FV32 LED

LENSO FLEX™ 2 RE FLEXO™

A flexible tool to light all areas of a tunnel

FV32 LED provides flexible solutions to meet the tunnel lighting requirements for the different enclosed areas.

A wide range of photometric distributions make the FV32 LED range the ideal instrument for lighting town and motorway tunnels or underpasses.

The extruded aluminium profile enables the number of LEDs to be adjusted in multiples of 8, starting with 16 up to a maximum of 240 LEDs.

Drivers and electrical connections are integrated into the luminaire. The protector opens to give tool free access to the components when the luminaires are installed.

IP 66 IK 08

RoHS CE cULus

TUNNELS & UNDERPASSES

Concept

The FV32 LED luminaire provides a tool free front access. It consists of a body and a continuous hinge/closure system. The body is composed of extruded anodised aluminium and incorporates two side plates made of die-cast aluminium protected by hot polyester powdering. The protector made of tempered glass covers the entire upper surface of the luminaire. Maximum flexibility with a minimal Total Cost of Ownership (TCO) was the driving force behind the development of the FV32 LED. Available with a variable number of LEDs (up to 240), the FV32 LED offers almost unlimited combinations of optics and mountings for unparalleled photometrical results. FV32 LED is perfectly suited for tunnel and underpass applications, especially the entrance and exit zones.

It offers various dimming scenarios and can be controlled via an advanced control system (ATS – Lumgate) in combination with a 1-10V or DALI driver to deliver operational excellence and a significant reduction in energy consumption.

The FV32 LED range has been developed to enable constant dimming with an optimised power factor. Designed with two electronic circuits, each FV32 LED luminaire can either be dimmed completely, partially or even have 50% of its LEDs switched off. This possibility not only maximises energy savings. It also extends the lifetime of the complete installation and reduces the need for disruptive maintenance.

FV32 LED is proposed with nine mounting options. It can be mounted using specific brackets that prevent galvanic corrosion between the aluminium body and the stainless steel bolts in grooves subjected to water retention. As an option, the luminaire can be mounted using 'Z'-shaped, swiveling or swiveling and adjustable brackets.

FV32 LED is part of Schréder's complete tunnel solution that includes robust luminaires, smart cabling with quick-on QPD connectors and advanced control systems to improve safety for drivers and to provide major operational benefits for tunnel managers.

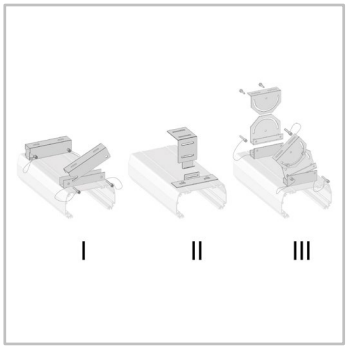
Types of application

- TUNNELS & UNDERPASSES

Key advantages

- Adapted to a wide range of different tunnel applications to provide safety at all times
- LensoFlex®2 and ReFlexo™ (counter beam lighting) photometric engines to provide flexible solutions
- Can be equipped with an integrated luminaire controller (Lumgate) for automated commissioning and bi-directional controls (option)
- High level of protection against corrosion, impacts and vibrations
- ThermiX®: maintains high performance over time
- Various inclination possibilities on-site for optimal photometry
- Control system: can be adapted to customer requirements or integrated into a tunnel backbone system

The tool free opening of the front door provides direct access to the gear compartment and to the LED engine.



Various mounting options provide inclination possibilities on-site for optimal photometry.

FV32 LED is available with a variable number of LEDs (up to 240).

FV32 LED is available with the ReFlexoTM photometric engine for counter beam lighting.

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LensoFlex®2

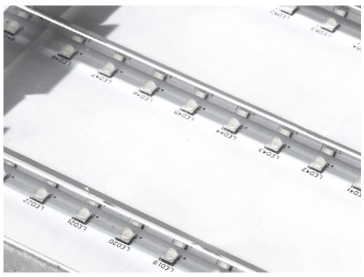
LensoFlex®2 is based upon the addition principle of photometric distribution. Each LED is associated with a specific PMMA lens that generates the complete photometric distribution of the luminaire. The number of LEDs in combination with the driving current determines the intensity level of the light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

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

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.



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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 (1 Lumgate per luminaire)

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

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.

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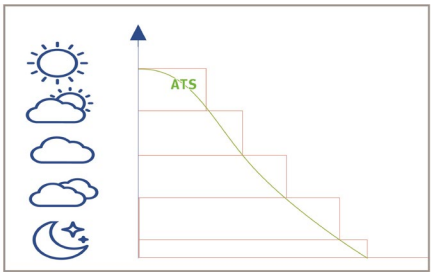
Jointly developed by Schréder and Phoenix Contact, the Advanced Tunnel Solution (ATS) has been designed to control every lighting point or clusters of luminaires to perfectly adapt the lighting level according to conditions in the tunnel, to monitor the power consumption and to report the burning hours 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 Lumgates, 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

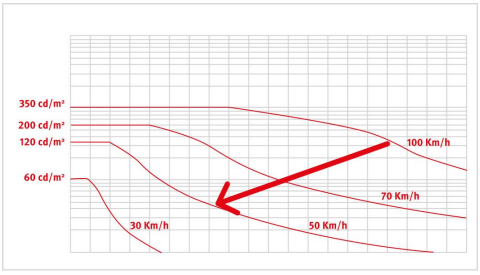
Every command or signal sent to or coming from a tunnel component (emergency exit, smoke extraction system, traffic management system...) can be used to trigger a responsive lighting scenario. All of the tunnel equipment can be controlled through the same bus command.

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.

