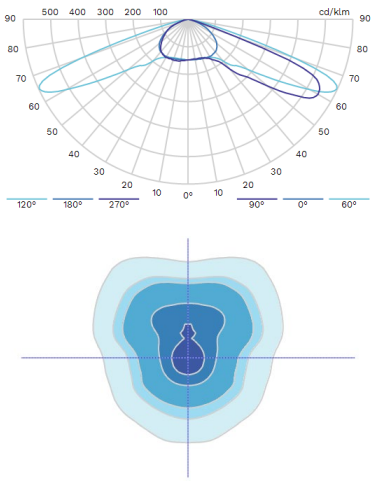

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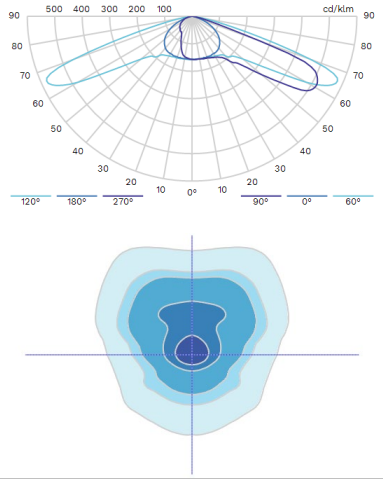
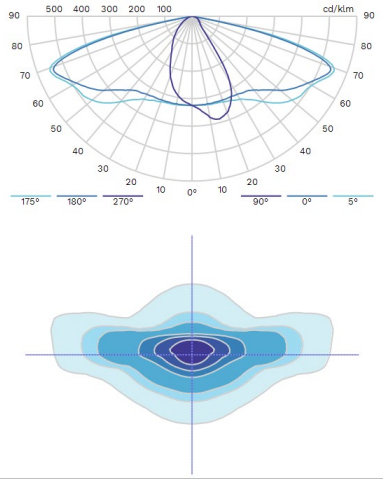
## 5121 BL




LENSO FLEX 2

## 5136

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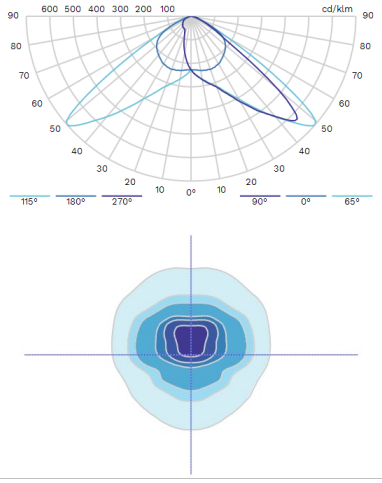


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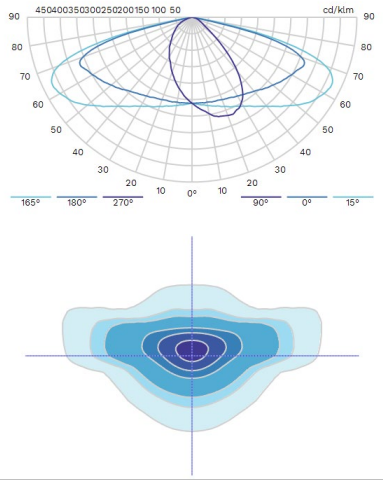


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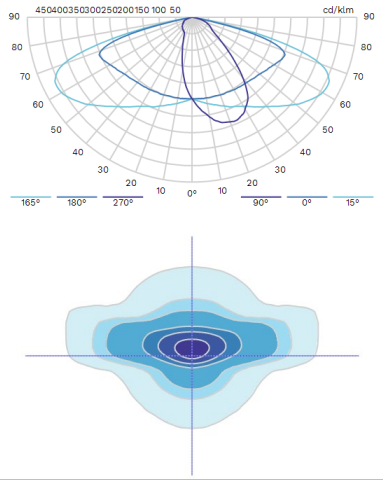
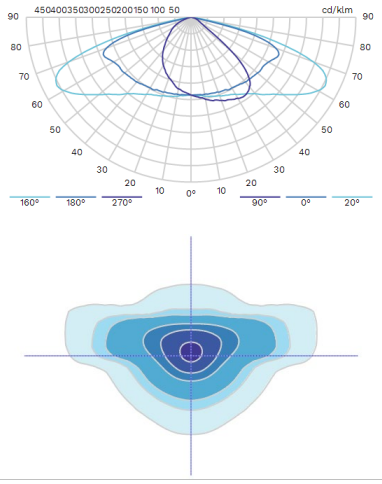


