



LIGHTING REPORT

for the

DALGUISE HOUSE DEVELOPEMENT

at

**MONKSTOWN,
Co. DUBLIN.**

for

GEDV MONKSTOWN OWNER LIMITED

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01	18/05/2022	7	Planning	EP	KM	MR

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1. INTRODUCTION

Our client, GEDV Monkstown Owner Limited., are proposing the development of the subject site at Dalguise House Development, Monkstown, Co. Dublin. which consists of 11 blocks of residential accommodation, 3 new houses located in the northwest corner of the site, and 3 existing structures undergoing major renovation totalling to 493 no. units and shared amenity spaces.

The subject site includes mature trees, many of which are to be retained in accordance with Development Plan policy, it also includes a Protected Structure. The lighting design has regard to the site's sensitivities. It should also be noted that no part of the site is intended to be taken in charge by DLRCC, as detailed in the Application Form and confirmed again in the response to Item 19 of the Further Information Request

The Proposed lighting for the site has been designed to provide a safe environment for pedestrians, cyclists and moving vehicles. The lighting design also takes into consideration and is adequately placed for safety and to minimise light pollution to the adjacent areas.

The works will include for the installation of new lighting columns, Bollard lighting, Handrail lighting, wall lighting and feature lighting.

2. DESIGN CONSIDERATIONS

2.1 General

A key consideration in the design of the proposed development was the character of the site provided by the Protected Structure and the mature trees. The scheme seeks to retain as many of the quality trees as possible, in the interests of visual amenity and to protect biodiversity.

It should also be noted that it is not proposed that any part of the proposed development would be taken in charge. The proposed development is a BTR Scheme, and its ownership and use will be restricted by legal for 15 years.

The proposed lighting has been split into two separate sets of drawings prepared by Metec:

The first set of drawings (entitled *Site Lighting Layout*) is designed to comply with the relevant standards. These lights relate to the vehicular routes (including the emergency access route to the northeast and the fire access route to the west of the site) and the primary pathways through the public open space areas and car parking.

The second set of drawings (entitled *Site (Feature) Lighting*) is additional lighting that is not designed to accord with the relevant Local Authority standards, however, have been designed to comply with Part M of the Building Regulations. This includes pedestrian routes around the periphery of the site, some of which transect communal open space areas, others like the woodland walk to the NW of the site are not counted as either communal nor public open space (due to steep level changes), however they are not on direct routes to Public Transportation and the site exit and are therefore not being offered up for "taking-in-charge".

The proposed design has considered the negative impact of trees on the performance of the lighting systems and the possible negative effects of the lighting system on existing trees. A single roadside lighting design has been selected to avoid conflict with the existing mature trees and in turn reducing unwanted shadowing and lighting uniformity issues. The decision to install lighting on the roadside opposite to the mature existing trees will avoid conflict below ground such as roots interfering with power cables. This conflict causes difficulty during installation, maintenance, and operation of the lighting system.

The lighting in the most densely used parts of the site (by pedestrians, cyclists, and vehicle drivers) are in accordance with the standards. The rest of the lighting proposed is suitable for the subject site which needs sympathetic treatment due to the Protected Structure and the existing trees.

2.2 Road Usage

When designing the proposed lighting scheme for Dalguise House Development the following traffic classifications have been considered:

- Vehicular Traffic
- Pedestrian Traffic
- Cyclist Traffic
- Car parking

2.3 Existing Trees

The site includes mature trees, many of which will be retained in accordance with Development Plan objectives and policy. This made the avoidance of tree positions difficult. Further analysis may be required to optimise the exact positions of columns. The spacing identified within the design allows for flexibility. The column positions can be single side or staggered if better suited to the tree positions. The design presented

on the drawings indicates column positions on the single side opposite to the existing treeline.

2.4 Bat Conservation

When designing the proposed road lighting scheme, consideration has been given to best practice as outlined in Bat Conservation Ireland's Bats & Lighting Guidance Notes with regards to reducing impact on bat population. The following have been considered:

- Column height $\leq 6\text{m}$
- Directional lighting to prevent light spillage & light pollution.
- All street lanterns calculated at 0° tilt
- All street lanterns available in 2700K LED (warm White) This colour temp. is available as a special order from the manufacturer. Calculations were based on 3000K but will have no adverse effects on the design.
- Modern light technology to restrict the horizontal plane of luminaires.

3. LIGHTING DESIGN

The lighting design has considered the current Dun Laoghaire Rathdown County Council Public Lighting Technical Specification & Requirements and EN 13201-2. Based on the guidelines set out in these documents the parameters applicable to the site are set out below:

LOCATION – Main Road – Lighting Class P4

Maintained (Eave) Lux Level - 6.80 Lux at (at approx. 30m spacing)

Maintained (Emin) Lux Level – 1.44 Lux (at approx. 30m spacing)

LOCATION – General pathways – Lighting Class P4

Maintained (Eave) Lux Level - 5 Lux (at 30m spacing)

Maintained (Emin) Lux Level – 1 Lux (at 30m spacing)

LOCATION – Car parking – 5 – 10 lux

Maintained (Eave) Lux Level - 5.57 – Lux (typical)

Maintained (Emin) Lux Level – 3.11 Lux (typical)

The proposed lighting scheme for main road and car parking consists of 6m pole mounted fittings as indicated on the drawings. The Luminaire selected is the Performance in Lighting Kreos.

- Low level lighting
- Minimal upward light spill
- LED lamps



Figure 1: Kreos/Pila

The proposed lighting scheme for general pathways consists of 4m pole mounted fittings as indicated on the drawings. The Luminaire selected is the Performance in Lighting Hedo+FT.

- Low level lighting
- Minimal upward light spill
- LED lamps



Figure 2: HEDO+FT/Pila

The proposed lighting scheme for the fire tender road between the boundary wall and playground area consists of bollard fittings as indicated on the drawings. The Luminaire selected is the iGuzzini iWay Super-Comfort.

- Low level lighting
- Zero upward light spill
- LED lamps`



Figure 3: iWay Super Comfort/Piatto

The proposed lighting scheme for ramp and step areas consists of handrail LED lighting and wall mounted fittings as indicated on the drawings. The Luminaires selected are the KKDC Duo Luna LED and the iGuzzini Walky Square.

- Low level lighting
- Minimal upward light spill
- LED lamps`



Figure 4: Duo Luna/Walky Square

4. LIGHTING SIMULATION RESULT

Roadway & Pathways:

The lighting class is determined using the Standards for road lighting Part 2: Performance requirements – EN 13201-2.

- Class P4 along roadway. Optimised spacing calculations to 30m achieves a maintained average illuminance of 6.80 Lux and minimum illuminance of 1.44 Lux.
- Class P4 along pathways. Optimised spacing achieves a maintained average illuminance of 5 Lux and minimum illuminance of 1 Lux.

Car Park:

- A maintained average illuminance of between 5 and 10 lux and minimum uniformity of 0.25 as per BS 5489. The values of 5.57 lux and minimum uniformity of 0.55 have been achieved.

5. LIGHTING CONTROL

Roadway, Carpark & Pathways:

Each light fitting shall be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile, 35 lux on/18 lux off.

Other landscape elements (spike lights, inground up-lights, bollards & feature lighting):

Light fitting shall be controlled via an astronomical clock which is built into the Site lighting distribution board.

6. CONCLUSION

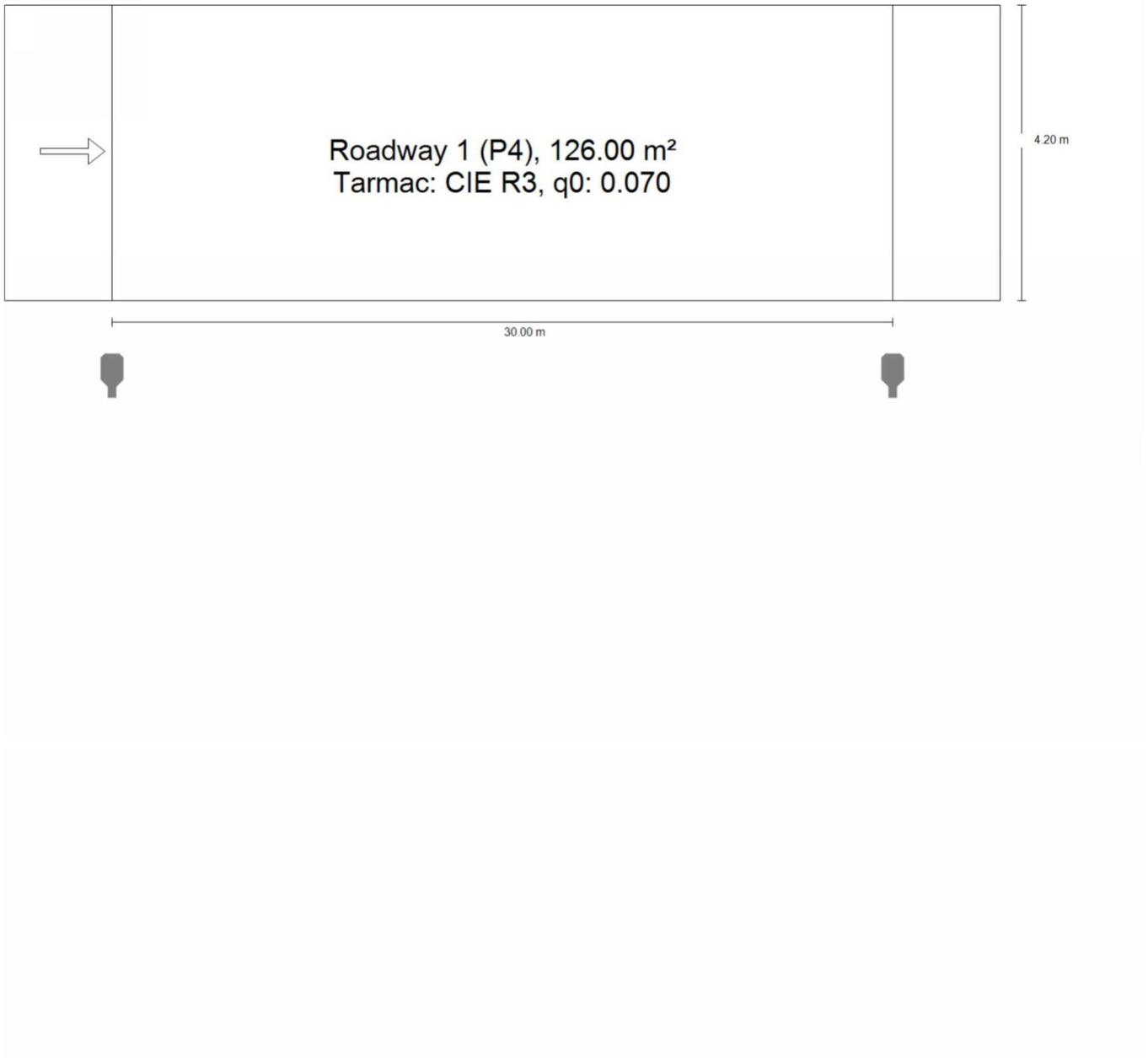
The proposed lighting installation achieves the following:

- Luminaire selection limits upward light spill.
- The lighting scheme achieves the recommended lux levels in accordance with current regulations and standards.
- The lighting scheme achieves good uniformity throughout the development to ensure good visibility at night.

APPENDIX 1
OPTIMISED SPACING CALCULATIONS/OPTIONS TO 30m

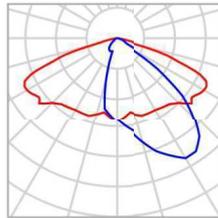
Street 1

Summary (according to EN 13201:2015)



Street 1

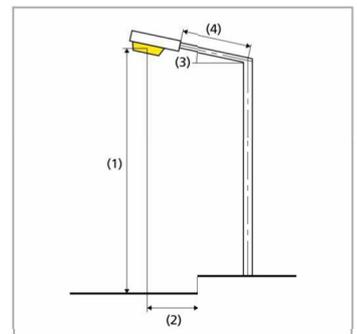
Summary (according to EN 13201:2015)



Manufacturer	Performance in Lighting	P	16.0 W
Article No.	3106154	$\Phi_{\text{Luminaire}}$	2089 lm
Article name	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket		
Fitting	1x KREOS SR/100 16W 730		

KREOS SR/100 16W 730 AN-96 DALI NEMA Socket (single side bottom)

Pole distance	30.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-1.000 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 16.0 W
Consumption	528.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	$\geq 70^\circ$: 637 cd/klm $\geq 80^\circ$: 94.4 cd/klm $\geq 90^\circ$: 0.00 cd/klm
Luminous intensity class The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.	G*3
Glare index class	D.5



Street 1

Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Roadway 1 (P4)	E_{av}	5.10 lx	[5.00 - 7.50] lx	✓
	E_{min}	1.72 lx	≥ 1.00 lx	✓
	$\text{Tl}^{(1)}$	12 %	-	-

(1) Informative, not part of the valuation

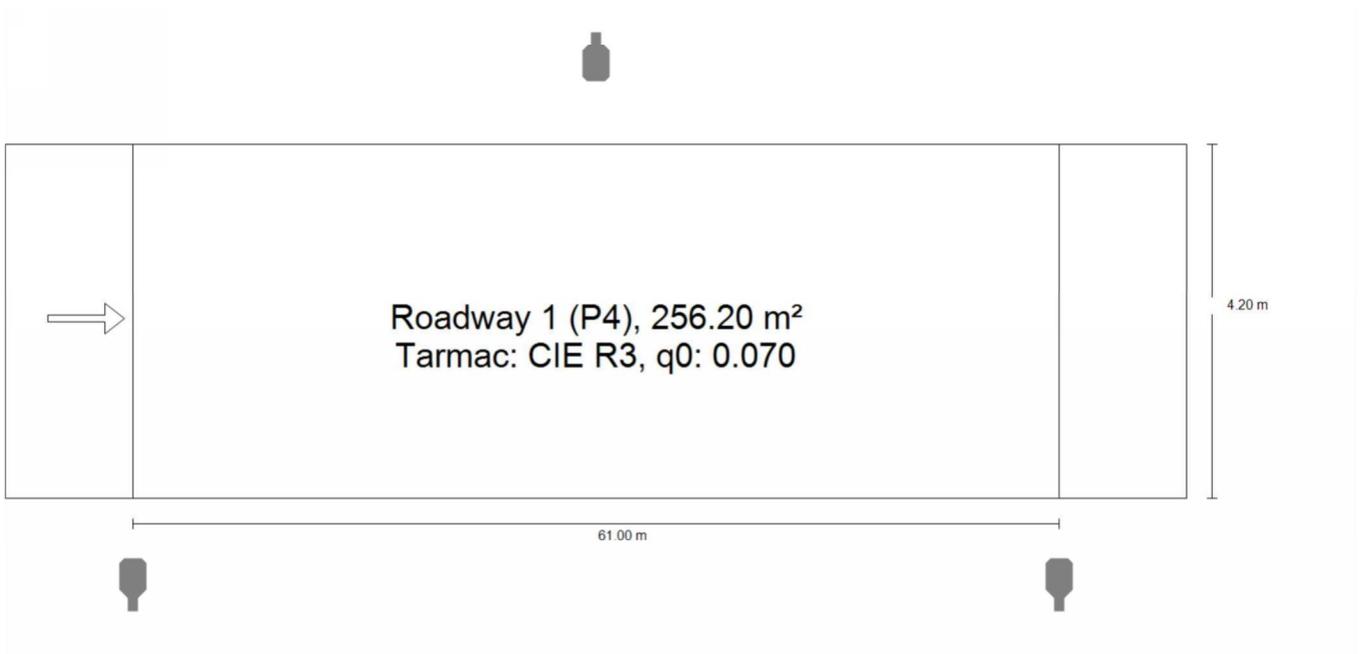
A maintenance factor of 0.67 was used for calculating for the installation.

