

# OMNIstar

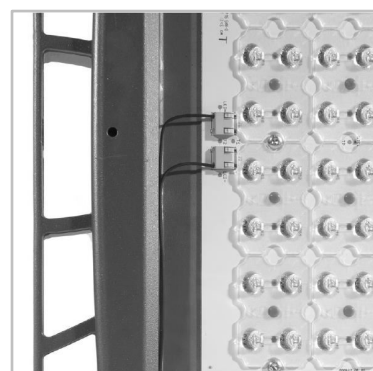


## Designed to generate massive savings and bring benefits to area and tunnel lighting

OMNIstar is setting a new standard by providing a performing LED alternative to HID luminaires for high-bay and tunnel applications with a minimum total cost of ownership.

OMNIstar provides a beneficial replacement for a full range of HID lighting fixtures in a variety of indoor and outdoor applications. This luminaire has been designed to provide an unrivalled combination of performance and flexibility for lighting areas where high lumen packages are needed with the added advantages of an LED solution : low energy consumption, improved visibility with white light, limited maintenance and longer life.

OMNIstar can be installed in various configurations (suspended, surface-mounted or post-top) with one to three optical units. The OMNIstar can operate with the Owlet range of control solutions and a building management system with the DALI protocol to further maximise energy savings by adapting the lighting levels according to the real needs of the place to be lit.



IP 66

IK 08



ACCENT &  
ARCHITECTURAL



TUNNELS &  
UNDERPASSES



CAR PARKS



LARGE AREAS



INDUSTRIAL  
HALLS &  
WAREHOUSES



ROADS &  
MOTORWAYS



SPORT  
FACILITIES

## Concept

OMNIstar provides a complete solution for applications requiring high lumen packages. It is composed of an optical unit (from 72 to 144 high-power LEDs), various mounting systems, a remote gear box and cables with quick connectors.

OMNIstar combines the energy efficiency of LED technology with the performance of the photometric concepts developed by Schröder. The design of the LensoFlex®2 and LensoFlex®3 photometric engines and the flexibility of the photometric distributions ensure safe and pleasant conditions for users while offering a superior efficacy. OMNIstar can be also be fitted with reflectors to provide a counter beam lighting solution (ReFlexo™ photometries) for sports, tunnel and apron applications. Dedicated collimator optics (BlastFlex™) are also available to deliver the requested beams for specific sport and architectural lighting applications.

Composed of robust materials, OMNIstar is highly resistant to shocks and corrosion within harsh environments. As an option, an explosion proof version is available to meet particular industrial requirements.

OMNIstar offers a modular concept of optical units which enables 1, 2 or 3 modules to be grouped on the same bracket to meet the specifications of the area to be lit. On-site adjustment guarantees the perfect lighting.

A separate driver box that can be easily plugged in to an LED optical unit with quick connectors to facilitate both installation and maintenance operations. It also means that the OMNIstar will be able to take advantage of future technological developments.



The inclination angle can be easily adjusted on-site.



The OMNIBOX is an IP 66 universal remote gear box for up to 4 optical units.

## Types of application

- ACCENT & ARCHITECTURAL
- TUNNELS & UNDERPASSES
- CAR PARKS
- LARGE AREAS
- INDUSTRIAL HALLS & WAREHOUSES
- ROADS & MOTORWAYS
- SPORT FACILITIES

## Key advantages

- Real beneficial LED alternative to HID floodlights for high-power applications
- Cost-effective and efficient to maximise energy and maintenance savings
- Flexibility: modular approach with wide range of lighting distributions
- Easy to dim: can adapt to the different lighting regimes required
- Highly efficient light distributions reduce the quantity of luminaires to be installed
- Various mounting options and inclination possibilities on-site for optimal photometry
- Explosion proof variant for use in industrial environments with a hazardous atmosphere
- Compact size: for tunnels with restrictive heights and to avoid any damage
- Various control options including remote management systems



With up to 144 high-power LEDs, OMNIstar delivers high lumen packages.



OMNIstar is delivered with quick connectors for an easy installation.

OMNistar | standard U bracket



OMNistar | large U bracket (wall mounting)



OMNistar | large U bracket (pole mounting)



OMNistar | tiltable ceiling mounting



OMNistar | fixed ceiling mounting



OMNistar | suspended with chains



OMNistar | 2 optical units, tiltable together



OMNistar | 2 optical units, tiltable independantly



OMNistar | 3 optical units, tiltable together



OMNistar | OMNIBOX | fixed ceiling mounting





## 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.

The proven LensoFlex®2 concept includes a glass protector to seal the LEDs and lenses into the luminaire body.



## LensoFlex®3

LensoFlex®3 uses lenses made of mouldable and optical-grade silicon offering superior transparency and excellent photothermal stability. This withstands high driving currents and delivers maximised lumen output over time. As silicon offers a higher thermal resistance compared to PMMA, temperature is not as critical for LensoFlex®3 engines. This offers two distinct advantages; LensoFlex®3 ensures enhanced performance in warm climates and enables a high driving current to be used to increase the lumen output and a higher lm/kg ratio. It also does not suffer from yellowing over time.



## 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.



## ReFlexo™

Using metal reflectors with a superior reflective co-efficient, the ReFlexo™ photometric engine delivers high performance for specific applications such as counter beam lighting in tunnels or very extensive light distributions for sports or apron lighting.

Another key advantage of the ReFlexo™ is its' ability to direct all the light to the front of the luminaire, ensuring that no back light is emitted. This photometric engine guarantees glare free lighting for excellent visual comfort and the creation of ambiance.



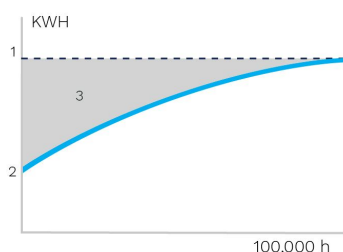




## Constant Light Output (CLO)

This system compensates for the depreciation of luminous flux to avoid excess lighting at the beginning of the installation's service life. Luminous depreciation over time must be taken into account to ensure a predefined lighting level during the luminaire's useful life.

Without a CLO feature, this simply means increasing the initial power upon installation in order to make up for luminous depreciation. By precisely controlling the luminous flux, the energy needed to reach the required level can be maintained throughout the luminaire's life.



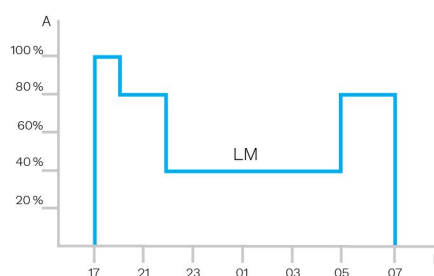
1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings



## 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. Performance | B. Time

## Advanced Tunnel Solution (ATS)

The ATS (Advanced Tunnel Solution) is a control system that manages luminaire controllers (Lumgates) to deploy pre-defined lighting scenarios or to take charge of the lighting installation at any moment.

The ATS controller can operate as a standalone unit or can be linked to the main tunnel control system to interact with features not directly related to lighting (traffic management, ventilation, fire detection etc.).



## Luminance meter (L20)

The luminance meter measures the luminance provided by natural light in the access zone from the safe stopping distance. It sends the data to the ATS control system that adjusts the lighting levels to avoid any visual adaptation problems.



## Lumgate

The Lumgate is an RS485 closed-loop device connected to the luminaire drivers to control the light intensity and provide command/reporting features.

One Lumgate can control several luminaires.



## Tunnel Control System (TCS)

The Tunnel Control System (TCS) is a gateway ensuring the connection/control of the multiple ATS controllers as well as the communication with the central management system of the tunnel infrastructure (SCADA) if applicable.





# Owlet IoT

Owlet IoT remotely controls luminaires in a lighting network, creating opportunities for improved efficiency, accurate real-time data and energy savings of up to 85%.



## ALL-IN-ONE

The LUCO P7 CM controller includes the most advanced features for optimised asset management. It also provides an integrated photocell and operates with an astronomical clock for seasonal dimming profile adaptations.

## EASY TO DEPLOY

Thanks to wireless communication, no cabling is needed. The network is not subject to physical constraints or limitations. From a single control unit to an unlimited network, you can expand your lighting scheme at any time.

With real-time geolocation and automatic detection of luminaire features, commissioning is quick and easy.