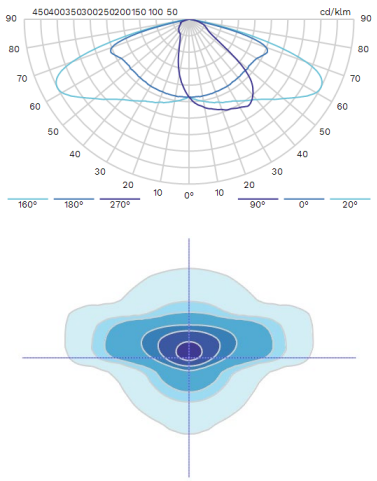

LENSO FLEX 2

## 5138



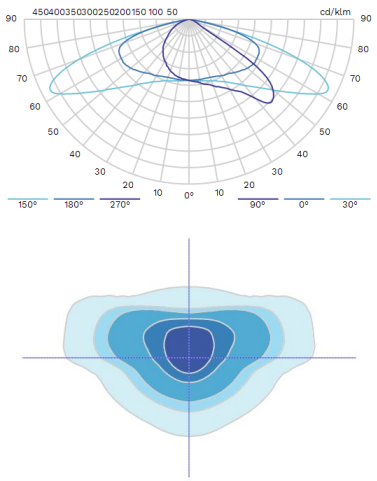

LENSO FLEX 2

## 5138 BL



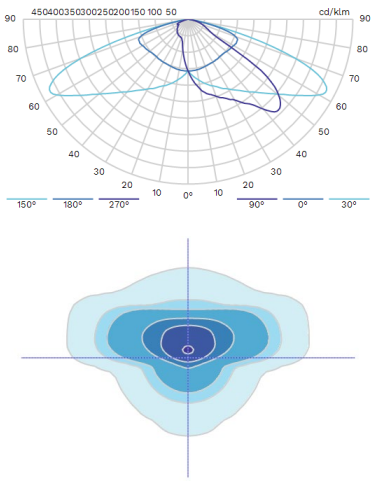

LENSO FLEX 2

## 5139



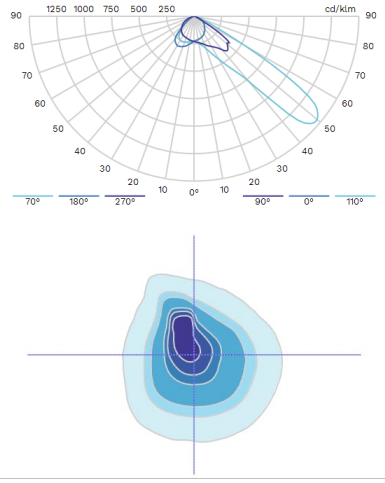

LENSO FLEX 2

## 5139 BL



LENSO FLEX™2

## 5144 ZL




LENSO FLEX™2

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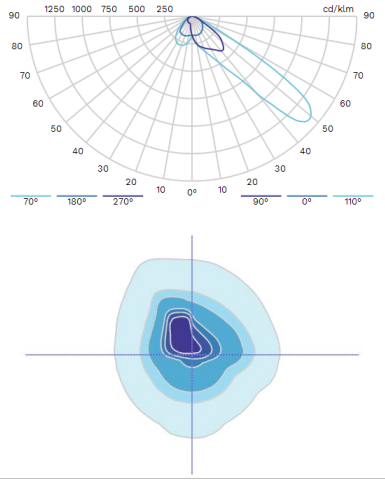
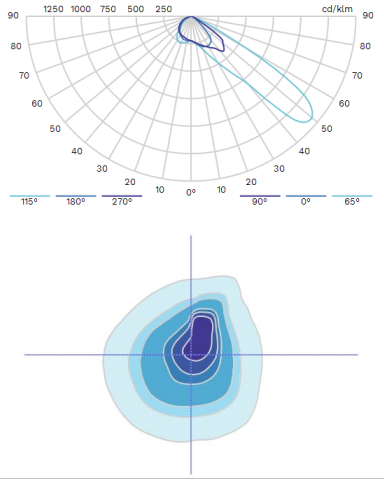



LENSO FLEX™2

## 5145 ZR




LENSO FLEX™2

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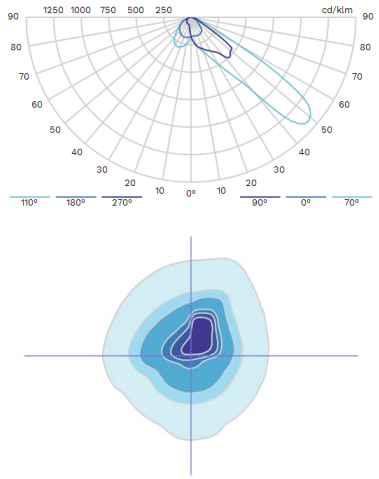
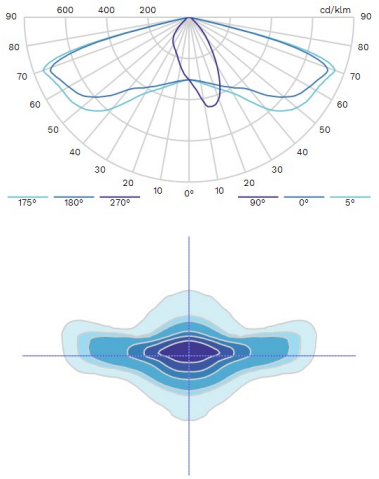


