

Planning Verification Report

City Labs 4.0 Manchester – External Lighting – 30th January 2025

The external lighting has been designed and installed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011.

All external lighting (except for safety and security lighting) has been designed and installed to be automatically switched off between 23:00 and 07:00

All safety and security lighting designed and installed and used between 23:00 and 07:00, complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's guidance notes.

Lighting is controlled by timeclock and Photocell, to ensure operation only in set hours and when suitable light levels require.

All column mounted lights are to the perimeter of the site, facing inwards to the building to reduce any light spill to surrounding properties. In addition, these fittings have louvre kits installed to further reduce light spill, and these can be adjusted manually as required on site.

Regular maintenance should be carried out, checking external lights to ensure correct operation of timeclock and photocell should be carried out. This is especially relevant around BST time changes to ensure correct operational Hours.

Refer to the following documents:-

ZG-DWG-0002295446-EXT-AB-220224-A0 – As built light plots
L025-KNG-96-01.00-D-E-960001 – AB – As built lighting layout
Urba Bollard Data Sheet
Isaro Pro Data Sheet
D-CO R LED Data Sheet

For and on behalf of KNG Building Services Ltd

LIGHTING LEGEND

- L1 THORN LIGHTING LTD. 1000mm URBA DIRECTIONAL BOLLARD - 96275591 URBA BOLLARD 4L105 740 CL1, 1101 LUMENS / 135 WATTS
[ARROW INDICATES DIRECTION OF LIGHT]
- L1E AS ABOVE c/w EMERGENCY UNIT UNDER CONTROL BY THE INTERNAL EMERGENCY DALI SYSTEM
[ARROW INDICATES DIRECTION OF LIGHT]
- L3 THORN LIGHTING LTD. ISARO PRO 12L35-740 EWR 5m COLUMN LUMINAIRE, 2044 LUMENS / 30 WATTS
- L4 THORN LIGHTING LTD. ISARO PRO 12L35-740 NR BLV 5m COLUMN LUMINAIRE, 1946 LUMENS / 28 WATTS
- M THORN LIGHTING LTD. D-CO R LED MAXI UPLIGHTER - 96257239 12W

LEGEND

- 75mm DIAMETER (BT OPEN REACH DUCT) 450mm DEEP IN PRIVATE HIGHWAY AND FOOT PATHS.
- 75mm DIAMETER (BT OPEN REACH DUCT) EXISTING SERVICE MINIMUM OF 450mm DEEP IN PUBLIC FOOTPATH.
- LOW VOLTAGE (LV) SMALL POWER, LIGHTING AND POWER DUCT (CLASS 2 RIGI DUCT) 600mm DEEP IN PRIVATE HIGHWAY AND FOOT PATHS.
- EXTRA LOW VOLTAGE (ELV) DATA AND COMMS DUCT (CLASS 2 RIGI DUCT) 450mm DEEP IN PRIVATE HIGHWAY AND FOOT PATHS.
- MANHOLE TO BT OPEN REACH SPEC.
- 600x600mm MANHOLE.

ELECTRICAL NOTES

- E1 75mm DIAMETER BT OPEN REACH DUCT.
- E2 2No. 100mm IDø DUCTS, 1No. LV AND 1No. ELV.
- E3 1No. 100mm IDø DUCT LV.
- E4 1No. 100mm IDø DUCT ELV.
- E5 1No. 125mm IDø DUCT LV.
- E6 2No. 100mm IDø DUCTS LV AND 2No. 100mm IDø DUCTS ELV.

