Schréder
Experts in lightability™

AREA

NEOS GEN2

Designer : Michel Tortel

LENSO FLEX™ 4

The most versatile solution for your road and urban lighting applications

The true successor to the renowned NEOS luminaires, NEOS GEN2 combines the most advanced LED technology with elegant design. Compact yet powerful, it offers versatile, energy-efficient lighting for a wide range of applications.

NEOS GEN2 not only illuminates but transforms spaces, providing both aesthetic appeal and functional performance.

IP 66 | IK 09 | IK 10

UL 1598
CSA C22.2 No. 250.0

URBAN & RESIDENTIAL STREETS | BRIDGES | BIKE & PEDESTRIAN PATHS | RAILWAY STATIONS & METROS | CAR PARKS | LARGE AREAS | SQUARES & PEDESTRIAN AREAS | ROADS & MOTORWAYS | SPORT F ACILITIES

Concept

The NEOS GEN2 luminaires are composed of a three-piece housing (the body, the cover and the glass frame) made of painted die-cast low-copper aluminium to meet the requirements of highly corrosive environments. These luminaires combine a refined yet strong shape, offering a high tightness level and strong impact resistance levels to withstand any type of outdoor environment.

NEOS GEN2 combines the energy efficiency of the latest LED technology with the photometric concepts developed by Schréder.

The LensoFlex®4 photometric platform offers flexible, energy-efficient photometric solutions that can be tailored to meet the specific lighting needs of any project. This range of photometric options gives NEOS GEN2 exceptional versatility, allowing it to efficiently illuminate a wide range of applications. From pedestrian crossings to urban squares and streets, and even major roads and large areas, NEOS GEN2 delivers optimal lighting performance in every setting. Dedicated collimator optics (BlastFlex) are also available to deliver the beams required for specific sport and architectural lighting applications.

Mounting by means of a fork enables the inclination to be precisely adjusted on-site. The versatility of this fork makes it perfect for mounting on a surface or wall, or on a pole/bracket.

As an option, these connected-ready luminaires can be equipped with a NEMA or a Zhaga socket, enabling them to be easily integrated with various connected lighting systems, and providing greater adjustability and control.

Various photometric distributions for numerous outdoor lighting applications.

NEOS GEN2 luminaires are easy to install and adjust on site.

TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- LARGE AREAS
- SQUARES & PEDESTRIAN AREAS
- ROADS & MOTORWAYS
- SPORT FACILITIES

KEY ADVANTAGES

- Refined design
- LensoFlex®4 versatile solutions for high-end photometries maximising comfort and safety
- Sports optics based on BlastFlex technology offering a wide range of beams: very narrow to asymmetrical beams
- Connected-ready
- Numerous light distributions
- Zhaga-D4i certified
- Compact and versatile

As an option, NEOS GEN2 can be equipped with a NEMA or a Zhaga socket.

Tool-free opening for the greatest maintenance and servicing ease.

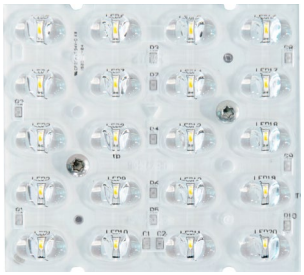
NEOS GEN2 | NEOS GEN2 1

NEOS GEN2 | NEOS GEN2 2

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.



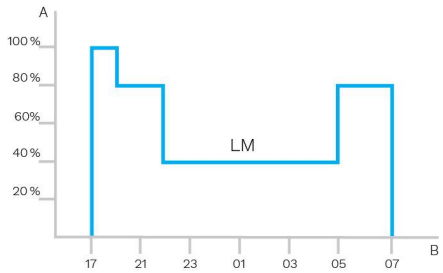
BlastFlex™

Using silicon collimators, the BlastFlex photometric engine offers the highest efficacy for directional beams dedicated to specific applications in architectural and sports lighting. The ability to control the light with the highest accuracy reduces the light spill in the surroundings and contributes to an optimal use of the energy consumed. Thanks to a superior thermal resistance, the BlastFlex optics can work with very high currents to provide large lumen packages and do not suffer from the yellowing effect over time.