Results for energy efficiency indicators

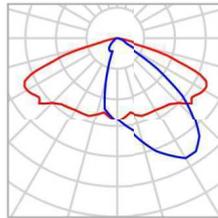
	Symbol	Calculated	Consumption
Street 1	D_p	0.025 W/lx*m ²	-
KREOS SR/100 16W 730 AN-96 DALI NEMA Socket (single side bottom)	D_e	0.5 kWh/m ² yr,	64.0 kWh/yr

Street 1

Summary (according to EN 13201:2015)



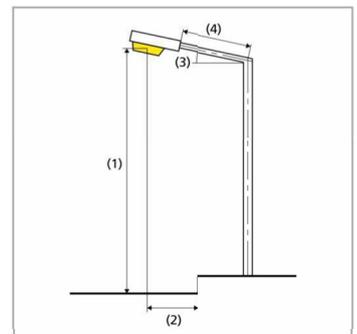
Street 1

Summary (according to EN 13201:2015)

Manufacturer	Performance in Lighting	P	16.0 W
Article No.	3106154	$\Phi_{\text{Luminaire}}$	2089 lm
Article name	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket		
Fitting	1x KREOS SR/100 16W 730		

KREOS SR/100 16W 730 AN-96 DALI NEMA Socket (both sides offset)

Pole distance	61.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-1.000 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 16.0 W
Consumption	512.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	$\geq 70^\circ$: 637 cd/klm $\geq 80^\circ$: 94.4 cd/klm $\geq 90^\circ$: 0.00 cd/klm
Luminous intensity class The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.	G*3
Glare index class	D.5



Street 1

Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Roadway 1 (P4)	E _{av}	5.07 lx	[5.00 - 7.50] lx	✓
	E _{min}	1.87 lx	≥ 1.00 lx	✓
	TI ⁽¹⁾	13 %	-	-

(1) Informative, not part of the valuation

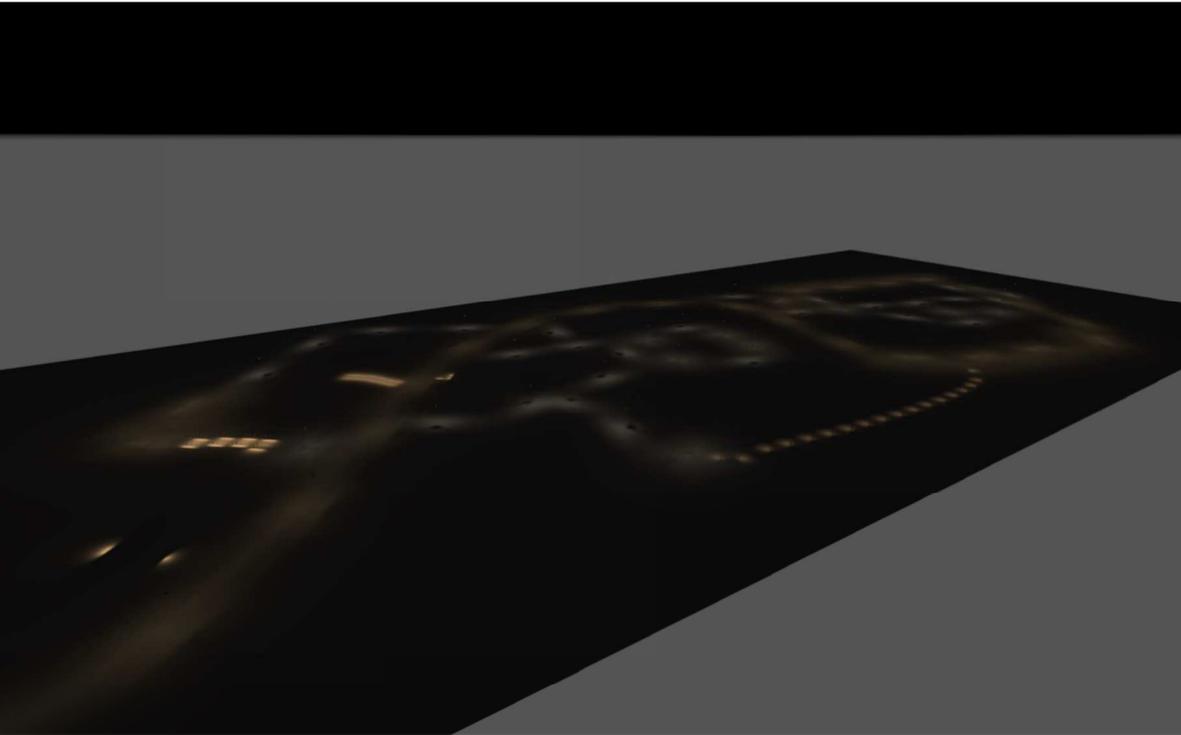
A maintenance factor of 0.67 was used for calculating for the installation.

Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Street 1	D _p	0.025 W/lx*m ²	-
KREOS SR/100 16W 730 AN-96 DALI NEMA Socket (both sides offset)	D _e	0.5 kWh/m ² yr,	128.0 kWh/yr

APPENDIX 2

SITE LIGHTING REPORT & LUMINAIRE SCHEDULE



GL Metec Dalguise Monkstown Embedded DWG 07.03.23

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Luminaire list

Φ_{total} 172686 lm	P_{total} 1944.9 W	Luminous efficacy 88.8 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
30	iGuzzini illuminazione S.p.A	EI32-15_X338-15	Walky - square - EI32.15 - Square optic assembly 180x180mm – AL optic – Warm White LED – 220÷240Vac - 9.9W 1550lm - 3000K - Grey	11.5 W	419 lm	36.4 lm/W
18	iGuzzini illuminazione S.p.A	EP04-15_EP17-15_B513-00	iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W	12.3 W	223 lm	18.1 lm/W
381	Not yet a DIALux member	Duo Luna 3000K (1 modules per m) 12v DC	Duo Luna 3000K (1 modules per m) 12v DC	0.5 W	35 lm	66.2 lm/W
9	Performance in Lighting	3106062	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey	18.0 W	2185 lm	121.4 lm/W
26	Performance in Lighting	3106066	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey	14.0 W	1696 lm	121.1 lm/W
18	Performance in Lighting	3106154	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket	16.0 W	2089 lm	130.6 lm/W
11	Performance in Lighting	3106268	KREOS SR/150 34W 730 AN-96 RPA	34.0 W	3764 lm	110.7 lm/W

Product data sheet

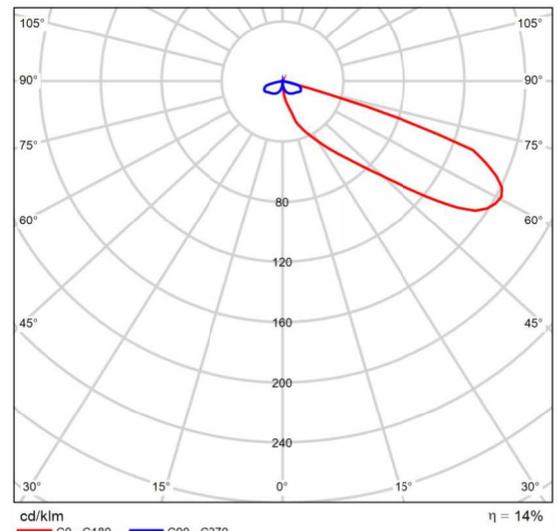
iGuzzini illuminazione S.p.A - iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W



Article No.	EP04-15_EP17-15_B513-00
P	12.3 W
Φ_{Lamp}	1650 lm
$\Phi_{Luminaire}$	223 lm
η	13.50 %
Luminous efficacy	18.1 lm/W
CCT	3000 K
CRI	80

EP04 :

Outdoor, ground or pavement-mounted direct light luminaire, designed to use LED lamps, with a 180° asymmetric optic. The complete product consists of an optical assembly and a cylindrical post to be ordered separately. The optical assembly is made up of various parts, including a top cover made of painted aluminium; a PMMA flux enhancer; a transparent polycarbonate emission lens with an extruded internal bracket and an LED circuit fixed in radial mode; a black-painted, die-cast aluminium cone; a die-cast aluminium lower box for housing the control gear; and silicone seals to guarantee a watertight seal between the top cover, the lens and the cone. The external aluminium parts have been subjected to a multi-step, pre-treatment process, in which the main phases are degreasing, fluorozirconation (a protective surface film) and sealing (with a nano-structured silane layer). The following painting stage consists of a primer and a liquid acrylic paint, cured at 150°C, with a high level of weather and UV ray resistance. At the bottom, the optical assembly is completed by a nickel-plated brass cable clamp and an H07RN-F 4x1mm rubber outlet cable L=1700 mm. The electrical connection requires IP or BOX IP connectors that need to be ordered separately. All external screws used are



Polar LDC

Product data sheet

iGuzzini illuminazione S.p.A - iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W

made of AISI 303 (A1) stainless steel.

EP17 :

The post is cylindrical and made of extruded aluminium. It houses the three stainless steel rods fixed to the base, which give the product such a high level of impact resistance. The post is anchored to the ground by a fixing base made of corrosion-resistant low copper content die-cast aluminium alloy. The base and post are subjected to a multi-step, pre-treatment process, in which the main phases are degreasing, fluorozirconation (a protective surface film) and sealing (with a nano-structured silane layer). The following painting stage consists of a primer and a liquid acrylic paint, cured at 150°C, with a high level of weather and UV ray resistance. All external screws used are made of A2 stainless steel.

B513 :

Fixing plate with anchor bolts

EP04.15 - Ø180mm optical assembly - Warm White LED -
220÷240Vac DALI - Super Comfort 180° optic - Full Cut-Off - 9.6W
1650lm - 3000K - Grey

EP17.15 - Post for iWay optical compartment Ø170 mm - h = 919 mm
- Grey

B513.00 - Counter-plate with anchor bolts - Indeterminate

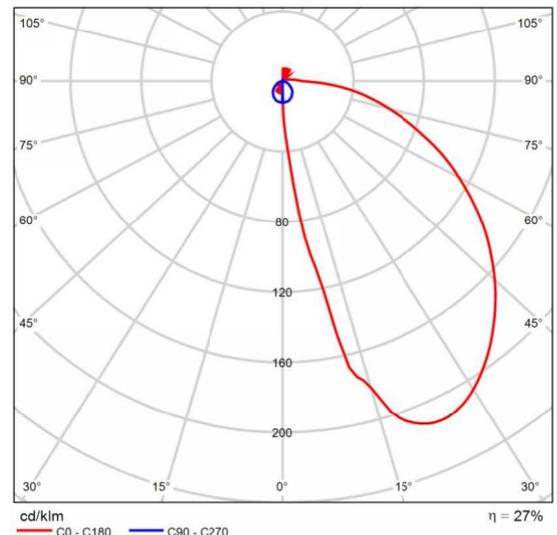
C52P - Lamp LED Warm White CRI>80

Product data sheet

iGuzzini illuminazione S.p.A - Walky - square - EI32.15 - Square optic assembly 180x180mm - AL optic - Warm White LED - 220÷240Vac - 9.9W 1550lm - 3000K - Grey



Article No.	EI32-15_X338-15
P	11.5 W
Φ_{Lamp}	1550 lm
$\Phi_{Luminaire}$	419 lm
η	27.00 %
Luminous efficacy	36.4 lm/W
CCT	3000 K
CRI	80



Polar LDC

EI32 :

Luminaire for walkways designed to use high visual comfort LED lamps. Ceiling and wall-recessed installation. It consists of an optical assembly with an IP66 protection rating and an outer casing or wall-mounted base to be ordered separately. The optical assembly and base are made of aluminium alloy treated with powder paint, which provides a high level of resistance to weather and UV rays. Plastic closure guard at the rear of the optical assembly. Complete with plastic cable gland and outlet cable. Sodium-calcium tempered satin finish safety glass. Luminaire with no visible screws and an anti-vandal system that uses an opening key to access the rear wiring compartment (supplied in the package). All external screws used are made of A2 stainless steel.

X338 :

Wall base for square Walky optical assembly 180x180mm. Made of die-cast aluminium and treated with powder paint, which provides a high level of resistance to weather and UV rays.

EI32.15 - Square optic assembly 180x180mm - AL optic - Warm White LED - 220÷240Vac - 9.9W 1550lm - 3000K - Grey

Product data sheet

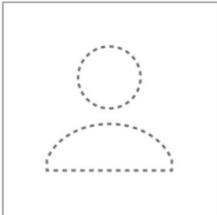
iGuzzini illuminazione S.p.A - Walky - square - EI32.15 - Square optic assembly 180x180mm - AL optic - Warm White LED - 220÷240Vac - 9.9W 1550lm - 3000K - Grey

X338.15 - Wall base - square - Grey

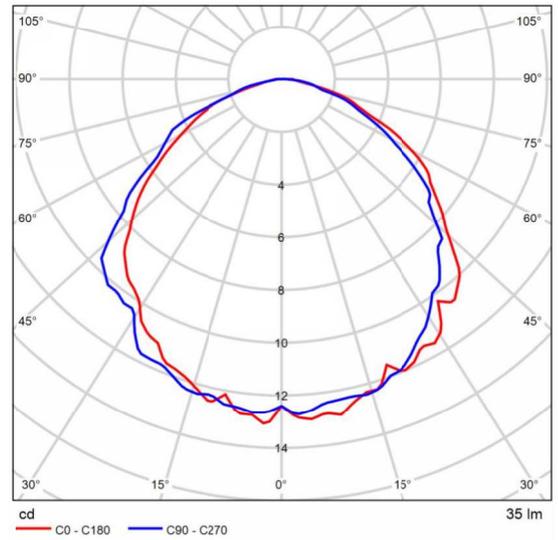
B28P - Lamp LED Warm White CRI>80

Product data sheet

Not yet a DIALux member - Duo Luna 3000K (1 modules per m) 12v DC



Article No.	Duo Luna 3000K (1 modules per m) 12v DC
P	0.5 W
$\Phi_{\text{Luminaire}}$	35 lm
Luminous efficacy	66.2 lm/W
CCT	3000 K
CRI	100



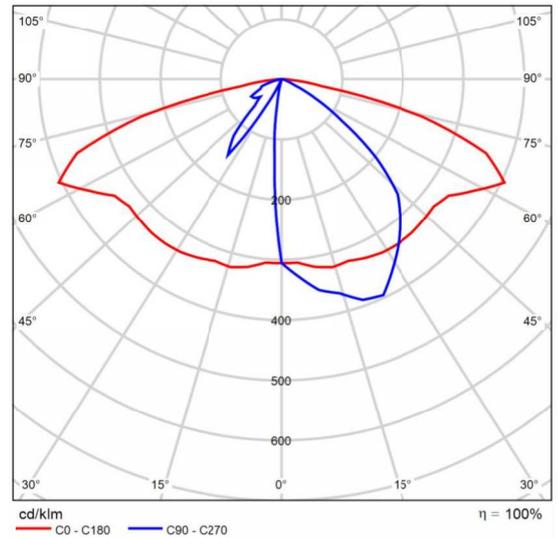
Polar LDC

Product data sheet

Performance in Lighting - HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey



Article No.	3106066
P	14.0 W
Φ_{Lamp}	1697 lm
$\Phi_{Luminaire}$	1696 lm
η	99.91 %
Luminous efficacy	121.1 lm/W
CCT	4000 K
CRI	70



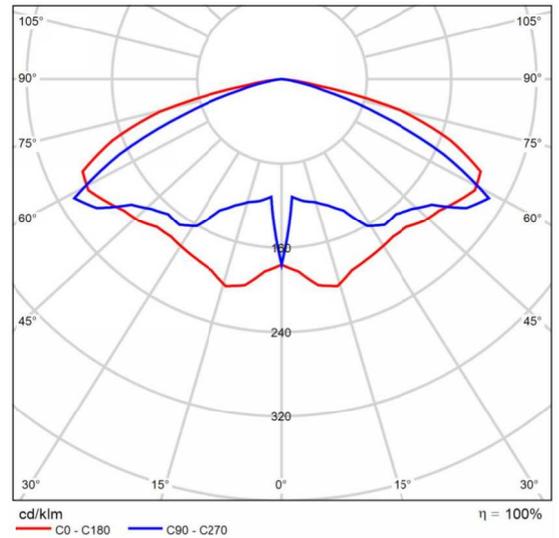
Polar LDC

Product data sheet

Performance in Lighting - HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey



Article No.	3106062
P	18.0 W
Φ_{Lamp}	2185 lm
$\Phi_{Luminaire}$	2185 lm
η	99.99 %
Luminous efficacy	121.4 lm/W
CCT	4000 K
CRI	70



Polar LDC

Glare evaluation according to UGR												
	70	70	50	50	30	70	70	50	50	30		
ρ Ceiling	50	30	50	30	30	50	30	50	30	30		
ρ Walls	20	20	20	20	20	20	20	20	20	20		
ρ Floor	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis						
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis						
2H	2H	28.5	30.1	28.8	30.3	30.6	27.8	29.4	28.1	29.7	30.0	
	3H	30.8	32.3	31.2	32.6	32.8	29.4	30.8	29.7	31.1	31.4	
	4H	31.5	32.9	31.8	33.1	33.5	29.6	30.9	29.9	31.2	31.5	
	6H	31.7	32.9	32.0	33.3	33.6	29.6	30.8	29.9	31.2	31.5	
	8H	31.6	32.9	32.0	33.2	33.5	29.5	30.8	29.9	31.1	31.4	
	12H	31.6	32.8	32.0	33.1	33.5	29.5	30.7	29.9	31.0	31.3	
4H	2H	29.7	31.1	30.0	31.4	31.7	29.3	30.7	29.6	31.0	31.3	
	3H	32.1	33.2	32.4	33.6	33.9	30.9	32.1	31.3	32.4	32.8	
	4H	32.7	33.8	33.2	34.2	34.5	31.1	32.2	31.6	32.6	32.9	
	6H	33.0	33.9	33.4	34.3	34.7	31.2	32.1	31.5	32.5	32.9	
	8H	33.0	33.8	33.4	34.2	34.6	31.2	32.0	31.6	32.4	32.8	
	12H	32.9	33.7	33.4	34.1	34.6	31.1	31.9	31.6	32.3	32.8	
8H	4H	32.9	33.8	33.4	34.2	34.6	31.5	32.4	31.9	32.8	33.2	
	6H	33.2	33.9	33.6	34.3	34.8	31.6	32.3	32.0	32.7	33.2	
	8H	33.2	33.8	33.7	34.2	34.7	31.6	32.2	32.1	32.6	33.1	
	12H	33.2	33.7	33.7	34.2	34.7	31.6	32.1	32.1	32.5	33.0	
	12H	4H	32.9	33.7	33.4	34.1	34.5	31.5	32.3	31.9	32.7	33.1
		6H	33.2	33.8	33.6	34.2	34.7	31.6	32.2	32.1	32.6	33.1
8H		33.2	33.7	33.7	34.2	34.7	31.6	32.1	32.1	32.6	33.1	
Variation of the observer position for the luminaire distances S												
S = 1.0H	+0.2 / -0.2					+0.2 / -0.2						
S = 1.5H	+0.4 / -0.5					+0.7 / -0.7						
S = 2.0H	+0.8 / -1.0					+1.4 / -1.7						
Standard table	BK05					BK04						
Correction summand	15.8					14.0						
Corrected glare indices referring to 2185lm Total luminous flux												

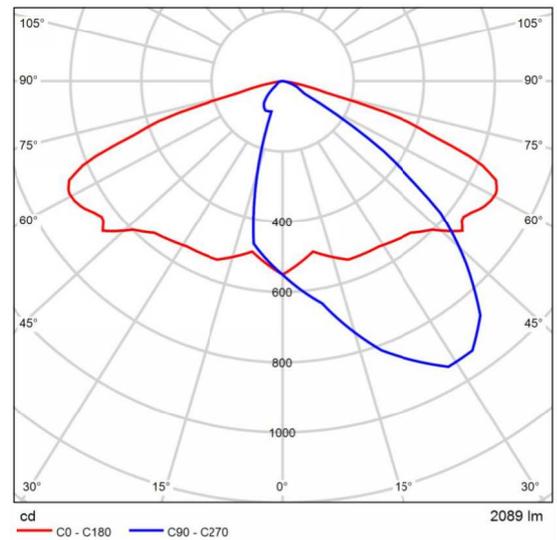
UGR diagram (SHR: 0.25)

Product data sheet

Performance in Lighting - KREOS SR/100 16W 730 AN-96 DALI NEMA Socket



Article No.	3106154
P	16.0 W
$\Phi_{\text{Luminaire}}$	2089 lm
Luminous efficacy	130.6 lm/W
CCT	3259 K
CRI	70



Polar LDC

Part number: 3106154. Series: KREOS.

