



OCSC

O'CONNOR · SUTTON · CRONIN
MULTIDISCIPLINARY CONSULTING ENGINEERS

G531: CABRA PBSA

SITE LIGHTING REPORT

For
R & D Developments Limited (in Receivership), Grant Thornton
6 January 2026

NOTICE

This document has been produced by O'Connor Sutton Cronin & Associates for its client, R & D Developments Limited (in Receivership), Grant Thornton. It may not be used for any purpose other than that specified by any other person without the written permission of the authors.

DOCUMENT CONTROL & HISTORY

OCSC Job No: G531	Project Code	Originator	Zone Volume	Level	File Type	Role Type	Number	Status / Suitability Code	Revision
	G531	OCSC	XX	XX	RP	E	0001	S3	P04

Rev.	Status	Authors	Checked	Authorised	Issue Date
P02	S3	HK	BF	BF	25/08/2025
P03	S3	HK	BF	BF	27/11/2025
P04	S3	HK	BF	BF	6/01/2026

TABLE OF CONTENTS

1 INTRODUCTION 1

2 PROPOSED DEVELOPMENT 2

3 THE DESIGN..... 3

 3.1 EXTERNAL LIGHTING.....3

 3.2 ENVIRONMENTAL AND BIODIVERSITY STRATEGY 4

 3.3 LIGHTING CLASSES 5

 3.4 DETAILED STRATEGY 6

 3.5 LUMINAIRES, LIGHTING CONTROL.....7

4 RESULTS..... 9

APPENDICES

APPENDIX A	SITE LIGHTING DRAWING
APPENDIX B	LIGHTING CALCULATION REPORT
APPENDIX C	LUMINAIRE DATA SHEETS

2 PROPOSED DEVELOPMENT

The proposed development provides for a Large-Scale Residential Development, which in summary, shall consist of:

- a) Demolition of the former 'Matts of Cabra' public house and associated structures (approx. 376.55 sqm).
- b) Construction of a purpose-built student accommodation scheme consisting of 249 no. student bedspaces arranged in 32 no. clusters of 4, 7, 8, 9 and 10-bedroom units (including 13 no. accessible units and 10 no. studio units) each with associated shared kitchen/living/dining areas in 2 no. blocks ranging in height from 4-6 storeys;
- c) Internal amenity spaces (approx. 347.1 sqm) including a student lounge area, laundry room, postal room and a reception / office / kitchen / tearoom across the ground floor and first floor levels;
- d) External amenity areas (approx. 2,971.4 sqm) including 1 no. outdoor terrace at fourth floor level of Block A (193.1 sqm);
- e) Approx. 405.5 sqm of public open space in the form of a public plaza fronting Fassaugh Avenue;
- f) Switch room, ESB substation, sprinkler room and bin storage all in a single storey services building along the eastern site boundary;
- g) A total of 308 no. bicycle parking spaces at surface level (258 no. long term, covered bicycle parking spaces including 12 no. cargo bicycle parking spaces and 50 no. visitor bicycle parking spaces);
- h) Vehicular access to be provided from Fassaugh Avenue;
- i) 1 no. accessible car parking space proposed within the site;
- j) It is proposed that the development will be used for short term tourist or visitor accommodation outside of academic term times, in accordance with the definition of student accommodation.

The development will also provide for all associated service connections, public lighting, cold water storage and thermal store room, hard and soft landscaping, planting, formal activity equipment, removable bollards, tactile paving, boundary treatments, nature-based SuDS features, green and blue roofs, and all associated site clearance, excavation and development works above and below ground.

3 THE DESIGN

3.1 EXTERNAL LIGHTING

Please refer to Appendix A for site lighting layout.

The external lighting has been designed in the best possible way for visual comfort, biodiversity, and suitability, and shall be specified in accordance with the appropriate maintained illuminance levels recommended by the following documents:

- EN13201-2-2015 Lighting Classes for external lighting. (Published on: 31st Jan 2016 by BSI Standards Limited 2016)
- BS EN 12464-2 Outdoor workplaces (Published on: 31st Jan 2014 by BSI Standards Limited 2014)
- BS 5489-1-2020 Design of road lighting of roads and public amenity areas. Code of practice (Published on : 31st May 2020 by BSI Standards Limited 2020)
- BS EN 13201-2 Lighting Classes for external lighting. (Published on: 31st Jan 2016 by BSI Standards Limited 2016)
- CIBSE Lighting Guide 6 - The Outdoor environment (Published on: Jan 2016 by CIBSE publications)
- Institute of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light. (Published on: Jan 2020 by Institution of Lighting Professionals publications)
- Guide on the limitation of the effects of obtrusive light from outdoor lighting installations, 2nd edition
- Dublin City Council document on General Specification for Public Lighting Design and Installation in the Dublin City Council Area (Published on: January 2020).