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.

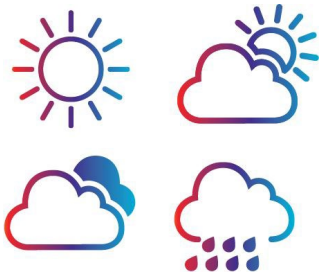
The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



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.

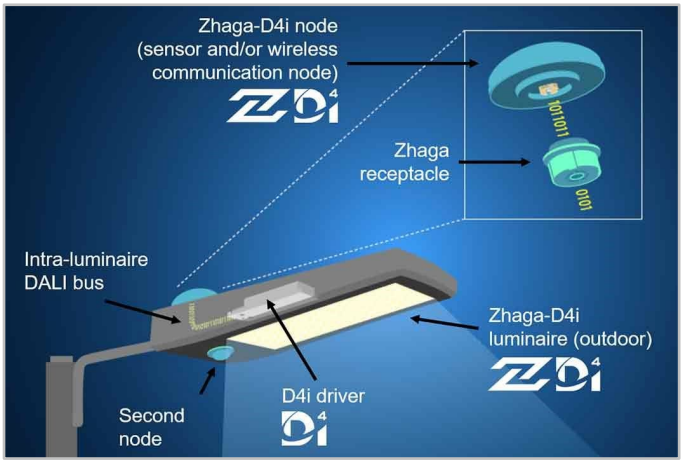


PIR sensor: motion detection

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

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

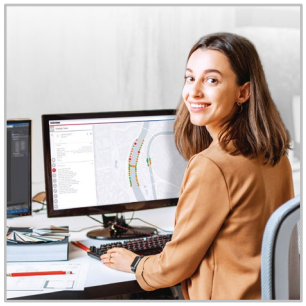
With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- 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

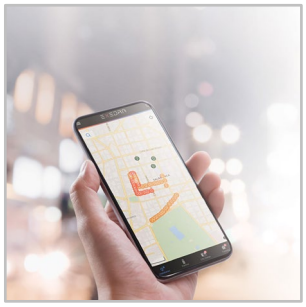
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

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.

NEOS GEN2 | CHARACTERISTICS

Schréder

GENERAL INFORMATION

Recommended installation height	8m to 15m | 26' to 49'
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
UL certified	Yes
Zhaga-D4i certified	Yes
UKCA marking	Yes

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09, IK 10
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

· NEMA socket is only available for NEOS GEN2 size 2

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +45°C / -22°F up to 113°F

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

ELECTRICAL INFORMATION

Electrical class	Class 1 US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 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	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schréder EXEDRA Schréder ITERRA
Sensor	Motion sensor (optional)

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White WW 722) 2700K (Warm White WW 727) 2700K (Warm White WW 827) 3000K (Warm White WW 730) 3000K (Warm White WW 830) 4000K (Neutral White NW 740) 4000K (Neutral White NW 840) 5700K (Cool White CW 757) 5700K (Cool White CW 857) 5700K (Cool White CW 957)
Colour rendering index (CRI)	>70 (Warm White WW 722) >70 (Warm White WW 727) >80 (Warm White WW 827) >70 (Warm White WW 730) >80 (Warm White WW 830) >70 (Neutral White NW 740) >80 (Neutral White NW 840) >70 (Cool White CW 757) >80 (Cool White CW 857) >90 (Cool White CW 957)