LED street luminaire, comprising: Die-cast aluminium housing and cap, chemical pre-treated and painted polyester powder coat finish ISO 9227. Painted die-cast aluminium pole-top adaptor for pole \varnothing 60 / 76 mm. Pure aluminium high-performance reflectors, polished, oxidised, PVD 99.99% silver treated. This treatment creates a surface with greater than 97% reflectance and iridescence-free. Compliant with the UNI 10819 standards on light pollution. High resiliency anti-ageing silicone gasket with high elastic return capacity. Extra clear, tempered, toughened flat glass diffuser. Switch splitter automatically disconnects the power supply when the cable cover is opened. Die-cast aluminium retaining clip with stainless steel spring allows quick and tool-free access to the fixture for extraordinary maintenance. Removable galvanized sheet metal gear tray. Built-in driver. Integral surge protection device (SPD) against mains overvoltages up to 10 kV. Complete with 1 meter H07RN-F 2x1.5 mm² or H07RN-F 4x1.5 mm² cable for dimmable versions, which allows connection to the mains without opening the luminaire. Stainless steel external screws. NEMA versions are complete with NEMA SOCKET connected to a DALI driver and a watertight short-circuit cap allowing the on-off operation of the luminaire. These versions are designed for mounting SMART-compatible solutions. KREOS versions can be manufactured with all optics available for the series. Consult Factory. For other colour temperatures and different colour rendering index consult factory.

Product data sheet

Performance in Lighting - KREOS SR/100 16W 730 AN-96 DALI NEMA Socket

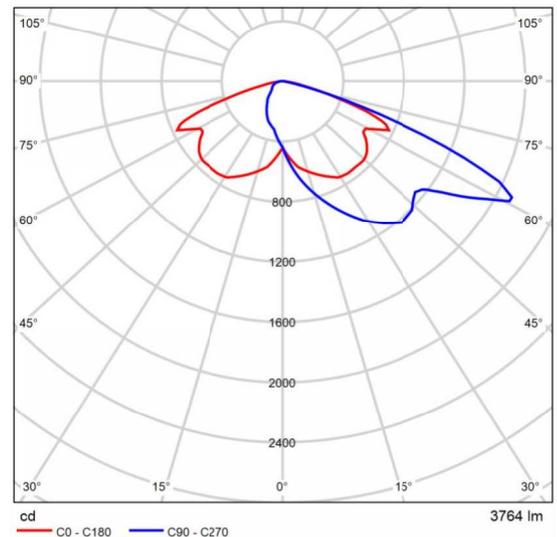
Mounting type: Street lighting. Colour/Finish: AN-96 / Anthracite gray / Textured. Shape: Rectangular. Net weight: 6.225 kg. International protection marking: IP66. IK08 9J xx5. Glow wire resistance: 960 °C. Ta MIN luminaire: -40° C. Ta MAX luminaire: 50° C. Optic: Road reflector - SR/100. Full cut-off. Lamps: 1. Lampholder: LED. Light Source: LED. ILCOS: DSS. Lightsource lumen output: 2562 lm. Luminaire lumen output: 2090 lm. Efficiency: 130 lm/W. Kelvin: 3000. CRI 70. MacAdam: 5. L90B10 @ 100000h. Insulation class: II. Supply voltage: 0/50/60. Wattage: 16 W. Power factor / COS Φ : 0.9. Dimmable DALI. CE certified. Mountable on normally flammable surfaces. EAC certified. RCM certified

Product data sheet

Performance in Lighting - KREOS SR/150 34W 730 AN-96 RPA



Article No.	3106268
P	34.0 W
$\Phi_{\text{Luminaire}}$	3764 lm
Luminous efficacy	110.7 lm/W
CCT	3259 K
CRI	70



Polar LDC

Part number: 3106268. Series: KREOS.

LED street luminaire, comprising: Die-cast aluminium housing and cap, chemical pre-treated and painted polyester powder coat finish ISO 9227. Painted die-cast aluminium pole-top adaptor for pole \varnothing 60 / 76 mm. Pure aluminium high-performance reflectors, polished, oxidised, PVD 99.99% silver treated. This treatment creates a surface with greater than 97% reflectance and iridescence-free. Compliant with the UNI 10819 standards on light pollution. High resiliency anti-ageing silicone gasket with high elastic return capacity. Extra clear, tempered, toughened flat glass diffuser. Switch splitter automatically disconnects the power supply when the cable cover is opened. Die-cast aluminium retaining clip with stainless steel spring allows quick and tool-free access to the fixture for extraordinary maintenance. Removable galvanized sheet metal gear tray. Built-in driver. Integral surge protection device (SPD) against mains overvoltages up to 10 kV. Complete with 1 meter H07RN-F 2x1.5 mm² or H07RN-F 4x1.5 mm² cable for dimmable versions, which allows connection to the mains without opening the luminaire. Stainless steel external screws. KREOS versions can be manufactured with all optics available for the series. Consult Factory. For other colour temperatures and different colour rendering index consult factory.

Mounting type: Street lighting. Colour/Finish: AN-96 / Anthracite gray / Textured. Shape: Rectangular. Net weight: 6.035 kg. International protection marking: IP66. IK08 9J xx5. Glow wire resistance: 960 °C. Ta MIN luminaire: -40° C. Ta MAX luminaire: 50°

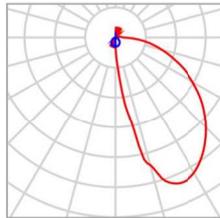
Product data sheet

Performance in Lighting - KREOS SR/150 34W 730 AN-96 RPA

C. Optic: Road reflector - SR/150. Full cut-off. Lamps: 1. Lampholder: LED. Light Source: LED. ILCOS: DSS. Lightsource lumen output: 5062 lm. Luminaire lumen output: 3757 lm. Efficiency: 110 lm/W. Kelvin: 3000. CRI 70. MacAdam: 5. L90B10 @ 100000h. Insulation class: II. Supply voltage: 50/60. Wattage: 34 W. Power factor / COS Φ : 0.9. Automatic derating. CE certified. Mountable on normally flammable surfaces. EAC certified. RCM certified

Site 1

Luminaire layout plan



Manufacturer	iGuzzini illuminazione S.p.A	P	11.5 W
Article No.	EI32-15_X338-15	Φ _{Luminaire}	419 lm
Article name	Walky - square - EI32.15 - Square optic assembly 180x180mm - AL optic - Warm White LED - 220÷240Vac - 9.9W 1550lm - 3000K - Grey		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
98.481 m	109.511 m	0.800 m	231
97.803 m	110.104 m	0.800 m	232
97.123 m	110.693 m	0.800 m	233
101.237 m	112.319 m	0.800 m	234
100.558 m	112.909 m	0.800 m	235
99.873 m	113.495 m	0.800 m	236
87.503 m	79.364 m	0.800 m	237
86.912 m	78.685 m	0.800 m	238
93.679 m	72.821 m	0.800 m	239
102.781 m	107.404 m	0.800 m	304

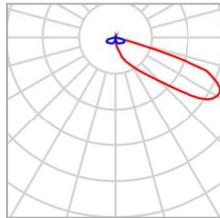
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
102.103 m	107.997 m	0.800 m	305
101.423 m	108.585 m	0.800 m	306
105.442 m	110.165 m	0.800 m	307
104.762 m	110.755 m	0.800 m	308
104.078 m	111.341 m	0.800 m	309
108.980 m	107.539 m	0.800 m	310
108.301 m	108.130 m	0.800 m	311
107.616 m	108.715 m	0.800 m	312
112.080 m	104.841 m	0.800 m	313
111.401 m	105.431 m	0.800 m	314
110.716 m	106.016 m	0.800 m	315
149.919 m	119.139 m	0.800 m	418
152.543 m	118.282 m	0.800 m	419
153.747 m	119.866 m	0.800 m	420
105.085 m	105.918 m	0.800 m	488
105.764 m	105.328 m	0.800 m	489
106.448 m	104.742 m	0.800 m	490
109.559 m	101.997 m	0.800 m	491
108.901 m	102.610 m	0.800 m	492
108.237 m	103.219 m	0.800 m	493

Site 1

Luminaire layout plan



Manufacturer	iGuzzini illuminazione S.p.A	P	12.3 W
Article No.	EP04-15_EP17-15_B513-00	Φ _{Luminaire}	223 lm
Article name	iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
177.800 m	52.427 m	0.001 m	285
187.800 m	50.010 m	0.001 m	286
198.000 m	48.700 m	0.001 m	287
208.000 m	47.400 m	0.001 m	288
218.000 m	46.500 m	0.001 m	289
238.000 m	45.600 m	0.001 m	290
257.778 m	47.778 m	0.001 m	291
248.000 m	45.962 m	0.001 m	292
223.000 m	46.100 m	0.001 m	293

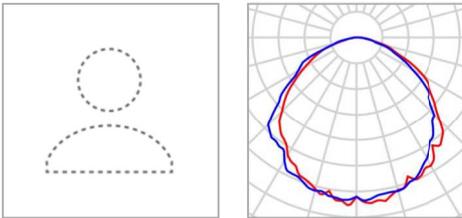
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
192.800 m	49.400 m	0.001 m	294
203.000 m	48.000 m	0.001 m	295
213.000 m	46.900 m	0.001 m	296
228.000 m	45.768 m	0.001 m	297
233.000 m	45.768 m	0.001 m	298
243.000 m	45.782 m	0.001 m	299
253.000 m	46.599 m	0.001 m	300
180.461 m	50.753 m	0.001 m	301
262.496 m	53.769 m	0.001 m	302

Site 1

Luminaire layout plan



Manufacturer	Not yet a DIALux member	P	0.5 W
Article No.	Duo Luna 3000K (1 modules per m) 12v DC	$\Phi_{\text{Luminaire}}$	35 lm
Article name	Duo Luna 3000K (1 modules per m) 12v DC		
Fitting	1x LED		

86 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	140.000 m / 120.822 m / 1.100 m	140.000 m	120.822 m	1.100 m	17
X-direction	86 pcs., Centre - centre, 0.111 m	139.942 m	120.917 m	1.100 m	18
Arrangement	A1	139.885 m	121.011 m	1.100 m	19
		139.827 m	121.106 m	1.100 m	20
		139.769 m	121.201 m	1.100 m	21
		139.711 m	121.296 m	1.100 m	22
		139.654 m	121.391 m	1.100 m	23
		139.596 m	121.486 m	1.100 m	24
		139.538 m	121.580 m	1.100 m	25
		139.480 m	121.675 m	1.100 m	26
		139.423 m	121.770 m	1.100 m	27
		139.365 m	121.865 m	1.100 m	28

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
139.307 m	121.960 m	1.100 m	29
139.250 m	122.054 m	1.100 m	30
139.192 m	122.149 m	1.100 m	31
139.134 m	122.244 m	1.100 m	32
139.076 m	122.339 m	1.100 m	33
139.019 m	122.434 m	1.100 m	34
138.961 m	122.528 m	1.100 m	35
138.903 m	122.623 m	1.100 m	36
138.846 m	122.718 m	1.100 m	37
138.788 m	122.813 m	1.100 m	38
138.730 m	122.908 m	1.100 m	39
138.672 m	123.003 m	1.100 m	40
138.615 m	123.097 m	1.100 m	41
138.557 m	123.192 m	1.100 m	42
138.499 m	123.287 m	1.100 m	43
138.442 m	123.382 m	1.100 m	44
138.384 m	123.477 m	1.100 m	45
138.326 m	123.571 m	1.100 m	46
138.268 m	123.666 m	1.100 m	47
138.211 m	123.761 m	1.100 m	48
138.153 m	123.856 m	1.100 m	49
138.095 m	123.951 m	1.100 m	50
138.038 m	124.045 m	1.100 m	51
137.980 m	124.140 m	1.100 m	52

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
137.922 m	124.235 m	1.100 m	53
137.864 m	124.330 m	1.100 m	54
137.807 m	124.425 m	1.100 m	55
137.749 m	124.520 m	1.100 m	56
137.691 m	124.614 m	1.100 m	57
137.633 m	124.709 m	1.100 m	58
137.576 m	124.804 m	1.100 m	59
137.518 m	124.899 m	1.100 m	60
137.460 m	124.994 m	1.100 m	61
137.403 m	125.088 m	1.100 m	62
137.345 m	125.183 m	1.100 m	63
137.287 m	125.278 m	1.100 m	64
137.229 m	125.373 m	1.100 m	65
137.172 m	125.468 m	1.100 m	66
137.114 m	125.562 m	1.100 m	67
137.056 m	125.657 m	1.100 m	68
136.999 m	125.752 m	1.100 m	69
136.941 m	125.847 m	1.100 m	70
136.883 m	125.942 m	1.100 m	71
136.825 m	126.037 m	1.100 m	72
136.768 m	126.131 m	1.100 m	73
136.710 m	126.226 m	1.100 m	74
136.652 m	126.321 m	1.100 m	75
136.595 m	126.416 m	1.100 m	76

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
136.537 m	126.511 m	1.100 m	77
136.479 m	126.605 m	1.100 m	78
136.421 m	126.700 m	1.100 m	79
136.364 m	126.795 m	1.100 m	80
136.306 m	126.890 m	1.100 m	81
136.248 m	126.985 m	1.100 m	82
136.191 m	127.079 m	1.100 m	83
136.133 m	127.174 m	1.100 m	84
136.075 m	127.269 m	1.100 m	85
136.017 m	127.364 m	1.100 m	86
135.960 m	127.459 m	1.100 m	87
135.902 m	127.554 m	1.100 m	88
135.844 m	127.648 m	1.100 m	89
135.786 m	127.743 m	1.100 m	90
135.729 m	127.838 m	1.100 m	91
135.671 m	127.933 m	1.100 m	92
135.613 m	128.028 m	1.100 m	93
135.556 m	128.122 m	1.100 m	94
135.498 m	128.217 m	1.100 m	95
135.440 m	128.312 m	1.100 m	96
135.382 m	128.407 m	1.100 m	97
135.325 m	128.502 m	1.100 m	98
135.267 m	128.596 m	1.100 m	430
135.209 m	128.691 m	1.100 m	431

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
135.152 m	128.786 m	1.100 m	432
135.094 m	128.881 m	1.100 m	433

89 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	141.732 m / 121.865 m / 1.100 m	141.732 m	121.865 m	1.100 m	99
X-direction	89 pcs., Centre - centre, 0.111 m	141.675 m	121.960 m	1.100 m	100
Arrangement	A2	141.617 m	122.055 m	1.100 m	101
		141.559 m	122.150 m	1.100 m	102
		141.502 m	122.244 m	1.100 m	103
		141.444 m	122.339 m	1.100 m	104
		141.386 m	122.434 m	1.100 m	105
		141.328 m	122.529 m	1.100 m	106
		141.271 m	122.624 m	1.100 m	107
		141.213 m	122.718 m	1.100 m	108
		141.155 m	122.813 m	1.100 m	109
		141.097 m	122.908 m	1.100 m	110
		141.040 m	123.003 m	1.100 m	111
		140.982 m	123.098 m	1.100 m	112
		140.924 m	123.193 m	1.100 m	113
		140.867 m	123.287 m	1.100 m	114
		140.809 m	123.382 m	1.100 m	115
		140.751 m	123.477 m	1.100 m	116
		140.693 m	123.572 m	1.100 m	117

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
140.636 m	123.667 m	1.100 m	118
140.578 m	123.761 m	1.100 m	119
140.520 m	123.856 m	1.100 m	120
140.463 m	123.951 m	1.100 m	121
140.405 m	124.046 m	1.100 m	122
140.347 m	124.141 m	1.100 m	123
140.289 m	124.235 m	1.100 m	124
140.232 m	124.330 m	1.100 m	125
140.174 m	124.425 m	1.100 m	126
140.116 m	124.520 m	1.100 m	127
140.059 m	124.615 m	1.100 m	128
140.001 m	124.710 m	1.100 m	129
139.943 m	124.804 m	1.100 m	130
139.885 m	124.899 m	1.100 m	131
139.828 m	124.994 m	1.100 m	132
139.770 m	125.089 m	1.100 m	133
139.712 m	125.184 m	1.100 m	134
139.654 m	125.278 m	1.100 m	135
139.597 m	125.373 m	1.100 m	136
139.539 m	125.468 m	1.100 m	137
139.481 m	125.563 m	1.100 m	138
139.424 m	125.658 m	1.100 m	139
139.366 m	125.752 m	1.100 m	140
139.308 m	125.847 m	1.100 m	141

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
139.250 m	125.942 m	1.100 m	142
139.193 m	126.037 m	1.100 m	143
139.135 m	126.132 m	1.100 m	144
139.077 m	126.227 m	1.100 m	145
139.020 m	126.321 m	1.100 m	146
138.962 m	126.416 m	1.100 m	147
138.904 m	126.511 m	1.100 m	148
138.846 m	126.606 m	1.100 m	149
138.789 m	126.701 m	1.100 m	150
138.731 m	126.795 m	1.100 m	151
138.673 m	126.890 m	1.100 m	152
138.616 m	126.985 m	1.100 m	153
138.558 m	127.080 m	1.100 m	154
138.500 m	127.175 m	1.100 m	155
138.442 m	127.269 m	1.100 m	156
138.385 m	127.364 m	1.100 m	157
138.327 m	127.459 m	1.100 m	158
138.269 m	127.554 m	1.100 m	159
138.212 m	127.649 m	1.100 m	160
138.154 m	127.744 m	1.100 m	161
138.096 m	127.838 m	1.100 m	162
138.038 m	127.933 m	1.100 m	163
137.981 m	128.028 m	1.100 m	164
137.923 m	128.123 m	1.100 m	165