## USER-FRIENDLY

Once a controller is installed on a luminaire, the luminaire automatically appears with its GPS coordinates on a web-based map.

An easy-to-use dashboard enables each user to organise and customise screens, statistics and reports. Users can gain relevant, real-time insights.

The Owlet IoT web application can be accessed at all times from anywhere in the world with a device connected to the Internet. The application adapts to the device to offer an intuitive and user-friendly experience.

Real-time notifications can be pre-programmed to monitor the most important elements of the lighting scheme.



Plugging the LUCO P7 CM controller onto the 7-pin NEMA socket

## SECURE

The Owlet IoT system uses a local wireless mesh communication networks to control the on-site luminaires combined with a remote control system utilising the cloud to ensure smooth data transfers to and from the central management system.

The system uses encrypted IP V6 communication to protect data transmission in both directions. Using a secure APN, Owlet IoT ensures a high level of protection.

In the exceptional case of a communication failure, the built-in astronomical clock and photocell will take over to switch the luminaires on and off, thus avoiding a complete blackout at night.

## EFFICIENT

Thanks to sensors and/or pre-programmed settings, lighting scenarios can be easily adapted to cope with live events, providing the right lighting levels at the right time and in the right place.

The integrated utility grade meter offers the highest accuracy available on the market today, enabling decisions based on real figures.

Accurate real-time feedback and clear reporting ensures that the network operates efficiently and maintenance is optimised.

When LED luminaires are switched on, the inrush current can create problems for the electricity grid. Owlet IoT incorporates an algorithm to preserve the grid at all times.

## OPEN

The LUCO P7 CM controller can be plugged onto the standard 7 pin NEMA socket and operates through either a DALI or 1-10V interface to control the luminaire.

Owlet IoT is based on the IPv6 protocol. This method for addressing devices can generate an almost unlimited number of unique combinations to connect non-traditional components to the Internet or computer network.

Through open APIs, Owlet IoT can be integrated into existing or future global management systems.

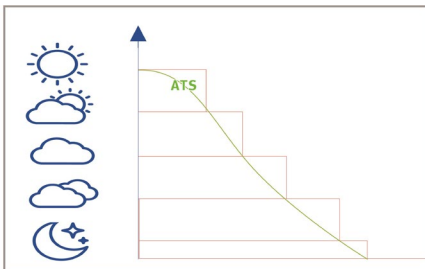


Jointly developed by Schröder and Phoenix Contact, the Advanced Tunnel Solution (ATS) has been designed to control every lighting point or clusters of luminaires to perfectly adapt the lighting level according to conditions in the

tunnel, to monitor the power consumption and to report the burning hours or any failure to facilitate maintenance. The system includes a self-commissioning feature and enables scenarios to be adapted remotely at any moment.

## PRECISE AND CONTINUOUS DIMMING

ATS provides 25 different dimming levels to precisely adapt the lighting to the real needs. Without any over-lighting, the energy consumption is limited to what is absolutely necessary to ensure safe and comfortable driving conditions.



## FLEXIBILITY

Flexible redundancy offers security on multi-level applications, not only for the lighting.

## PLUG AND PLAY COMMISSIONING

The tunnel lighting study can be directly imported into the ATS control system.

This unique feature, in combination with the auto-addressing of the Lumigates, leads to an extremely short commissioning time once the fixtures have been installed.

Each luminaire or cluster of luminaires is attributed the precise dimming profile linked to its position and characteristics.

## INTERACTION WITH THIRD PARTY SYSTEMS

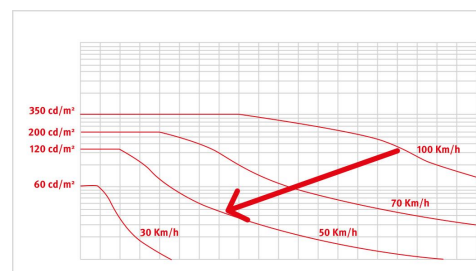
Every command or signal sent to or coming from a tunnel component (emergency exit, smoke extraction system, traffic management system...) can be used to trigger a responsive lighting scenario. All of the tunnel equipment can be controlled through the same bus command.

## MAXIMISED SAFETY

The system enables the easy set-up of emergency and disaster management scenarios.

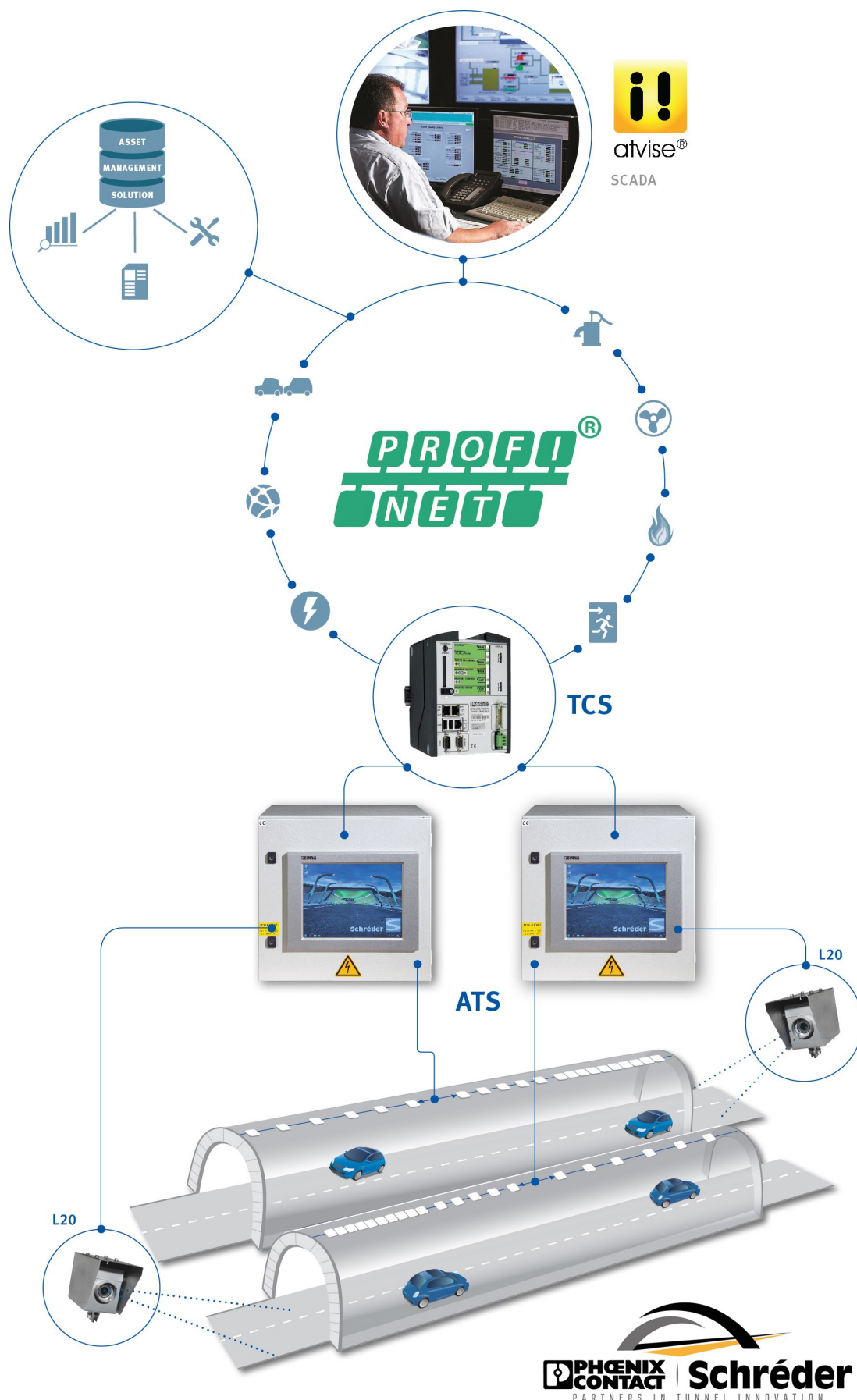
## ADAPTIVE LIGHTING ACCORDING TO SPEED

The ATS can be linked to a traffic monitoring system to obtain data regarding speed or density to adapt the lighting level according to safety standards. This option further reduces energy consumption and increases the lifetime of the installation while ensuring the best driving conditions for motorists.