LIFETIME OF THE LEDS @ TQ 25°C

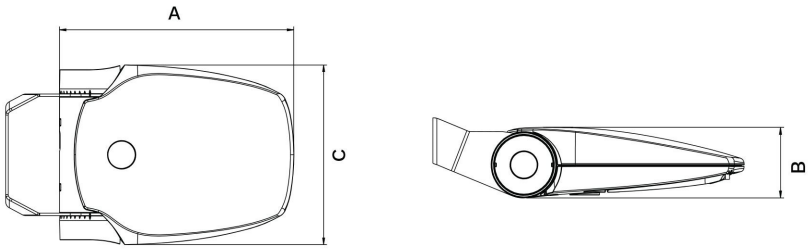
All configurations	100,000h - L92

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

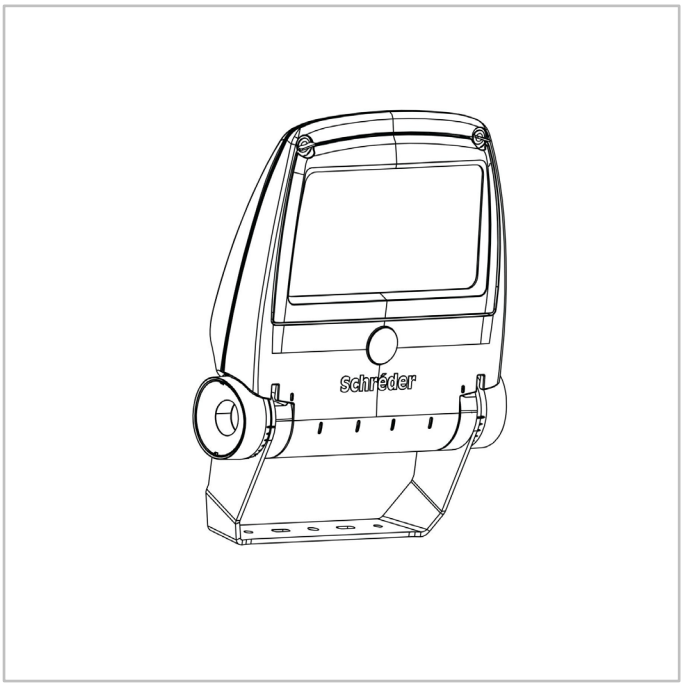
DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	NEOS GEN2 1 : 383.5x107x293 | 15.1x4.2x11.5 NEOS GEN2 2 : 416x107x416 | 16.4x4.2x16.4
Weight (kg | lbs)	NEOS GEN2 1 : 7.1 | 15.6 NEOS GEN2 2 : 10.1 | 22.2
Aerodynamic resistance (CxS)	NEOS GEN2 1 : 0.13 NEOS GEN2 2 : 0.20
Mounting possibilities	Bracket enabling adjustable inclination

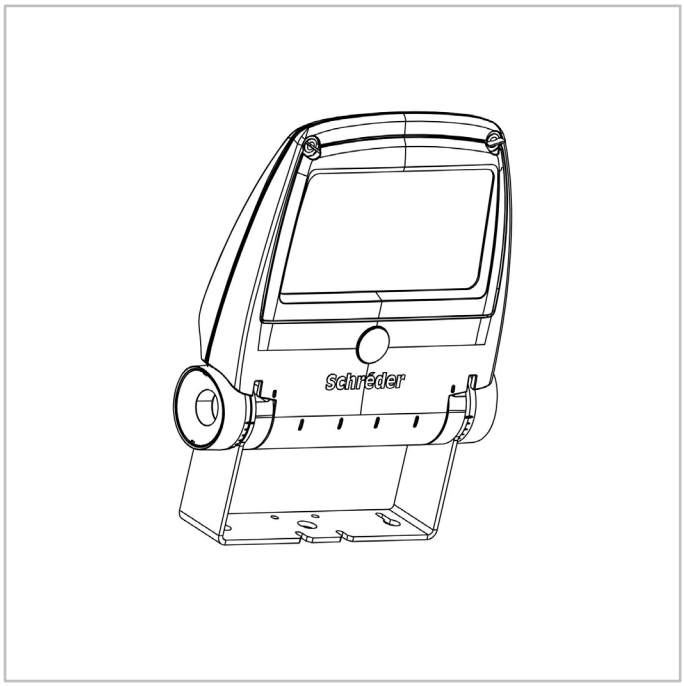
· *For more information about mounting possibilities, please consult the installation sheet.*