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
137.865 m	128.218 m	1.100 m	166
137.807 m	128.312 m	1.100 m	167
137.750 m	128.407 m	1.100 m	168
137.692 m	128.502 m	1.100 m	169
137.634 m	128.597 m	1.100 m	170
137.577 m	128.692 m	1.100 m	171
137.519 m	128.786 m	1.100 m	172
137.461 m	128.881 m	1.100 m	173
137.403 m	128.976 m	1.100 m	174
137.346 m	129.071 m	1.100 m	175
137.288 m	129.166 m	1.100 m	176
137.230 m	129.261 m	1.100 m	177
137.173 m	129.355 m	1.100 m	178
137.115 m	129.450 m	1.100 m	421
137.057 m	129.545 m	1.100 m	422
136.999 m	129.640 m	1.100 m	423
136.942 m	129.735 m	1.100 m	424
136.884 m	129.829 m	1.100 m	425
136.826 m	129.924 m	1.100 m	426
136.769 m	130.019 m	1.100 m	427
136.711 m	130.114 m	1.100 m	428
136.653 m	130.209 m	1.100 m	429

52 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Site 1

Luminaire layout plan

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	135.031 m / 128.957 m / 1.100 m	135.031 m	128.957 m	1.100 m	179
X-direction	52 pcs., Centre - centre, 0.111 m	134.947 m	129.030 m	1.100 m	180
		134.863 m	129.103 m	1.100 m	181
Arrangement	A3	134.779 m	129.176 m	1.100 m	182
		134.696 m	129.249 m	1.100 m	183
		134.612 m	129.321 m	1.100 m	184
		134.528 m	129.394 m	1.100 m	185
		134.445 m	129.467 m	1.100 m	186
		134.361 m	129.540 m	1.100 m	187
		134.277 m	129.613 m	1.100 m	188
		134.193 m	129.686 m	1.100 m	189
		134.110 m	129.759 m	1.100 m	190
		134.026 m	129.832 m	1.100 m	191
		133.942 m	129.904 m	1.100 m	192
		133.858 m	129.977 m	1.100 m	193
		133.775 m	130.050 m	1.100 m	194
		133.691 m	130.123 m	1.100 m	195
		133.607 m	130.196 m	1.100 m	196
		133.524 m	130.269 m	1.100 m	197
		133.440 m	130.342 m	1.100 m	198
		133.356 m	130.415 m	1.100 m	199
		133.272 m	130.487 m	1.100 m	200
		133.189 m	130.560 m	1.100 m	201
133.105 m	130.633 m	1.100 m	202		

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
133.021 m	130.706 m	1.100 m	203
132.937 m	130.779 m	1.100 m	204
132.854 m	130.852 m	1.100 m	205
132.770 m	130.925 m	1.100 m	206
132.686 m	130.998 m	1.100 m	207
132.603 m	131.070 m	1.100 m	208
132.519 m	131.143 m	1.100 m	209
132.435 m	131.216 m	1.100 m	210
132.351 m	131.289 m	1.100 m	211
132.268 m	131.362 m	1.100 m	212
132.184 m	131.435 m	1.100 m	213
132.100 m	131.508 m	1.100 m	214
132.016 m	131.581 m	1.100 m	215
131.933 m	131.653 m	1.100 m	216
131.849 m	131.726 m	1.100 m	217
131.765 m	131.799 m	1.100 m	218
131.681 m	131.872 m	1.100 m	219
131.598 m	131.945 m	1.100 m	220
131.514 m	132.018 m	1.100 m	221
131.430 m	132.091 m	1.100 m	222
131.347 m	132.163 m	1.100 m	223
131.263 m	132.236 m	1.100 m	224
131.179 m	132.309 m	1.100 m	225
131.095 m	132.382 m	1.100 m	226

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
131.012 m	132.455 m	1.100 m	227
130.928 m	132.528 m	1.100 m	228
130.844 m	132.601 m	1.100 m	229
130.760 m	132.674 m	1.100 m	230

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	100.302 m / 110.726 m / 1.100 m	100.302 m	110.726 m	1.100 m	316
X-direction	25 pcs., Centre - centre, 0.110 m	100.218 m	110.797 m	1.100 m	317
		100.133 m	110.868 m	1.100 m	318
Arrangement	A8	100.049 m	110.940 m	1.100 m	319
		99.964 m	111.011 m	1.100 m	320
		99.880 m	111.082 m	1.100 m	321
		99.795 m	111.153 m	1.100 m	322
		99.711 m	111.224 m	1.100 m	323
		99.626 m	111.295 m	1.100 m	324
		99.542 m	111.367 m	1.100 m	325
		99.457 m	111.438 m	1.100 m	326
		99.373 m	111.509 m	1.100 m	327
		99.289 m	111.580 m	1.100 m	328
		99.204 m	111.651 m	1.100 m	329
		99.120 m	111.722 m	1.100 m	330
		99.035 m	111.794 m	1.100 m	331
		98.951 m	111.865 m	1.100 m	332

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
98.866 m	111.936 m	1.100 m	333
98.782 m	112.007 m	1.100 m	334
98.697 m	112.078 m	1.100 m	335
98.613 m	112.149 m	1.100 m	336
98.528 m	112.221 m	1.100 m	337
98.444 m	112.292 m	1.100 m	338
98.359 m	112.363 m	1.100 m	339
98.275 m	112.434 m	1.100 m	340

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	104.419 m / 108.414 m / 1.100 m	104.419 m	108.414 m	1.100 m	341
X-direction	25 pcs., Centre - centre, Distances not equal	104.335 m	108.485 m	1.100 m	342
		104.250 m	108.557 m	1.100 m	343
Arrangement	A9	104.166 m	108.628 m	1.100 m	344
		104.082 m	108.699 m	1.100 m	345
		103.997 m	108.770 m	1.100 m	346
		103.913 m	108.841 m	1.100 m	347
		103.828 m	108.912 m	1.100 m	348
		103.744 m	108.984 m	1.100 m	349
		103.659 m	109.055 m	1.100 m	350
		103.575 m	109.126 m	1.100 m	351
		103.490 m	109.197 m	1.100 m	352
		103.406 m	109.268 m	1.100 m	353

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
103.321 m	109.339 m	1.100 m	354
103.237 m	109.411 m	1.100 m	355
103.152 m	109.482 m	1.100 m	356
103.068 m	109.553 m	1.100 m	357
102.983 m	109.624 m	1.100 m	358
102.899 m	109.695 m	1.100 m	359
102.392 m	110.122 m	1.100 m	360
102.477 m	110.051 m	1.100 m	361
102.561 m	109.980 m	1.100 m	362
102.646 m	109.909 m	1.100 m	363
102.730 m	109.838 m	1.100 m	364
102.815 m	109.766 m	1.100 m	365

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	108.011 m / 106.018 m / 1.100 m	108.011 m	106.018 m	1.100 m	366
X-direction	25 pcs., Centre - centre, Distances not equal	107.926 m	106.089 m	1.100 m	367
		107.842 m	106.160 m	1.100 m	368
Arrangement	A10	107.757 m	106.231 m	1.100 m	369
		107.673 m	106.302 m	1.100 m	370
		107.588 m	106.373 m	1.100 m	371
		107.504 m	106.445 m	1.100 m	372
		107.419 m	106.516 m	1.100 m	373
		107.335 m	106.587 m	1.100 m	374

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
107.250 m	106.658 m	1.100 m	375
107.166 m	106.729 m	1.100 m	376
107.082 m	106.800 m	1.100 m	377
106.997 m	106.872 m	1.100 m	378
106.913 m	106.943 m	1.100 m	379
106.828 m	107.014 m	1.100 m	380
106.744 m	107.085 m	1.100 m	381
106.659 m	107.156 m	1.100 m	382
106.575 m	107.227 m	1.100 m	383
106.490 m	107.299 m	1.100 m	384
105.983 m	107.726 m	1.100 m	385
106.068 m	107.654 m	1.100 m	386
106.152 m	107.583 m	1.100 m	387
106.237 m	107.512 m	1.100 m	388
106.321 m	107.441 m	1.100 m	389
106.406 m	107.370 m	1.100 m	390

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	110.933 m / 102.843 m / 1.100 m	110.933 m	102.843 m	1.100 m	391
X-direction	25 pcs., Centre - centre, Distances not equal	110.848 m	102.914 m	1.100 m	392
		110.764 m	102.985 m	1.100 m	393
Arrangement	A11	110.679 m	103.056 m	1.100 m	394
		110.595 m	103.127 m	1.100 m	395

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
110.510 m	103.198 m	1.100 m	396
110.426 m	103.270 m	1.100 m	397
110.341 m	103.341 m	1.100 m	398
110.257 m	103.412 m	1.100 m	399
110.172 m	103.483 m	1.100 m	400
110.088 m	103.554 m	1.100 m	401
110.003 m	103.625 m	1.100 m	402
109.919 m	103.697 m	1.100 m	403
109.834 m	103.768 m	1.100 m	404
109.750 m	103.839 m	1.100 m	405
109.666 m	103.910 m	1.100 m	406
109.581 m	103.981 m	1.100 m	407
109.497 m	104.052 m	1.100 m	408
109.412 m	104.124 m	1.100 m	409
108.905 m	104.551 m	1.100 m	410
108.990 m	104.479 m	1.100 m	411
109.074 m	104.408 m	1.100 m	412
109.159 m	104.337 m	1.100 m	413
109.243 m	104.266 m	1.100 m	414
109.328 m	104.195 m	1.100 m	415

54 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	132.332 m / 133.987 m / 1.100 m	132.332 m	133.987 m	1.100 m	434

Site 1

Luminaire layout plan

X-direction	54 pcs., Centre - centre, 0.111 m	X	Y	Mounting height	Luminaire
Arrangement	A12	132.416 m	133.914 m	1.100 m	435
		132.500 m	133.841 m	1.100 m	436
		132.583 m	133.769 m	1.100 m	437
		132.667 m	133.696 m	1.100 m	438
		132.751 m	133.623 m	1.100 m	439
		132.835 m	133.550 m	1.100 m	440
		132.919 m	133.477 m	1.100 m	441
		133.002 m	133.404 m	1.100 m	442
		133.086 m	133.332 m	1.100 m	443
		133.170 m	133.259 m	1.100 m	444
		133.254 m	133.186 m	1.100 m	445
		133.337 m	133.113 m	1.100 m	446
		133.421 m	133.040 m	1.100 m	447
		133.505 m	132.967 m	1.100 m	448
		133.589 m	132.895 m	1.100 m	449
		133.672 m	132.822 m	1.100 m	450
		133.756 m	132.749 m	1.100 m	451
		133.840 m	132.676 m	1.100 m	452
		133.924 m	132.603 m	1.100 m	453
		134.007 m	132.530 m	1.100 m	454
		134.091 m	132.457 m	1.100 m	455
		134.175 m	132.385 m	1.100 m	456
		134.259 m	132.312 m	1.100 m	457
		134.342 m	132.239 m	1.100 m	458

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
134.426 m	132.166 m	1.100 m	459
134.510 m	132.093 m	1.100 m	460
134.594 m	132.020 m	1.100 m	461
134.677 m	131.948 m	1.100 m	462
134.761 m	131.875 m	1.100 m	463
134.845 m	131.802 m	1.100 m	464
134.929 m	131.729 m	1.100 m	465
135.013 m	131.656 m	1.100 m	466
135.096 m	131.583 m	1.100 m	467
135.180 m	131.511 m	1.100 m	468
135.264 m	131.438 m	1.100 m	469
135.348 m	131.365 m	1.100 m	470
135.431 m	131.292 m	1.100 m	471
135.515 m	131.219 m	1.100 m	472
135.599 m	131.146 m	1.100 m	473
135.683 m	131.074 m	1.100 m	474
135.766 m	131.001 m	1.100 m	475
135.850 m	130.928 m	1.100 m	476
135.934 m	130.855 m	1.100 m	477
136.018 m	130.782 m	1.100 m	478
136.101 m	130.709 m	1.100 m	479
136.185 m	130.637 m	1.100 m	480
136.269 m	130.564 m	1.100 m	481
136.353 m	130.491 m	1.100 m	482

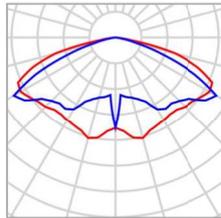
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
136.436 m	130.418 m	1.100 m	483
136.520 m	130.345 m	1.100 m	484
132.248 m	134.060 m	1.100 m	485
132.165 m	134.133 m	1.100 m	486
132.081 m	134.206 m	1.100 m	487

Site 1

Luminaire layout plan



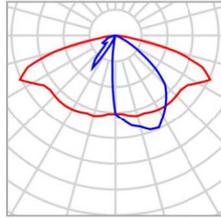
Manufacturer	Performance in Lighting	P	18.0 W
Article No.	3106062	$\Phi_{\text{Luminaire}}$	2185 lm
Article name	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
210.932 m	116.868 m	4.500 m	258
206.910 m	98.876 m	4.500 m	259
232.397 m	109.097 m	4.500 m	260
231.885 m	96.685 m	4.500 m	261
174.876 m	56.641 m	4.500 m	262
285.940 m	109.324 m	4.500 m	278
327.013 m	78.218 m	4.500 m	279
313.447 m	87.253 m	4.500 m	280
116.833 m	97.358 m	4.500 m	417

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting
Article No.	3106066
Article name	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey
Fitting	1x LED

P	14.0 W
$\Phi_{\text{Luminaire}}$	1696 lm

2 x Performance in Lighting HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	131.149 m / 164.743 m / 4.500 m	131.149 m	164.743 m	4.500 m	252
X-direction	2 pcs., Centre - centre, 25.000 m	114.945 m	145.705 m	4.500 m	253
Arrangement	A6				

2 x Performance in Lighting HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	149.621 m / 167.625 m / 4.500 m	149.621 m	167.625 m	4.500 m	254
X-direction	2 pcs., Centre - centre, 25.000 m	171.737 m	155.969 m	4.500 m	255
Arrangement	A7				

Individual luminaires

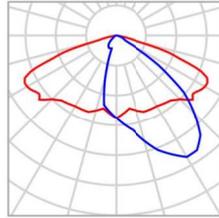
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
192.427 m	138.425 m	4.500 m	16
198.442 m	111.033 m	4.500 m	256
191.203 m	123.229 m	4.500 m	257
171.321 m	72.663 m	4.500 m	263
168.721 m	90.441 m	4.500 m	264
140.753 m	94.586 m	4.500 m	265
161.403 m	93.814 m	4.500 m	266
183.756 m	98.446 m	4.500 m	267
221.991 m	87.873 m	4.500 m	268
227.528 m	121.415 m	4.500 m	269
173.365 m	125.724 m	4.500 m	270
270.908 m	143.655 m	4.500 m	271
352.000 m	107.723 m	4.501 m	272
345.848 m	86.429 m	4.501 m	273
306.715 m	75.955 m	4.501 m	274
296.722 m	92.117 m	4.501 m	275
292.432 m	121.832 m	4.501 m	276
271.521 m	114.008 m	4.501 m	277
333.929 m	95.561 m	4.501 m	281
299.132 m	106.066 m	4.501 m	282
316.019 m	99.834 m	4.501 m	283
358.282 m	88.912 m	4.501 m	284

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting	P	16.0 W
Article No.	3106154	$\Phi_{\text{Luminaire}}$	2089 lm
Article name	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket		
Fitting	1x KREOS SR/100 16W 730		

Individual luminaires

X	Y	Mounting height	Luminaire
40.495 m	50.345 m	6.000 m	1
68.351 m	45.754 m	6.000 m	2
94.915 m	54.514 m	6.000 m	3
114.100 m	74.400 m	6.000 m	4
131.302 m	96.462 m	6.000 m	5
146.023 m	117.256 m	6.000 m	6
163.633 m	140.897 m	6.000 m	7
189.475 m	147.805 m	6.000 m	8
215.477 m	151.559 m	6.000 m	9
239.946 m	145.801 m	6.000 m	10
257.892 m	129.965 m	6.000 m	11
11.100 m	56.500 m	6.000 m	12

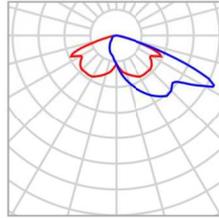
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
-18.272 m	62.448 m	6.000 m	13
342.293 m	79.404 m	6.001 m	14
336.375 m	56.161 m	6.000 m	15
359.230 m	101.247 m	6.100 m	243
262.894 m	110.221 m	6.000 m	248
257.329 m	83.055 m	6.000 m	249

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting	P	34.0 W
Article No.	3106268	$\Phi_{\text{Luminaire}}$	3764 lm
Article name	KREOS SR/150 34W 730 AN-96 RPA		
Fitting	1x KREOS SR/150 34W 730		

4 x Performance in Lighting KREOS SR/150 34W 730 AN-96 RPA

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	297.254 m / 133.668 m / 6.000 m	297.254 m	133.668 m	6.000 m	241
X-direction	4 pcs., Centre - centre, 20.000 m	316.680 m	128.910 m	6.000 m	242
Arrangement	A4	336.106 m	124.151 m	6.000 m	244
		355.531 m	119.392 m	6.000 m	245

2 x Performance in Lighting KREOS SR/150 34W 730 AN-96 RPA

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	296.090 m / 54.848 m / 6.000 m	296.090 m	54.848 m	6.000 m	246
X-direction	3 pcs., Centre - centre, Distances not equal	276.661 m	59.594 m	6.000 m	247
Arrangement	A5				

Site 1

Luminaire layout plan

Individual luminaires

X	Y	Mounting height	Luminaire
278.642 m	130.917 m	6.001 m	240
90.737 m	114.192 m	6.001 m	250
97.058 m	134.224 m	6.001 m	251
261.397 m	68.910 m	6.000 m	303
320.545 m	44.725 m	6.000 m	416