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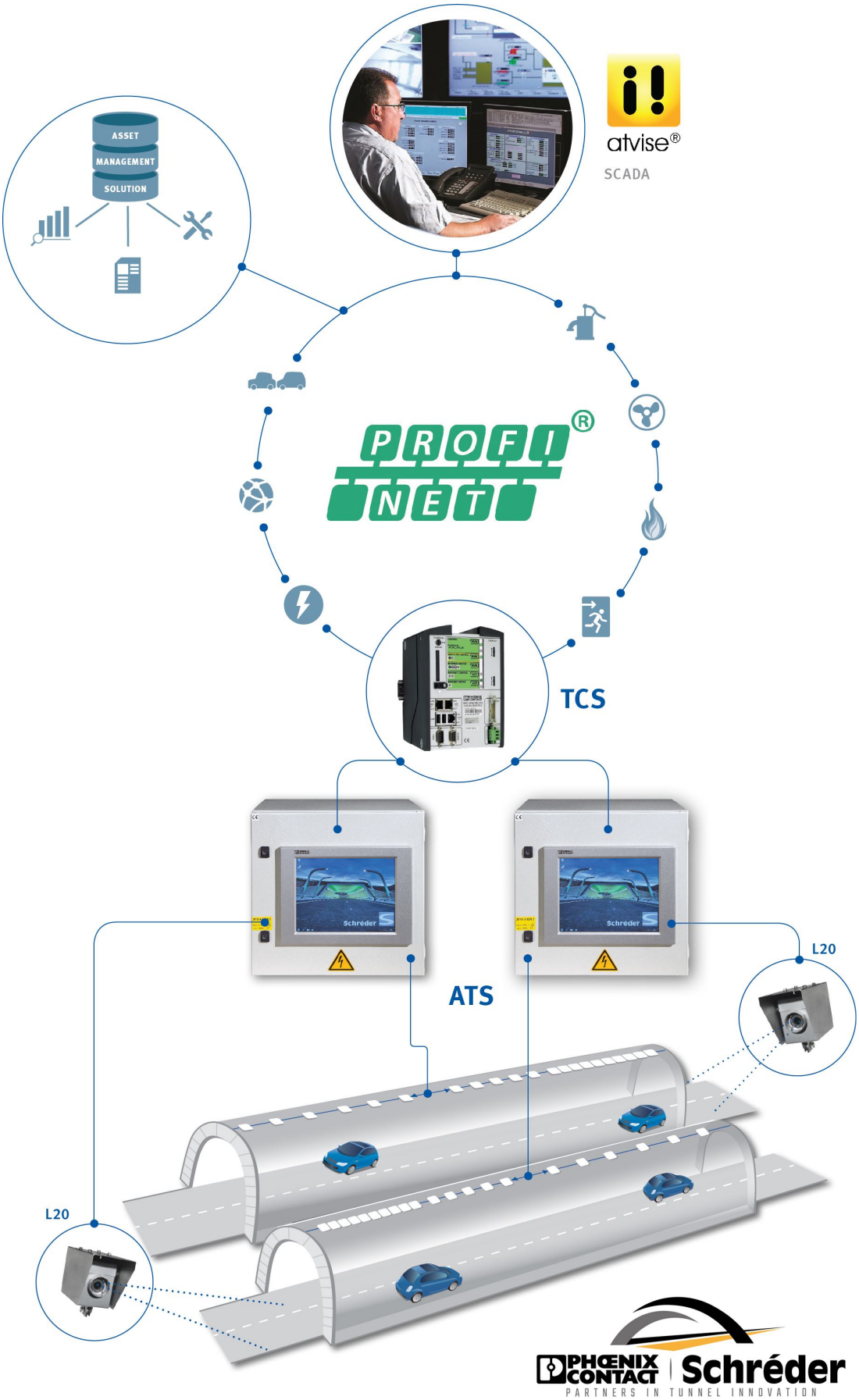

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FV32 LED | CHARACTERISTICS

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GENERAL INFORMATION

Recommended installation height	3m to 8m | 10' to 26'
FutureProof	Easy replacement of the photometric engine and electronic assembly
Driver included	Yes
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
Protector	Tempered glass
Tightness level	IP 66
Impact resistance	IK 08
Access for maintenance	Tool less access to gear compartment

OPERATING CONDITIONS

Operating temperature range (Ta)	-20 °C up to +45 °C / -4 °F up to 113 °F

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

ELECTRICAL INFORMATION

Electrical class	Class I EU
Nominal voltage	220-240V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	10 20
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-4-5
Control protocol(s)	1-10V, DALI
Control options	Custom dimming profile, Lumgate, Remote management
Associated control system(s)	Advanced Tunnel Solution (ATS)

OPTICAL INFORMATION

LED colour temperature	3000K (Warm White 730) 4000K (Neutral White 740)
Colour rendering index (CRI)	>70 (Warm White 730) >70 (Neutral White 740)

LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90

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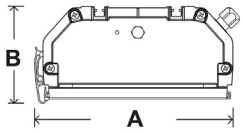
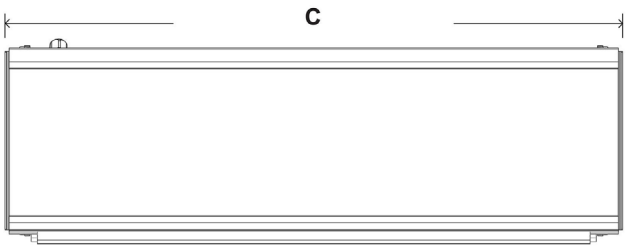
DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	FV32 LED 0 - 285x135x308 | 11.2x5.3x12.1 FV32 LED 1 - 285x135x560 | 11.2x5.3x22.0 FV32 LED 2 - 285x135x888 | 11.2x5.3x35.0 FV32 LED 3 - 285x135x1265 | 11.2x5.3x49.8 FV32 LED 0 Lumgate - 285x135x308 | 11.2x5.3x12.1 FV32 LED 1 Lumgate - 285x135x560 | 11.2x5.3x22.0 FV32 LED 2 Lumgate - 285x135x888 | 11.2x5.3x35.0 FV32 LED 3 Lumgate - 285x135x1265 | 11.2x5.3x49.8
Weight (kg | lbs)	FV32 LED 0 - 6 | 13.2 FV32 LED 1 - 10 | 22.0 FV32 LED 2 - 17 | 37.4 FV32 LED 3 - 23 | 50.6 FV32 LED 0 Lumgate - 6 | 13.2 FV32 LED 1 Lumgate - 6 | 13.2 FV32 LED 2 Lumgate - 12 | 26.4 FV32 LED 3 Lumgate - 23 | 50.6
Mounting possibilities	Bracket enabling adjustable inclination Surface mounting





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			Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Up to	Photometry
FV32 LED 0	32	200	3000	3200	3100	3400	21.4	21.4	159	LENSO FLEX 2
	32	300	3800	4100	3900	4200	30.9	30.9	136	LENSO FLEX 2
	32	400	4600	5000	4800	5200	41	41	127	LENSO FLEX 2
	32	500	5600	6000	5800	6200	51.5	51.5	120	LENSO FLEX 2
	40	200	3800	4100	3900	4200	25.9	25.9	162	LENSO FLEX 2
	40	300	4700	5100	4900	5300	38	38	139	LENSO FLEX 2
	40	400	5800	6300	6000	6500	50.5	50.5	129	LENSO FLEX 2
	40	500	7000	7500	7200	7800	63	63	124	LENSO FLEX 2