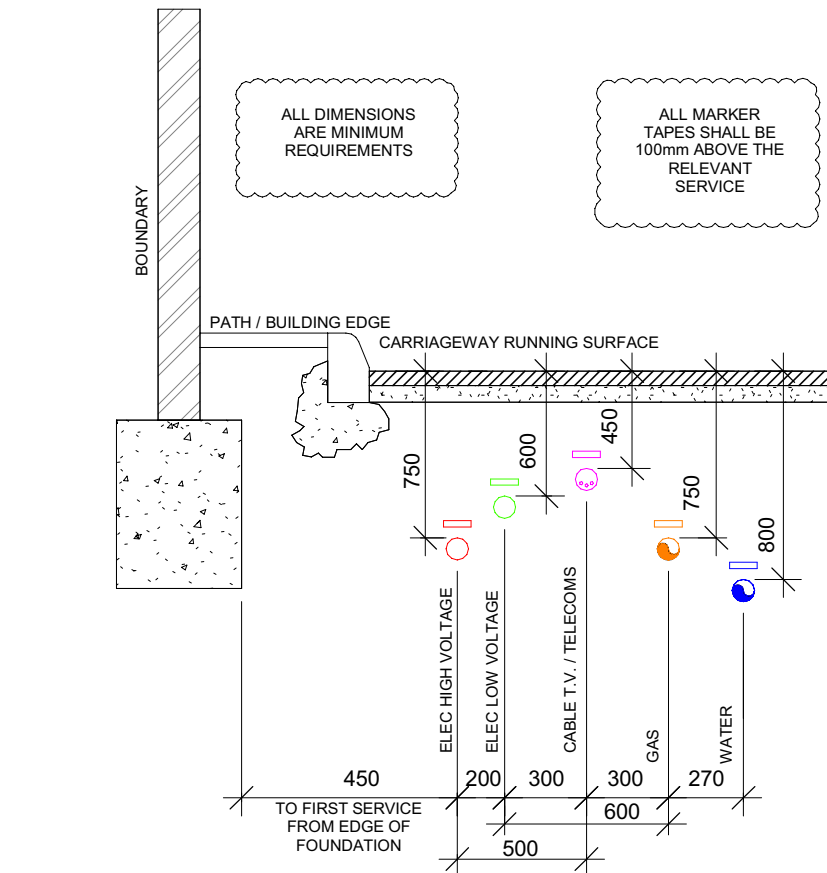


THORN LIGHTING LTD. 1000mm URBA DIRECTIONAL BOLLARD REF. L1 & L1E

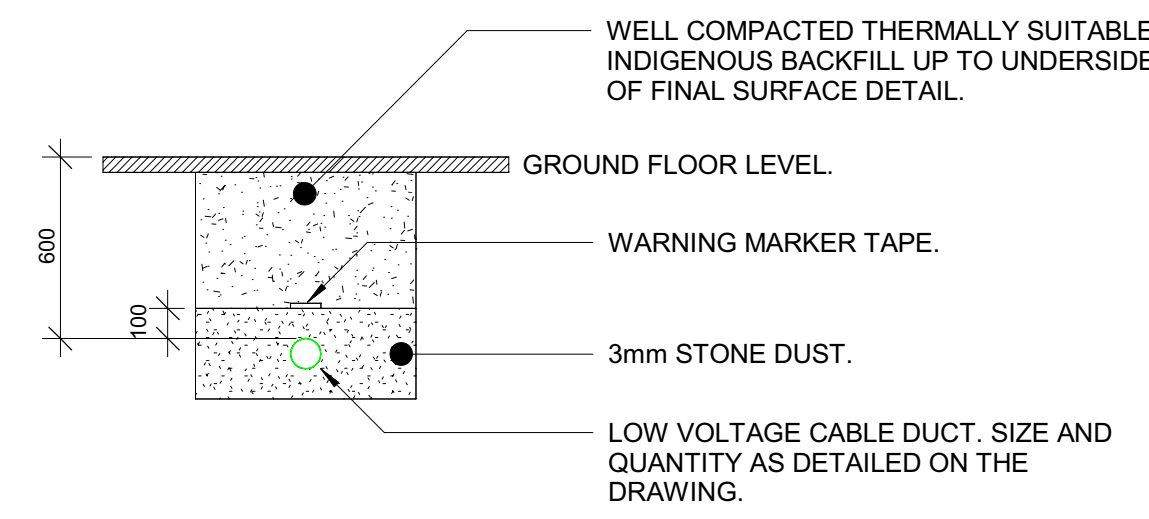


THORN LIGHTING LTD. ISARO PRO REF. L3 & L4