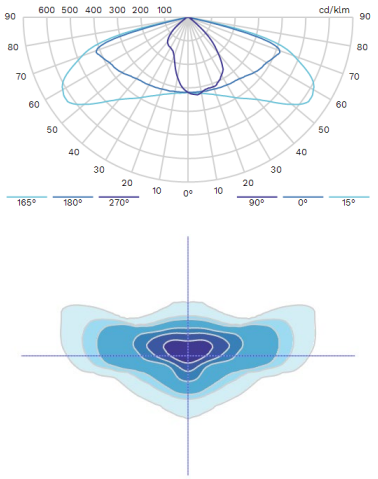

PRO FLEX™

## 5205



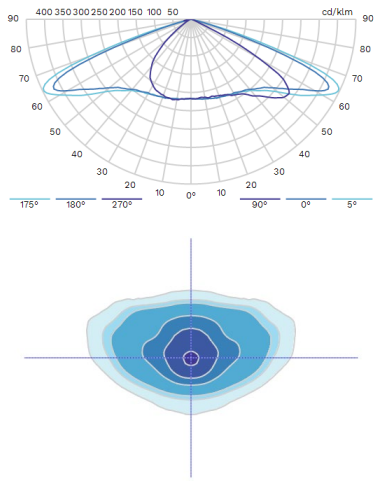

PRO FLEX™

## 5206



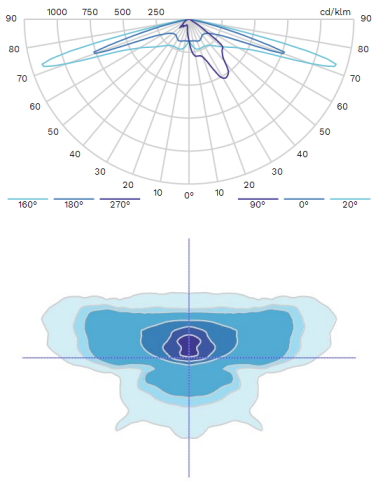

PRO FLEX™

## 5243



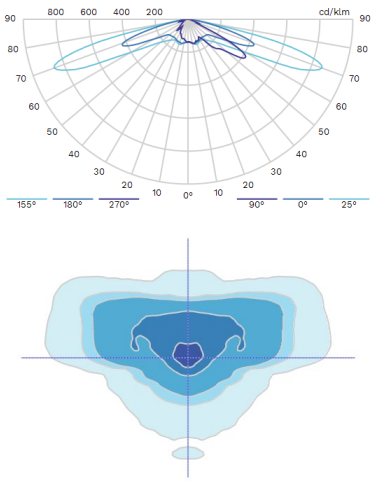

PRO FLEX™

## 5266

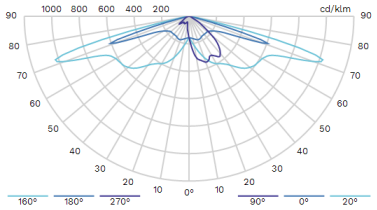


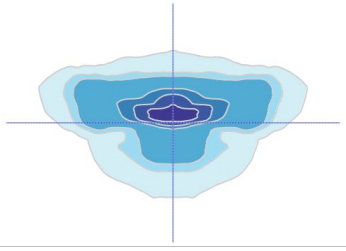

PRO FLEX™

## 5267

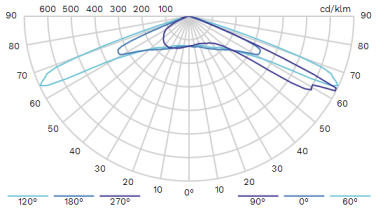


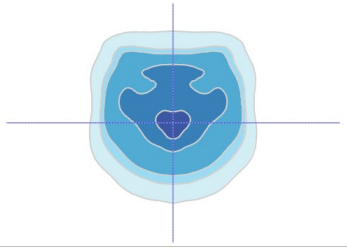
PRO FLEX™ 5270



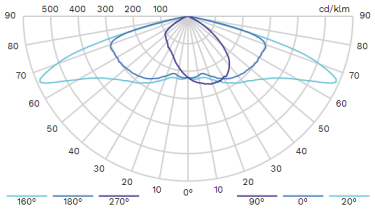



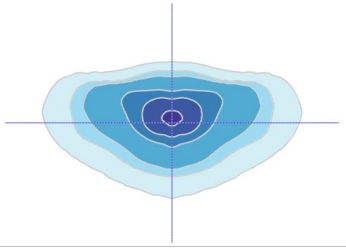
PRO FLEX™ 5293



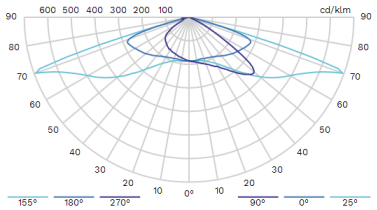



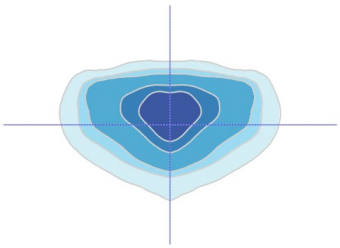
PRO FLEX™ 5294



PRO FLEX™ 5295



PRO FLEX™ 5296