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

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Up to	
FV32 LED 1	48	200	4500	4900	4700	5100	30.6	30.6	167	LENSO FLEX°2
	48	300	5700	6100	5900	6400	45	45	142	LENSO FLEX°2
	48	400	7000	7500	7200	7800	60	60	130	LENSO FLEX°2
	48	500	8400	9000	8700	9300	75	75	124	LENSO FLEX°2
	56	200	5300	5700	5500	5900	36.1	36.1	163	LENSO FLEX°2
	56	300	6700	7200	6900	7400	53	53	140	LENSO FLEX°2
	56	400	8100	8800	8400	9100	70	70	130	LENSO FLEX°2
	56	500	9800	10500	10100	10900	88	88	124	LENSO FLEX°2
	64	200	6100	6500	6300	6800	40.5	40.5	168	LENSO FLEX°2 RE FLEXO°
	64	300	7600	8200	7900	8500	59.5	59.5	143	LENSO FLEX°2 RE FLEXO°
	64	350	7500	7900	7800	8200	69	69	119	LENSO FLEX°2 RE FLEXO°
	64	400	9300	10100	9600	10400	79	79	132	LENSO FLEX°2 RE FLEXO°
	64	500	10100	12100	10400	12500	99	99	126	LENSO FLEX°2 RE FLEXO°
	72	200	6800	7400	7100	7600	45	45	169	LENSO FLEX°2
	72	300	8600	9200	8900	9600	66.5	66.5	144	LENSO FLEX°2
	72	400	10500	11300	10800	11700	88	88	133	LENSO FLEX°2
	72	500	12600	13600	13000	14000	111	111	126	LENSO FLEX°2
	80	200	7600	8200	7800	8500	50	50	170	LENSO FLEX°2
	80	300	9500	10300	9900	10600	73	73	145	LENSO FLEX°2
	80	400	11700	12600	12100	13000	98	98	133	LENSO FLEX°2
	80	500	14000	15100	14500	15600	123	123	127	LENSO FLEX°2

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Up to	
FV32 LED 2	96	200	9000	9700	9300	10000	61	61	164	LENSO FLEX™2
	96	300	11300	12200	11700	12700	90	90	141	LENSO FLEX™2
	96	400	13900	15000	14400	15500	120	120	129	LENSO FLEX™2
	96	500	16700	18000	17300	18600	150	150	124	LENSO FLEX™2
	104	200	9700	10500	10000	10800	68	68	159	LENSO FLEX™2
	104	300	12300	13300	12700	13700	99	99	138	LENSO FLEX™2
	104	400	15100	16300	15600	16800	131	131	128	LENSO FLEX™2
	104	500	18100	19500	18700	20200	164	164	123	LENSO FLEX™2
	112	200	10400	11300	10800	11700	72	72	162	LENSO FLEX™2
	112	300	13200	14300	13700	14800	106	106	140	LENSO FLEX™2
	112	400	16200	17500	16800	18100	140	140	129	LENSO FLEX™2
	112	500	19500	21000	20200	21800	176	176	124	LENSO FLEX™2
	120	200	11200	12100	11600	12500	77	77	162	LENSO FLEX™2
	120	300	14200	15300	14700	15800	112	112	141	LENSO FLEX™2
	120	400	17400	18800	18000	19400	150	150	129	LENSO FLEX™2
	120	500	20900	22600	21600	23300	188	188	124	LENSO FLEX™2
	128	200	11900	12900	12400	13300	81	81	164	LENSO FLEX™2 RE FLEXO™
	128	300	15100	16300	15600	16900	119	119	142	LENSO FLEX™2 RE FLEXO™
	128	350	15100	15900	15600	16400	138	138	119	LENSO FLEX™2 RE FLEXO™

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

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730 Min	Luminaire output flux (lm) Warm White 730 Max	Luminaire output flux (lm) Neutral White 740 Min	Luminaire output flux (lm) Neutral White 740 Max	Power consumption (W) Min	Power consumption (W) Max	Luminaire efficacy (lm/W) Up to	Photometry
FV32 LED 2	128	400	18600	20100	19200	20700	158	158	131	LENSO FLEX™2 RE FLEXO™
	128	500	20300	24100	20900	24900	198	198	126	LENSO FLEX™2 RE FLEXO™
	136	200	12700	13700	13100	14200	86	86	165	LENSO FLEX™2
	136	300	16100	17400	16600	18000	126	126	143	LENSO FLEX™2
	136	400	19700	21300	20400	22000	168	168	131	LENSO FLEX™2
	136	500	23700	25600	24500	26400	210	210	126	LENSO FLEX™2
	144	200	13400	14500	13900	15000	90	90	167	LENSO FLEX™2
	144	300	17000	18400	17600	19000	133	133	143	LENSO FLEX™2
	144	400	20900	22600	21600	23300	176	176	132	LENSO FLEX™2
	144	500	25100	27100	25900	28000	222	222	126	LENSO FLEX™2
	152	200	14200	15300	14700	15800	95	95	166	LENSO FLEX™2
	152	300	18000	19400	18600	20100	140	140	144	LENSO FLEX™2
	152	400	22100	23800	22800	24600	186	186	132	LENSO FLEX™2
	152	500	26500	28600	27400	29600	234	234	126	LENSO FLEX™2
	160	200	14900	16100	15500	16700	100	100	167	LENSO FLEX™2
	160	300	18900	20400	19600	21100	146	146	145	LENSO FLEX™2
	160	400	23200	25100	24000	25900	196	196	132	LENSO FLEX™2
	160	500	27900	30100	28800	31100	246	246	126	LENSO FLEX™2