Site 1

Luminaire list

Φ_{total} 172686 lm	P_{total} 1944.9 W	Luminous efficacy 88.8 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
30	iGuzzini illuminazione S.p.A	EI32-15_X338-15	Walky - square - EI32.15 - Square optic assembly 180x180mm – AL optic – Warm White LED – 220÷240Vac - 9.9W 1550lm - 3000K - Grey	11.5 W	419 lm	36.4 lm/W
18	iGuzzini illuminazione S.p.A	EP04-15_EP17-15_B513-00	iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W	12.3 W	223 lm	18.1 lm/W
381	Not yet a DIALux member	Duo Luna 3000K (1 modules per m) 12v DC	Duo Luna 3000K (1 modules per m) 12v DC	0.5 W	35 lm	66.2 lm/W
9	Performance in Lighting	3106062	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey	18.0 W	2185 lm	121.4 lm/W
26	Performance in Lighting	3106066	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey	14.0 W	1696 lm	121.1 lm/W
18	Performance in Lighting	3106154	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket	16.0 W	2089 lm	130.6 lm/W
11	Performance in Lighting	3106268	KREOS SR/150 34W 730 AN-96 RPA	34.0 W	3764 lm	110.7 lm/W

Site 1 (Light scene 1)

Calculation objects



Site 1 (Light scene 1)

Calculation objects

Surface result objects

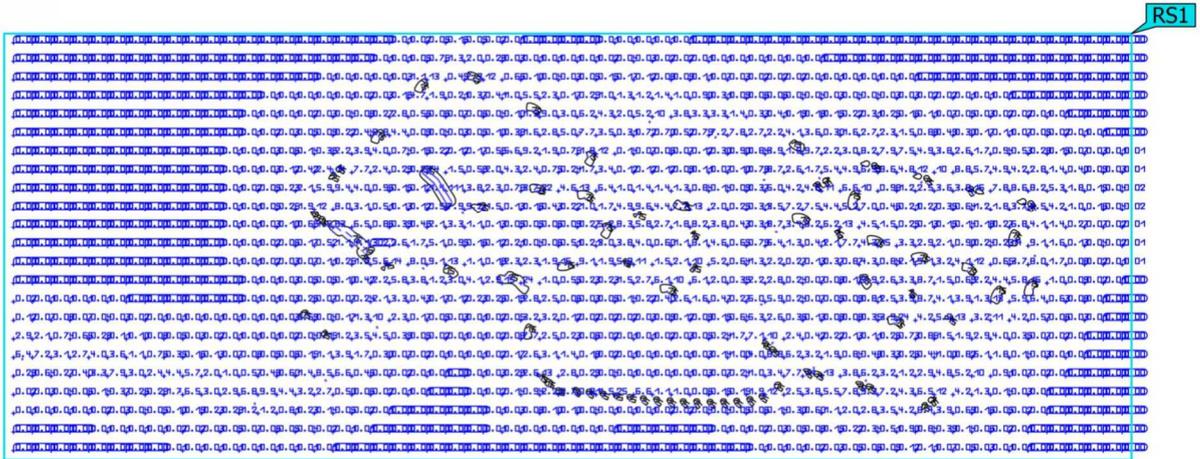
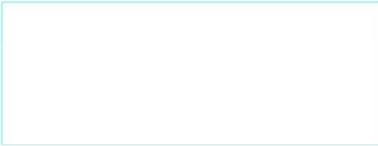
Properties	Ø	min	max	g ₁	g ₂	Index
Surface result object 1 Perpendicular illuminance (adaptive) Height: 0.001 m	1.71 lx	0.000 lx	373 lx	0.00	0.00	RS1
Surface result object 1 Luminance Height: 0.001 m	0.11 cd/m ²	0.000 cd/m ²	23.7 cd/m ²	0.00	0.00	RS1

Calculation surfaces

Properties	E	E _{min}	E _{max}	g ₁	g ₂	Index
Site Lighting Perpendicular illuminance Height: 0.001 m	1.71 lx	0.000 lx	203 lx	0.00	0.00	CG1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

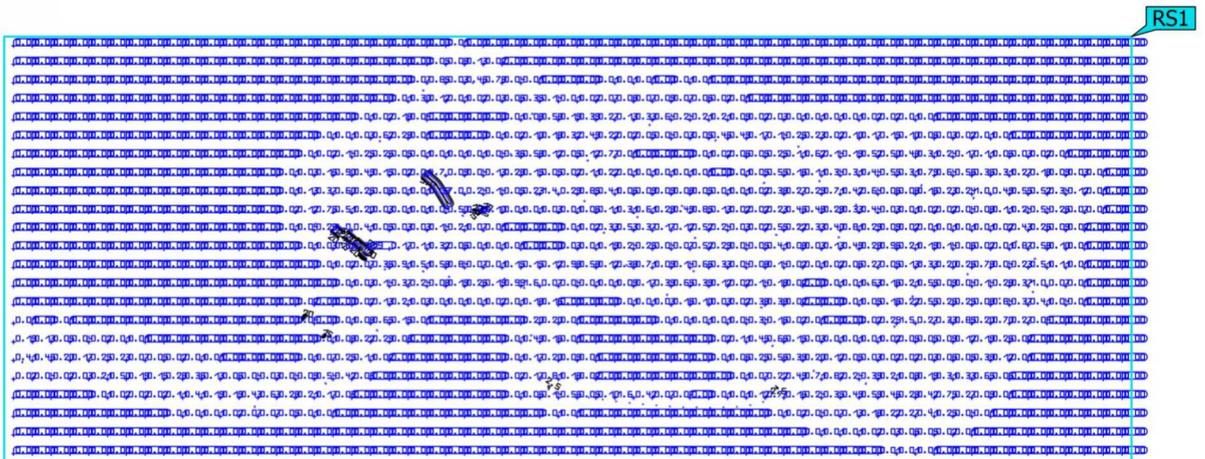
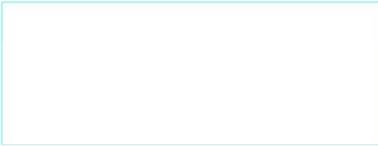
Site 1 (Light scene 1)
Surface result object 1



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Surface result object 1 Perpendicular illuminance (adaptive) Height: 0.001 m	1.71 lx	0.000 lx	373 lx	0.00	0.00	RS1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)
Surface result object 1

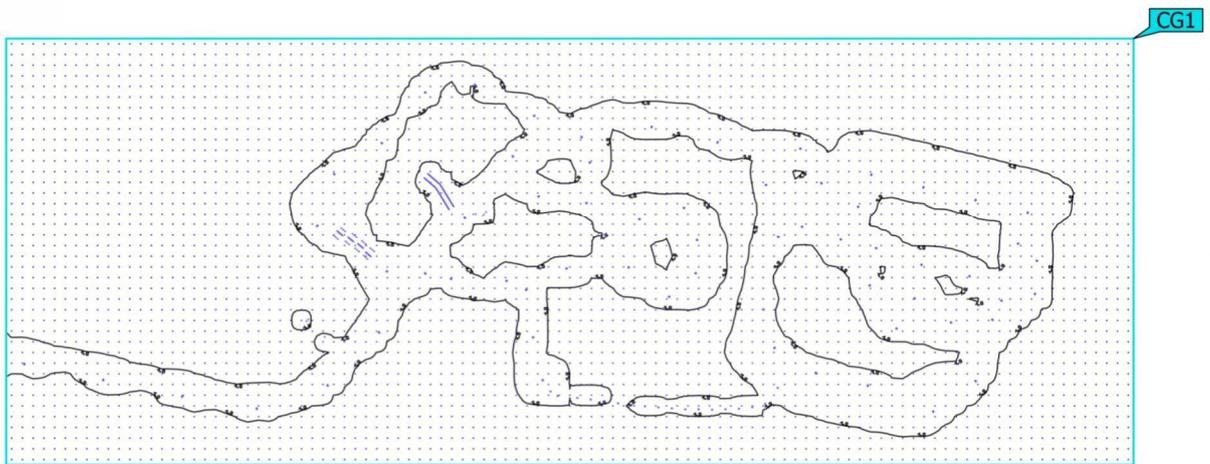


Properties	Ø	min	max	g ₁	g ₂	Index
Surface result object 1 Luminance Height: 0.001 m	0.11 cd/m ²	0.000 cd/m ²	23.7 cd/m ²	0.00	0.00	RS1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)

Site Lighting



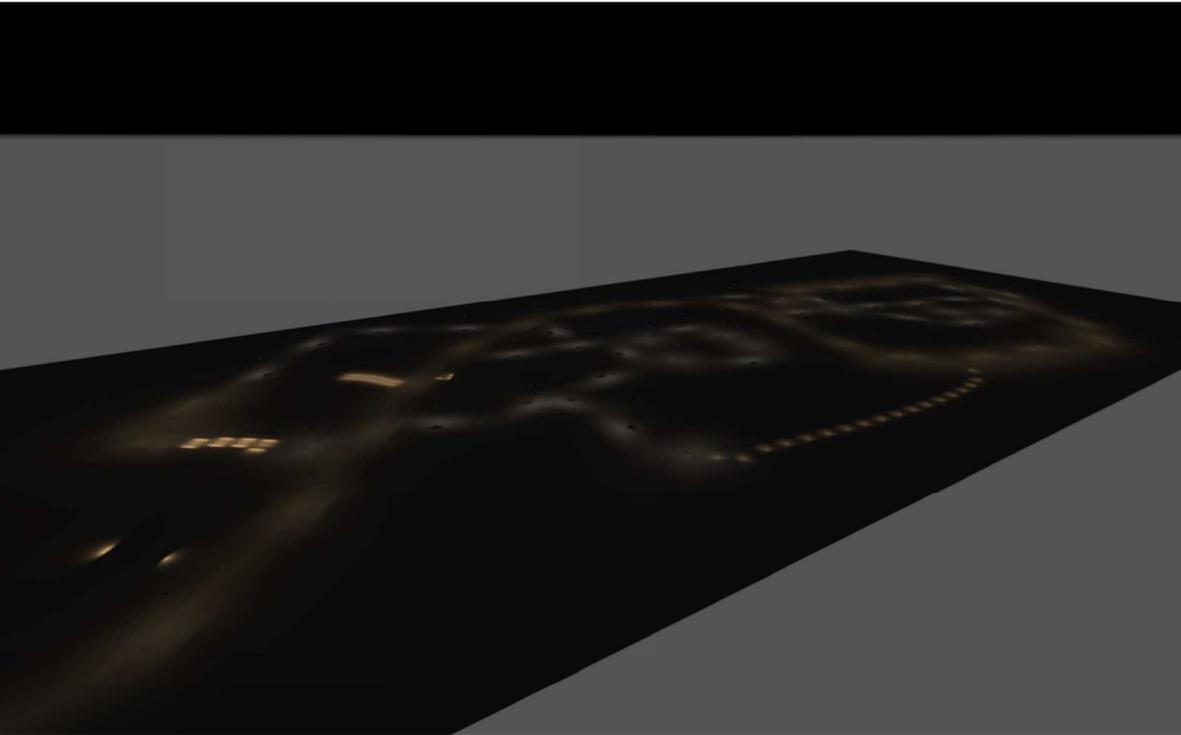
Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Site Lighting Perpendicular illuminance Height: 0.001 m	1.71 lx	0.000 lx	203 lx	0.00	0.00	CG1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))



APPENDIX 3

ROAD LIGHTING REPORT



GL Metec Dalguise Monkstown Embedded DWG 07.03.23

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Luminaire list

Φ_{total} 172686 lm	P_{total} 1944.9 W	Luminous efficacy 88.8 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
30	iGuzzini illuminazione S.p.A	EI32-15_X338-15	Walky - square - EI32.15 - Square optic assembly 180x180mm – AL optic – Warm White LED – 220÷240Vac - 9.9W 1550lm - 3000K - Grey	11.5 W	419 lm	36.4 lm/W
18	iGuzzini illuminazione S.p.A	EP04-15_EP17-15_B513-00	iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W	12.3 W	223 lm	18.1 lm/W
381	Not yet a DIALux member	Duo Luna 3000K (1 modules per m) 12v DC	Duo Luna 3000K (1 modules per m) 12v DC	0.5 W	35 lm	66.2 lm/W
9	Performance in Lighting	3106062	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey	18.0 W	2185 lm	121.4 lm/W
26	Performance in Lighting	3106066	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey	14.0 W	1696 lm	121.1 lm/W
18	Performance in Lighting	3106154	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket	16.0 W	2089 lm	130.6 lm/W
11	Performance in Lighting	3106268	KREOS SR/150 34W 730 AN-96 RPA	34.0 W	3764 lm	110.7 lm/W

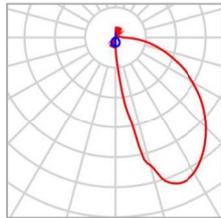
Site 1

Luminaire layout plan



Site 1

Luminaire layout plan



Manufacturer	iGuzzini illuminazione S.p.A	P	11.5 W
Article No.	EI32-15_X338-15	Φ _{Luminaire}	419 lm
Article name	Walky - square - EI32.15 - Square optic assembly 180x180mm - AL optic - Warm White LED - 220÷240Vac - 9.9W 1550lm - 3000K - Grey		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
98.481 m	109.511 m	0.800 m	231
97.803 m	110.104 m	0.800 m	232
97.123 m	110.693 m	0.800 m	233
101.237 m	112.319 m	0.800 m	234
100.558 m	112.909 m	0.800 m	235
99.873 m	113.495 m	0.800 m	236
87.503 m	79.364 m	0.800 m	237
86.912 m	78.685 m	0.800 m	238
93.679 m	72.821 m	0.800 m	239
102.781 m	107.404 m	0.800 m	304

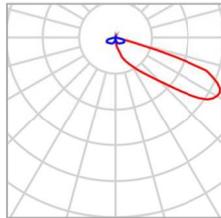
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
102.103 m	107.997 m	0.800 m	305
101.423 m	108.585 m	0.800 m	306
105.442 m	110.165 m	0.800 m	307
104.762 m	110.755 m	0.800 m	308
104.078 m	111.341 m	0.800 m	309
108.980 m	107.539 m	0.800 m	310
108.301 m	108.130 m	0.800 m	311
107.616 m	108.715 m	0.800 m	312
112.080 m	104.841 m	0.800 m	313
111.401 m	105.431 m	0.800 m	314
110.716 m	106.016 m	0.800 m	315
149.919 m	119.139 m	0.800 m	418
152.543 m	118.282 m	0.800 m	419
153.747 m	119.866 m	0.800 m	420
105.085 m	105.918 m	0.800 m	488
105.764 m	105.328 m	0.800 m	489
106.448 m	104.742 m	0.800 m	490
109.559 m	101.997 m	0.800 m	491
108.901 m	102.610 m	0.800 m	492
108.237 m	103.219 m	0.800 m	493

Site 1

Luminaire layout plan



Manufacturer	iGuzzini illuminazione S.p.A	P	12.3 W
Article No.	EP04-15_EP17-15_B513-00	Φ _{Luminaire}	223 lm
Article name	iWay Super comfort - Round - Leuchtgehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
177.800 m	52.427 m	0.001 m	285
187.800 m	50.010 m	0.001 m	286
198.000 m	48.700 m	0.001 m	287
208.000 m	47.400 m	0.001 m	288
218.000 m	46.500 m	0.001 m	289
238.000 m	45.600 m	0.001 m	290
257.778 m	47.778 m	0.001 m	291
248.000 m	45.962 m	0.001 m	292
223.000 m	46.100 m	0.001 m	293

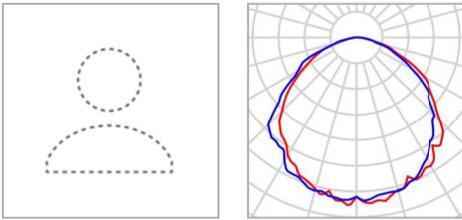
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
192.800 m	49.400 m	0.001 m	294
203.000 m	48.000 m	0.001 m	295
213.000 m	46.900 m	0.001 m	296
228.000 m	45.768 m	0.001 m	297
233.000 m	45.768 m	0.001 m	298
243.000 m	45.782 m	0.001 m	299
253.000 m	46.599 m	0.001 m	300
180.461 m	50.753 m	0.001 m	301
262.496 m	53.769 m	0.001 m	302

Site 1

Luminaire layout plan



Manufacturer	Not yet a DIALux member	P	0.5 W
Article No.	Duo Luna 3000K (1 modules per m) 12v DC	Φ _{Luminaire}	35 lm
Article name	Duo Luna 3000K (1 modules per m) 12v DC		
Fitting	1x LED		

86 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	140.000 m / 120.822 m / 1.100 m	140.000 m	120.822 m	1.100 m	17
X-direction	86 pcs., Centre - centre, 0.111 m	139.942 m	120.917 m	1.100 m	18
Arrangement	A1	139.885 m	121.011 m	1.100 m	19
		139.827 m	121.106 m	1.100 m	20
		139.769 m	121.201 m	1.100 m	21
		139.711 m	121.296 m	1.100 m	22
		139.654 m	121.391 m	1.100 m	23
		139.596 m	121.486 m	1.100 m	24
		139.538 m	121.580 m	1.100 m	25
		139.480 m	121.675 m	1.100 m	26
		139.423 m	121.770 m	1.100 m	27
		139.365 m	121.865 m	1.100 m	28

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
139.307 m	121.960 m	1.100 m	29
139.250 m	122.054 m	1.100 m	30
139.192 m	122.149 m	1.100 m	31
139.134 m	122.244 m	1.100 m	32
139.076 m	122.339 m	1.100 m	33
139.019 m	122.434 m	1.100 m	34
138.961 m	122.528 m	1.100 m	35
138.903 m	122.623 m	1.100 m	36
138.846 m	122.718 m	1.100 m	37
138.788 m	122.813 m	1.100 m	38
138.730 m	122.908 m	1.100 m	39
138.672 m	123.003 m	1.100 m	40
138.615 m	123.097 m	1.100 m	41
138.557 m	123.192 m	1.100 m	42
138.499 m	123.287 m	1.100 m	43
138.442 m	123.382 m	1.100 m	44
138.384 m	123.477 m	1.100 m	45
138.326 m	123.571 m	1.100 m	46
138.268 m	123.666 m	1.100 m	47
138.211 m	123.761 m	1.100 m	48
138.153 m	123.856 m	1.100 m	49
138.095 m	123.951 m	1.100 m	50
138.038 m	124.045 m	1.100 m	51
137.980 m	124.140 m	1.100 m	52

