

Aerie – LK1

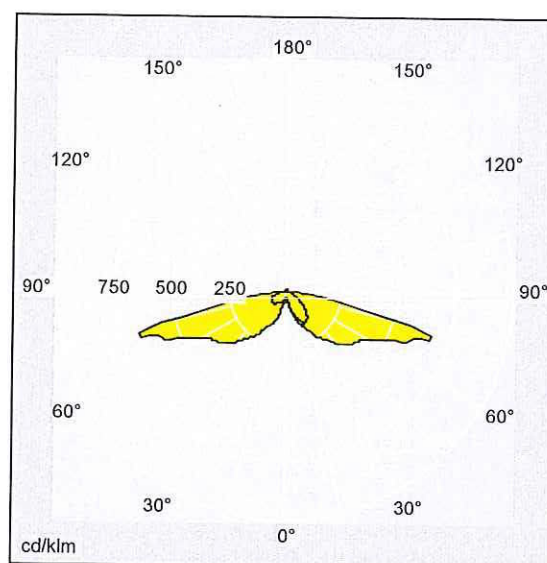
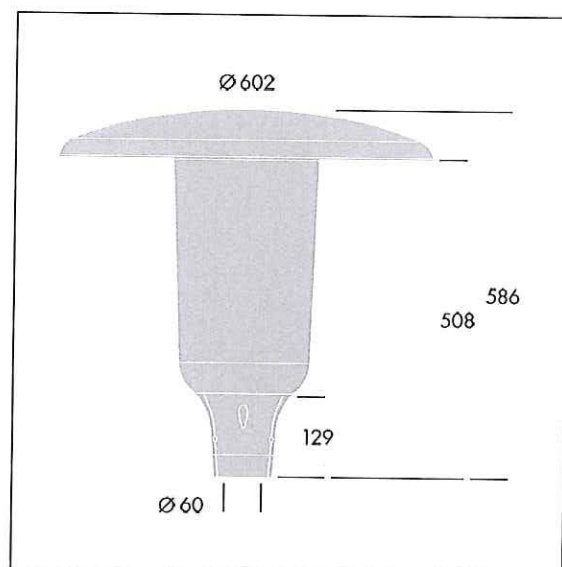
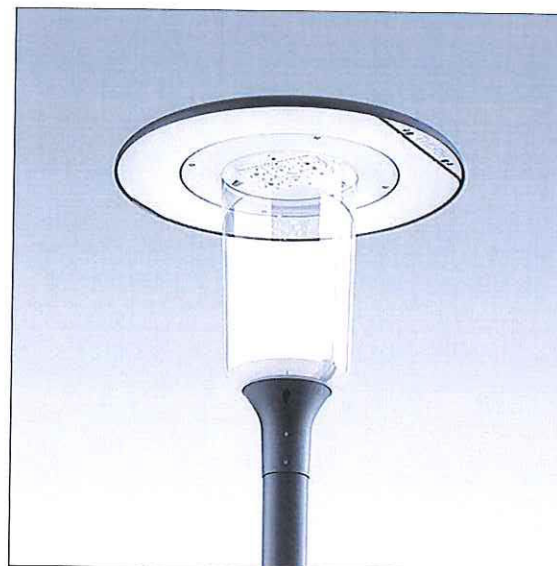
ARS 12L70-730 WSC CL NONE ZU CL1 W5 T60 R7016

LED 27W ARSC12L70-730WSC	CB	ISO 9223 C5	IP66	IK10	⏚	CE	⚡
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Aerie

A discreet, post top LED lantern with a timeless design.
 LED driver for 12 LEDs, driven at 700mA with Wide Street
 Comfort (asymmetrical) distribution.
 Class I electrical, IP66, IK10.
 Canopy and base: corrosion resistant die-cast powder
 coated aluminium suitable for C5 environments, finished
 textured RAL7016.
 Enclosure: slim UV stabilised polycarbonate with clear
 finish.
 Complete with 3000K LED.
 Post top mounting to Ø60mm column (option Ø76mm).
 Pre-wired with 5m cable.
 Equipped with ZHAGA socket.
 Surge protection: 6kV DM, 8kV CM.

Dimensions: Ø602 x 586 mm
 Luminaire input power: 27 W
 Luminaire luminous flux: 3377 lm
 Luminaire efficacy: 125 lm/W
 Weight: 10.99 kg
 Scx: 0.172 m²



Lamp position: STD – standard, central
 Light Source: LED, removable
 Luminaire luminous flux*: 3377 lm
 Luminaire efficacy*: 125 lm/W
 Lamp efficacy: 125 lm/W
 Colour Rendering Index min.: 70
 LOR: 1,00 ULOR: 0,01 DLOR: 0,99

Ballast: 1 x TRI Premium DALI D4i, removable
 Power supply : 230V / 50Hz
 Correlated colour temperature: 3000 Kelvin
 Chromaticity tolerance (initial MacAdam): 5
 Rated useful life (B10)*: L90 100000
 Luminaire input power*: 27 W Power
 Dimming: PROG (autonomous)

ZG Lighting
 Jankovcova
 Tel.: +
 IČ: 257005

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and conf

Unless stated otherwise, the values apply to an ambient temperature of 25°C.
 In most products the failure of one LED point causes no functional impairment to the lighting performance of the luminaire and is therefore no

Unless otherwise stated all Thorn LED products are suitable for unrestricted use (rated RG0 or RG1) with regard photobiological blue light safe

Thorn Lighting is constantly developing and improving its products. The right is reserved to change specifications without prior notification or public announcement.
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Aerie – LK2

ARS 24L50-730 WSC-S CL NONE ZU CL1 W5 T60 R7016

THORN

LED 36W ARSC24L50-730WSC	CB	ISO 9223 C5	IP66	IK10	CE	
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Aerie

A discreet, post top LED lantern with a timeless design.
LED driver for 24 LEDs, driven at 500mA with Wide Street
Comfort (symmetrical) distribution.

Class I electrical, IP66, IK10.

Canopy and base: corrosion resistant die-cast powder
coated aluminium suitable for C5 environments, finished
textured RAL7016.

Enclosure: slim UV stabilised polycarbonate with clear
finish.

Complete with 3000K LED.

Post top mounting to Ø60mm column (option Ø76mm).

Pre-wired with 5m cable.

Equipped with ZHAGA socket.

Surge protection: 6kV DM, 8kV CM.

Dimensions: Ø602 x 586 mm

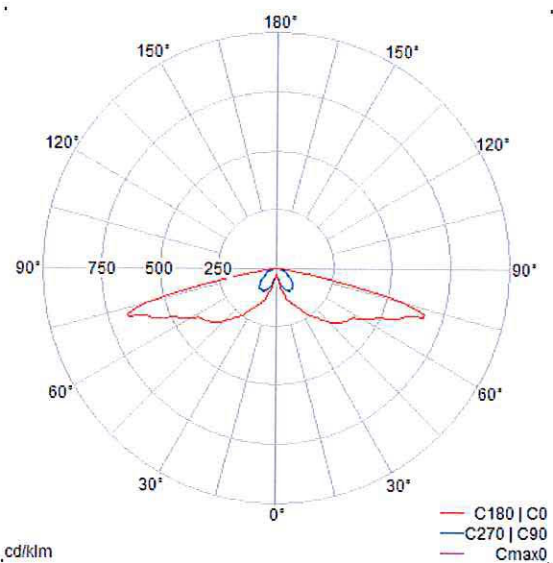
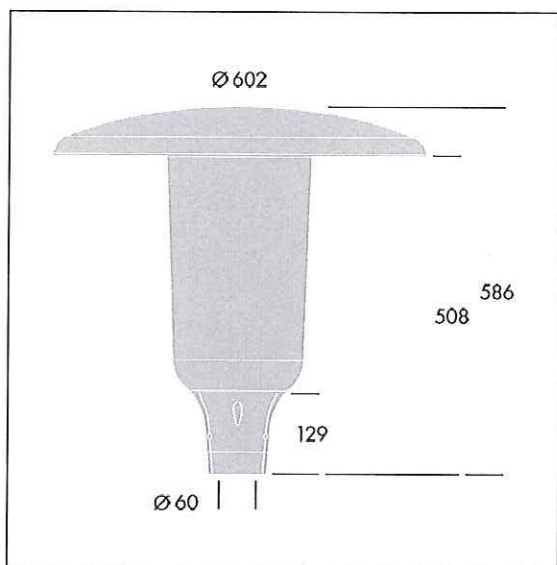
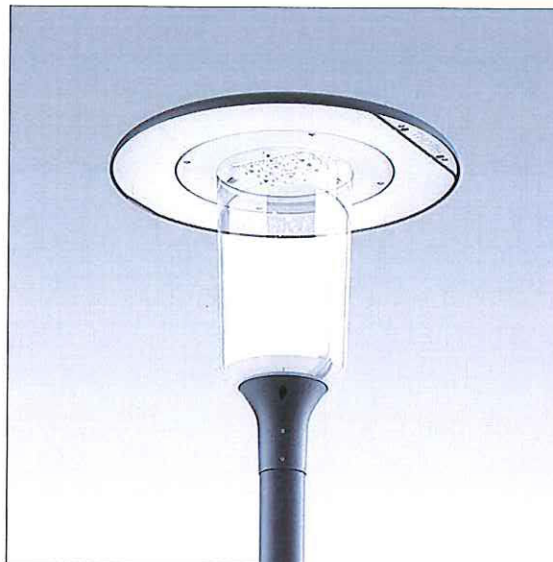
Luminaire input power: 36 W

Luminaire luminous flux: 4965 lm

Luminaire efficacy: 138 lm/W

Weight: 11.21 kg

Scx: 0.172 m²



Lamp position: STD – standard,
central Light Source: LED, removable
Luminaire luminous flux*: 4965 lm
Luminaire efficacy*: 138 lm/W
Lamp efficacy: 138 lm/W
Colour Rendering Index min.: 70
LOR: 1,00 ULOR: 0,01 DLOR: 0,99

Ballast: 1 x TRI Premium DALI D4i, removable
Power supply : 230V / 50Hz
Correlated colour temperature: 3000 Kelvin
Chromaticity tolerance (initial MacAdam): 5
Rated useful life (B10)*: L90 100000h at 25°C
Luminaire input power*: 36 W Power factor = 0.97
Dimming: PROG (autonomous)

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Jankovcova

Tel.: +

IC: 25700

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connect

Unless stated otherwise, the values apply to an ambient temperature of 25°C.