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Up to	
FV32 LED 3	176	200	16500	17800	17100	18400	112	112	164	LENSO FLEX 2
	176	300	21000	22600	21700	23400	164	164	143	LENSO FLEX 2
	176	400	25800	27800	26600	28700	216	216	133	LENSO FLEX 2
	176	500	30900	33300	32000	34500	273	273	126	LENSO FLEX 2
	184	200	17300	18600	17900	19300	117	117	165	LENSO FLEX 2
	184	300	21900	23600	22600	24400	171	171	143	LENSO FLEX 2
	184	400	26900	29100	27900	30000	228	228	132	LENSO FLEX 2
	184	500	32300	34900	33400	36000	285	285	126	LENSO FLEX 2
	192	200	18000	19400	18600	20100	122	122	165	LENSO FLEX 2 / RE FLEXO
	192	300	22900	24700	23600	25500	178	178	143	LENSO FLEX 2 / RE FLEXO
	192	350	22700	23800	23500	24600	207	207	119	LENSO FLEX 2 / RE FLEXO
	192	400	28200	30300	29100	31400	237	237	132	LENSO FLEX 2 / RE FLEXO
	192	500	30400	36400	31400	37600	297	297	127	LENSO FLEX 2 / RE FLEXO
	200	200	18800	20300	19400	20900	126	126	166	LENSO FLEX 2
	200	300	23800	25700	24600	26600	183	183	145	LENSO FLEX 2
	200	400	29300	31600	30300	32700	243	243	135	LENSO FLEX 2
	200	500	35100	35100	36300	36300	306	306	119	LENSO FLEX 2
	208	200	19500	21100	20200	21800	130	130	168	LENSO FLEX 2
	208	300	24800	26700	25600	27600	190	190	145	LENSO FLEX 2

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Up to	
FV32 LED 3	208	400	30500	32900	31500	34000	255	255	133	LENSO FLEX 2
	208	500	36500	39400	37800	40700	321	321	127	LENSO FLEX 2
	216	200	20300	21900	21000	22600	135	135	167	LENSO FLEX 2
	216	300	25700	27800	26600	28700	200	200	144	LENSO FLEX 2
	216	400	31600	34100	32700	35300	264	264	134	LENSO FLEX 2
	216	500	37900	40900	39200	42300	333	333	127	LENSO FLEX 2
	224	200	21000	22700	21700	23500	140	140	168	LENSO FLEX 2
	224	300	26700	28800	27600	29800	204	204	146	LENSO FLEX 2
	224	400	32800	35400	33900	36600	273	273	134	LENSO FLEX 2
	224	500	39300	42400	40700	43900	342	342	128	LENSO FLEX 2
	232	200	21800	23500	22500	24300	144	144	169	LENSO FLEX 2
	232	300	27600	29800	28600	30800	213	213	145	LENSO FLEX 2
	232	400	34000	36700	35100	37900	282	282	134	LENSO FLEX 2
	232	500	40700	44000	42100	45500	357	357	127	LENSO FLEX 2
	240	200	22500	24300	23300	25100	150	150	167	LENSO FLEX 2
	240	300	28600	30800	29600	31900	219	219	146	LENSO FLEX 2
	240	400	35100	37900	36300	39200	294	294	133	LENSO FLEX 2
	240	500	42200	45500	43600	47000	369	369	127	LENSO FLEX 2

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			Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Up to	Photometry
FV32 LED 0 Lumgate	32	200	3000	3200	3100	3400	21.5	21.5	158	LENSO FLEX 2
	32	300	3800	4100	3900	4200	30.9	30.9	136	LENSO FLEX 2
	32	400	4600	5000	4800	5200	40.5	40.5	128	LENSO FLEX 2
	32	500	5600	6000	5800	6200	50	50	124	LENSO FLEX 2
	40	200	3800	4100	3900	4200	26.3	26.3	160	LENSO FLEX 2
	40	300	4700	5100	4900	5300	37.5	37.5	141	LENSO FLEX 2
	40	400	5800	6300	6000	6500	49.5	49.5	131	LENSO FLEX 2
	40	500	7000	7500	7200	7800	62	62	126	LENSO FLEX 2

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

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FV32 LED | PERFORMANCE

Schréder

			Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Up to	Photometry
FV32 LED 1 Lumgate	48	200	4500	4900	4700	5100	31.1	31.1	164	LENSO FLEX™2
	48	300	5700	6100	5900	6400	44.5	44.5	144	LENSO FLEX™2
	48	400	7000	7500	7200	7800	59	59	132	LENSO FLEX™2
	48	500	8400	9000	8700	9300	74	74	126	LENSO FLEX™2
	64	200	6100	6500	6300	6800	43	43	158	LENSO FLEX™2 RE FLEXO™
	64	300	7600	8200	7900	8500	62	62	137	LENSO FLEX™2 RE FLEXO™
	64	350	7500	7900	7800	8200	71	71	115	LENSO FLEX™2 RE FLEXO™
	64	400	9300	10100	9600	10400	81	81	128	LENSO FLEX™2 RE FLEXO™
	64	500	10100	12100	10400	12500	100	100	125	LENSO FLEX™2 RE FLEXO™
	80	200	7600	8200	7800	8500	52.5	52.5	162	LENSO FLEX™2
	80	300	9500	10300	9900	10600	75	75	141	LENSO FLEX™2
	80	400	11700	12600	12100	13000	99	99	131	LENSO FLEX™2
	80	500	14000	15100	14500	15600	124	124	126	LENSO FLEX™2

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

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FV32 LED | PERFORMANCE

Schréder

Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Up to	
FV32 LED 2 Lumgate	96	200	8900	9700	9300	10000	62	62	161	LENSO FLEX™2
	96	300	11300	12200	11700	12700	89	89	143	LENSO FLEX™2
	96	400	13900	15000	14400	15500	118	118	131	LENSO FLEX™2
	96	500	16700	18000	17300	18600	148	148	126	LENSO FLEX™2
	112	200	10400	11300	10800	11700	70	70	167	LENSO FLEX™2
	112	300	13200	14300	13700	14800	102	102	145	LENSO FLEX™2
	112	400	16200	17500	16800	18100	136	136	133	LENSO FLEX™2
	112	500	19500	21000	20200	21800	170	170	128	LENSO FLEX™2
	128	200	11900	12900	12400	13300	80	80	166	LENSO FLEX™2 RE FLEXO™
	128	300	15100	16300	15600	16900	116	116	146	LENSO FLEX™2 RE FLEXO™
	128	350	15100	15900	15600	16400	135	135	121	LENSO FLEX™2 RE FLEXO™
	128	400	18600	20100	19200	20700	154	154	134	LENSO FLEX™2 RE FLEXO™
	128	500	20300	24100	20900	24900	194	194	128	LENSO FLEX™2 RE FLEXO™
	144	200	13400	14500	13900	15000	89	89	169	LENSO FLEX™2
	144	300	17000	18400	17600	19000	130	130	146	LENSO FLEX™2
	144	400	20900	22600	21600	23300	172	172	135	LENSO FLEX™2
	144	500	25100	27100	25900	28000	218	218	128	LENSO FLEX™2
	160	200	14900	16100	15500	16700	98	98	170	LENSO FLEX™2
	160	300	18900	20400	19600	21100	144	144	147	LENSO FLEX™2
	160	400	23200	25100	24000	25900	192	192	135	LENSO FLEX™2
	160	500	27900	30100	28800	31100	240	240	130	LENSO FLEX™2