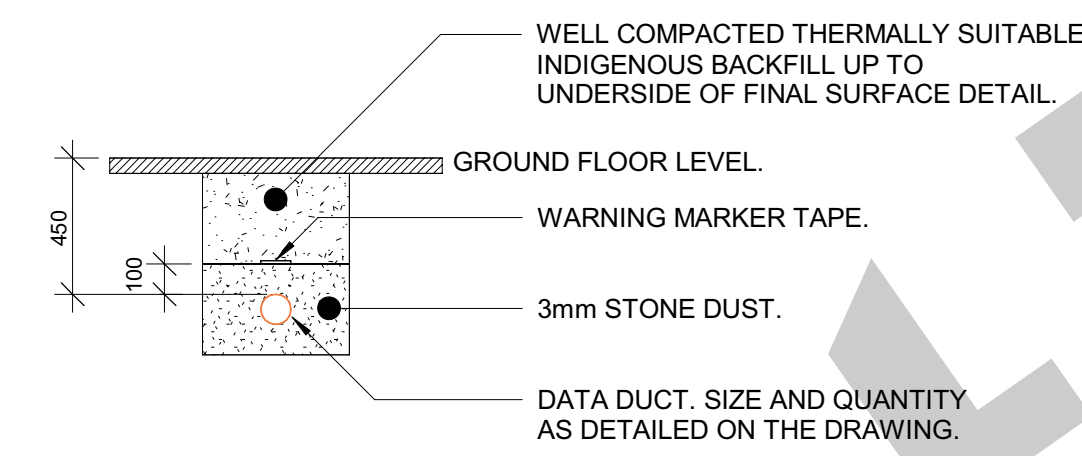
THORN LIGHTING LTD. D-CO R LED MAXI UPLIGHTER REF. M



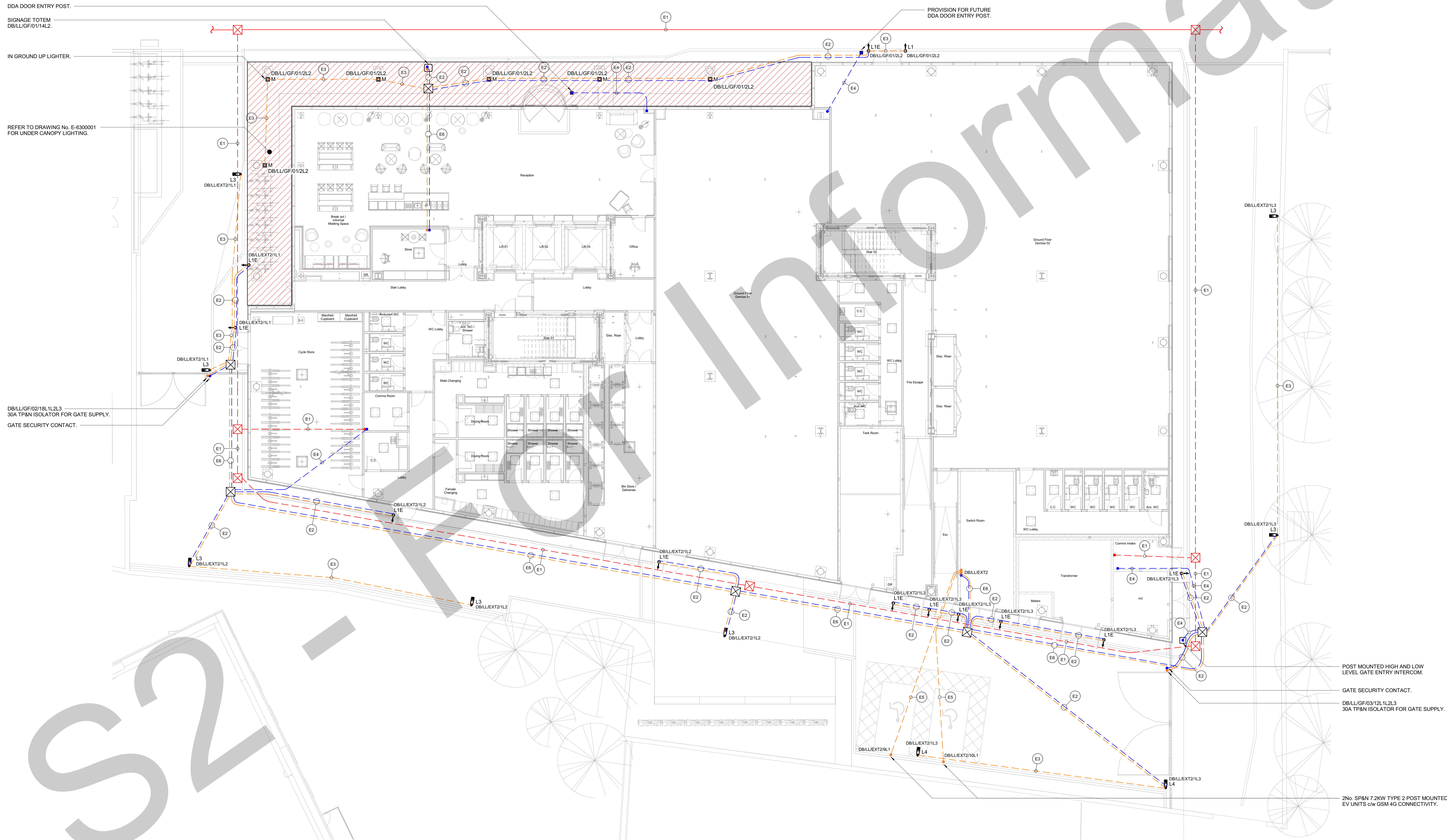
2 Detail 'A' - Positioning of Services in a Carriageway NTS