Lighting design shall ensure that:

- All night-time lighting is concentrated in the appropriate areas
- upward lighting is minimised
- light pollution is minimised
- energy consumption is minimised
- To enhance security

3.2 ENVIRONMENTAL AND BIODIVERSITY STRATEGY

It is widely recognised that artificial lighting can have detrimental effects on nocturnal animals. Therefore, the development lighting strategy has considered the following: -

- **Do not over light** - Where relevant guidance gives a range of illumination levels the lowest one which is appropriate shall be utilised. No lighting is directly at the open water or trees or the canal frontage.
- **Luminance distribution** - The spread of light shall be kept near to or below the horizontal where possible.
- **Minimise UV light** - Selected luminaires shall emit minimal UV light. This can be achieved by selecting LED luminaires.
- **Colour temperature of lamps** - All light sources shall be 3000K maximum.
- **Lighting controls** – Consideration shall be made to when lighting is operational to reduce detrimental impacts on nocturnal animals. The western boundary of the site along the rail line is primarily lit with low level bollard lights that don't provide upward light distribution that affect any bat flying corridor or routes. The lighting can also be programmed to dim down to lower levels at pre-set hours for example between 11pm-6am.
- **Light spill** – The lighting calculations were conducted to examine if the light spill from the fittings. It was concluded that the levels were appropriately low. As an E4 zone a lux average level below 5 lux would be considered appropriate. To achieve these levels back baffles will be installed on the luminaires in question (primarily on the eastern boundary adjacent residential gardens).

Table 2: Environmental zones

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town / City centres with high levels of night-time activity

Figure 2 - CIE 150 Zone Categorization (2017)

Table 3 (CIE 150 table 2); Maximum values of vertical illuminance on properties.

Light technical parameter	Application conditions	Environmental zone				
		E0	E1	E2	E3	E4
Illuminance in the vertical plane (E_v)	Pre-curfew	n/a	2 lx	5 lx	10 lx	25 lx
	Post curfew	n/a	<0.1 lx*	1 lx	2 lx	5 lx

Figure 3 -CIE 150 Intrusive light (2017)

3.3 LIGHTING CLASSES

The appropriate lighting classes shall be in accordance with BS EN 13201-2: 2015 (Table 3) "Lighting Classes for External Lighting" detailed below:

Class	Horizontal Illuminance	
	Maintained average illuminance. (lx)	Minimum maintained illuminance (lx)
P1	15	3
P2	10	2
P3	7.5	1.5
P4	5	1
P5	3	0.6
P6	2	0.6
P7	<u>Not determined</u>	<u>Not determined</u>

Table 1 - Lighting Classes for external lighting

The points below were used as guidelines in the design of the external lighting. The different lighting classifications used for the proposed development can be seen below:

- Part M and BS8300 guidelines are considered for the stairs/ramps and entrances to the site.
- CIBSE guidelines considered while installing and designing the strategy lighting for areas like roadways.
- Minimum lux level to be used or as required by Health & Safety especially along the perimeters.
- Lighting Classification
 - P4 – All Pathways