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

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 730 Min	Luminaire output flux (lm) Warm White 730 Max	Luminaire output flux (lm) Neutral White 740 Min	Luminaire output flux (lm) Neutral White 740 Max	Power consumption (W) Min	Power consumption (W) Max	Luminaire efficacy (lm/W) Up to	Photometry
FV32 LED 3 Lumgate	192	200	18000	19400	18600	20100	117	117	172	LENSO FLEX™2 RE FLEXO™
	192	300	22900	24700	23600	25500	172	172	148	LENSO FLEX™2 RE FLEXO™
	192	350	22700	23800	23500	24600	200	200	123	LENSO FLEX™2 RE FLEXO™
	192	400	28100	30300	29100	31400	228	228	138	LENSO FLEX™2 RE FLEXO™
	192	500	30400	36400	31400	37600	288	288	131	LENSO FLEX™2 RE FLEXO™
	224	200	21000	22700	21700	23500	141	141	167	LENSO FLEX™2
	224	300	26700	28800	27600	29800	204	204	146	LENSO FLEX™2
	224	400	32800	35400	33900	36600	272	272	135	LENSO FLEX™2
	224	500	39300	42400	40700	43900	340	340	129	LENSO FLEX™2
	240	200	22500	22500	23300	23300	150	150	155	LENSO FLEX™2
	240	300	28600	28600	29600	29600	218	218	136	LENSO FLEX™2
	240	400	35100	35100	36300	36300	288	288	126	LENSO FLEX™2
	240	500	42200	42200	43600	43600	364	364	120	LENSO FLEX™2

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

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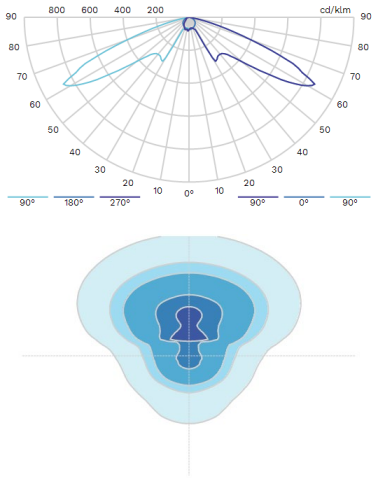

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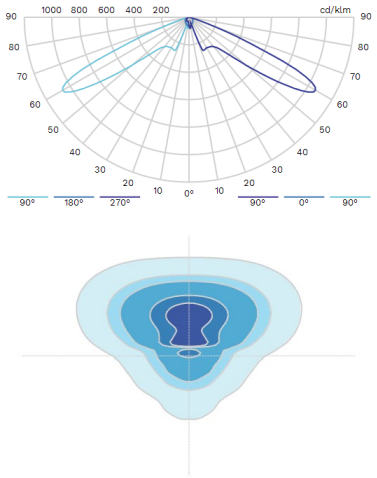

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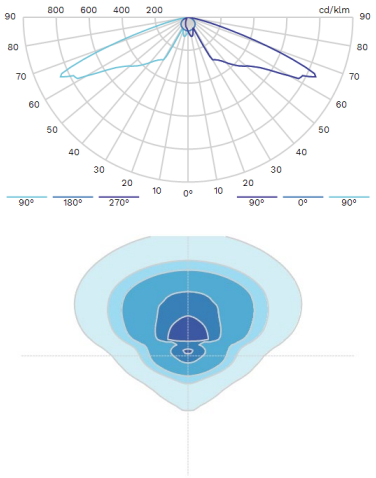

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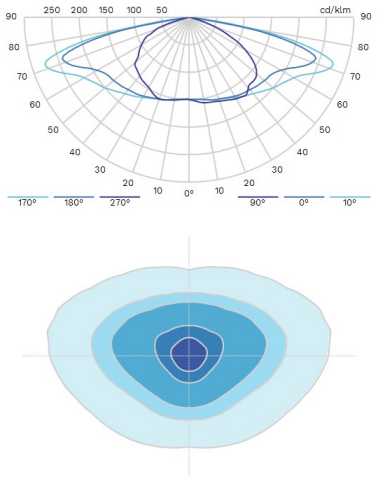

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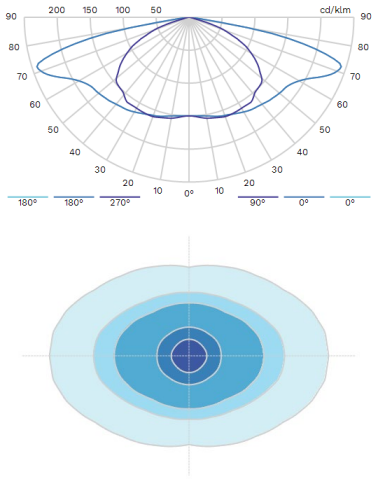

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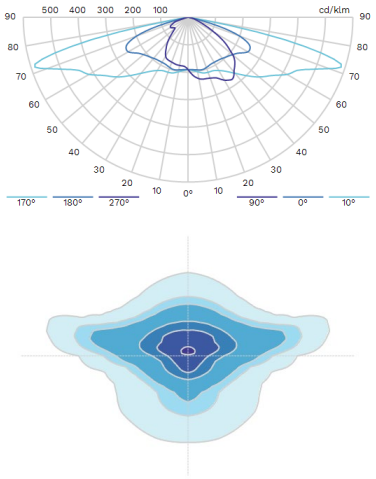

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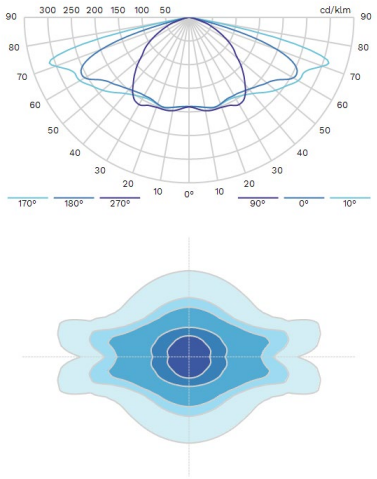