3 Detail 'B' - Typical Section Through Low Voltage Duct Route NTS



4 Detail 'C' - Typical Section Through Data Duct Route NTS



1 External Lighting Layout
1 : 100

GENERAL NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ASSOCIATED SERVICES DRAWINGS, ARCHITECTS AND STRUCTURAL DRAWINGS TOGETHER WITH THE SCHEMATIC DRAWINGS AND ALL MECHANICAL AND ELECTRICAL SPECIFICATIONS.
- ALL SERVICES INSTALLATIONS SHALL BE CO-ORDINATED AND FULLY INTEGRATED WITH THE MECHANICAL AND ELECTRICAL SERVICES, ARCHITECTURAL FEATURES, PLANT, STRUCTURAL ELEMENTS ETC.
- THE SERVICES CONTRACTORS SHALL FAMILIARISE THEMSELVES WITH THE MECHANICAL AND ELECTRICAL SERVICES, ARCHITECTURAL FEATURES, PLANT, STRUCTURAL ELEMENTS ETC.

NOTES

This drawing should be used in conjunction with all other relevant layouts/scope of work and any other information provided.

DO NOT SCALE FROM THIS DRAWING

REV	DATE	REVISION HISTORY	REV BY
AB	28/01/23	ISSUED FOR COMMENT.	PI

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CLIENT

Bruntwood Science Ltd

TITLE

External Lighting Layout

ADDRESS

City Labs 4.0

Name	Sign	Date
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Drawn	PH	28/01/23
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Checked	MG	
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Approved	PI	
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DRAWING NUMBER	Revision
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L025-KNG-96-01.00-D-E-960001	AB
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INITIAL DRAWING DATE	SCALE	PAPER SIZE
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SEPT 2023	As indicated	A0
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DRAWING STATUS