In most products the failure of one LED point causes no functional impairment to the lighting performance of the luminaire and is therefore no reason

Unless otherwise stated all Thorn LED products are suitable for unrestricted use (rated RG0 or RG1) with regard photobiological blue light safety (IEC 62471)

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Ing. Martina
Vlčková

Digitally signed by Ing.
Martina Vlčková
Date: 2021.03.24
09:06:21 +01'00'

A scenic view of a European town at dusk. In the foreground, a calm canal reflects the lights from the street and buildings. A stone wall separates the water from a pedestrian walkway. Several tall, slender streetlights with modern, rectangular light fixtures are positioned along the walkway. In the background, multi-story buildings with colorful facades (red, yellow, and white) line the street. Some buildings have balconies with wrought-iron railings and striped awnings over the ground-floor entrances. People are seen walking and sitting at outdoor cafe tables. The sky is a deep blue, and the overall atmosphere is warm and inviting.

THORN
LIGHTING

AERIE

A timeless and discreet light glow

TODAY AND TOMORROW'S TECHNOLOGY

TO ENLIVEN URBAN SPACES

Aerie brings a soft glow that appears to float weightlessly in the air, illuminating the urban space clearly yet gently. Its expertly designed, cutting-edge optics and smart controls support safety, wellbeing and a calm atmosphere, while minimising obtrusive light. And with a range of installation options, Aerie is ready to bring a breath of fresh air to countless different urban settings.



Parks,
promenades
& pathways



Urban &
residential
streets



Parking



TIMELESS DESIGN, ADAPTED TO YOUR NEEDS

SLIM SHAPE

Aerie's classic yet contemporary design makes it ideal for installation in many environments. The wide variety of available optical cover shapes and finishes enables it to be adapted to different needs.

ONE PRODUCT, MANY POSSIBILITIES

Whatever the lighting installation, there's an Aerie to fit. A clear bowl for maximum efficacy. A slim design, or a wide alternative to fit in with the surrounding space. Aerie's light source can be supplied with a comfort diffuser to control glare, or without.

AERIE SLIM WITH
COMFORT DIFFUSER



AERIE SLIM WITHOUT
COMFORT DIFFUSER



WIDE SHAPE

Zhaga socket – for installation of sensors on upper and/or lower canopy surface

Mixing chamber – a complete system with integrated optical engine, diffuser and bowl

Integrated motion sensor (available for the wide version only)

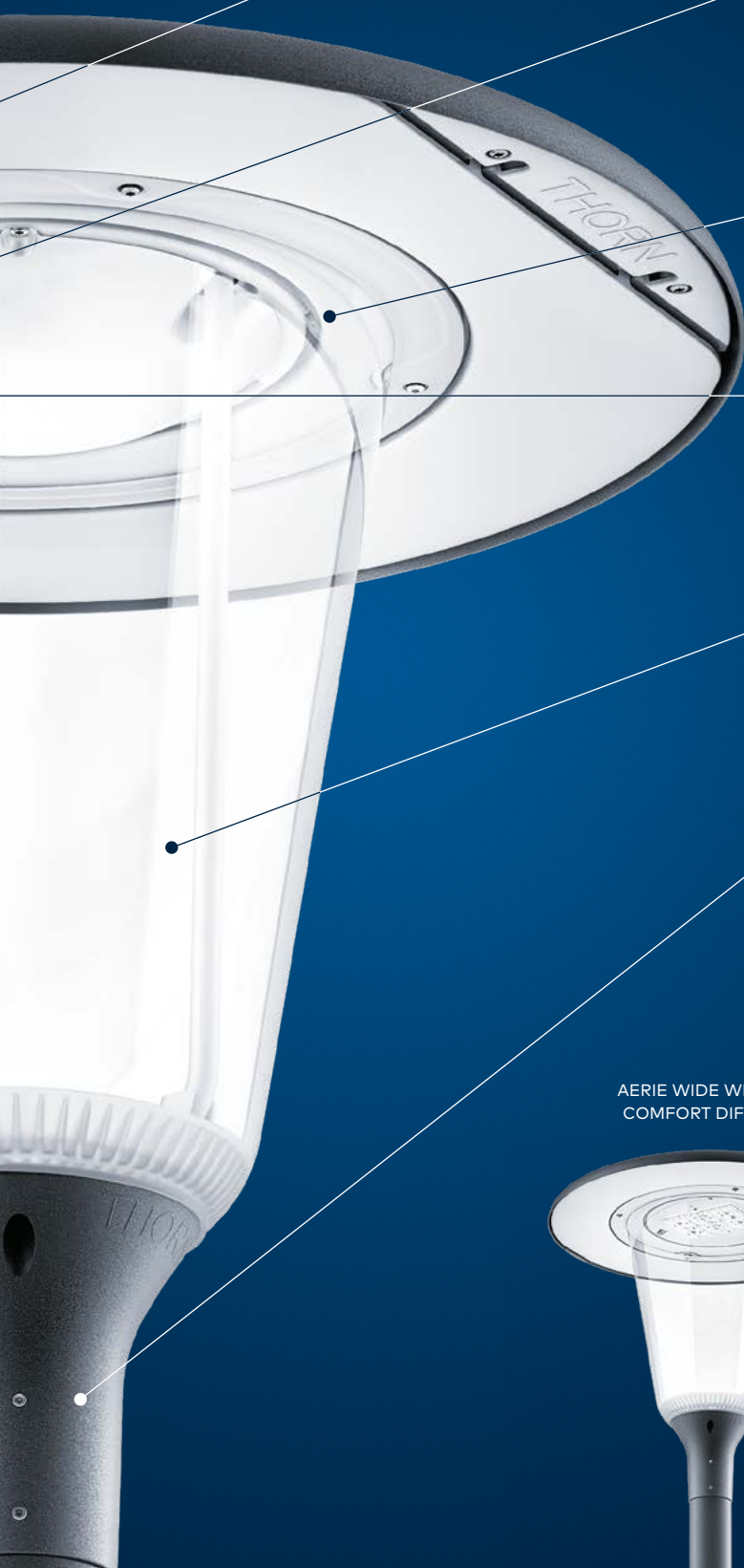
Available with or without comfort diffuser

Clear bowl

Diameter 60 or 76 mm

AERIE WIDE WITH COMFORT DIFFUSER

AERIE WIDE WITHOUT COMFORT DIFFUSER



COMFORT. PRECISION. PERFORMANCE.

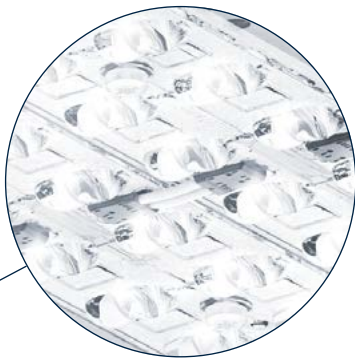
OPTICAL COMFORT

Aerie's state-of-the-art lighting technique provides great visual comfort at night. Its soft glow is made possible by a special inner mixing chamber that minimises glare.



OPTICAL PRECISION

Aerie's light goes exactly where it is needed – and nowhere else – so it complies with the latest light pollution requirements. An integrated internal louvre (LV) can be used in combination with Thorn's R-PEC optics to reduce light emission to the back by up to 20%.

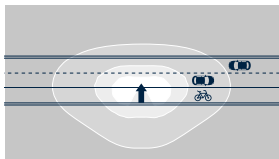


OPTICAL PERFORMANCE

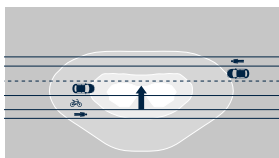
Thorn's high-performance R-PEC and A-PEC optics maximise efficiency, achieving up to 160 lm/W. This means excellent efficacy, with no waste light.