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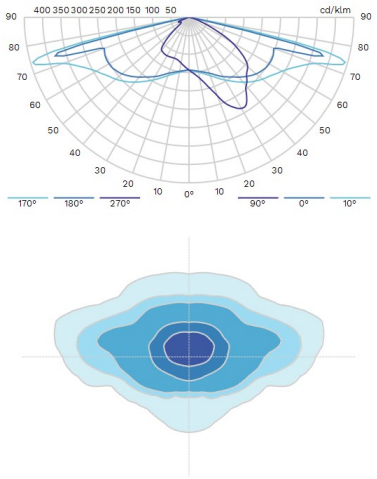

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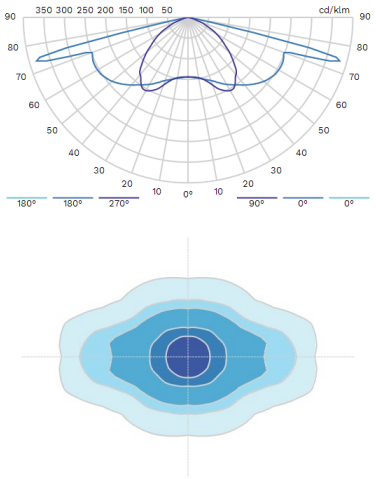

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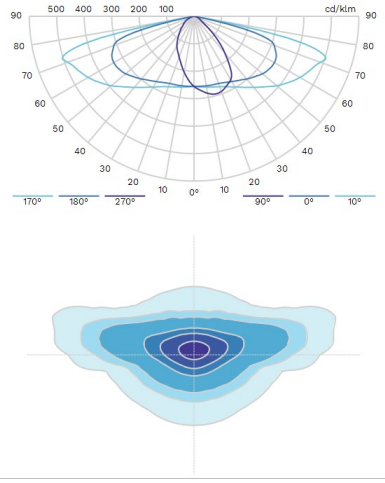
5102



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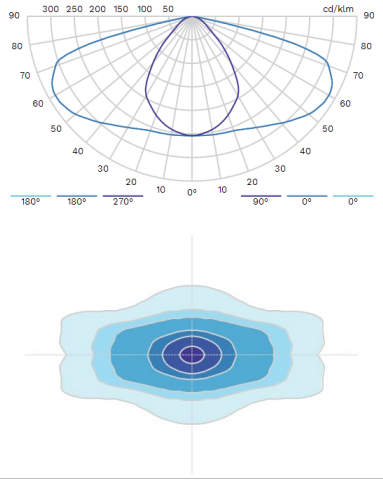

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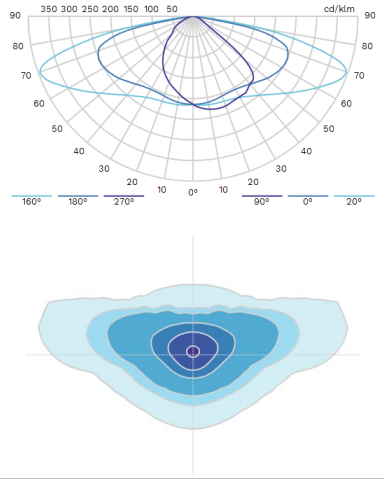

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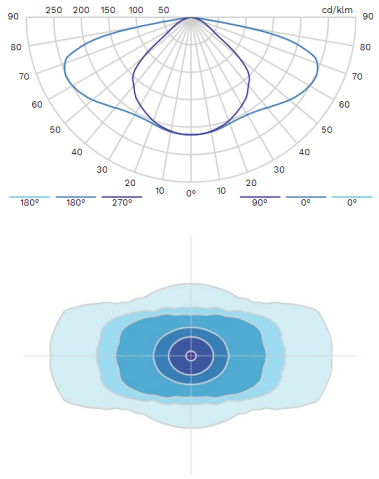

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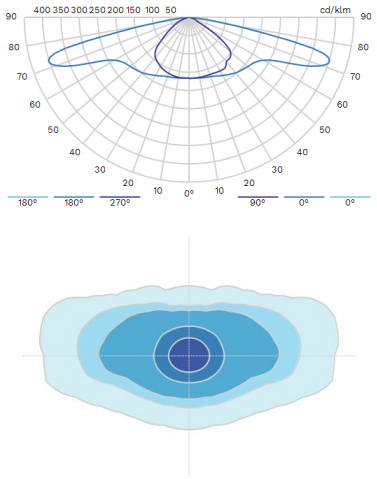

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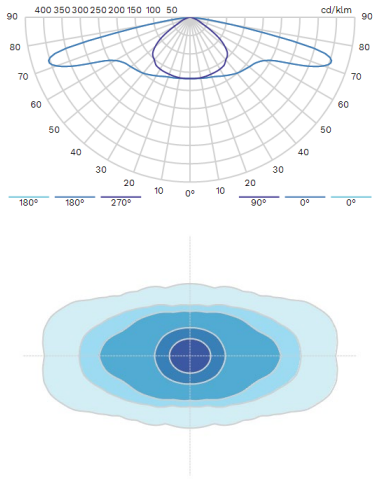

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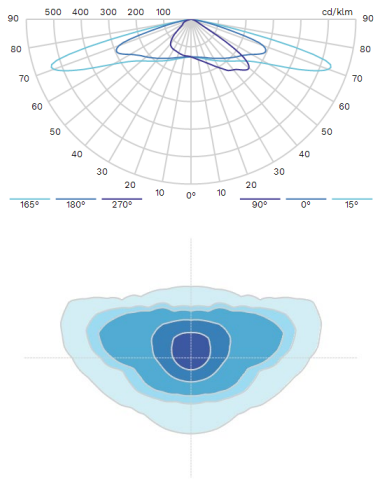

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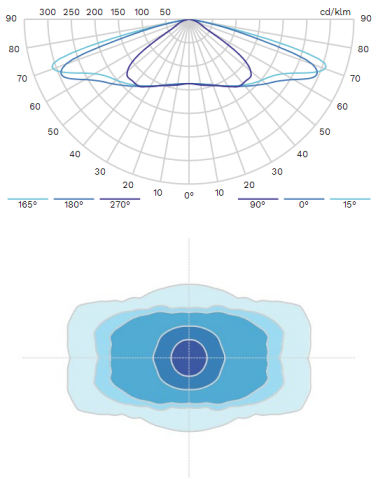