## ADAPTIVE LIGHTING ACCORDING TO POLLUTION

Based on cleaning cycles, the ATS can take into account the depreciation of the flux due to dirt accumulation to continuously provide the requested lighting level in the tunnel. No more, no less. This feature offers additional energy savings while providing safety and comfort for users.



## GENERAL INFORMATION

Recommended installation height	8m to 45m   26' to 148'
FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
Driver included	No
CE Mark	Yes
ENEC certified	Yes
ETL/UL certified	Yes
ROHS compliant	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

## HOUSING AND FINISH

Housing	Aluminium
Optic	Aluminium reflector PMMA Silicon
Protector	Tempered glass Frosted glass 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 ANSI 1.5G and 3G and modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool less access to gear compartment
Safety compliance against ball throwing	DIN18 032-3:1997-04 according to EN 13 964 Annex D
Explosion proof compliance	IECEX / ATEX according to EN 60079   TÜV 16 ATEX 7895 X   Ex II 3 G Ex nR IIC T4 Gc   TÜV 16 ATEX 7896 X   Ex II 2 D Ex tb IIC T100°C Db   IECEX TUR 16.0037X

· Any other RAL or AKZO colour upon request

## OPERATING CONDITIONS

Operating temperature range (Ta)	-30 °C up to +55 °C / -22 ° F up to 131 °F
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· Depending on the luminaire configuration. For more details, please contact us.

## ELECTRICAL INFORMATION

Electromagnetic compatibility (EMC)	EN 61547 / EN 61000-4-2, -3, -4, -5, -6, -8, -11
Control protocol(s)	1-10V, DALI
Control options	Bi-power, Custom dimming profile, Lumgate, Photocell
Socket	NEMA 3-pin (optional) NEMA 7-pin (optional)
Associated control system(s)	Owlet Nightshift Owlet IoT Advanced Tunnel Solution (ATS) Nicolaudie Pharos

· Electrical information given for the gear box

## OPTICAL INFORMATION

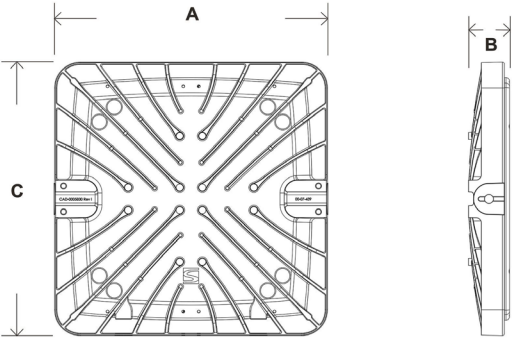
LED colour temperature	3000K (Warm White 730) 3000K (Warm White 830) 4000K (Neutral White 740) 4000K (Neutral White 940) 5700K (Cool White 757) 5700K (Cool White 957)
Colour rendering index (CRI)	>70 (Warm White 730) >80 (Warm White 830) >70 (Neutral White 740) >90 (Neutral White 940) >70 (Cool White 757) >90 (Cool White 957)
Upward Light Output Ratio (ULOR)	0%

## LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L85
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DIMENSIONS AND MOUNTING

AxBxC (mm   inch)	532x80x530   20.9x3.1x20.9
Weight (kg   lbs)	14   30.8
Aerodynamic resistance (CxS)	0.26
Mounting possibilities	Hook(s) for suspension Post-top slip-over – Ø76mm Post-top slip-over – Ø76-108mm Side-entry slip-over – Ø76mm Bracket enabling adjustable inclination Surface mounting Direct mounting on ceiling



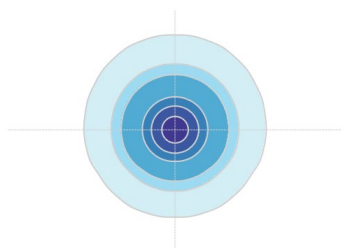
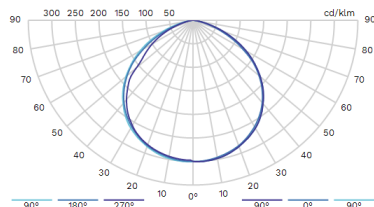


			Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Cool White 757		Luminaire output flux (lm) Cool White 957		Luminaire output flux (lm) Neutral White 940		Watt	Lm/W	
LEDs	Current (mA)		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		Up to	Photometry
OMNistar	72	350	8200	11200	8400	11600	-	-	-	-	-	-	-	-	78	155	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	72	350	-	-	9300	11600	8100	10100	9300	11600	8100	10200	7800	9800	76	159	BLAST FLEX <sup>®</sup> RE FLEKO <sup>®</sup> LENZO FLEX <sup>3</sup>
	72	500	11200	15400	11600	15900	-	-	-	-	-	-	-	-	111	143	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	72	500	-	-	12900	16200	11300	14100	12900	16200	11300	14200	10900	13700	108	150	BLAST FLEX <sup>®</sup> RE FLEKO <sup>®</sup> LENZO FLEX <sup>3</sup>
	72	700	15100	20400	15600	21100	-	-	-	-	-	-	-	-	156	138	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	72	700	-	-	17500	21800	15200	19000	17500	21800	15300	19200	14800	18500	151	147	BLAST FLEX <sup>®</sup> RE FLEKO <sup>®</sup> LENZO FLEX <sup>3</sup>
	72	1000	20000	27500	20700	28400	-	-	-	-	-	-	-	-	225	126	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	72	1000	-	-	24000	30100	20900	26200	24000	30100	21100	26400	20300	25400	218	138	BLAST FLEX <sup>®</sup> RE FLEKO <sup>®</sup> LENZO FLEX <sup>3</sup>
	72	1200	-	-	27800	34700	24300	30200	27800	34700	24400	30400	23500	29300	265	131	BLAST FLEX <sup>®</sup> RE FLEKO <sup>®</sup> LENZO FLEX <sup>3</sup>
	144	350	16400	22400	16900	23200	-	-	-	-	-	-	-	-	160	155	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	144	350	-	-	18600	23300	16200	20300	18600	23300	16300	20500	15700	19700	157	160	BLAST FLEX <sup>®</sup> LENZO FLEX <sup>3</sup> RE FLEKO <sup>®</sup>
	144	500	22800	30700	23500	31700	-	-	-	-	-	-	-	-	228	143	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	144	500	-	-	26300	33000	23000	28800	26300	33000	23100	29000	22300	27900	220	153	BLAST FLEX <sup>®</sup> LENZO FLEX <sup>3</sup> RE FLEKO <sup>®</sup>
	144	700	30000	40600	31100	42000	-	-	-	-	-	-	-	-	321	137	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	144	700	-	-	34600	44400	30200	38700	34600	44400	30300	38900	29200	37500	312	150	BLAST FLEX <sup>®</sup> LENZO FLEX <sup>3</sup> RE FLEKO <sup>®</sup>
	144	1000	39300	52800	40600	54600	-	-	-	-	-	-	-	-	462	121	LENZO FLEX <sup>2</sup> RE FLEKO <sup>®</sup> BLAST FLEX <sup>®</sup>
	144	1000	-	-	47600	59300	41500	51800	47600	59300	41800	52100	40300	50200	450	136	BLAST FLEX <sup>®</sup> LENZO FLEX <sup>3</sup> RE FLEKO <sup>®</sup>
	144	1200	-	-	54700	67800	47700	59100	54700	67800	48000	59500	46300	57300	532	128	BLAST FLEX <sup>®</sup> LENZO FLEX <sup>3</sup> RE FLEKO <sup>®</sup>

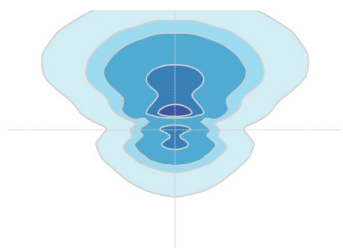
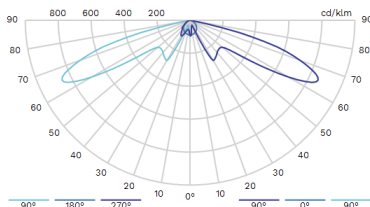
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %



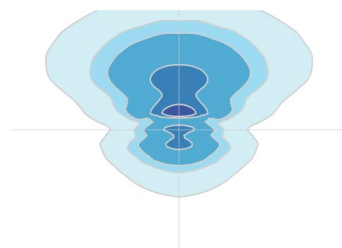
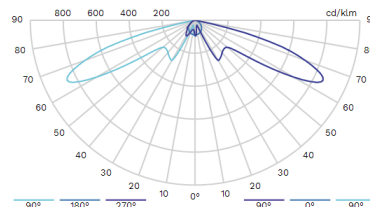
0 No lenses