FLEXIBILITY OF OPTICAL DISTRIBUTIONS

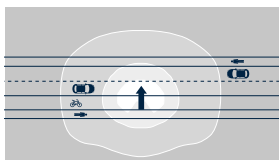
With its careful balance of vertical and horizontal illumination, Aerie ensures that outdoor spaces are comfortably lit. The luminaire can be fitted with a variety of different optics, including R-PEC for asymmetrical street light distribution, or A-PEC for asymmetrical and perfect rotationally symmetric light distribution. In this way, Aerie can fulfil the various lighting requirements of today's urban centres, while allowing designers to achieve a single unified look and feel.



NARROW ROAD (NR)



WIDE STREET COMFORT (WSC)



EXTRA WIDE ROAD (EWR)
with diffuser



ROTATIONAL SYMMETRICAL
(R/S)



When installing Aerie close to residences, an unobtrusive external louvre can easily be added on-site. This limits the direct view into the light source for residents, covering an angle of 130°.

CONNECT AND CONTROL

With control for single luminaires or groups, and even remote access, our flexible lighting management system is ready to control the smallest and largest urban installations.

PROMENADE

**URBAN &
RESIDENTIAL
STREETS**

**HISTORICAL
CITY CENTRE**

Our solutions for group and remote controls:



InCity



Wide zone motion detection
via Zhaga down + detector



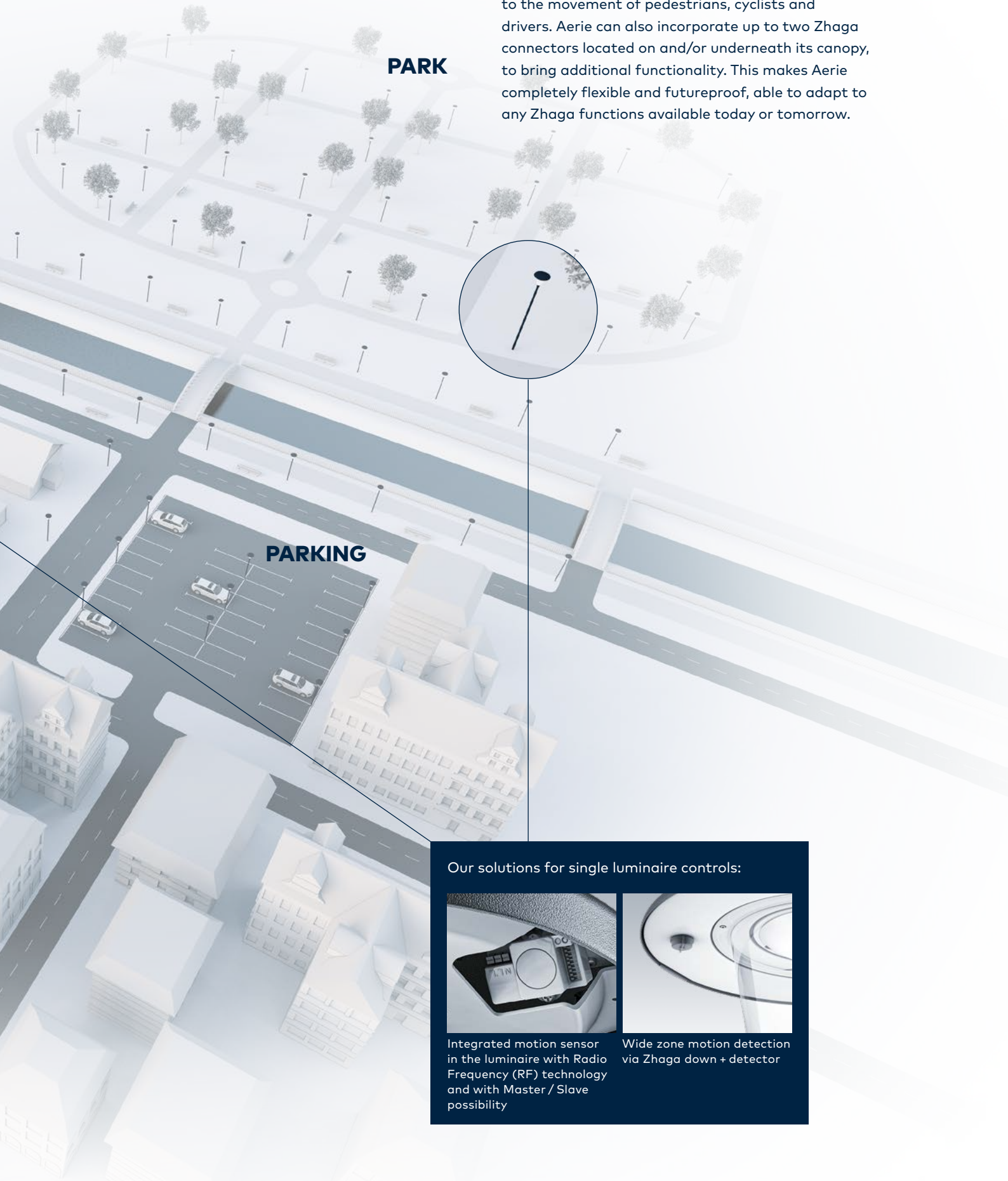
Wireless communication,
daylight sensor etc.
via Zhaga up



Integrated motion sensor
in the luminaires, controlled
via either Pilot Wire or RF

Aerie brings intelligence to urban spaces through a wide range of control options, including DALI2, multi-layer dimming, power-line control and wireless. It is compatible with all available RF systems, and can be managed using InCity – Thorn's intelligent outdoor lighting system.

Presence detection is also available for smart control of light to reduce energy use and light pollution. Aerie's high-quality integrated motion sensor makes sure light is only emitted when people need it, enabling energy savings while ensuring safety, and contributing to a sense of wellbeing by adapting to the movement of pedestrians, cyclists and drivers. Aerie can also incorporate up to two Zhaga connectors located on and/or underneath its canopy, to bring additional functionality. This makes Aerie completely flexible and futureproof, able to adapt to any Zhaga functions available today or tomorrow.



PARK

PARKING

Our solutions for single luminaire controls:



Integrated motion sensor in the luminaire with Radio Frequency (RF) technology and with Master / Slave possibility



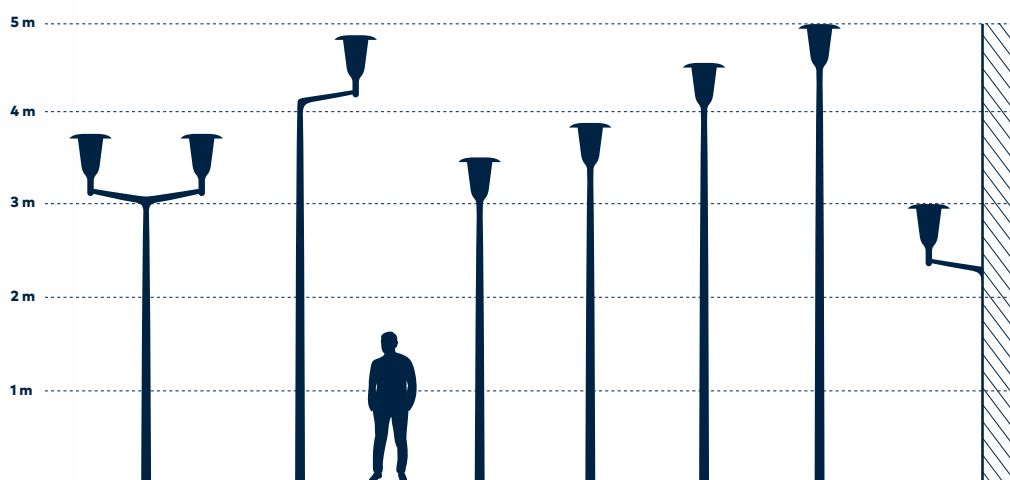
Wide zone motion detection via Zhaga down + detector

INSTALLATION POSSIBILITIES



Aerie offers a number of possible mast configurations, styles, mountings and heights. Installers benefit from:

- Pre-wired for easy installation with just one tool
- 120° fixing screws for perfect adjustment on the pole
- Maintenance access from above, tool-free



DISCOVER

AERIE



WIDE



SLIM

	With or without comfort diffuser	With comfort diffuser	With or without comfort diffuser	With comfort diffuser
	12 LEDs / 18 LEDs / 24 LEDs			
	2700K / 3000K / 4000K			
	Up to 6629 lm (2700K) / Up to 7350 lm (3000K) / Up to 8000 lm (4000K)			
	Up to 132 lm/W (2700K) / Up to 146 lm/W (3000K) / Up to 160 lm/W (4000K)			
	70 / 80			
	IP66			
	-30 to +50°C			
	Up to IK10			
	Base and canopy corrosion resistant die cast aluminium powder-coated			
	UV Resistant			
	100 000 h B10L90@25°C and @50°C			
	R-PEC and A-PEC			
	T60 / T76			
	Texturized anthracite close to RAL 7043 and 14 additional colors as standard			
	10 kV			
	DALI2, Bi-Power, Power Line, Constant Light Output, Light Reduction Twin Phases, Zhaga interface, Motion detection, Radio Frequency			

[illegible]

Configure the ideal product solution with myProduct. The myProduct configurator allows you to quickly and easily configure the luminaire to suit your individual needs.