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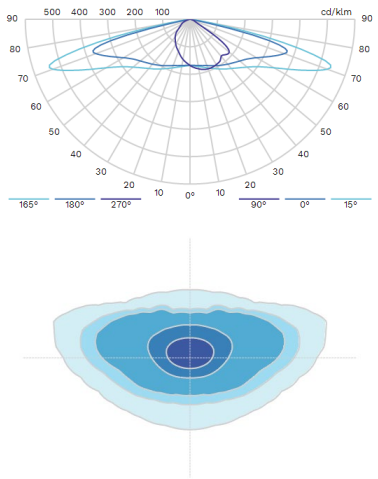

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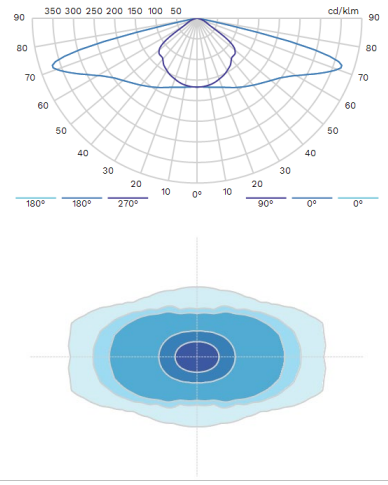
LENSO FLEX 2

5118 SY



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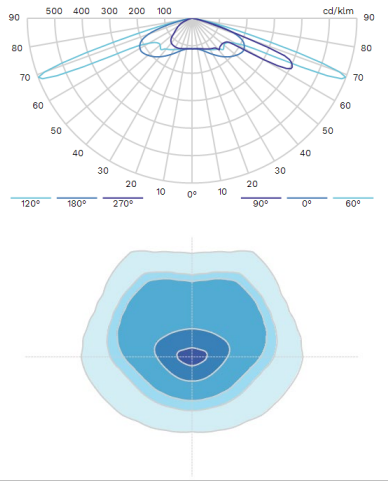

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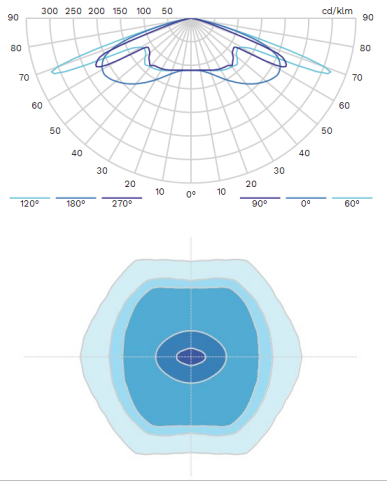

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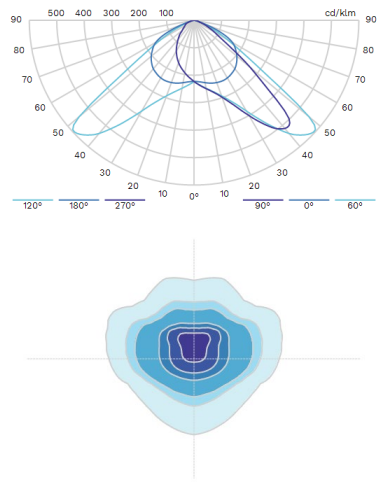

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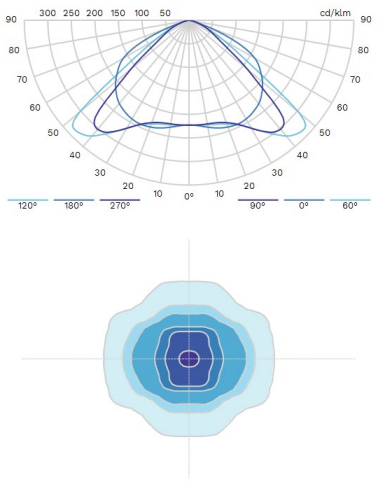

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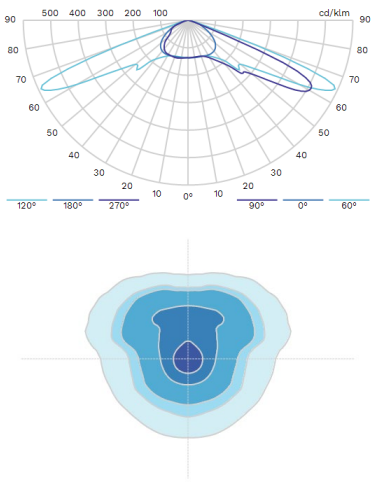

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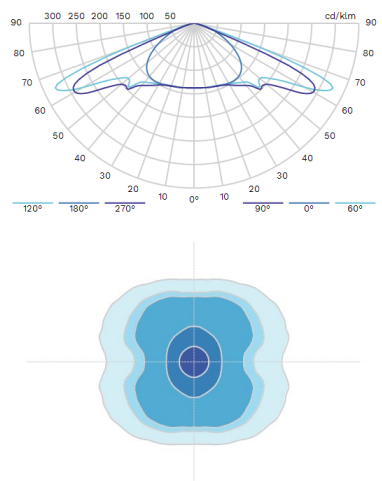

LENSO FLEX 2

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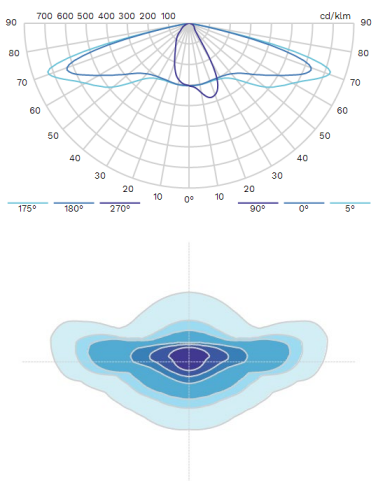

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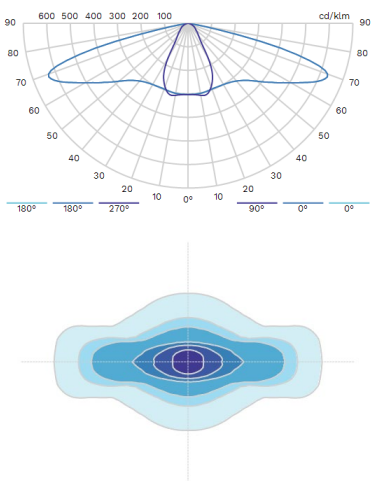