NEOS GEN2 | Surface and wall mounting



NEOS GEN2 | Bracket for post-top mounting



NEOS GEN2 1

Photometry

LENSO FLEX™4

	Luminaire output flux (lm)																				W		lm/W
	WW 722		WW 727		WW 827		WW 730		WW 830		NW 740		NW 840		CW 757		CW 857		CW 957				
Nbr of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
20	1900	6600	2200	7300	2000	6700	2300	7900	2200	7300	2500	8500	2300	7800	2400	8100	2300	7800	2000	6900	23	66	154
25	2700	7400	3000	8200	2700	7500	3200	8900	3000	8200	3500	9600	3200	8700	3300	9200	3200	8700	2800	7800	28	87	140

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

NEOS GEN2 2

Photometry

LENSO FLEX™4

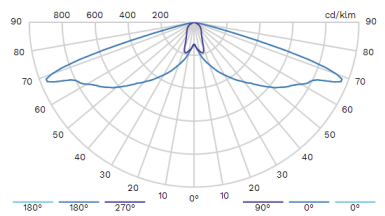
	Luminaire output flux (lm)																				W		lm/W
	WW 722		WW 727		WW 827		WW 730		WW 830		NW 740		NW 840		CW 757		CW 857		CW 957				
Nbr of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
40	3900	12900	4400	14500	4000	13200	4700	15600	4400	14500	5100	16800	4600	15300	4900	16100	4600	15300	4100	13600	44	132	162
50	5400	13000	6100	14500	5500	13300	6500	15600	6100	14500	7000	16900	6400	15400	6700	16200	6400	15400	5700	13700	54	145	147

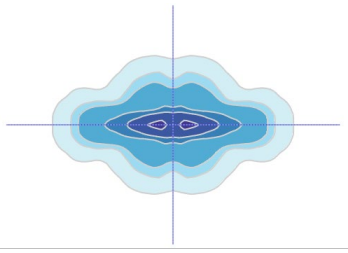
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

LensoFlex4

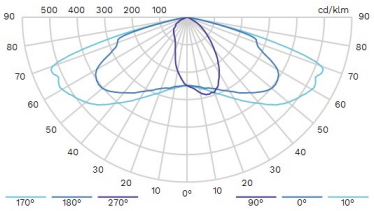
LENSO FLEX™4

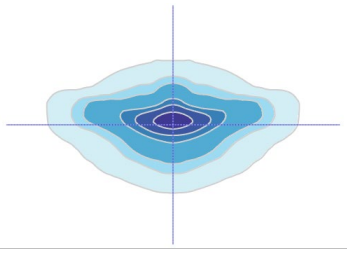
5300 Ultra-Narrow



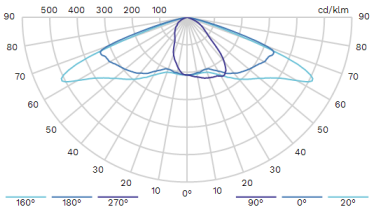


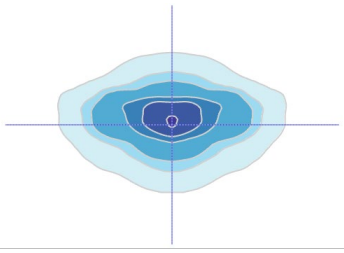
5301 Narrow





5303 Medium





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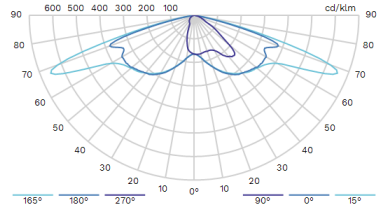