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
137.922 m	124.235 m	1.100 m	53
137.864 m	124.330 m	1.100 m	54
137.807 m	124.425 m	1.100 m	55
137.749 m	124.520 m	1.100 m	56
137.691 m	124.614 m	1.100 m	57
137.633 m	124.709 m	1.100 m	58
137.576 m	124.804 m	1.100 m	59
137.518 m	124.899 m	1.100 m	60
137.460 m	124.994 m	1.100 m	61
137.403 m	125.088 m	1.100 m	62
137.345 m	125.183 m	1.100 m	63
137.287 m	125.278 m	1.100 m	64
137.229 m	125.373 m	1.100 m	65
137.172 m	125.468 m	1.100 m	66
137.114 m	125.562 m	1.100 m	67
137.056 m	125.657 m	1.100 m	68
136.999 m	125.752 m	1.100 m	69
136.941 m	125.847 m	1.100 m	70
136.883 m	125.942 m	1.100 m	71
136.825 m	126.037 m	1.100 m	72
136.768 m	126.131 m	1.100 m	73
136.710 m	126.226 m	1.100 m	74
136.652 m	126.321 m	1.100 m	75
136.595 m	126.416 m	1.100 m	76

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
136.537 m	126.511 m	1.100 m	77
136.479 m	126.605 m	1.100 m	78
136.421 m	126.700 m	1.100 m	79
136.364 m	126.795 m	1.100 m	80
136.306 m	126.890 m	1.100 m	81
136.248 m	126.985 m	1.100 m	82
136.191 m	127.079 m	1.100 m	83
136.133 m	127.174 m	1.100 m	84
136.075 m	127.269 m	1.100 m	85
136.017 m	127.364 m	1.100 m	86
135.960 m	127.459 m	1.100 m	87
135.902 m	127.554 m	1.100 m	88
135.844 m	127.648 m	1.100 m	89
135.786 m	127.743 m	1.100 m	90
135.729 m	127.838 m	1.100 m	91
135.671 m	127.933 m	1.100 m	92
135.613 m	128.028 m	1.100 m	93
135.556 m	128.122 m	1.100 m	94
135.498 m	128.217 m	1.100 m	95
135.440 m	128.312 m	1.100 m	96
135.382 m	128.407 m	1.100 m	97
135.325 m	128.502 m	1.100 m	98
135.267 m	128.596 m	1.100 m	430
135.209 m	128.691 m	1.100 m	431

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
135.152 m	128.786 m	1.100 m	432
135.094 m	128.881 m	1.100 m	433

89 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	141.732 m / 121.865 m / 1.100 m	141.732 m	121.865 m	1.100 m	99
X-direction	89 pcs., Centre - centre, 0.111 m	141.675 m	121.960 m	1.100 m	100
Arrangement	A2	141.617 m	122.055 m	1.100 m	101
		141.559 m	122.150 m	1.100 m	102
		141.502 m	122.244 m	1.100 m	103
		141.444 m	122.339 m	1.100 m	104
		141.386 m	122.434 m	1.100 m	105
		141.328 m	122.529 m	1.100 m	106
		141.271 m	122.624 m	1.100 m	107
		141.213 m	122.718 m	1.100 m	108
		141.155 m	122.813 m	1.100 m	109
		141.097 m	122.908 m	1.100 m	110
		141.040 m	123.003 m	1.100 m	111
		140.982 m	123.098 m	1.100 m	112
		140.924 m	123.193 m	1.100 m	113
		140.867 m	123.287 m	1.100 m	114
		140.809 m	123.382 m	1.100 m	115
		140.751 m	123.477 m	1.100 m	116
		140.693 m	123.572 m	1.100 m	117

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
140.636 m	123.667 m	1.100 m	118
140.578 m	123.761 m	1.100 m	119
140.520 m	123.856 m	1.100 m	120
140.463 m	123.951 m	1.100 m	121
140.405 m	124.046 m	1.100 m	122
140.347 m	124.141 m	1.100 m	123
140.289 m	124.235 m	1.100 m	124
140.232 m	124.330 m	1.100 m	125
140.174 m	124.425 m	1.100 m	126
140.116 m	124.520 m	1.100 m	127
140.059 m	124.615 m	1.100 m	128
140.001 m	124.710 m	1.100 m	129
139.943 m	124.804 m	1.100 m	130
139.885 m	124.899 m	1.100 m	131
139.828 m	124.994 m	1.100 m	132
139.770 m	125.089 m	1.100 m	133
139.712 m	125.184 m	1.100 m	134
139.654 m	125.278 m	1.100 m	135
139.597 m	125.373 m	1.100 m	136
139.539 m	125.468 m	1.100 m	137
139.481 m	125.563 m	1.100 m	138
139.424 m	125.658 m	1.100 m	139
139.366 m	125.752 m	1.100 m	140
139.308 m	125.847 m	1.100 m	141

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
139.250 m	125.942 m	1.100 m	142
139.193 m	126.037 m	1.100 m	143
139.135 m	126.132 m	1.100 m	144
139.077 m	126.227 m	1.100 m	145
139.020 m	126.321 m	1.100 m	146
138.962 m	126.416 m	1.100 m	147
138.904 m	126.511 m	1.100 m	148
138.846 m	126.606 m	1.100 m	149
138.789 m	126.701 m	1.100 m	150
138.731 m	126.795 m	1.100 m	151
138.673 m	126.890 m	1.100 m	152
138.616 m	126.985 m	1.100 m	153
138.558 m	127.080 m	1.100 m	154
138.500 m	127.175 m	1.100 m	155
138.442 m	127.269 m	1.100 m	156
138.385 m	127.364 m	1.100 m	157
138.327 m	127.459 m	1.100 m	158
138.269 m	127.554 m	1.100 m	159
138.212 m	127.649 m	1.100 m	160
138.154 m	127.744 m	1.100 m	161
138.096 m	127.838 m	1.100 m	162
138.038 m	127.933 m	1.100 m	163
137.981 m	128.028 m	1.100 m	164
137.923 m	128.123 m	1.100 m	165

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
137.865 m	128.218 m	1.100 m	166
137.807 m	128.312 m	1.100 m	167
137.750 m	128.407 m	1.100 m	168
137.692 m	128.502 m	1.100 m	169
137.634 m	128.597 m	1.100 m	170
137.577 m	128.692 m	1.100 m	171
137.519 m	128.786 m	1.100 m	172
137.461 m	128.881 m	1.100 m	173
137.403 m	128.976 m	1.100 m	174
137.346 m	129.071 m	1.100 m	175
137.288 m	129.166 m	1.100 m	176
137.230 m	129.261 m	1.100 m	177
137.173 m	129.355 m	1.100 m	178
137.115 m	129.450 m	1.100 m	421
137.057 m	129.545 m	1.100 m	422
136.999 m	129.640 m	1.100 m	423
136.942 m	129.735 m	1.100 m	424
136.884 m	129.829 m	1.100 m	425
136.826 m	129.924 m	1.100 m	426
136.769 m	130.019 m	1.100 m	427
136.711 m	130.114 m	1.100 m	428
136.653 m	130.209 m	1.100 m	429

52 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Site 1

Luminaire layout plan

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	135.031 m / 128.957 m / 1.100 m	135.031 m	128.957 m	1.100 m	179
X-direction	52 pcs., Centre - centre, 0.111 m	134.947 m	129.030 m	1.100 m	180
		134.863 m	129.103 m	1.100 m	181
Arrangement	A3	134.779 m	129.176 m	1.100 m	182
		134.696 m	129.249 m	1.100 m	183
		134.612 m	129.321 m	1.100 m	184
		134.528 m	129.394 m	1.100 m	185
		134.445 m	129.467 m	1.100 m	186
		134.361 m	129.540 m	1.100 m	187
		134.277 m	129.613 m	1.100 m	188
		134.193 m	129.686 m	1.100 m	189
		134.110 m	129.759 m	1.100 m	190
		134.026 m	129.832 m	1.100 m	191
		133.942 m	129.904 m	1.100 m	192
		133.858 m	129.977 m	1.100 m	193
		133.775 m	130.050 m	1.100 m	194
		133.691 m	130.123 m	1.100 m	195
		133.607 m	130.196 m	1.100 m	196
		133.524 m	130.269 m	1.100 m	197
		133.440 m	130.342 m	1.100 m	198
		133.356 m	130.415 m	1.100 m	199
		133.272 m	130.487 m	1.100 m	200
		133.189 m	130.560 m	1.100 m	201
133.105 m	130.633 m	1.100 m	202		

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
133.021 m	130.706 m	1.100 m	203
132.937 m	130.779 m	1.100 m	204
132.854 m	130.852 m	1.100 m	205
132.770 m	130.925 m	1.100 m	206
132.686 m	130.998 m	1.100 m	207
132.603 m	131.070 m	1.100 m	208
132.519 m	131.143 m	1.100 m	209
132.435 m	131.216 m	1.100 m	210
132.351 m	131.289 m	1.100 m	211
132.268 m	131.362 m	1.100 m	212
132.184 m	131.435 m	1.100 m	213
132.100 m	131.508 m	1.100 m	214
132.016 m	131.581 m	1.100 m	215
131.933 m	131.653 m	1.100 m	216
131.849 m	131.726 m	1.100 m	217
131.765 m	131.799 m	1.100 m	218
131.681 m	131.872 m	1.100 m	219
131.598 m	131.945 m	1.100 m	220
131.514 m	132.018 m	1.100 m	221
131.430 m	132.091 m	1.100 m	222
131.347 m	132.163 m	1.100 m	223
131.263 m	132.236 m	1.100 m	224
131.179 m	132.309 m	1.100 m	225
131.095 m	132.382 m	1.100 m	226

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
131.012 m	132.455 m	1.100 m	227
130.928 m	132.528 m	1.100 m	228
130.844 m	132.601 m	1.100 m	229
130.760 m	132.674 m	1.100 m	230

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	100.302 m / 110.726 m / 1.100 m	100.302 m	110.726 m	1.100 m	316
X-direction	25 pcs., Centre - centre, 0.110 m	100.218 m	110.797 m	1.100 m	317
		100.133 m	110.868 m	1.100 m	318
Arrangement	A8	100.049 m	110.940 m	1.100 m	319
		99.964 m	111.011 m	1.100 m	320
		99.880 m	111.082 m	1.100 m	321
		99.795 m	111.153 m	1.100 m	322
		99.711 m	111.224 m	1.100 m	323
		99.626 m	111.295 m	1.100 m	324
		99.542 m	111.367 m	1.100 m	325
		99.457 m	111.438 m	1.100 m	326
		99.373 m	111.509 m	1.100 m	327
		99.289 m	111.580 m	1.100 m	328
		99.204 m	111.651 m	1.100 m	329
		99.120 m	111.722 m	1.100 m	330
		99.035 m	111.794 m	1.100 m	331
		98.951 m	111.865 m	1.100 m	332

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
98.866 m	111.936 m	1.100 m	333
98.782 m	112.007 m	1.100 m	334
98.697 m	112.078 m	1.100 m	335
98.613 m	112.149 m	1.100 m	336
98.528 m	112.221 m	1.100 m	337
98.444 m	112.292 m	1.100 m	338
98.359 m	112.363 m	1.100 m	339
98.275 m	112.434 m	1.100 m	340

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	104.419 m / 108.414 m / 1.100 m	104.419 m	108.414 m	1.100 m	341
X-direction	25 pcs., Centre - centre, Distances not equal	104.335 m	108.485 m	1.100 m	342
		104.250 m	108.557 m	1.100 m	343
Arrangement	A9	104.166 m	108.628 m	1.100 m	344
		104.082 m	108.699 m	1.100 m	345
		103.997 m	108.770 m	1.100 m	346
		103.913 m	108.841 m	1.100 m	347
		103.828 m	108.912 m	1.100 m	348
		103.744 m	108.984 m	1.100 m	349
		103.659 m	109.055 m	1.100 m	350
		103.575 m	109.126 m	1.100 m	351
		103.490 m	109.197 m	1.100 m	352
		103.406 m	109.268 m	1.100 m	353

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
103.321 m	109.339 m	1.100 m	354
103.237 m	109.411 m	1.100 m	355
103.152 m	109.482 m	1.100 m	356
103.068 m	109.553 m	1.100 m	357
102.983 m	109.624 m	1.100 m	358
102.899 m	109.695 m	1.100 m	359
102.392 m	110.122 m	1.100 m	360
102.477 m	110.051 m	1.100 m	361
102.561 m	109.980 m	1.100 m	362
102.646 m	109.909 m	1.100 m	363
102.730 m	109.838 m	1.100 m	364
102.815 m	109.766 m	1.100 m	365

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	108.011 m / 106.018 m / 1.100 m	108.011 m	106.018 m	1.100 m	366
X-direction	25 pcs., Centre - centre, Distances not equal	107.926 m	106.089 m	1.100 m	367
		107.842 m	106.160 m	1.100 m	368
Arrangement	A10	107.757 m	106.231 m	1.100 m	369
		107.673 m	106.302 m	1.100 m	370
		107.588 m	106.373 m	1.100 m	371
		107.504 m	106.445 m	1.100 m	372
		107.419 m	106.516 m	1.100 m	373
		107.335 m	106.587 m	1.100 m	374

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
107.250 m	106.658 m	1.100 m	375
107.166 m	106.729 m	1.100 m	376
107.082 m	106.800 m	1.100 m	377
106.997 m	106.872 m	1.100 m	378
106.913 m	106.943 m	1.100 m	379
106.828 m	107.014 m	1.100 m	380
106.744 m	107.085 m	1.100 m	381
106.659 m	107.156 m	1.100 m	382
106.575 m	107.227 m	1.100 m	383
106.490 m	107.299 m	1.100 m	384
105.983 m	107.726 m	1.100 m	385
106.068 m	107.654 m	1.100 m	386
106.152 m	107.583 m	1.100 m	387
106.237 m	107.512 m	1.100 m	388
106.321 m	107.441 m	1.100 m	389
106.406 m	107.370 m	1.100 m	390

25 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	110.933 m / 102.843 m / 1.100 m	110.933 m	102.843 m	1.100 m	391
X-direction	25 pcs., Centre - centre, Distances not equal	110.848 m	102.914 m	1.100 m	392
		110.764 m	102.985 m	1.100 m	393
Arrangement	A11	110.679 m	103.056 m	1.100 m	394
		110.595 m	103.127 m	1.100 m	395

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
110.510 m	103.198 m	1.100 m	396
110.426 m	103.270 m	1.100 m	397
110.341 m	103.341 m	1.100 m	398
110.257 m	103.412 m	1.100 m	399
110.172 m	103.483 m	1.100 m	400
110.088 m	103.554 m	1.100 m	401
110.003 m	103.625 m	1.100 m	402
109.919 m	103.697 m	1.100 m	403
109.834 m	103.768 m	1.100 m	404
109.750 m	103.839 m	1.100 m	405
109.666 m	103.910 m	1.100 m	406
109.581 m	103.981 m	1.100 m	407
109.497 m	104.052 m	1.100 m	408
109.412 m	104.124 m	1.100 m	409
108.905 m	104.551 m	1.100 m	410
108.990 m	104.479 m	1.100 m	411
109.074 m	104.408 m	1.100 m	412
109.159 m	104.337 m	1.100 m	413
109.243 m	104.266 m	1.100 m	414
109.328 m	104.195 m	1.100 m	415

54 x Not yet a DIALux member Duo Luna 3000K (1 modules per m) 12v DC

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	132.332 m / 133.987 m / 1.100 m	132.332 m	133.987 m	1.100 m	434

Site 1

Luminaire layout plan

X-direction	54 pcs., Centre - centre, 0.111 m	X	Y	Mounting height	Luminaire
Arrangement	A12	132.416 m	133.914 m	1.100 m	435
		132.500 m	133.841 m	1.100 m	436
		132.583 m	133.769 m	1.100 m	437
		132.667 m	133.696 m	1.100 m	438
		132.751 m	133.623 m	1.100 m	439
		132.835 m	133.550 m	1.100 m	440
		132.919 m	133.477 m	1.100 m	441
		133.002 m	133.404 m	1.100 m	442
		133.086 m	133.332 m	1.100 m	443
		133.170 m	133.259 m	1.100 m	444
		133.254 m	133.186 m	1.100 m	445
		133.337 m	133.113 m	1.100 m	446
		133.421 m	133.040 m	1.100 m	447
		133.505 m	132.967 m	1.100 m	448
		133.589 m	132.895 m	1.100 m	449
		133.672 m	132.822 m	1.100 m	450
		133.756 m	132.749 m	1.100 m	451
		133.840 m	132.676 m	1.100 m	452
		133.924 m	132.603 m	1.100 m	453
		134.007 m	132.530 m	1.100 m	454
		134.091 m	132.457 m	1.100 m	455
		134.175 m	132.385 m	1.100 m	456
		134.259 m	132.312 m	1.100 m	457
		134.342 m	132.239 m	1.100 m	458

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
134.426 m	132.166 m	1.100 m	459
134.510 m	132.093 m	1.100 m	460
134.594 m	132.020 m	1.100 m	461
134.677 m	131.948 m	1.100 m	462
134.761 m	131.875 m	1.100 m	463
134.845 m	131.802 m	1.100 m	464
134.929 m	131.729 m	1.100 m	465
135.013 m	131.656 m	1.100 m	466
135.096 m	131.583 m	1.100 m	467
135.180 m	131.511 m	1.100 m	468
135.264 m	131.438 m	1.100 m	469
135.348 m	131.365 m	1.100 m	470
135.431 m	131.292 m	1.100 m	471
135.515 m	131.219 m	1.100 m	472
135.599 m	131.146 m	1.100 m	473
135.683 m	131.074 m	1.100 m	474
135.766 m	131.001 m	1.100 m	475
135.850 m	130.928 m	1.100 m	476
135.934 m	130.855 m	1.100 m	477
136.018 m	130.782 m	1.100 m	478
136.101 m	130.709 m	1.100 m	479
136.185 m	130.637 m	1.100 m	480
136.269 m	130.564 m	1.100 m	481
136.353 m	130.491 m	1.100 m	482