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LENSO FLEX 2

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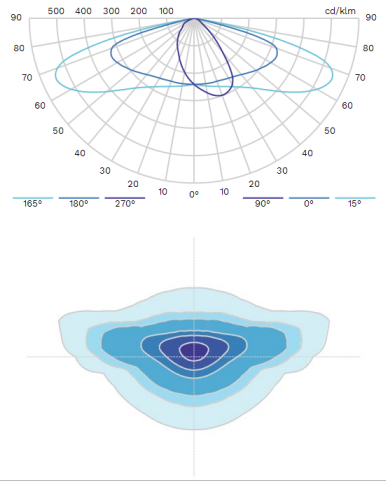

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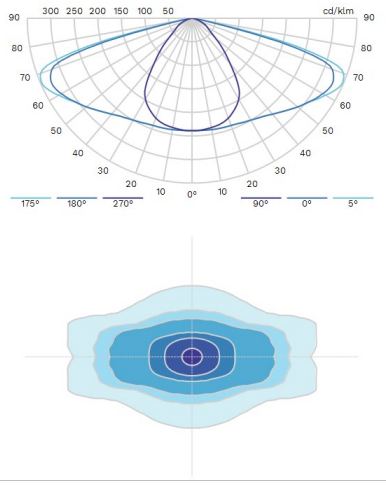

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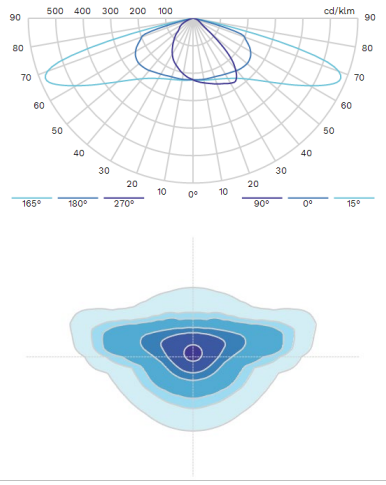

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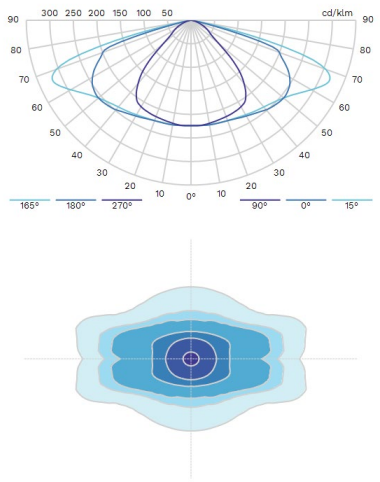

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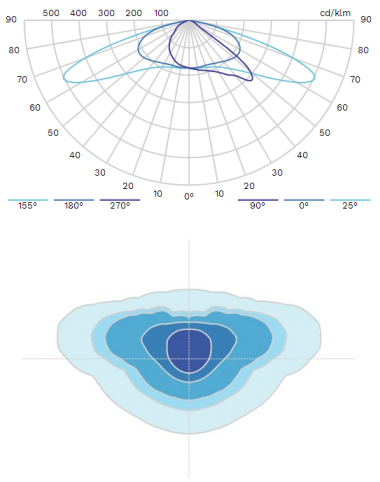

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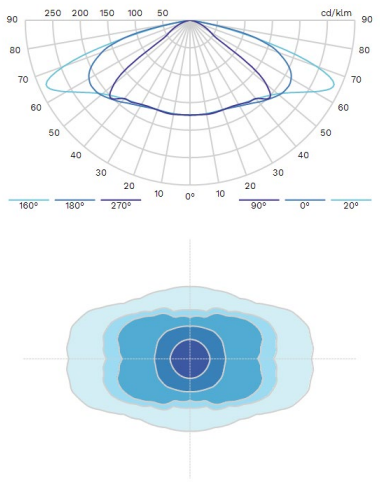

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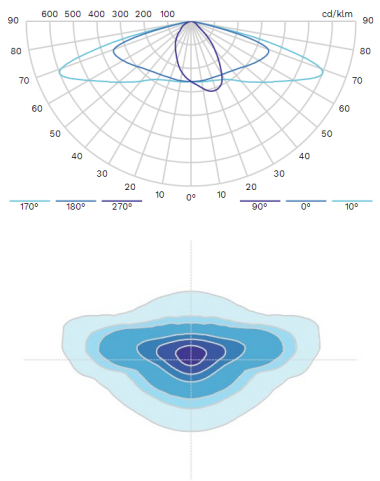

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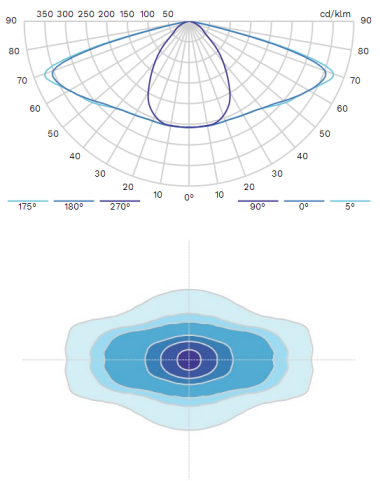

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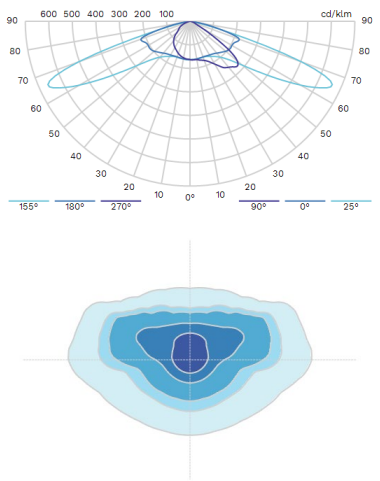

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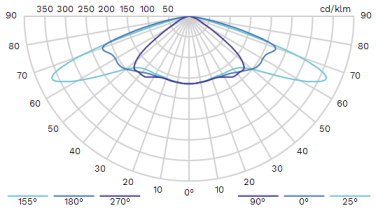
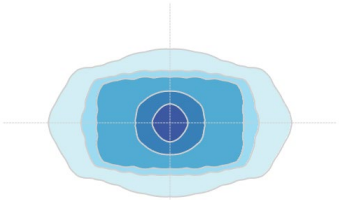
LENSO FLEX 2

5141 SY





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