Try it now at www.thornlighting.com/myproduct



As a globally leading luminaire manufacturer, Thorn Lighting provides a five-year warranty for its complete product range within all European Countries.

thornlighting.com/guarantee

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**WE
MAKE
LIGHT
WORK**

PRÍLOHA č. 6

Date:
17/03/2021

Bratislava tender

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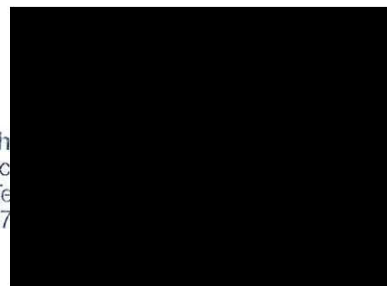


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Bratislava tender

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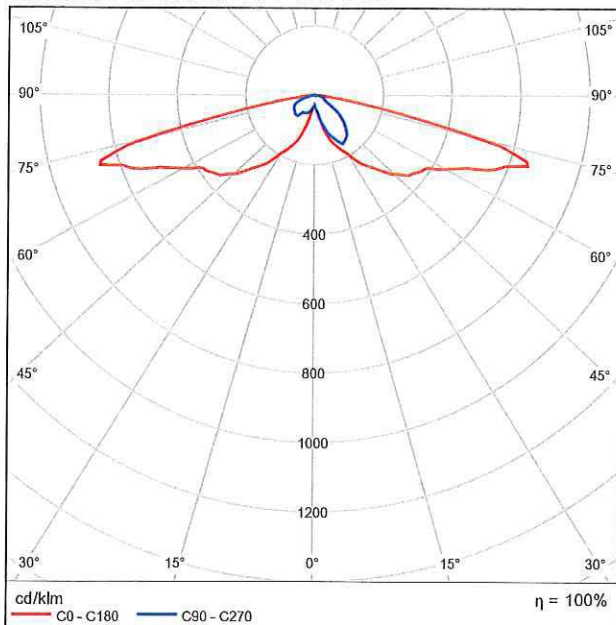
THORN - Les Andelys ARS CL 12L70-730 WSC AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic 1xLEDs 2x12 @ 350mA / THORN - Les Andelys - AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic (1xLEDs 2x12 @ 350mA)

THORN - Les Andelys ARS CL 12L70-730 WSC AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic 1xLEDs 2x12 @ 350mA

See our luminaire catalog for an image of the luminaire.

Light output ratio: 100%
Lamp luminous flux: 3377 lm
Luminaire luminous flux: 3377 lm
Power: 27.0 W
Luminous efficacy: 125.1 lm/W

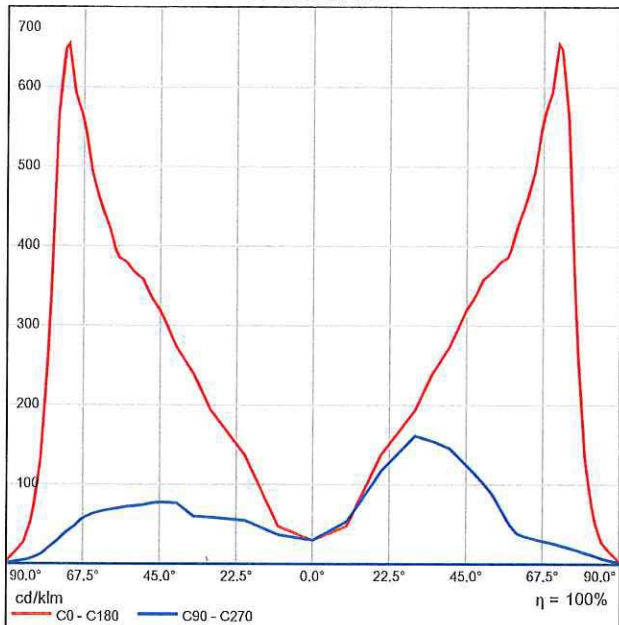
Luminous emittance 1 / Polar LDC



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THORN - Les Andelys ARS CL 12L70-730 WSC AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic 1xLEDs 2x12 @ 350mA / THORN - Les Andelys - AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic (1xLEDs 2x12 @ 350mA)

Luminous emittance 1 / Linear LDC

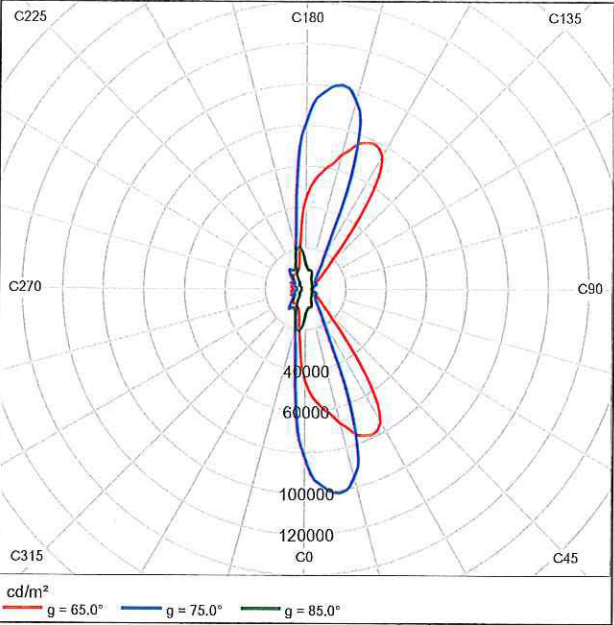


It is not possible to generate a cone diagram, as the light distribution is asymmetrical.

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IČ: 25700

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Luminous emittance 1 / Luminance diagram



It is not possible to generate a UGR diagram, as the light distribution is asymmetrical.

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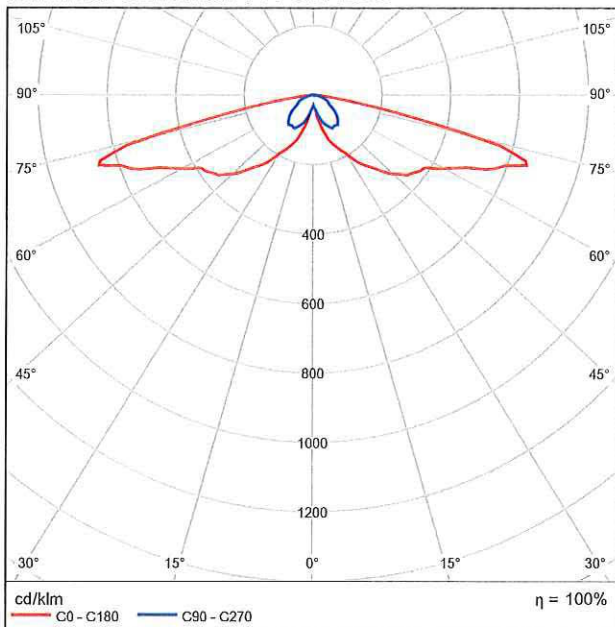
THORN - Les Andelys ARS CL 24L50-730 WSC-S AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic 1xLEDs 2x12 @ 350mA / THORN - Les Andelys - AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic (1xLEDs 2x12 @ 350mA)

THORN - Les Andelys ARS CL 24L50-730 WSC-S AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic 1xLEDs 2x12 @ 350mA

See our luminaire catalog for an image of the luminaire.

Light output ratio: 100%
Lamp luminous flux: 4965 lm
Luminaire luminous flux: 4965 lm
Power: 36.0 W
Luminous efficacy: 137.9 lm/W

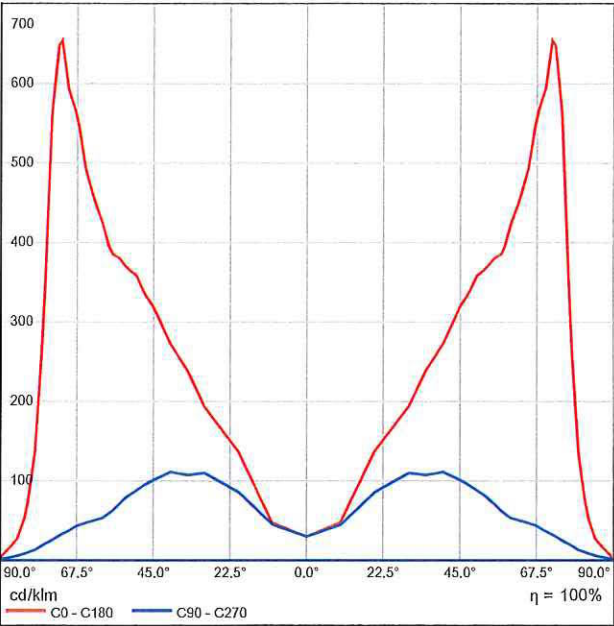
Luminous emittance 1 / Polar LDC



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THORN - Les Andelys ARS CL 24L50-730 WSC-S AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic 1xLEDs 2x12 @ 350mA / THORN - Les Andelys - AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic (1xLEDs 2x12 @ 350mA)

Luminous emittance 1 / Linear LDC

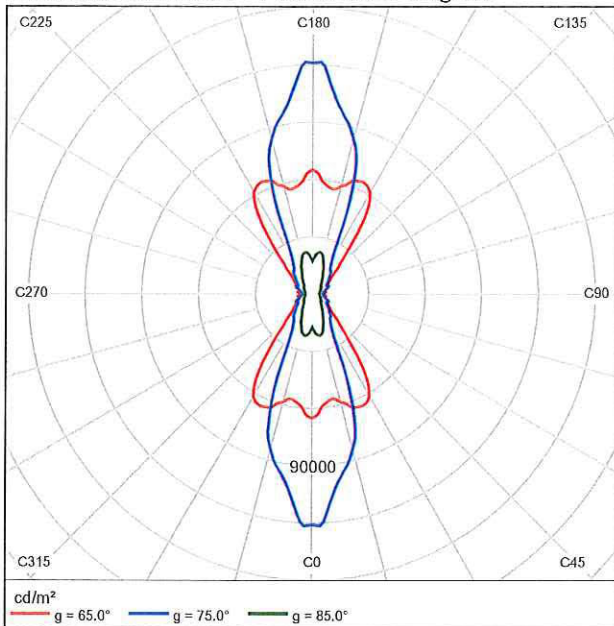


It is not possible to generate a cone diagram, as the light distribution is asymmetrical.