As Built

96630678 IP 12L105-740 NR BP 3550 CL1 M42 GY-S

LED 41W IP12L105-740NR	ISO 9223 C5				IP 66	IK 09						
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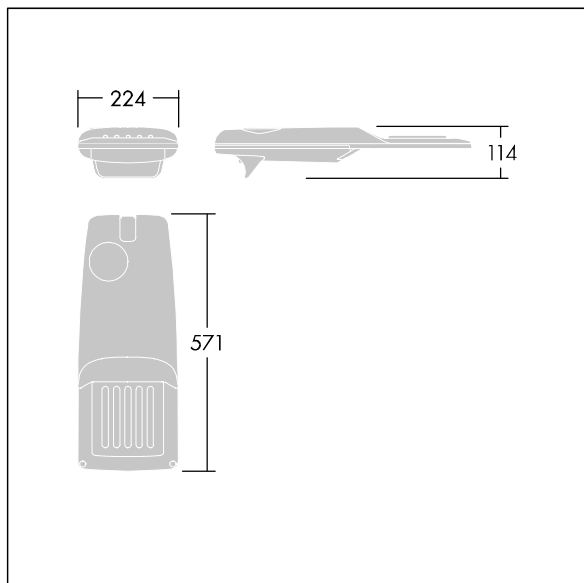
Isaro Pro

A state of the art LED road lighting lantern (small) with 12 LEDs driven at 1.05A with Narrow Road optic. Programmable LED driver. Class I electrical, IP66, IK09. Housing: die-cast aluminium (EN AC-44300), powder coated textured light grey 150 (close to RAL9006). Spigot: die-cast aluminium (EN AC-44300), unpainted. Enclosure: 5mm thick glass. Fixings: stainless steel. Supplied with Ø42mm spigot adaptor which can be fitted for post-top (0°/5°/10°/15°/20° tilt) or side-entry (-15°/-10°/-5°/0°/5°/10°/15° tilt). Equipped with power reduction circuit, effective 3 hours before and 5 hours after a calculated midnight. Complete with 4000K LED. Surge protection: 10kV single pulse common mode and 8kV multipulse common mode and 6kV multipulse differential mode. If permanent DALI system is connected, 6kV multipulse common and differential mode.

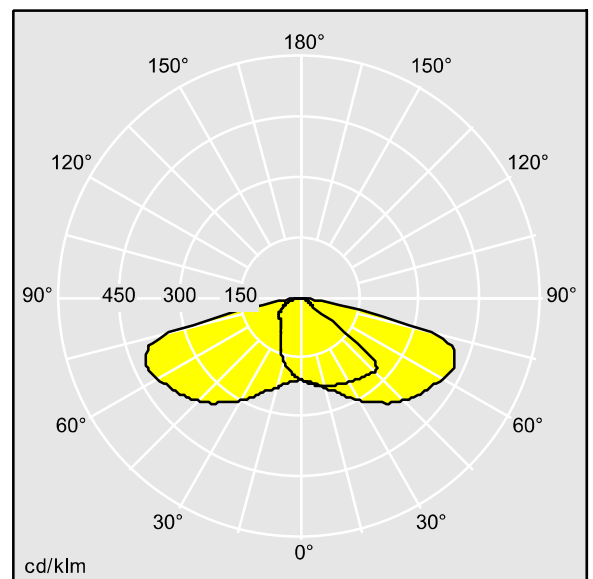
Dimensions: 571 x 224 x 114 mm
Luminaire input power: 41 W
Luminaire luminous flux: 5369 lm
Luminaire efficacy: 131 lm/W
Weight: 5.5 kg
Scx: 0.054 m²



TLG_ISRP_F_PDB_SIL.jpg



TLG ISRP M LD1.wmf



TL IP12L105NR740.Idt

Lamp position: STD - standard
Light Source: LED
Luminaire luminous flux*: 5369 lm
Luminaire efficacy*: 131 lm/W
Colour Rendering Index min.: 70
Ballast: 1 x 87500884 LCO 40/200-1050/64 o4a NF C
EXC3

Correlated colour temperature*: 4000 Kelvin
Chromaticity tolerance (initial MacAdam): 5
Rated useful life (B10)*:
L85 100000h at 25°C
Luminaire input power*: 41 W Power factor = 0.99
Dimming: PROG
LOR: 1.00 ULOR: 0.00 PLOR: 1.00

This product contains a light source of energy efficiency class D.