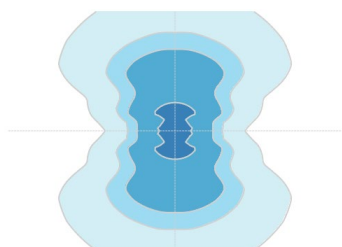
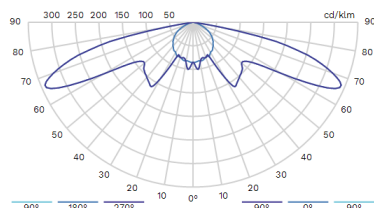
**RE FLEXTM** 2258



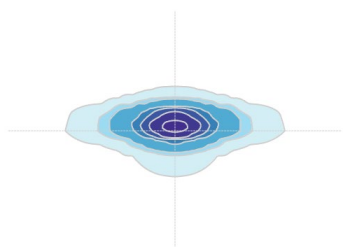
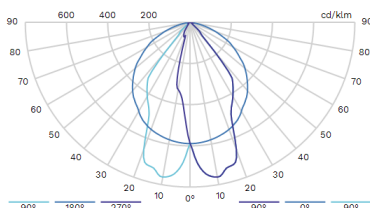
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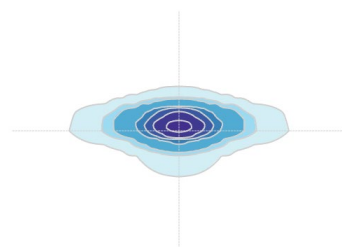
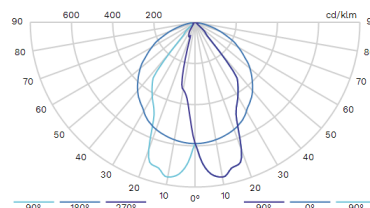
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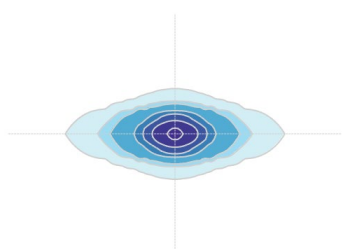
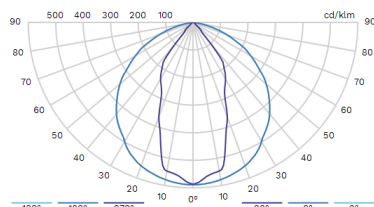
**RE FLEXTM** 2259



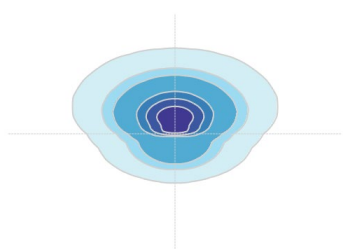
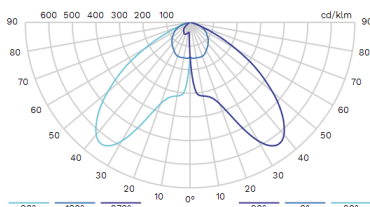
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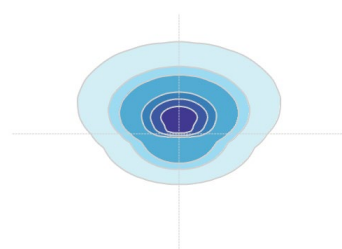
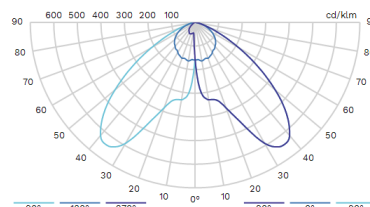
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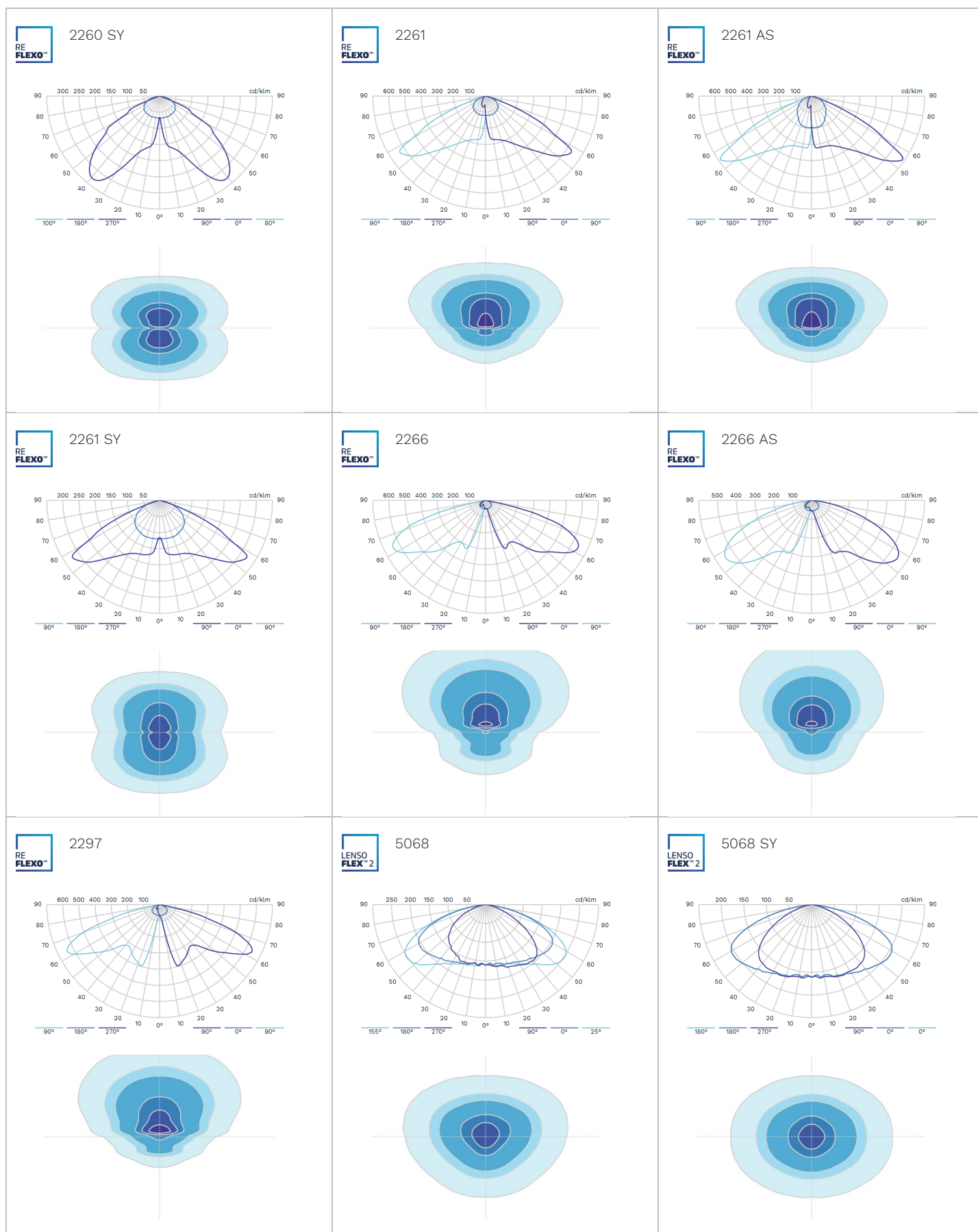