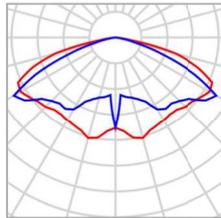
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
136.436 m	130.418 m	1.100 m	483
136.520 m	130.345 m	1.100 m	484
132.248 m	134.060 m	1.100 m	485
132.165 m	134.133 m	1.100 m	486
132.081 m	134.206 m	1.100 m	487

Site 1

Luminaire layout plan



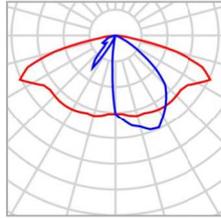
Manufacturer	Performance in Lighting	P	18.0 W
Article No.	3106062	Φ _{Luminaire}	2185 lm
Article name	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey		
Fitting	1x LED		

Individual luminaires

X	Y	Mounting height	Luminaire
210.932 m	116.868 m	4.500 m	258
206.910 m	98.876 m	4.500 m	259
232.397 m	109.097 m	4.500 m	260
231.885 m	96.685 m	4.500 m	261
174.876 m	56.641 m	4.500 m	262
285.940 m	109.324 m	4.500 m	278
327.013 m	78.218 m	4.500 m	279
313.447 m	87.253 m	4.500 m	280
116.833 m	97.358 m	4.500 m	417

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting	P	14.0 W
Article No.	3106066	$\Phi_{\text{Luminaire}}$	1696 lm
Article name	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey		
Fitting	1x LED		

2 x Performance in Lighting HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	131.149 m / 164.743 m / 4.500 m	131.149 m	164.743 m	4.500 m	252
X-direction	2 pcs., Centre - centre, 25.000 m	114.945 m	145.705 m	4.500 m	253
Arrangement	A6				

2 x Performance in Lighting HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	149.621 m / 167.625 m / 4.500 m	149.621 m	167.625 m	4.500 m	254
X-direction	2 pcs., Centre - centre, 25.000 m	171.737 m	155.969 m	4.500 m	255
Arrangement	A7				

Individual luminaires

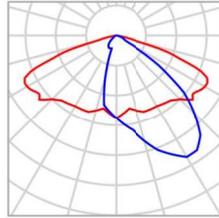
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
192.427 m	138.425 m	4.500 m	16
198.442 m	111.033 m	4.500 m	256
191.203 m	123.229 m	4.500 m	257
171.321 m	72.663 m	4.500 m	263
168.721 m	90.441 m	4.500 m	264
140.753 m	94.586 m	4.500 m	265
161.403 m	93.814 m	4.500 m	266
183.756 m	98.446 m	4.500 m	267
221.991 m	87.873 m	4.500 m	268
227.528 m	121.415 m	4.500 m	269
173.365 m	125.724 m	4.500 m	270
270.908 m	143.655 m	4.500 m	271
352.000 m	107.723 m	4.501 m	272
345.848 m	86.429 m	4.501 m	273
306.715 m	75.955 m	4.501 m	274
296.722 m	92.117 m	4.501 m	275
292.432 m	121.832 m	4.501 m	276
271.521 m	114.008 m	4.501 m	277
333.929 m	95.561 m	4.501 m	281
299.132 m	106.066 m	4.501 m	282
316.019 m	99.834 m	4.501 m	283
358.282 m	88.912 m	4.501 m	284

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting	P	16.0 W
Article No.	3106154	$\Phi_{\text{Luminaire}}$	2089 lm
Article name	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket		
Fitting	1x KREOS SR/100 16W 730		

Individual luminaires

X	Y	Mounting height	Luminaire
40.495 m	50.345 m	6.000 m	1
68.351 m	45.754 m	6.000 m	2
94.915 m	54.514 m	6.000 m	3
114.100 m	74.400 m	6.000 m	4
131.302 m	96.462 m	6.000 m	5
146.023 m	117.256 m	6.000 m	6
163.633 m	140.897 m	6.000 m	7
189.475 m	147.805 m	6.000 m	8
215.477 m	151.559 m	6.000 m	9
239.946 m	145.801 m	6.000 m	10
257.892 m	129.965 m	6.000 m	11
11.100 m	56.500 m	6.000 m	12

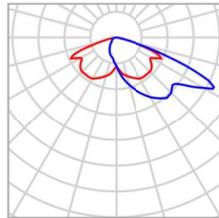
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
-18.272 m	62.448 m	6.000 m	13
342.293 m	79.404 m	6.001 m	14
336.375 m	56.161 m	6.000 m	15
359.230 m	101.247 m	6.100 m	243
262.894 m	110.221 m	6.000 m	248
257.329 m	83.055 m	6.000 m	249

Site 1

Luminaire layout plan



Manufacturer	Performance in Lighting	P	34.0 W
Article No.	3106268	$\Phi_{\text{Luminaire}}$	3764 lm
Article name	KREOS SR/150 34W 730 AN-96 RPA		
Fitting	1x KREOS SR/150 34W 730		

4 x Performance in Lighting KREOS SR/150 34W 730 AN-96 RPA

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	297.254 m / 133.668 m / 6.000 m	297.254 m	133.668 m	6.000 m	241
X-direction	4 pcs., Centre - centre, 20.000 m	316.680 m	128.910 m	6.000 m	242
Arrangement	A4	336.106 m	124.151 m	6.000 m	244
		355.531 m	119.392 m	6.000 m	245

2 x Performance in Lighting KREOS SR/150 34W 730 AN-96 RPA

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	296.090 m / 54.848 m / 6.000 m	296.090 m	54.848 m	6.000 m	246
X-direction	3 pcs., Centre - centre, Distances not equal	276.661 m	59.594 m	6.000 m	247
Arrangement	A5				

Site 1

Luminaire layout plan

Individual luminaires

X	Y	Mounting height	Luminaire
278.642 m	130.917 m	6.001 m	240
90.737 m	114.192 m	6.001 m	250
97.058 m	134.224 m	6.001 m	251
260.658 m	69.874 m	6.000 m	303
320.545 m	44.725 m	6.000 m	416

Site 1

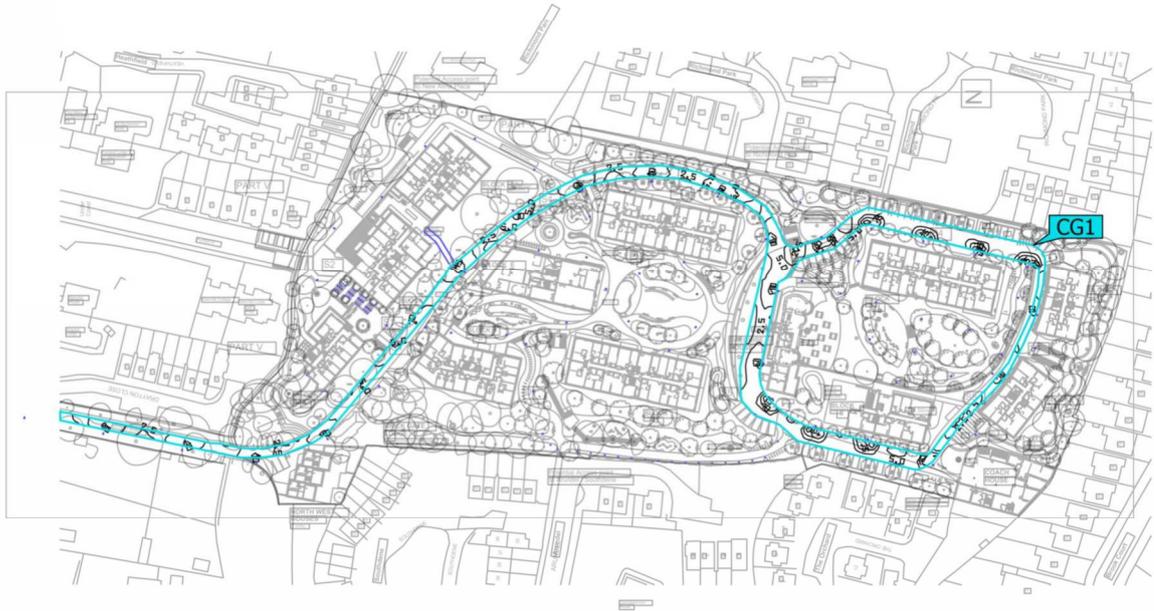
Luminaire list

Φ_{total} 172686 lm	P_{total} 1944.9 W	Luminous efficacy 88.8 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
30	iGuzzini illuminazione S.p.A	EI32-15_X338-15	Walky - square - EI32.15 - Square optic assembly 180x180mm – AL optic – Warm White LED – 220÷240Vac - 9.9W 1550lm - 3000K - Grey	11.5 W	419 lm	36.4 lm/W
18	iGuzzini illuminazione S.p.A	EP04-15_EP17-15_B513-00	iWay Super comfort - Round - Leuchtengehäuse Ø180mm - Led Warm White - 220÷240Vac DALI - Optik 180° Super Comfort- Full Cut-Off 12.3W	12.3 W	223 lm	18.1 lm/W
381	Not yet a DIALux member	Duo Luna 3000K (1 modules per m) 12v DC	Duo Luna 3000K (1 modules per m) 12v DC	0.5 W	35 lm	66.2 lm/W
9	Performance in Lighting	3106062	HEDO+ FT 18W 740 C/EW NEMA - Anthracite grey	18.0 W	2185 lm	121.4 lm/W
26	Performance in Lighting	3106066	HEDO+ FT 14W 740 SR/075 NEMA - Anthracite grey	14.0 W	1696 lm	121.1 lm/W
18	Performance in Lighting	3106154	KREOS SR/100 16W 730 AN-96 DALI NEMA Socket	16.0 W	2089 lm	130.6 lm/W
11	Performance in Lighting	3106268	KREOS SR/150 34W 730 AN-96 RPA	34.0 W	3764 lm	110.7 lm/W

Site 1 (Light scene 1)

Calculation objects



Site 1 (Light scene 1)

Calculation objects

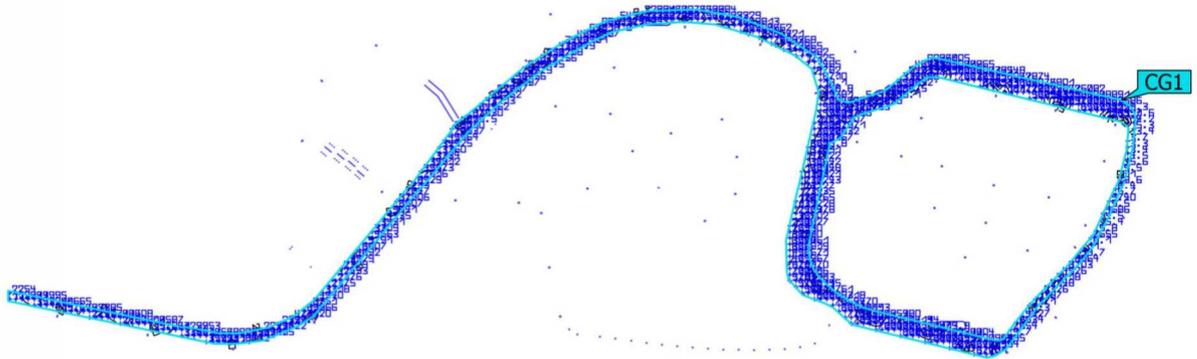
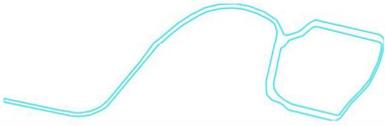
Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Road Lighting Perpendicular illuminance Height: 0.001 m	6.80 lx	1.44 lx	17.4 lx	0.21	0.083	CG1

Utilisation profile: DIALux presetting (5.1.4-Standard (outdoor transportation area))

Site 1 (Light scene 1)

Road Lighting



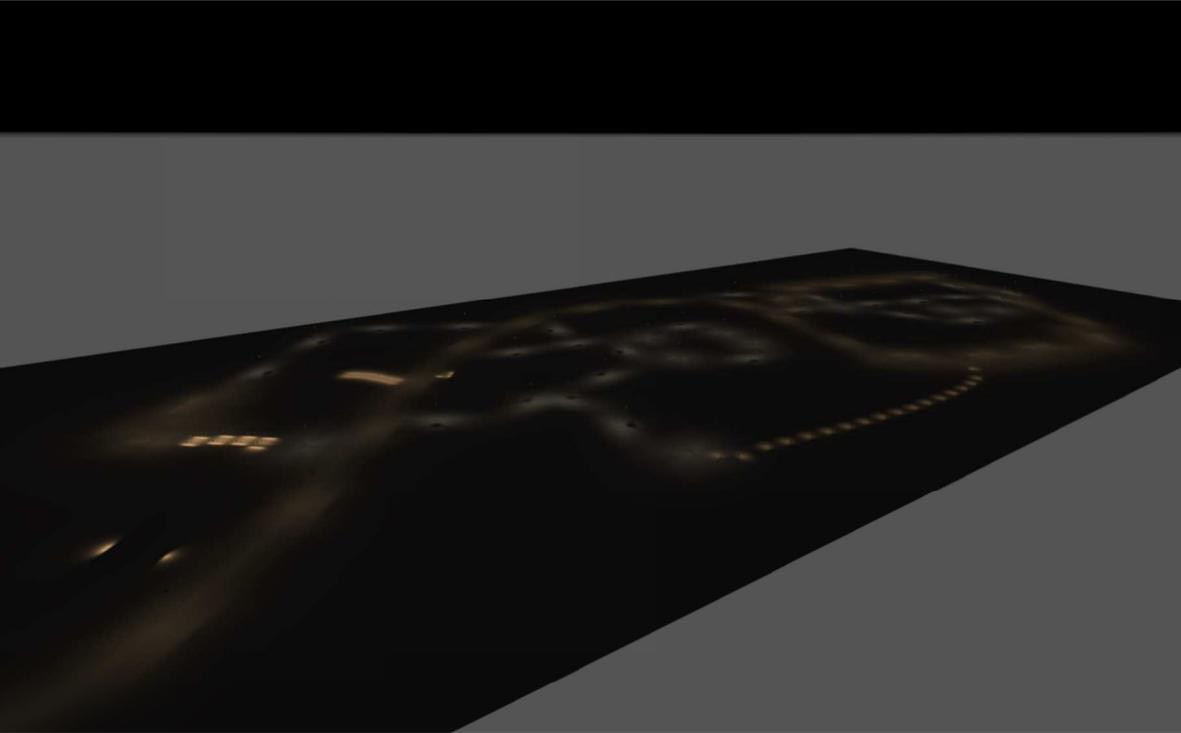
Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Road Lighting Perpendicular illuminance Height: 0.001 m	6.80 lx	1.44 lx	17.4 lx	0.21	0.083	CG1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))



APPENDIX 4

CAR PARKING LIGHTING REPORT



GL Metec Dalguise Monkstown Embedded DWG 07.03.23

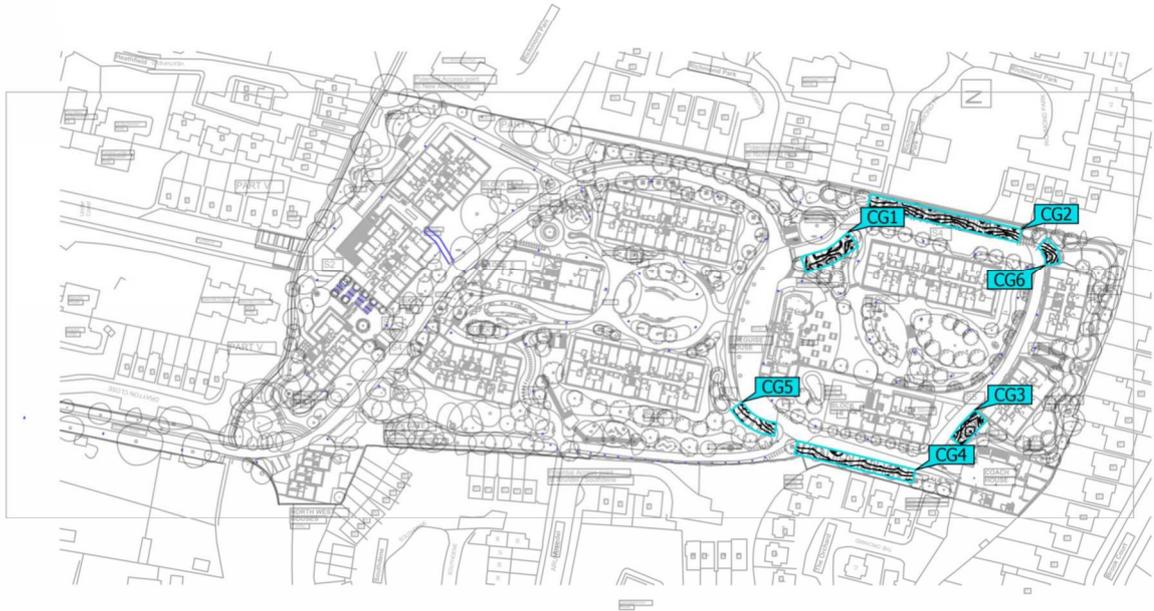
Preface

Notes on planning:

The energy consumption quantities do not take into account light scenes and their dimming levels.