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THORN - Les Andelys ARS CL 24L50-730 WSC-S AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic 1xLEDs 2x12 @ 350mA / THORN - Les Andelys - AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic (1xLEDs 2x12 @ 350mA)

Luminous emittance 1 / Luminance diagram

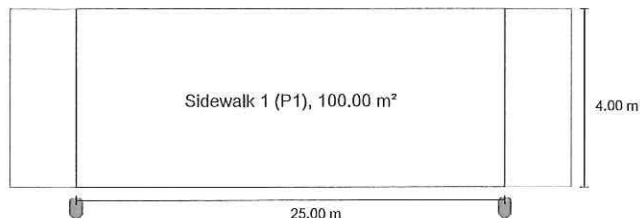


It is not possible to generate a UGR diagram, as the light distribution is asymmetrical.

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Option 1 - LK1 according to EN 13201:2015

THORN - Les Andelys ARS CL 12L70-730 WSC
 AERIE Slim - 12 x Warm White 3000K LED 700mA -
 WSC Optic



Results for valuation fields

Maintenance factor: 0.80

Sidewalk 1 (P1)

Em [lx]	Emin [lx]
≥ 15.00	≥ 3.00
≤ 22.50	
✓ 15.15	✓ 6.28

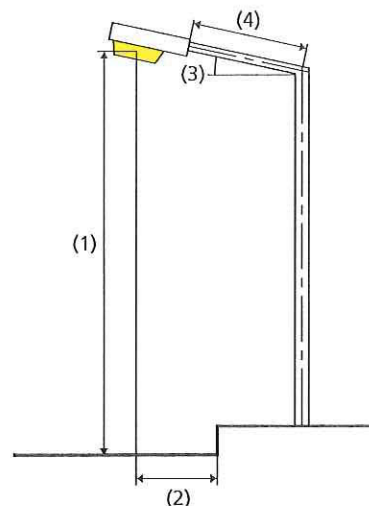
Results for energy efficiency indicators

Power density indicator (Dp)

0.018 W/lx·m²

Energy consumption density

Arrangement: AERIE Slim - 12 x Warm White 3000K LED 700mA - WSC Optic (108.0 kWh/yr) 1.1 kWh/m² yr



Lamp:	1xLEDs 2x12 @ 350mA
Luminous flux (luminaire):	3377.08 lm
Luminous flux (lamp):	3377.00 lm
Operating Hours	
4000 h:	100.0 %, 27.0 W
W/km:	1080.0
Arrangement:	single side bottom
Pole distance:	25.000 m
Boom inclination (3):	0.0°
Boom length (4):	0.000 m
Light centre height (1):	4.000 m
Light overhang (2):	-0.500 m

ULR: 0.01

ULOR: 0.01

Maximum luminous intensities

at 70° and above 935 cd/klm *

at 80° and above 154 cd/klm *

at 90° and above 4.88 cd/klm *

Luminous intensity class: G*1

Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.

* Luminous intensity values in [cd/klm] for calculating luminous intensity class refer to the output flux of the luminaire, according EN 13201:2015.

Arrangement complies with glare index class D.4

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 Jankovcov
 Tel.
 IČ: 2570

Sidewalk 1 (P1)

Maintenance factor: 0.80

Grid: 10 x 3 Points

Em [lx] ≥ 15.00 ≤ 22.50	Emin [lx] ≥ 3.00
✓ 15.15	✓ 6.28

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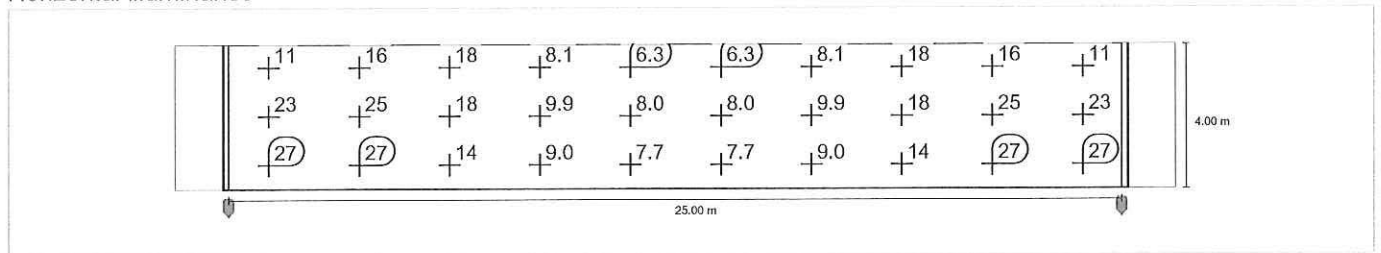
Sidewalk 1 (P1)

Maintenance factor: 0.80

Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 15.00	≥ 3.00
≤ 22.50	
✓ 15.15	✓ 6.28

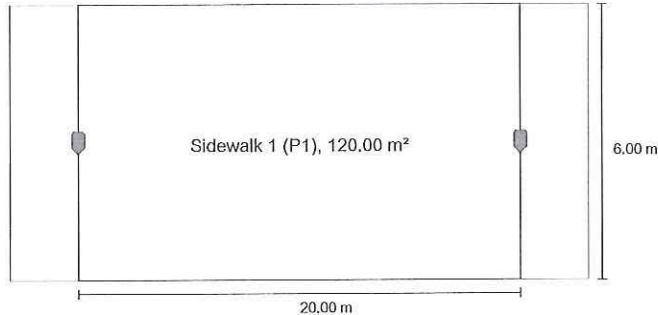
Horizontal illuminance



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IČ: 24

Option 2 - LK2 according to EN 13201:2015

THORN - Les Andelys ARS CL 24L50-730 WSC-S
 AERIE Slim - 24 x Warm White 3000K LED 500mA -
 WSC-S Optic



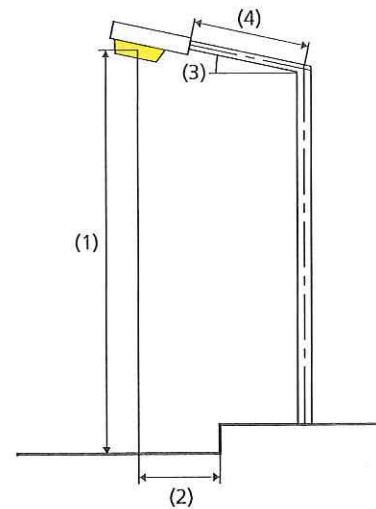
Results for valuation fields
 Maintenance factor: 0.80

Sidewalk 1 (P1)

Em [lx] ≥ 15.00 ≤ 22.50	Emin [lx] ≥ 3.00
✓ 20.34	✓ 12.34

Results for energy efficiency indicators

Power density indicator (Dp)	0.015 W/lx·m²
Energy consumption density	
Arrangement: AERIE Slim - 24 x Warm White 3000K LED 500mA - WSC-S Optic (144.0 kWh/yr)	1.2 kWh/m² yr



Lamp:	1xLEDs 2x12 @ 350mA
Luminous flux (luminaire):	4965.37 lm
Luminous flux (lamp):	4965.00 lm
Operating Hours	
4000 h:	100.0 %, 36.0 W
W/km:	1800.0
Arrangement:	single side bottom
Pole distance:	20.000 m
Boom inclination (3):	0.0°
Boom length (4):	0.000 m
Light centre height (1):	4.000 m
Light overhang (2):	3.000 m

ULR:	0.01
ULOR:	0.01
Maximum luminous intensities	
at 70° and above	655 cd/klm *
at 80° and above	138 cd/klm *
at 90° and above	4.50 cd/klm *
Luminous intensity class:	G*2

Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.

* Luminous intensity values in [cd/klm] for calculating luminous intensity class refer to the output flux of the luminaire, according EN 13201:2015.