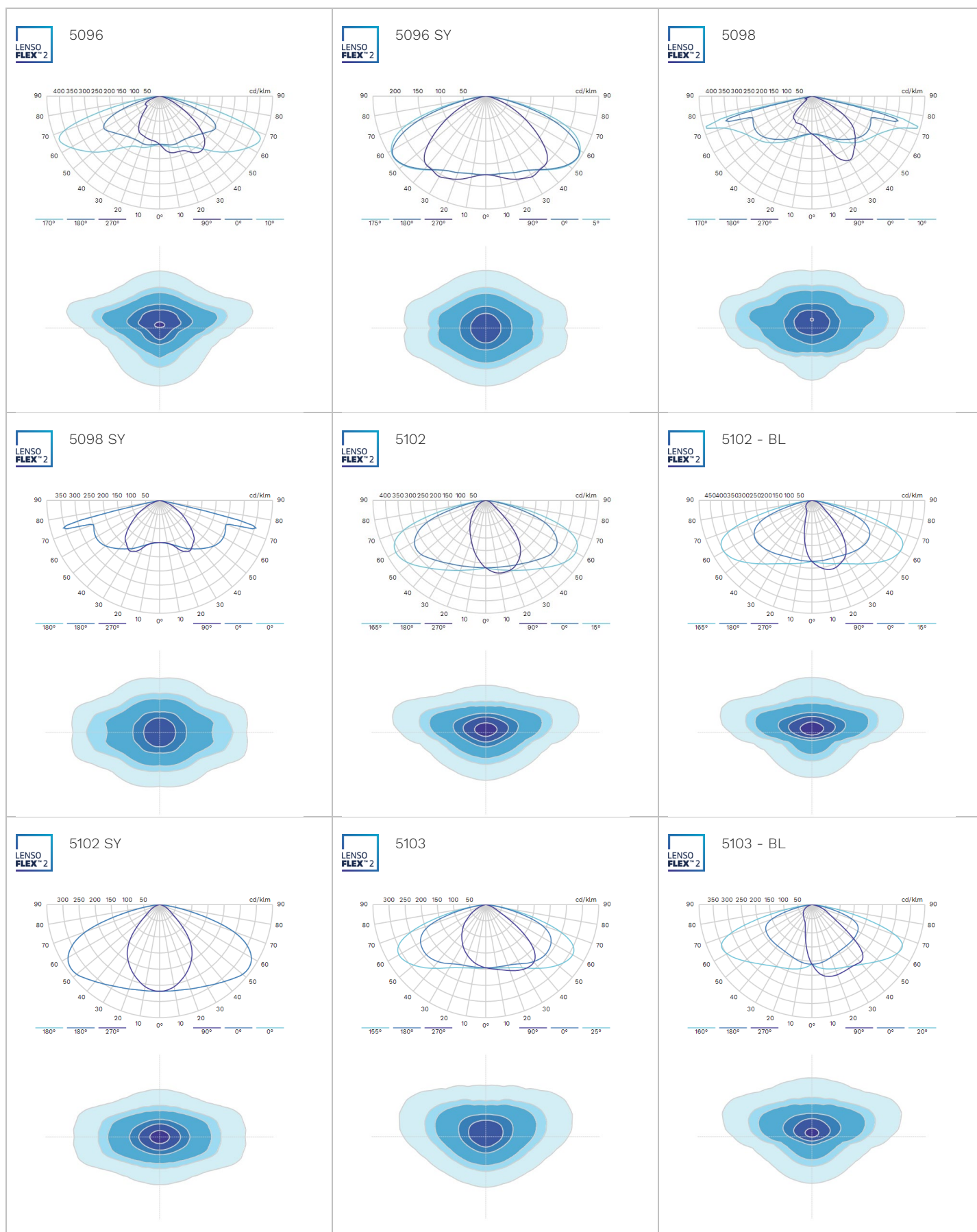
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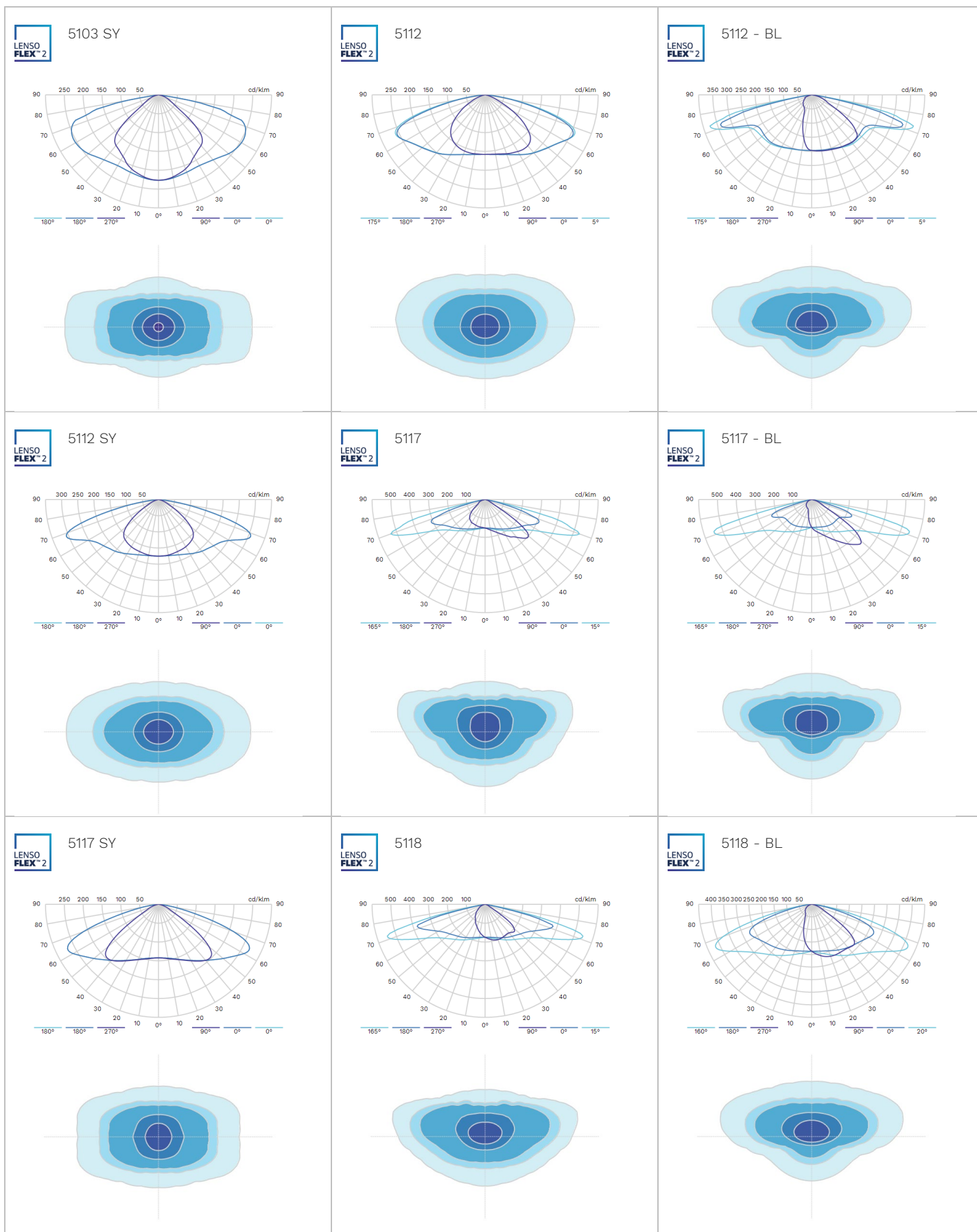