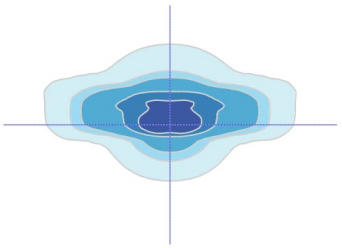

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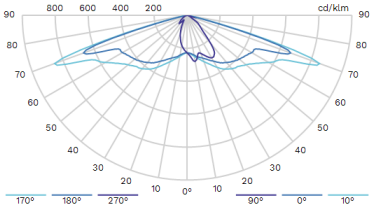

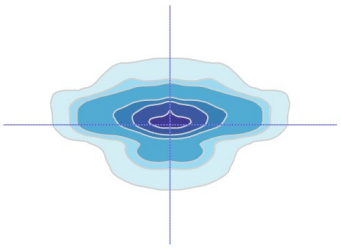

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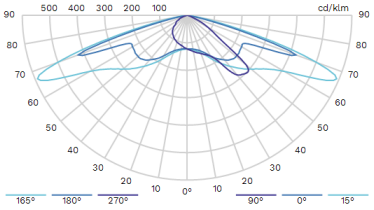
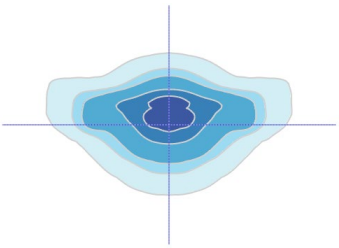
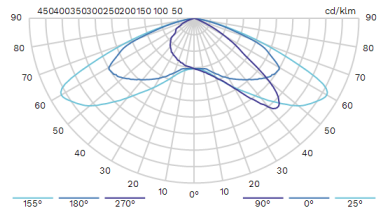
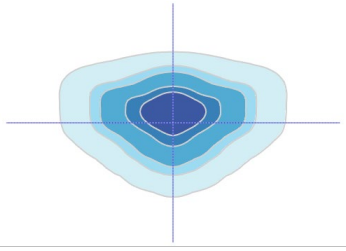




LENSO FLEX™4 5308 **Wide**





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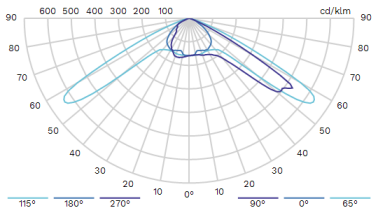
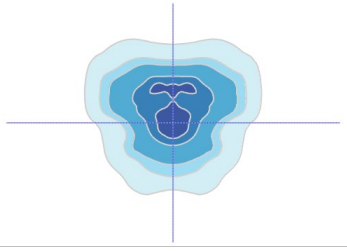
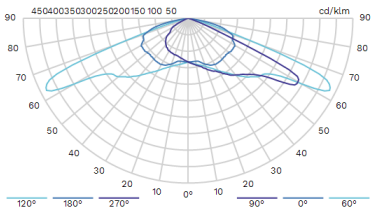
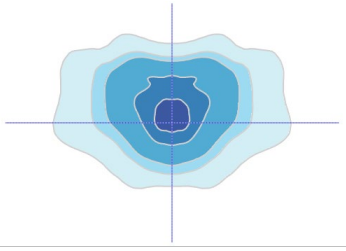


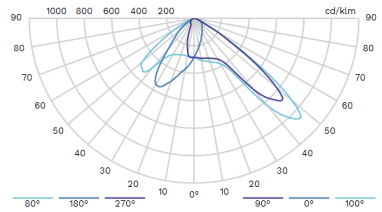


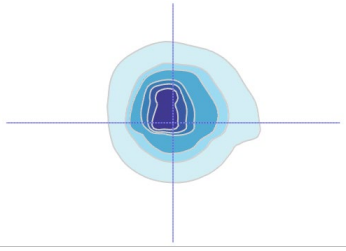
LENSO FLEX™4 5393 **Ultra-Wide**





LENSO FLEX™4 5370 **Zebra Left**





LENSO FLEX™4 5369 **Zebra Right**