Arrangement complies with glare index class B4

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Sidewalk 1 (P1)

Maintenance factor: 0.80

Grid: 10 x 4 Points

Em [lx] ≥ 15.00 ≤ 22.50	Emin [lx] ≥ 3.00
✓ 20.34	✓ 12.34

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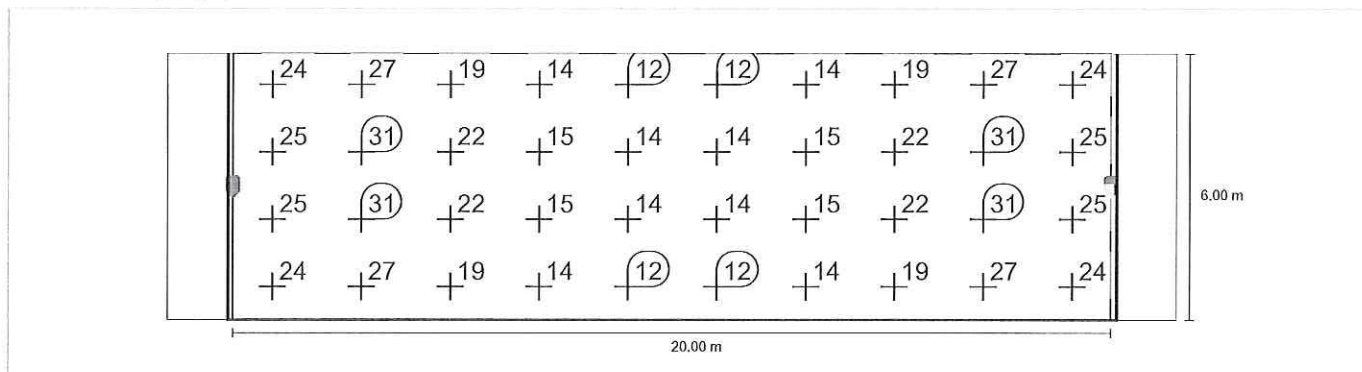
Sidewalk 1 (P1)

Maintenance factor: 0.80

Grid: 10 x 4 Points

Em [lx] ≥ 15.00 ≤ 22.50	Emin [lx] ≥ 3.00
✓ 20.34	✓ 12.34

Horizontal illuminance



Ing. Martina
Vlčková

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Ing. Martina Vlčková
Date: 2021.03.24
09:16:45 +01'00'

ZG Lighting
Jankovcova 2
Tel.: +4
IČ: 2570058

OVE Austrian Electrotechnical Association
Eschenbachgasse 9 | 1010 Wien | Austria
ZVR: 327279890 | www.ove.at

OVE Testing and Certification
Kahlenberger Str. 2A | 1190 Wien | Austria
T +43 1 370 58 06 | certification@ove.at



ENEC Certification Body registered under ID # 11.

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LICENCE

to use the European Mark



Licence No.: **80585-027**

Date of issue: Wien, 2020 08 18

OVE the Austrian Electrotechnical Association as signatory to the **"Agreement on the use of a commonly agreed Mark of Conformity for certain electrical equipment complying with European Standards"** hereby grants the right to label the products mentioned hereunder and listed in the Annex with the Mark(s) shown above to the following company

Licenceholder: **ZG Lighting France**
Route de Paix
27700 Les Andelys
France

Product: **Luminaires for road and street lighting**

Trade Mark: **THORN**

Series/Type: **Series AERIE (ARW ... CL1, ARS ... CL1)**

Basis for this given right is the conformity of the products with the requirements of the relevant Standard(s) as listed in the Annex and the fulfilment of articles 8 and 9 of the ENEC-Agreement by the manufacturer. This licence refers to the tested specimen and to all products manufactured strictly identical to the submitted one.

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification.

Österreichischer Verband für Elektrotechnik
Certification

igned by W. Martin
=w.martin@ove.at
g. W. Martin



ZG Lig
Jankov

IC: 25

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<i>Hersteller</i> <i>Manufacturer</i>	Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom
<i>Fertigungsstätte(n)</i> <i>Factory location(s)</i>	<p>Europheane SAS Route de Paix 27700 Les Andelys France</p> <p>ZG Lighting SRB doo Ulica Cumtobel br. 1 18000 Nis Serbia, Republic of</p>
<i>Typenbezeichnung</i> <i>Type reference</i>	<p>AR. 12L ... CL1 ... AR. 18L ... CL1 ... AR. 24L ... CL1 ..., see type code on page 5.</p>
<i>Prüfbericht</i> <i>Test Report</i>	TR 80585-0020-01 ECS
<i>Nationale Bestimmung(en)</i> <i>National Standard(s)</i>	<p>OVE EN 60598-1:2018-11-01 ÖVE/ÖNORM EN 60598-2-3:2012-01-01</p>
<i>Europannorm(en)</i> <i>European Standard(s)</i>	<p>EN 60598-1:2015 + A1:2018 EN 60598-2-3:2003 + A1:2011</p>
<i>Ersatz für Zertifikat</i> <i>Superseded licence</i>	--
<i>Anmerkung(en)</i> <i>Remark(s)</i>	CTF Stage 3.

ZG Li
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<i>Nennspannung</i> <i>Rated voltage</i>	AC 220-240 V
<i>Anzahl und Leistung der Lampen</i> <i>Rated wattage and number of lamps</i>	1x LED module LEM R12, or 2x LED module LEM R12, or 1x LED module LEM H18.
<i>Lampentyp(en)</i> <i>Lamp identification</i>	Built-in LED modules with 12 LEDs each (LEM R12), or with 18 LEDs (LEM H18).
<i>Schutzgrad</i> <i>Degree of protection</i>	IP66
<i>Netzanschluss</i> <i>Supply connection</i>	External wiring
<i>Befestigungsfläche</i> <i>Supporting surface</i>	Normally flammable surface
<i>Schutzklasse</i> <i>Class of protection</i>	CI.I
<i>Beschreibung des Aufbaus</i> <i>Description of construction</i>	Post top mounted LED lantern with different optics, spigot diameter 60 or 76 mm. Canopy and base made of die-cast powder coated aluminium. Enclosure made of UV-stabilized polycarbonate (PC). PC bowl in different designs: Slim (types ARS ...) or Wide (types ARW ...). Pre-wired with external cable.
<i>Zusatzinformation</i> <i>Additional information</i>	Classified as risk group 2 (moderate risk) according to EN 62471:2008. The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 1,5 m is not expected.

ZG Light
Jankovc
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<i>Bauteil Component</i>	<i>Code Code</i>	<i>Hersteller Manufacturer</i>	<i>Typenbezeichnung Type Reference</i>	<i>Konformitätszeichen Mark(s) of conformity</i>
LED control gear	B	Tridonic	LCO 40/200–1050/64	ENEC 11
	B	Tridonic	LCO 60/200–1050/100	ENEC 11
Internal wiring	B	Omerin	RECSC 300V; 180°C; double insulated	VDE
LED Module	A*	THORN	LEM R12 max. 1050mA, RG2, tc=105°C	ÖVE
	A*	THORN	LEM H18 max. 1050mA, RG2, tc=105°C	ÖVE
Terminals	A	Wago	224-112 400V; 24A; T105	VDE
	A	Electro Terminal	SLK/3 450V, 24A, T110	ENEC 11
SPD	B	Citel	MLPC1-230L-R	CB/HU-001850
Internal wiring	B	BLF	SIL/0100 300V; 0,75mm ² ; 180°C	VDE
Cable Gland	A	Bimed	BMOS-22 IP68, 100°C	VDE
External wiring	A	BizLink	H07RN-F 1,5mm ²	HAR

A The component is replaceable with another one, also certified, with equivalent characteristics.
A* The component is replaceable with another one according to ETF5-OSM-LUM/DSH 2057.
B The component is replaceable if authorised by the test house.
C Integrated component tested together with the appliance.
D Alternative component.