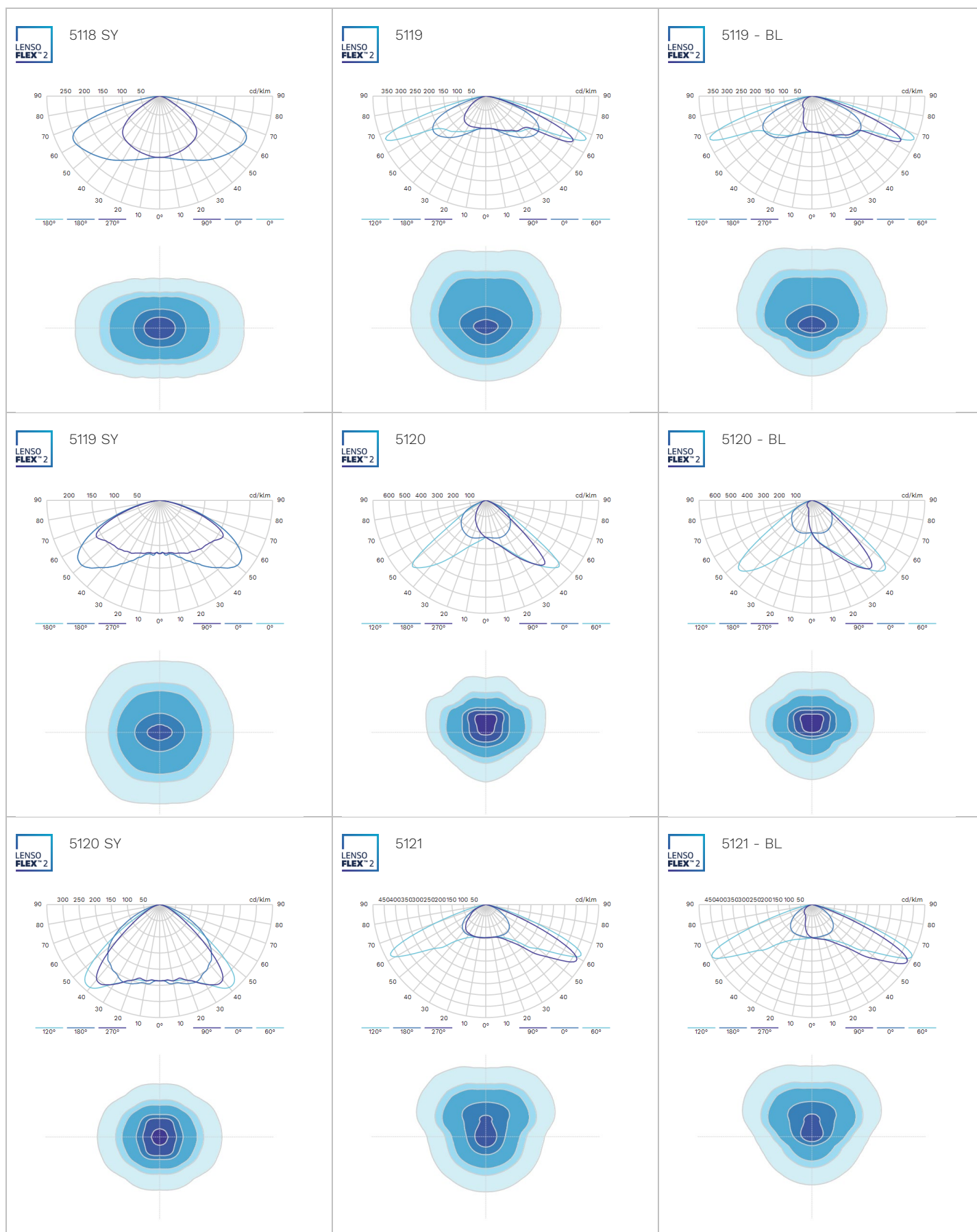
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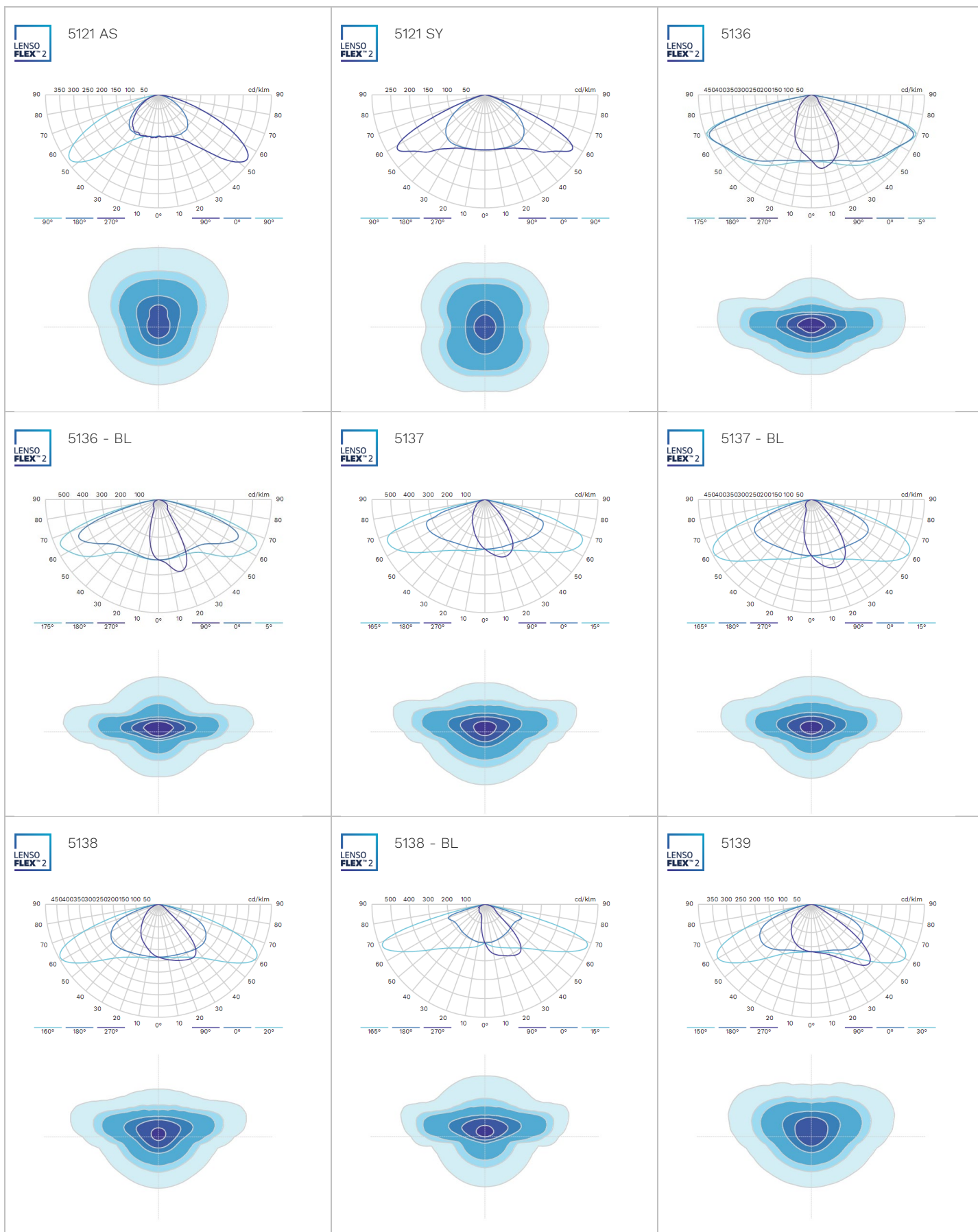