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated instances of technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connected load at $\pm 10\%$. Unless stated otherwise, the values apply to an ambient temperature of 25°C.

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Urba Bollard

THORN

96275591 URBA BOLLARD 4L105 740 CL1

LED 15W URBB_740	ISO 9223 C3	IP65	⏚	CE	EAC	⚡	⚡	650°C	
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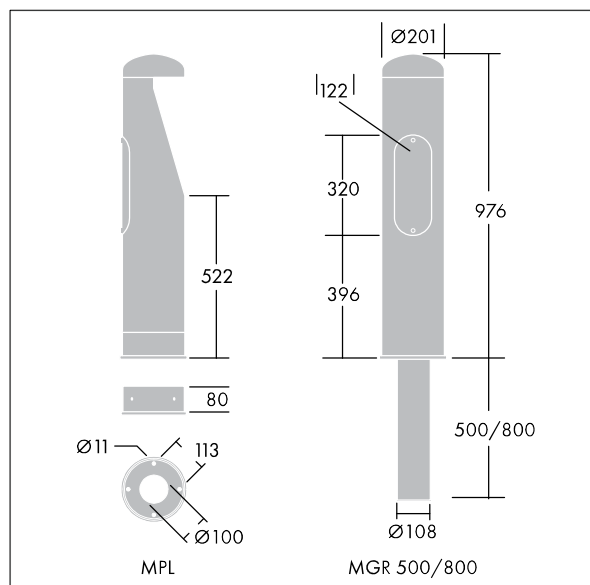
Urba Bollard

A decorative LED bollard. Electronic, fixed output control gear. Class I electrical, IP65, IK10. Body and bezel: low carbon steel, electro-plated zinc, finished black (RAL 9005). Diffuser: clear 5mm polycarbonate plate. Flange or root mounted using bases to be ordered separately. Complete with 4000K LED.

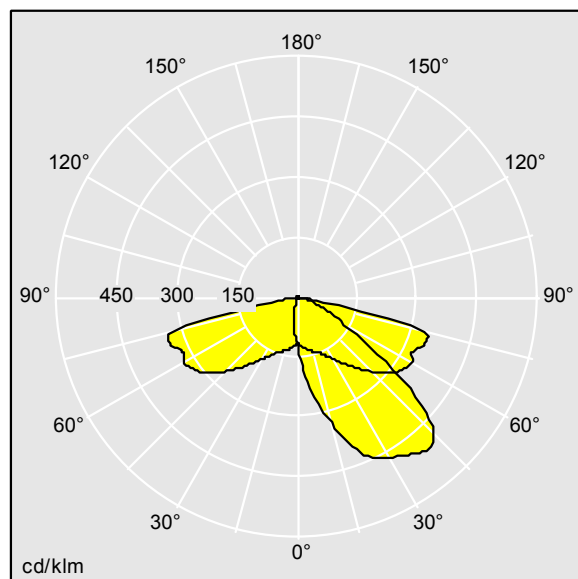
Dimensions: Ø200 x 970 mm
 Luminaire input power: 15 W
 Luminaire luminous flux: 1107 lm
 Luminaire efficacy: 74 lm/W
 Weight: 12 kg



TLG_TEA1_F_PDB.jpg



TLG_TEA1_M_LD1.wmf



TL_URBB4L105-740.ltd

Lamp position: STD - standard
 Light Source: LED
 Luminaire luminous flux*: 1107 lm
 Luminaire efficacy*: 74 lm/W
 Colour Rendering Index min.: 70
 Ballast: 1 x 96277445 DR TCI 40W 350-1050 BI #CC
 1276CC(verniss)

Correlated colour temperature*: 4000 Kelvin
 Rated useful life (B10)*:
 L85 100000h at 25°C
 Luminaire input power*: 15 W
 Dimming: FO
 Total harmonic distortion (THD): 15.95 %
 LOR: 1,00 ULOR: 0,00 DLOR: 0,99

This product contains a light source of energy efficiency class D.