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AR. ..L...-... .. CL1

- Colour**
 - GY Light grey 150 sanded
 - ANT Anthracite 900 sanded
 - BK Black sanded
 - R.... RAL....
- Mounting**
 - T60.....post-top D60
 - T76.....post-top D76
- Wiring**
 - D5 Pre-wired, 5m
 - D6 Pre-wired, 6m
 - D8 Pre-wired, 8m
 - W5 Pre-wired, 5m
 - W6 Pre-wired, 6m
 - W8 Pre-wired, 8m
- CL1** Protection class I
- SP** with Surge Protection Device (optional)
- HFX** DALI dimmable (optional)
- Bi-Power light reduction (optional)**
 - BPL Bi-Power Power Line
 - LRT Light Reduction Twin Phases
 - BPS550..... Bi-Power 5h (-2h +3h) 50% reduction
 - BPS750..... Bi-Power 7h (-3h +4h) 50% reduction
 - BPS..... Bi-Power 8h (-3h +5h) 50% reduction
 - BPS530..... Bi-Power 5h (-2h +3h) 30% reduction
 - BPS730..... Bi-Power 7h (-3h +4h) 30% reduction
 - BPS830..... Bi-Power 8h (-3h +5h) 30% reduction
- CLO** Constant Light Output (optional)
- Bowl**
 - CL clear
 - OP opal
- PR** Prismatic/Comfort diffuser (optional)
- LV** Internal louvre (optional)
- Optics**
 - Photometric code**
 - 827 2700K, CRI 80
 - 730 3000K, CRI 70
 - 830 3000K, CRI 80
 - 740 4000K, CRI 70
 - 840 4000K, CRI 80
- Current of LED module**
 - 35 350mA
 - 50 500mA
 - 70 700mA
 - 105 1050mA
- Number of LEDs**
 - 12L 12 LEDs
 - 18L 18 LEDs
 - 24L 24 LEDs
- Series AERIE**
 - ARW AERIE Wide version
 - ARS AERIE Slim version

Ing.
Martina
Vlčková

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Date: 2021.03.24
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ZG Lighti
Jankovco
Tel.
IČ: 2570

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Príloha č. 2 - Návrh na plnenie kritérií "Nákup svietidiel verejného osvetlenia - Balík 01"	
Ochodca meno uchádzača:	ZG Lighting Czech Republic s.r.o.
Sídlo uchádzača:	Jankovcova 1518/2, 170 00 Praha 7, ČR
Štatutárny zástupca:	Ing. Peter Milič MBA, prokurista
IČO:	25700588
IČ DPH:	CZ25700588
Telefónne číslo:	
E-mailová adresa:	
Datový súbor:	plata DPH

Technické parametre svietidiel			
Položka	Opis	Jednotka	Hodnota
Systémový príkon svietidla LK1 - 100%	P-LK1	W	27
Systémový príkon svietidla LK2 - 100%	P-LK2	W	36
Udržiavacia priemerová horizontálna osvetlenosť - svietidlo LK1 pre výpočet MS1	E-LK1-MS1	lx	15,00
Udržiavacia priemerová horizontálna osvetlenosť - svietidlo LK2 pre výpočet MS2	E-LK2-MS2	lx	20,00
Doba svietenia - 100%	t-100%	h	2275
Doba svietenia - 50%	t-50%	h	1825
Veľkosť osvetlenej plochy - modelová situácia č. 1	A-MS1	m ²	100
Veľkosť osvetlenej plochy - modelová situácia č. 2	A-MS2	m ²	120

Návrh na plnenie kritéria K1				
Položka	Jednotková cena v EUR bez DPH	Výška DPH	Jednotková cena v EUR s DPH	Počet bodov
Svietidlo LK1	178,40	35,68	214,08	201,19
Svietidlo LK2	189,40	37,88	227,28	780,41
Celkový počet svietidiel typu LK1 (Vypočítaný ako 20% finančného limitu zákazky; stanovený na základe jednotkovej ceny stanovenej uchádzačom zaokrúhlený na celé číslo smerom nadol)				336
Celkový počet svietidiel typu LK2 (Vypočítaný ako 80% finančného limitu zákazky; stanovený na základe jednotkovej ceny stanovenej uchádzačom zaokrúhlený na celé číslo smerom nadol)				1267

Návrh na plnenie kritéria K2		
Popis	Položka	Hodnota
Ukazovateľ príkonovej hustoty FDI Pomer hodnoty systémového príkonu a súčasu cieľovej plochy osvetlenia s typizovanou hodnotou príkonovej udržiavanej osvetlenosti na tejto ploche podľa EN 15204-2. Jednotka: W · lx ⁻¹ · m ⁻²	Svietidlo LK1 pre výpočet MS1	0,0189
	Svietidlo LK2 pre výpočet MS2	0,0150

Návrh na plnenie kritéria K3		
Popis	Položka	Hodnota
Ukazovateľ ročnej spotreby energie AECI Pomer celkovej spotreby elektrickej energie za rok a celkovej plochy, ktorá sa má osvetľovať danou osvetľovacou sústavou. Jednotka: Wh · m ⁻²	Svietidlo LK1 pre výpočet MS1	860,63
	Svietidlo LK2 pre výpočet MS2	956,25

Návrh na plnenie kritéria K4		
Svietidlo	Popis	Hodnota
Svietidlo "LK1"	Minimálny výkon svietidla (na základe životnosti, vrátane všetkých strát)	125
	Výžarovanie do horného polpriestoru pri náklone svietidla 0° voči horizontálnej osi	1
	Trieda svietivosti (G*1-G*6) pri náklone svietidla 0° voči horizontálnej osi	G1
	Trieda lúčovej osi (D0-D6)	D4
	Počiatočná chromatickosť	5
	Pokles svetelného toku Lx@50 pre 100 000h prevádzky (Ta=25°C)	L90B10
Svietidlo "LK2"	Minimálny výkon svietidla (na základe životnosti, vrátane všetkých strát)	138
	Výžarovanie do horného polpriestoru pri náklone svietidla 0° voči horizontálnej osi	1
	Trieda svietivosti (G*1-G*6) pri náklone svietidla 0° voči horizontálnej osi	G2
	Trieda lúčovej osi (D0-D6)	D4
	Počiatočná chromatickosť	5
	Pokles svetelného toku Lx@50 pre 100 000h prevádzky (Ta=25°C)	L90B10

V Prahe:	24.3.2021
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ZG
Jatel.: +420 286 782 200
IČ: 25700588, DIČ: CZ25700588Ing.
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Date: 2021.03.24
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Tabuľka minimálnych technických štandardov
Svetidlo ozn. "LK1"

Popis	Označenie (jednotka)	Požadovaná hodnota	Ponúkaná hodnota (uchádzať vopred zeleno označené bunky)	Poznámka
Svetelno-technické parametre				
Merný výkon svetidla (na začiatku životnosti, vrátane všetkých strát)	P (lm/W)	≥ 90	125	Kritérium K4 - Bodované - 1b za každých 5lm/W navyše oproti požadovanej hodnote, maximálne však 5b
Výžarovanie do horného polpriestoru pri náklone svetidla 0° voči horizontálnej osi	U _{LR} (%)	≤ 3%	1	Kritérium K4 - Bodované - 0,5b za každého 0,5% nižšie oproti požadovanej hodnote, max. 3b
Trieda svetivosti (G*1-G*6) pri náklone svetidla 0° voči horizontálnej osi	G*	≥ G*1	G1	Kritérium K4 - Bodované - 0,5b za každú triedu svetivosti navyše oproti požadovanej hodnote, max. 2,5b
Trieda indexu osivenia (D0-D6)	D _x	≥ D1	D4	Kritérium K4 - Bodované - 0,5b za každú triedu osivenia navyše oproti požadovanej hodnote, max. 2,5b
Náhradná teploota chromatickosti svetelného zdroja	CCT (K)	= 3000	3000K	
Počatočná chromatickosť	SDCM (-)	≤ 5	5	Kritérium K4 - Bodované - 0,5b za každý krok SDCM nižšie oproti požadovanej hodnote, max. 2b
Index podania farieb svetelného zdroja	Ra (-)	≥ 70	70	
Elektrické a prevádzkové parametre				
Napájacie napätie	U (V) / f (Hz)	230V/50Hz	230V/50HZ	
Power factor pri 100% výkone (na začiatku životnosti)	PF	≥ 0,90	0,97	
Základná prepäťová ochrana na úrovni svetidla	U _{ov} (kV)	≥ 6 kV	8kV CM, 6kV DM	
Pokles svetelného toku LxBS50 pre 100 000h prevádzky (Ta=25°C)	LxBS50 (%)	≥ L70BS50	L90B10	Kritérium K4 - Bodované - 1b za každých 5% navyše pri hodnote Lxx, max. 5b
Životnosť napájacieho zdroja	t (h)	≥ 100000	100 000	
Riadiaci vstup napájacieho zdroja	-	DALI/DALI-2	DALI	
Autonomné stmievanie na základe predprogramovanej krivky stmievania	(áno/nie)	áno	áno	
Konštrukčné a mechanické parametre				
Mechanická odolnosť	IK	≥ IK08	IK10	
Krytie svetidla	IP	≥ IP66	IP66	
Päťica pre riadiacu jednotku na vrchu svetidla (ZHAGA/NEMA), vrátane krytky	(áno/nie)	áno	áno	
Montáž na vrch stožiaru	(áno/nie)	áno	áno	
Priemer montážneho otvoru pre inštaláciu na vrch stožiaru	d (mm)	60-76	60mm alebo 76mm	
Vymeniteľný svetelný zdroj (LED modul)	(áno/nie)	áno	áno	
Vymeniteľný napájací zdroj (predradník)	(áno/nie)	áno	áno	
Tieleso svetidla vyrobené z hliníku	(áno/nie)	áno	áno	
Farbné úprava RAL7016 antracitová šedá	(áno/nie)	áno	áno	
Kryt optickéj časti z UV stabilného polykarbonátu	(áno/nie)	áno	áno	
Optická časť (LED modul) umiestnená v centrálnej časti svetidla (nie po obvode)	(áno/nie)	áno	áno	
Napájací kábel dĺžky 4m	(áno/nie)	áno	áno (5m)	

Tabuľka minimálnych technických štandardov
Svetidlo ozn. "LK2"