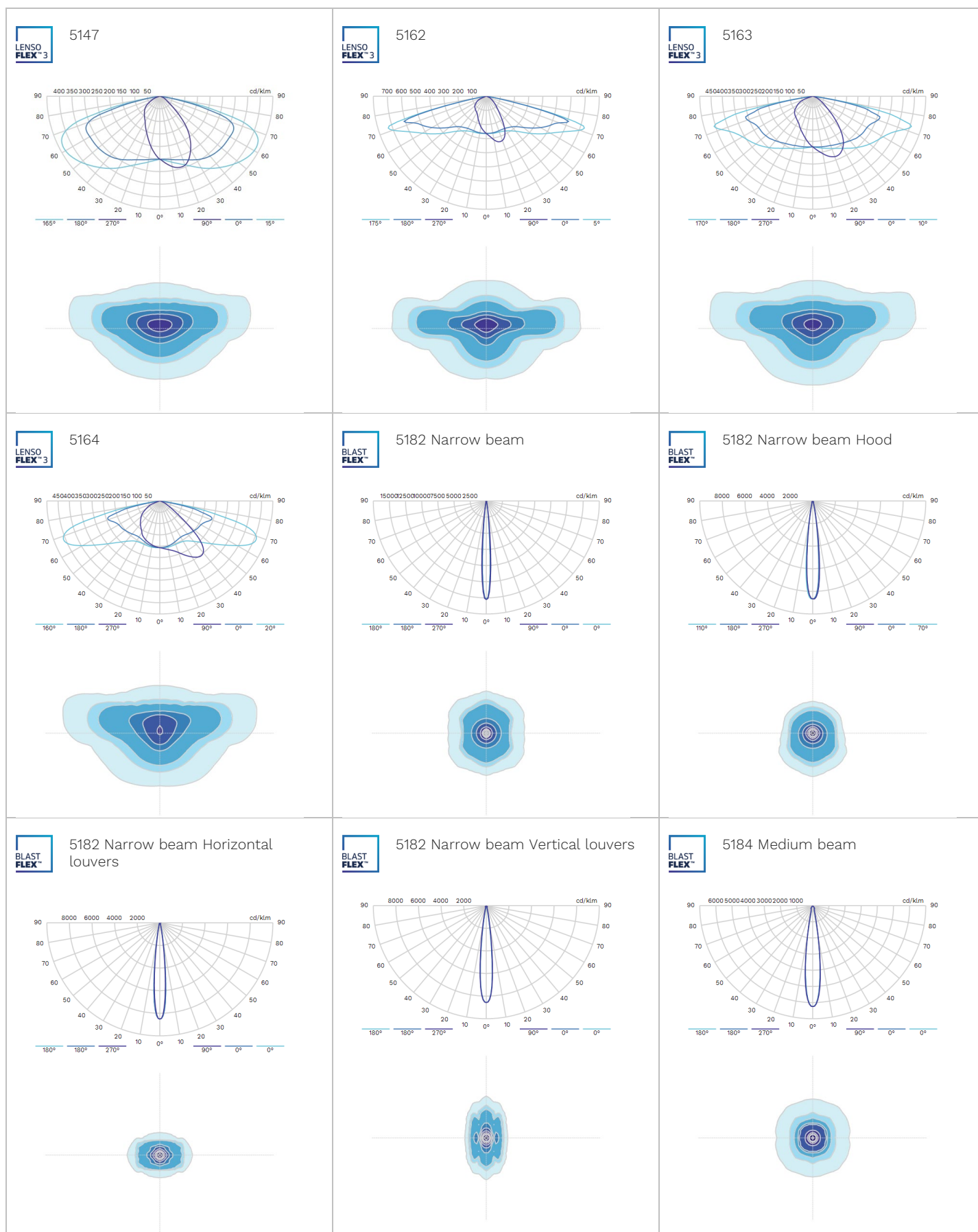






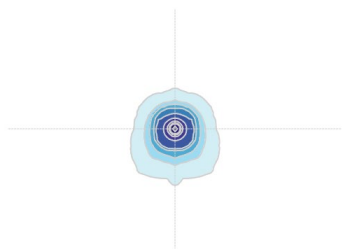
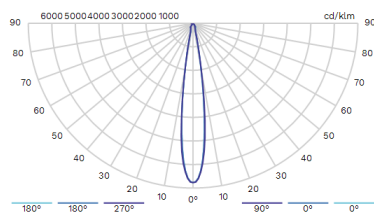




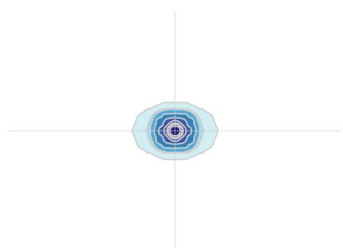
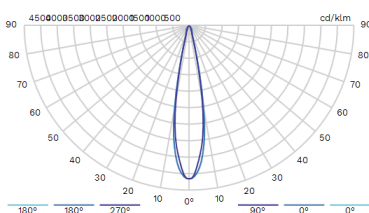




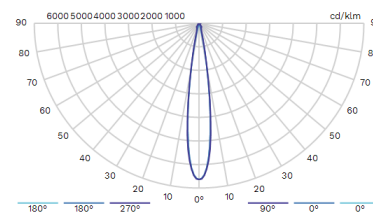
5184 Medium beam Hood



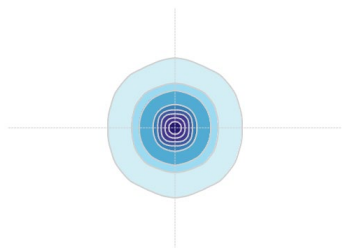
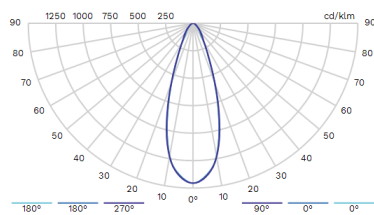
5184 Medium beam Horizontal louvers



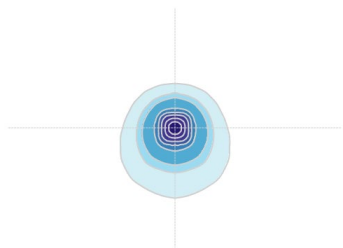
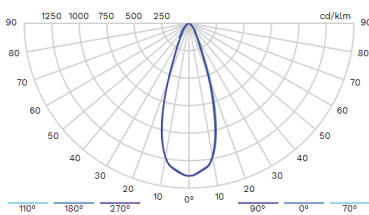
5184 Medium beam Vertical louvers



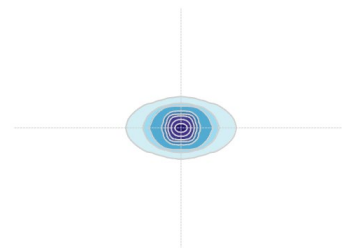
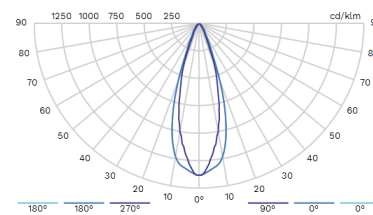
5185 Wide beam



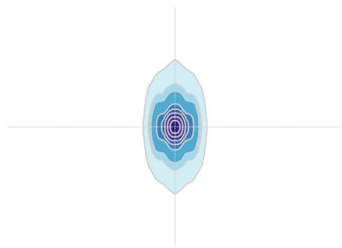
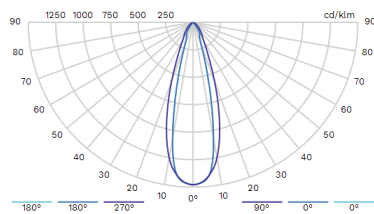
5185 Wide beam Hood



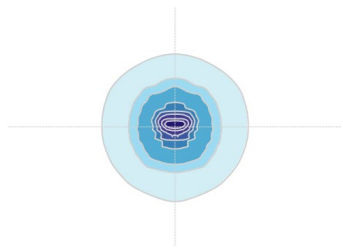
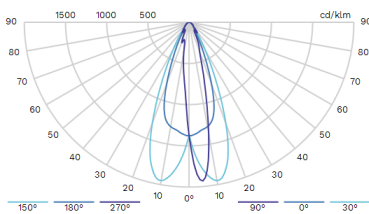
5185 Wide beam Horizontal louvers



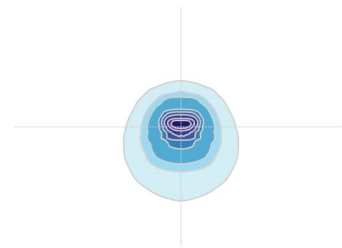
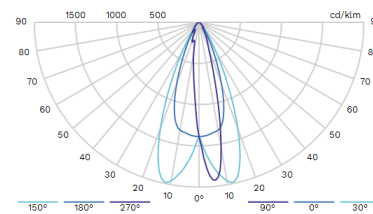
5185 Wide beam Vertical louvers



5186 Asymmetrical 10°

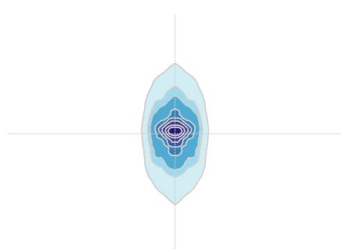
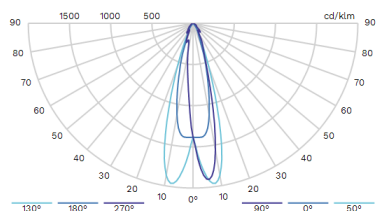


5186 Asymmetrical 10° Hood

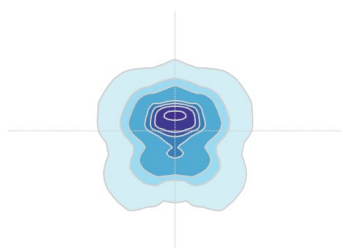
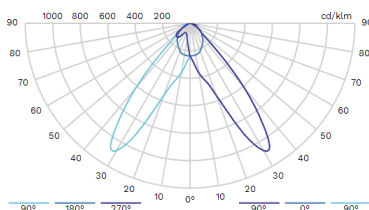