Site 1 (Light scene 1)

Calculation objects



Site 1 (Light scene 1)

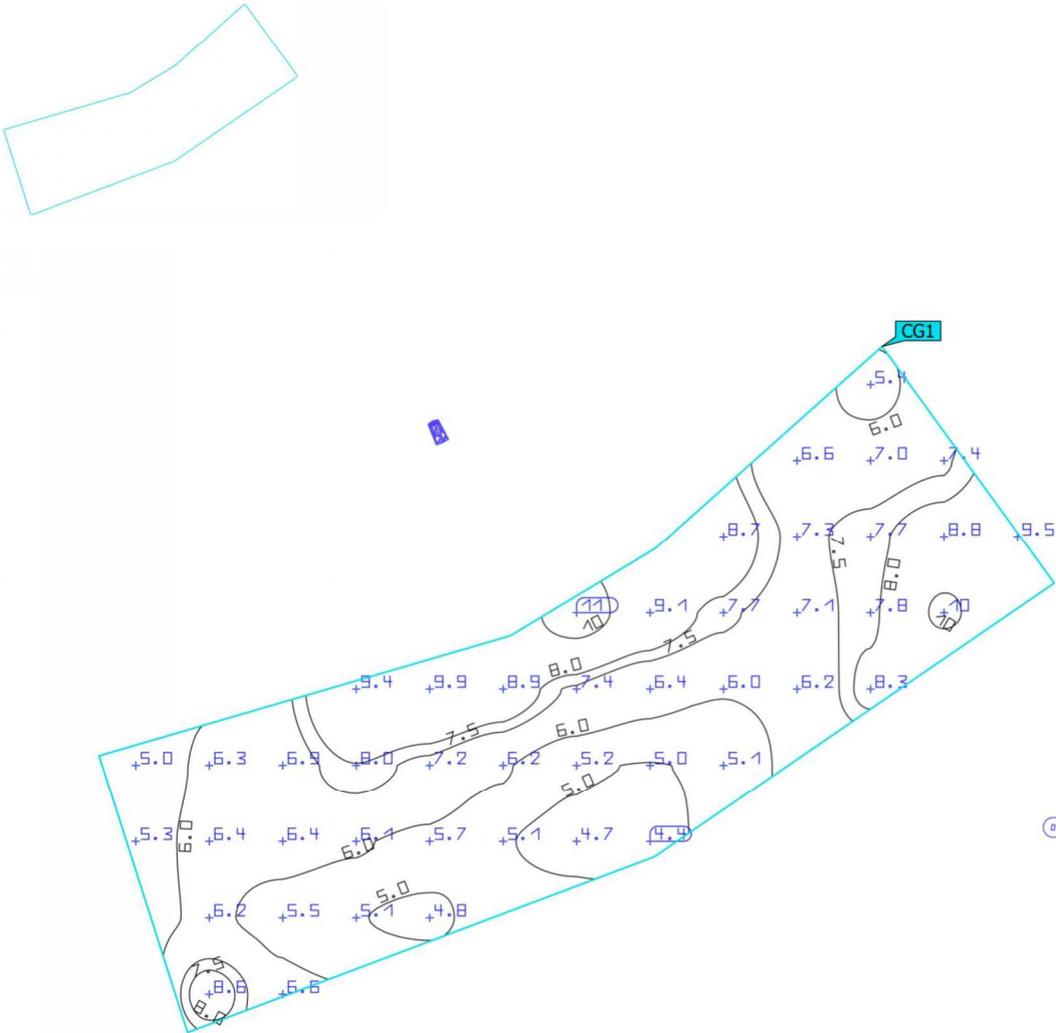
Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 1 Perpendicular illuminance Height: 0.001 m	6.94 lx	4.36 lx	10.7 lx	0.63	0.41	CG1
Parking Bay 2 Perpendicular illuminance Height: 0.001 m	4.74 lx	2.67 lx	7.71 lx	0.56	0.35	CG2
Parking Bay 4 Perpendicular illuminance Height: 0.001 m	7.49 lx	4.28 lx	12.2 lx	0.57	0.35	CG3
Parking Bay 5 Perpendicular illuminance Height: 0.001 m	4.90 lx	2.14 lx	8.38 lx	0.44	0.26	CG4
Parking Bay 6 Perpendicular illuminance Height: 0.001 m	4.23 lx	2.19 lx	7.78 lx	0.52	0.28	CG5
Parking Bay 3 Perpendicular illuminance Height: 0.001 m	5.11 lx	3.04 lx	7.91 lx	0.59	0.38	CG6

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

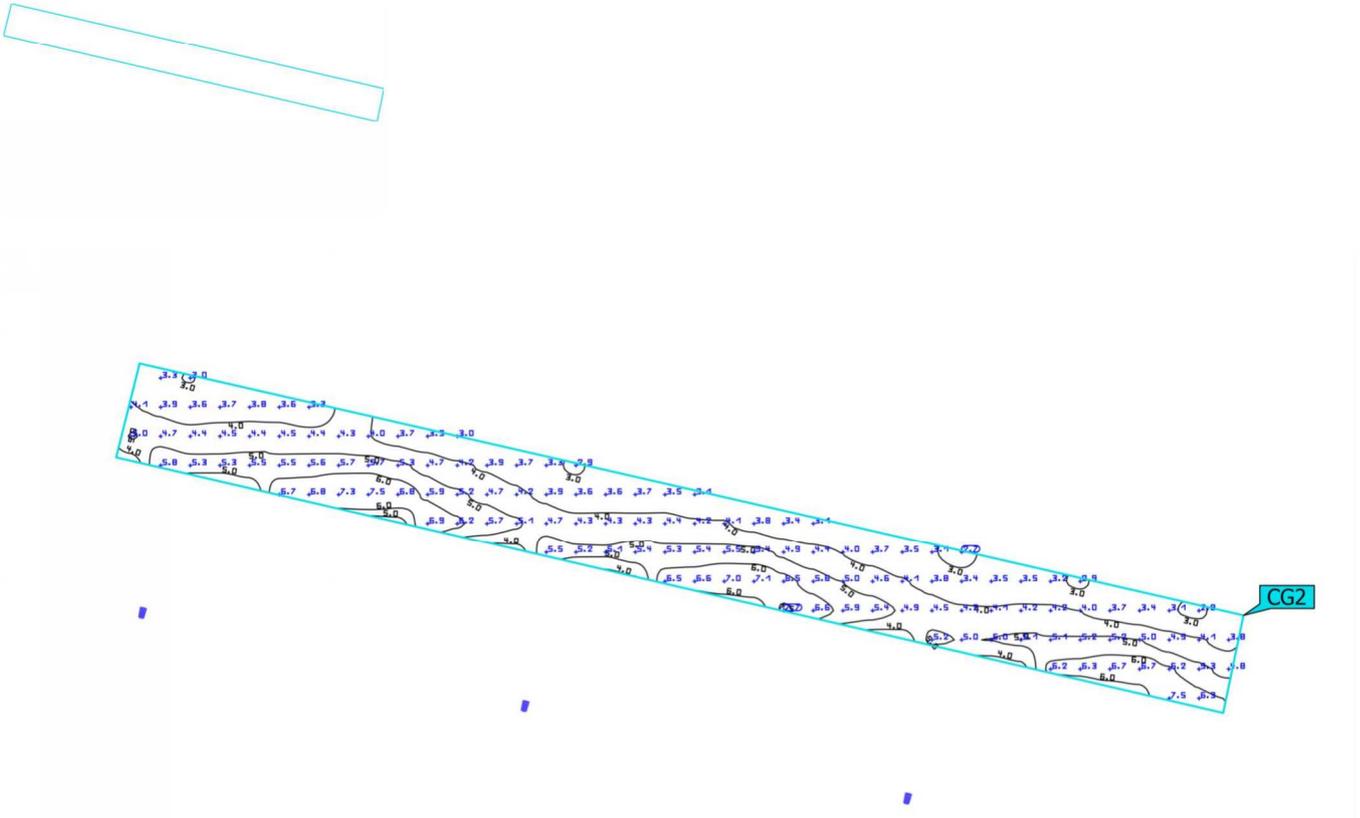
Site 1 (Light scene 1)
Parking Bay 1



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 1 Perpendicular illuminance Height: 0.001 m	6.94 lx	4.36 lx	10.7 lx	0.63	0.41	CG1

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

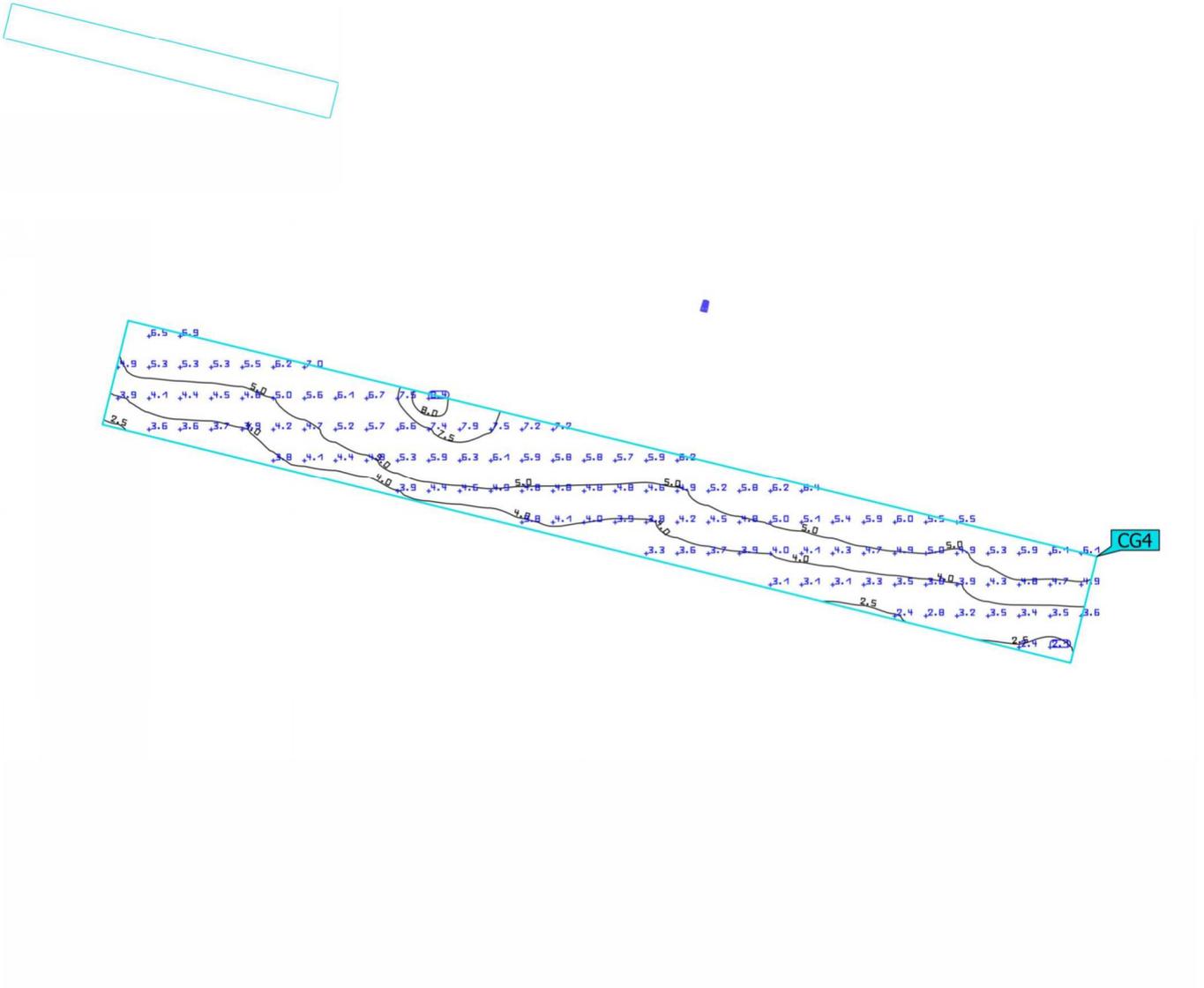
Site 1 (Light scene 1)
Parking Bay 2



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 2 Perpendicular illuminance Height: 0.001 m	4.74 lx	2.67 lx	7.71 lx	0.56	0.35	CG2

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

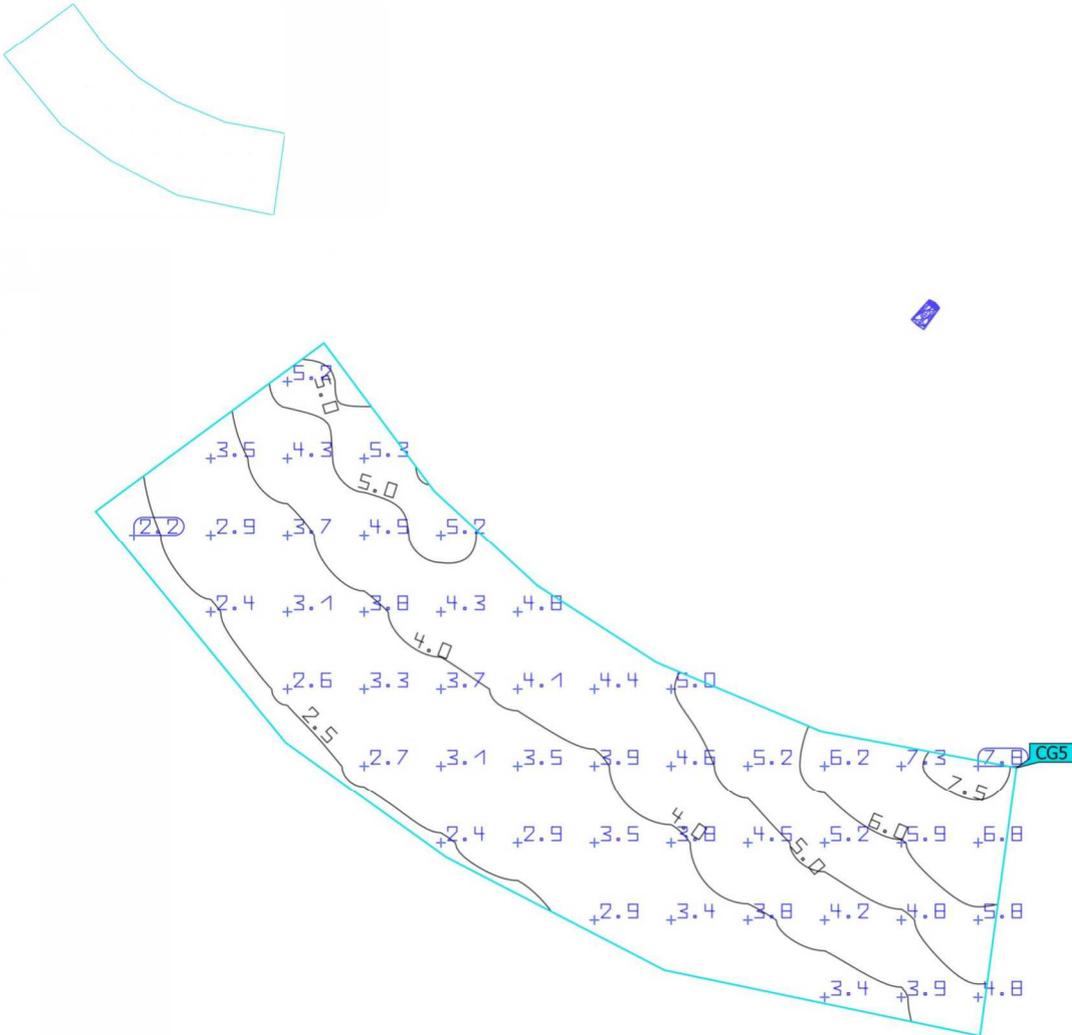
Site 1 (Light scene 1)
Parking Bay 5



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 5 Perpendicular illuminance Height: 0.001 m	4.90 lx	2.14 lx	8.38 lx	0.44	0.26	CG4

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

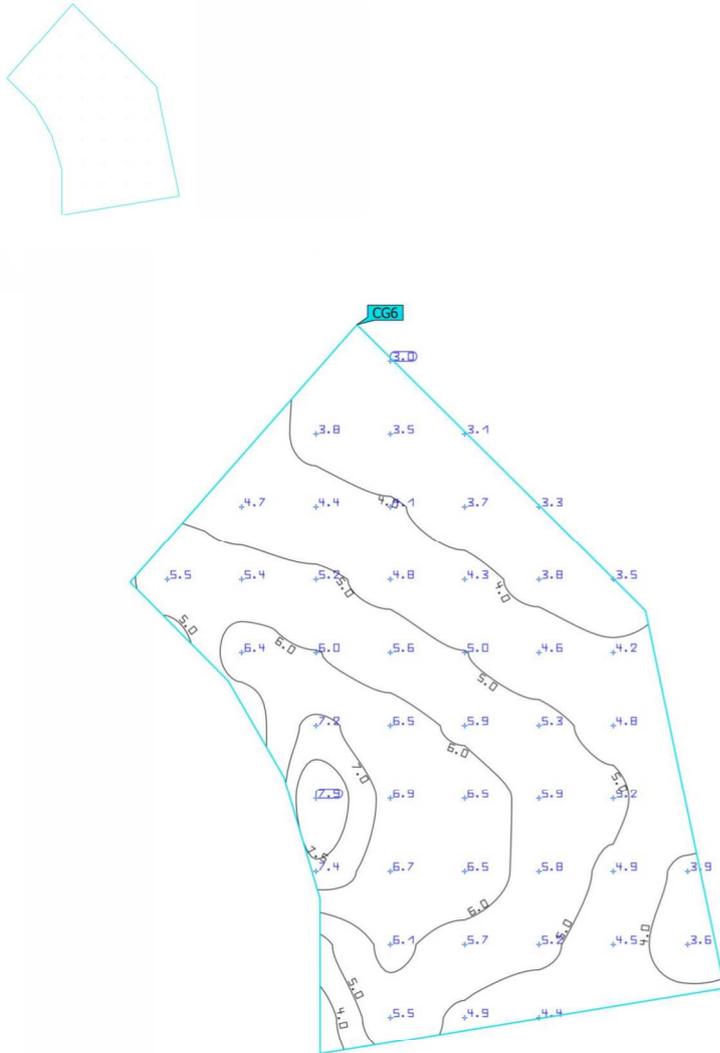
Site 1 (Light scene 1)
Parking Bay 6



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 6 Perpendicular illuminance Height: 0.001 m	4.23 lx	2.19 lx	7.78 lx	0.52	0.28	CG5

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)
Parking Bay 3



Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Parking Bay 3 Perpendicular illuminance Height: 0.001 m	5.11 lx	3.04 lx	7.91 lx	0.59	0.38	CG6

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))