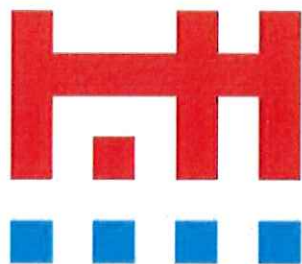
Popis		Označenie (jednotka)	Požadovaná hodnota	Ponúkaná hodnota (uchádzač vyplní zeleno označené bunky)	Poznámka
Svetelno-technické parametre					
Merný výkon svetidla (na začiatku životnosti, vrátane všetkých strát)		P (lm/W)	≥ 90	138	Kritérium K4 - Bodované - 4b za každých 5lm/W navyše oproti požadovanej hodnote, maximálne však 20b
Vyžarovanie do horného polpriestoru pri náklone svetidla 0° voči horizontálnej osi		ULR (%)	≤ 3%	1	Kritérium K4 - Bodované - 2b za každého 0,5% nižšie oproti požadovanej hodnote, max. 12b
Trieda svetivosti (G*1-G*6) pri náklone svetidla 0° voči horizontálnej osi		G*	≥ G*1	G2	Kritérium K4 - Bodované - 2b za každú triedu svetivosti navyše oproti požadovanej hodnote, max. 10b
Trieda indexu oslnenia (D0-D6)		Dx	≥ D1	D4	Kritérium K4 - Bodované - 2b za každú triedu oslnenia navyše oproti požadovanej hodnote, max. 10b
Náhradná teplota chromatickosti svetelného zdroja		CCT (K)	= 3000	3000K	
Počítačová chromatickosť		SDCM (-)	≤ 5	5	Kritérium K4 - Bodované - 2b za každý krok SDCM nižšie oproti požadovanej hodnote, max. 8b
Index podania farieb svetelného zdroja		Ra (-)	≥ 70	70	
Elektrické a prevádzkové parametre					
Napájacie napätie		U (V) / f (Hz)	230V/50Hz	230V/50Hz	
Power factor pri 100% výkone (na začiatku životnosti)		PF	≥ 0,90	0,97	
Základná prepäťová ochrana na úrovni svetidla		Uov (kV)	≥ 6 kV	8kV CM, 6kV DM	
Pokles svetelného toku LxxB50 pre 100 000h prevádzky (Ta=25°C)		LxxB50 (%)	≥ L70B50	L90B10	Kritérium K4 - Bodované - 4b za každých 5% navyše pri hodnote Lxx, max. 20b
Životnosť napájacieho zdroja		t (h)	≥ 100000	100 000	
Riadiaci vstup napájacieho zdroja		-		DALI	
Autonómne stmievanie na základe predprogramovanej krivky stmievania		(áno/nie)	áno	áno	
Konštrukčné a mechanické parametre					
Mechanická odolnosť		IK	≥ IK08	IK10	
Krytie svetidla		IP	≥ IP66	IP66	
Päťica pre riadiacu jednotku na vrchu svetidla (ZHAGA/NEMA), vrátane krytky		(áno/nie)	áno	áno	
Montáž na vrch stožiaru		(áno/nie)	áno	áno	
Priemer montážneho otvoru pre inštaláciu na vrch stožiaru		d (mm)	60-76	60mm alebo 76mm	
Vymeniteľný svetelný zdroj (LED modul)		(áno/nie)	áno	áno	
Vymeniteľný napájací zdroj (predradník)		(áno/nie)	áno	áno	
Teleso svetidla vyrobené z hliníku		(áno/nie)	áno	áno	
Farebná úprava RAL7016 antracitová šedá		(áno/nie)	áno	áno	
Kryt optickej časti z UV stabilného polykarbonátu		(áno/nie)	áno	áno	
Optická časť (LED modul) umiestnená v centrálnej časti svetidla (nie po obvode)		(áno/nie)	áno	áno	
Napájací kábel dĺžky 4m		(áno/nie)	áno	áno (5m)	

SÚŤAŽNÁ PONUKA UCHÁDZAČA

ZG Lighting Czech Republic s.r.o, Jankovcova 1518/2, 170 00 Praha 7, ČR, IČO 25700588

pre tender

„Nákup svietidiel verejného osvetlenia – Balík 01“



BRATISLAVA

Vypracovali: Ing. Pavol Góra, Ing. Peter Mišík

Dátum: 24.3.2021



OBSAH PONUKY UCHÁDZAČA

1. Identifikácia uchádzača	3
2. Technická a odborná spôsobilosť	4

Zoznam príloh:

Príloha č. 1 – výpis z Obchodného registra

Príloha č. 2 – výpis z Registra partnerov verejného sektora

Príloha č. 3 – výpisy z Registra trestov

Príloha č. 4 – výpis z bankového účtu o zložení zábezpeky

Príloha č. 5 – katalógové listy svietidiel a brožúra rodiny svietidiel THORN Aerie

Príloha č. 6 – svetelnotechnický výpočet

Príloha č. 7 – zdrojové súbory k použitým svietidlám

Príloha č. 8 – certifikáty k použitým svietidlám

Príloha č. 9 – potvrdenie k parametrom svetelného zdroja

Príloha č. 10 – potvrdenia (zdravotná poisťovňa, sociálna poisťovňa, finančný úrad, colný úrad, insolvenčný register, predmet podnikania)

Príloha č. 11 – Čestné vyhlásenie

Príloha č. 12 – Návrh na plnenie kritérií a minimálnych technických štandardov na vyhodnotenie ponúk

1. Identifikácia uchádzača

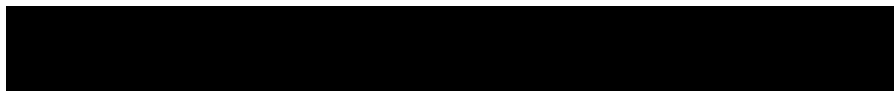
Obchodné meno: ZG Lighting Czech Republic s.r.o.
so sídlom: Jankovcova 1518/2, 170 00 Praha 7, Česká republika
IČO: 25700588
DIČ: CZ25700588
zastúpený: Rudolf Starický – konateľ
Jan Vacek – prokurista
Peter Mišík – prokurista
Martina Vlčková – prokurista
Agnieszka Wisniewska – prokurista

Kontaktné osoby:

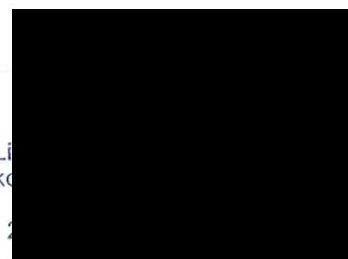
Ing. Peter Mišík, MBA, Country Manager Slovakia



Ing. Pavol Góra, Business Development Manager



Uchádzač je platiteľom DPH, avšak jeho sídlo je v inom členskom štáte Európskej únie (v Českej republike), preto sa samotná DPH nebude v súlade s komunitárnym právom fakturovať.



2. Technická a odborná spôsobilosť podľa § 34 ZVO

Zumtobel Group je popredný medzinárodný výrobca a dodávateľ komplexných riešení pre profesionálne osvetlenie interiérov a exteriérov, núdzové osvetlenie a systémy riadenia s obchodným zastúpením vo viac ako 90-tich krajinách.

Už viac ako 90 rokov spoločnosť Zumtobel Group vyvíja inovatívne riešenia osvetlenia, ktoré spĺňajú najvyššie ergonomické, ekonomické a environmentálne požiadavky s vyššou estetickou pridanou hodnotou.

Spoločnosť Zumtobel pokrýva značky Zumtobel, Thorn, Tridonic a acdc.

Globálny obrat v svetelnej technike: 1,2 miliardy € / rok

Centrála: Dornbirn, Rakúsko

ISO CERTIFICATION: ISO 9001: 2008 systém riadenia kvality, ISO 50001: 2011 systém riadenia energie, ISO 14001: 2004 systém environmentálneho manažérstva

ZG Lighting Czech Republic s.r.o - vybrané dodávky svietidiel verejného osvetlenia za predchádzajúce tri roky:

Obchodné meno a sídlo odberateľa	Opis predmetu zákazky	Zmluvná cena v EUR s DPH za predmetnú dodávku tovaru (dodávka LED svietidiel pre verejné osvetlenie)	Miesto dodávky tovaru	Lehota dodávky tovaru
D4R7 Construction s.r.o. Odborárska 21, 832 02 Bratislava, Slovenská republika	Dodávka kompletného osvetľovacieho systému (LED svietidiel) pre výstavbu verejného osvetlenia infraštruktúry diaľnice D4 a rýchlostnej cesty R7	231,882.70 €	Stavba D4/R7 úseky: R7 Ketelec – Dunajská Lužná R7 Dunajská Lužná – Holice R7 Bratislava Prievoz – Ketelec D4 Jarovce – Ivanka sever	08/2019 - 08/2020
	Dodávka kompletného osvetľovacieho systému (LED svietidiel) pre výstavbu verejného osvetlenia infraštruktúry diaľnice D4 a rýchlostnej cesty R7	172,279.32 €	Stavba D4/R7 úseky: R7 Ketelec – Dunajská Lužná R7 Dunajská Lužná – Holice R7 Bratislava Prievoz – Ketelec D4 Jarovce – Ivanka sever D4 Ivanka sever – Rača	09/2020 - 02/2021

Ing.
Martina
Vlčková

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by Ing. Martina
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