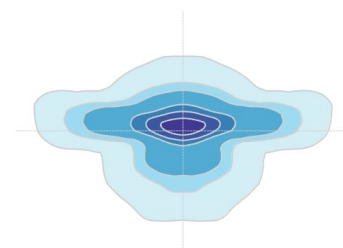
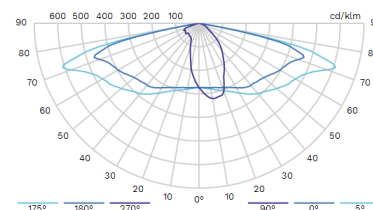
5186 Asymmetrical 10° Vertical louvers



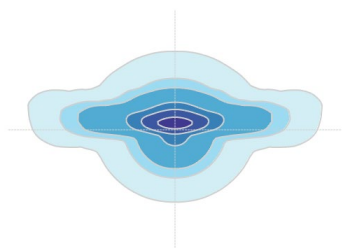
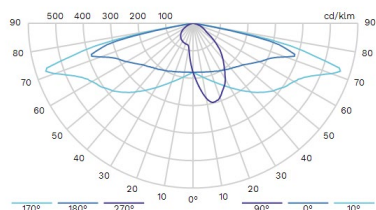
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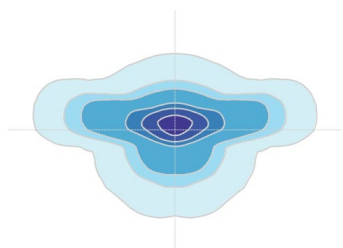
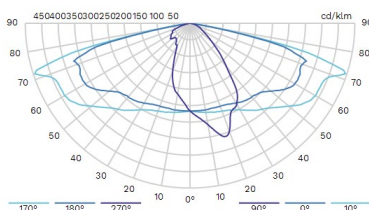
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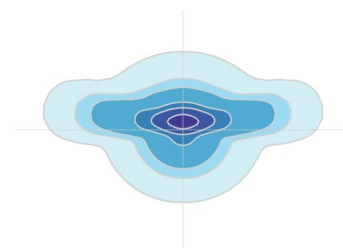
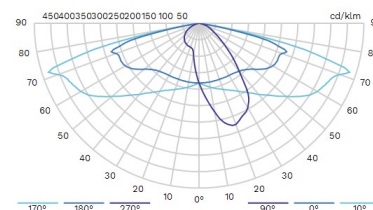
5244 - BL



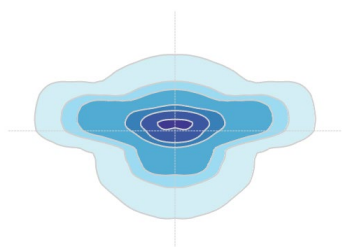
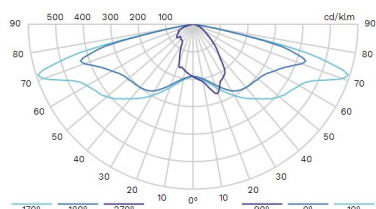
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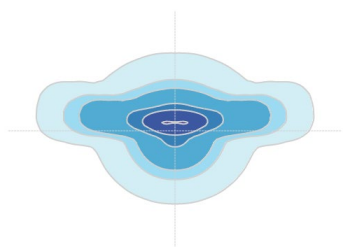
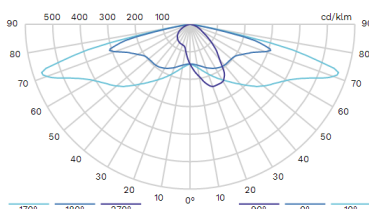
5245 - BL



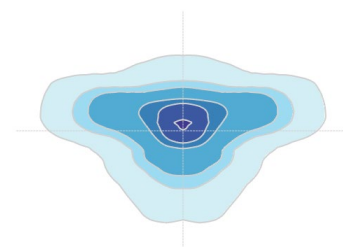
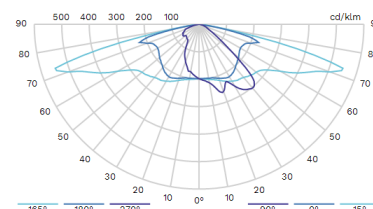
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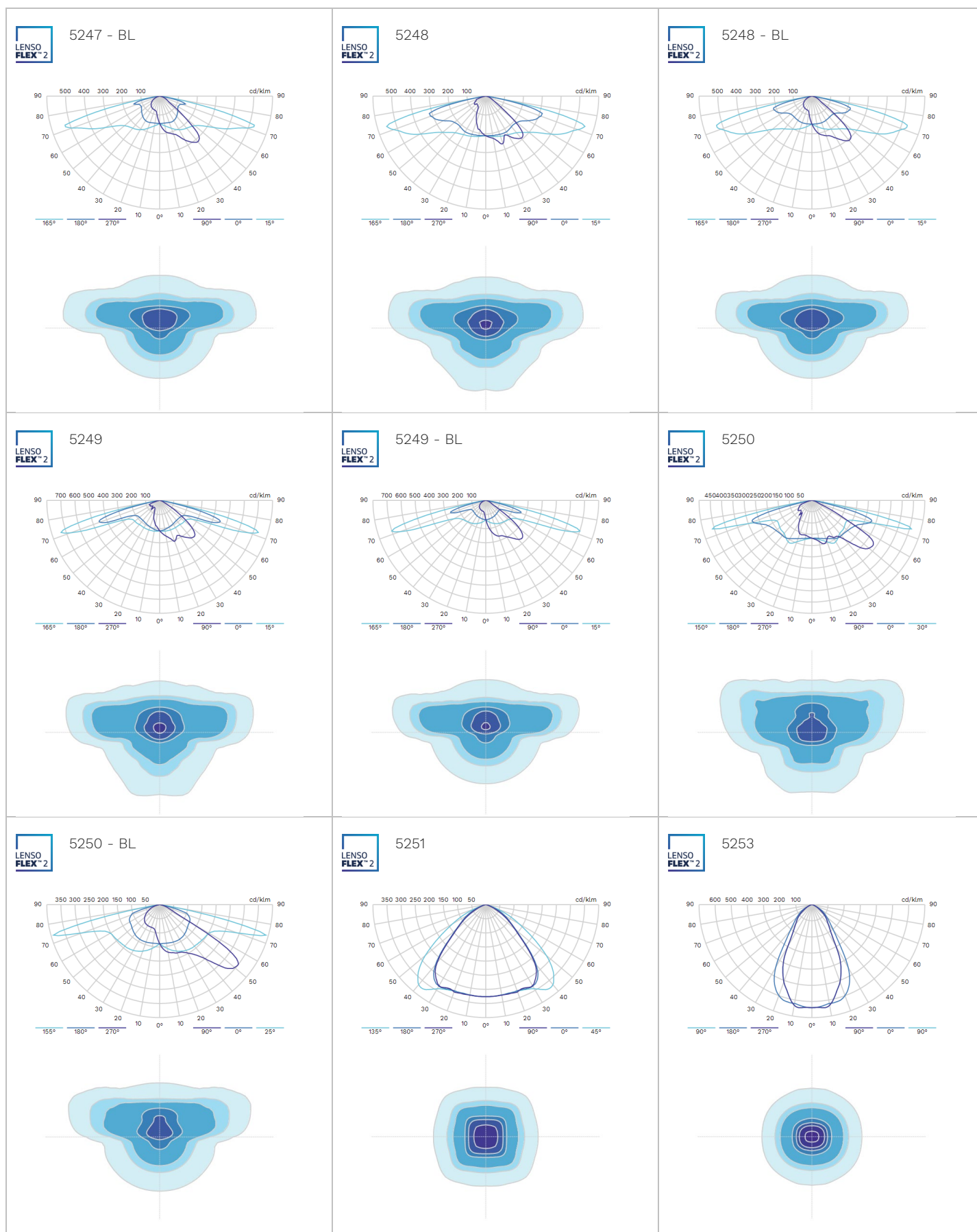


5246 - BL

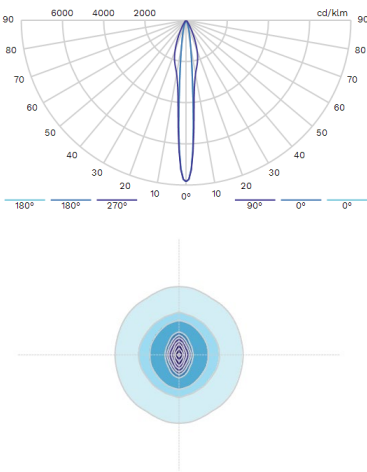


5247





6293



6295 No lenses