All values marked with an * are rated values. Thorn uses tried and tested components from leading suppliers, however there may be isolated instances of technology-related failures of individual LEDs during the rated product lifetime. International standards set the tolerance in initial flux and connected load at $\pm 10\%$. Unless stated otherwise, the values apply to an ambient temperature of 25°C.

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D-CO Recessed

THORN

96257239 <D-CO R LED MAXI 6L50 840 CL

LED 12W LED_D-CO_606	IP67	IK10							
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D-CO Recessed

A large size, ground recessed luminaire with 6 x 1.2W white LEDs for indoor or outdoor applications. Body in aluminium with ABS plastic recessed housing. Front glass, toughened with clear finish, stainless steel frame. Static load bearing 500kg. Complete with 5m cable.

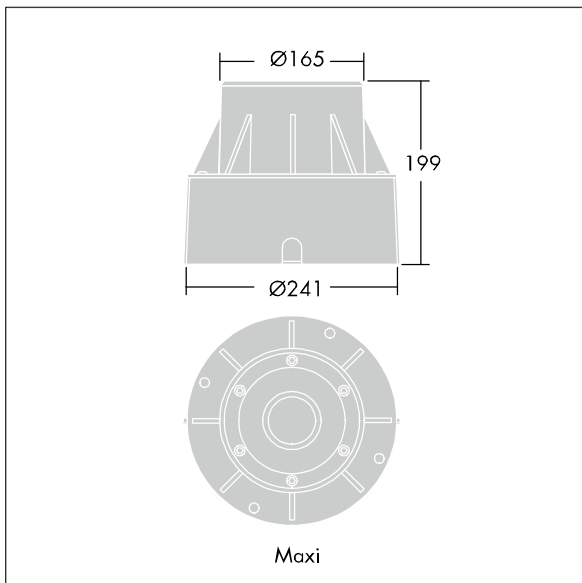
Dimensions: Ø241 x 199 mm

Luminaire input power: 12 W

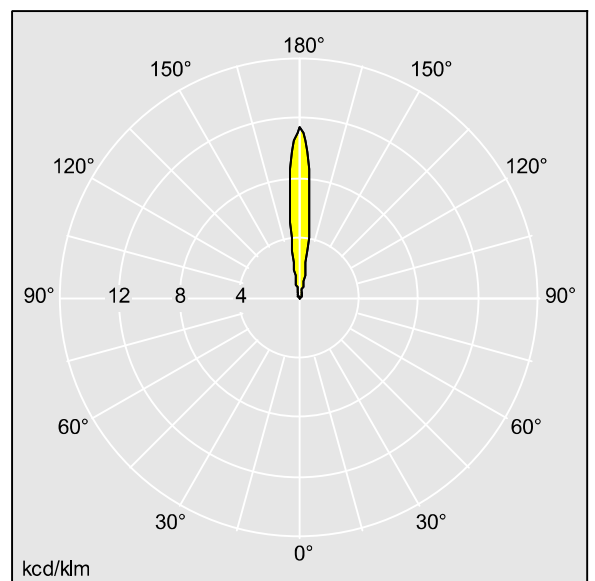
Weight: 3 kg



TLG_DCOL_F_LEDMAXIANGL.jpg



TLG_DCOL_M_ODL-165GZ.wmf



TLG_LA_DCOM2N_DC.ltd

Lamp position: STD - standard

Light Source: LED

Luminaire luminous flux*: 608 lm

Luminaire efficacy*: 51 lm/W

LOR: 1,00 ULOR: 1,00 DLOR: 0,00

Correlated colour temperature*: 4000 Kelvin

Rated median useful life*:

50000 h at 25 °C

Ballast: 1x LED_Con

Luminaire input power*: 12 W

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