3.4 DETAILED STRATEGY

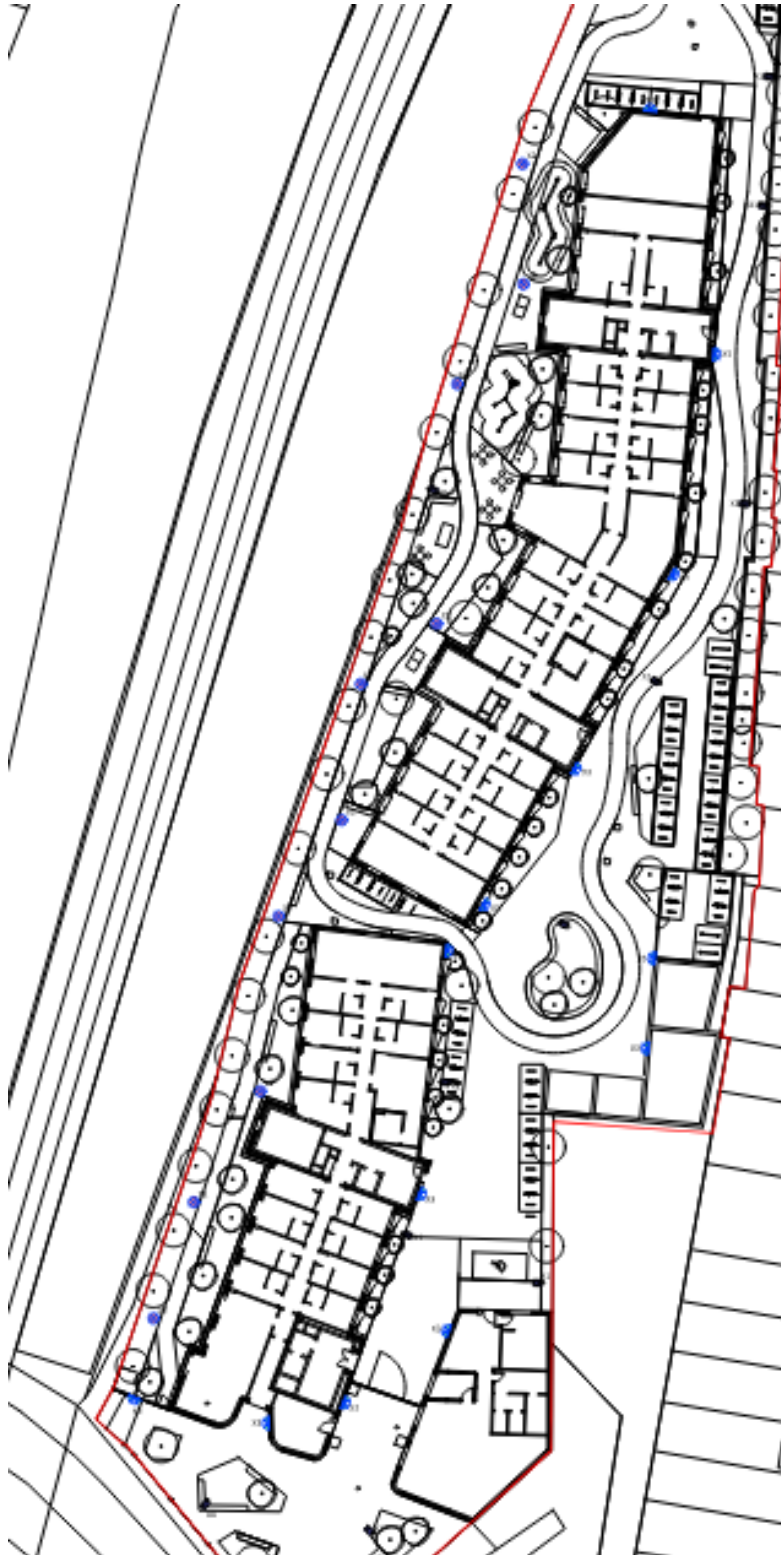


Figure 4- Proposed Typology Lighting Plan

The design considerations considered:

- This area is classified as P4 for walkways.
- Emergency luminaires Mounted near final exists.
- Minimise Light Spill onto Faussagh Avenue Cabra

3.5 LUMINAIRES, LIGHTING CONTROL

3.5.1 LUMINAIRES

The following luminaires have been used as the basis of this design:

- Type X1 - COLUMN MOUNTED LIGHT
WE-EF FLOODLIGHT -- RLF530-SE-LED - 24W 3126LM - 3000K H=4000



- Type X2 – WE-EF CTY150 LED BOLLARD - 9W- 1140LM- 3000K H=998



- Type X3 – WE-EF DLO229 WALL MOUNTED LIGHT – 3000K 1408LM



All proposed luminaires are 3000K colour temperature. The height of fittings was selected to comply with both private and public specifications. The desired lighting design may also be achieved by other luminaires, and the final lighting installation may use other luminaires, with modified positioning and aiming to achieve the same result. Manufacturers stated performance characteristics are subject to change.

3.5.2 LIGHTING CONTROL

All luminaires shall be able to dim up or down to achieve the desired lighting class and controlled with timers and photocell sensors. Curfews will be accommodated using timers when or if agreed.

4 RESULTS

Figure 5 indicates the predicted illumination levels. See appendix B for detailed results.

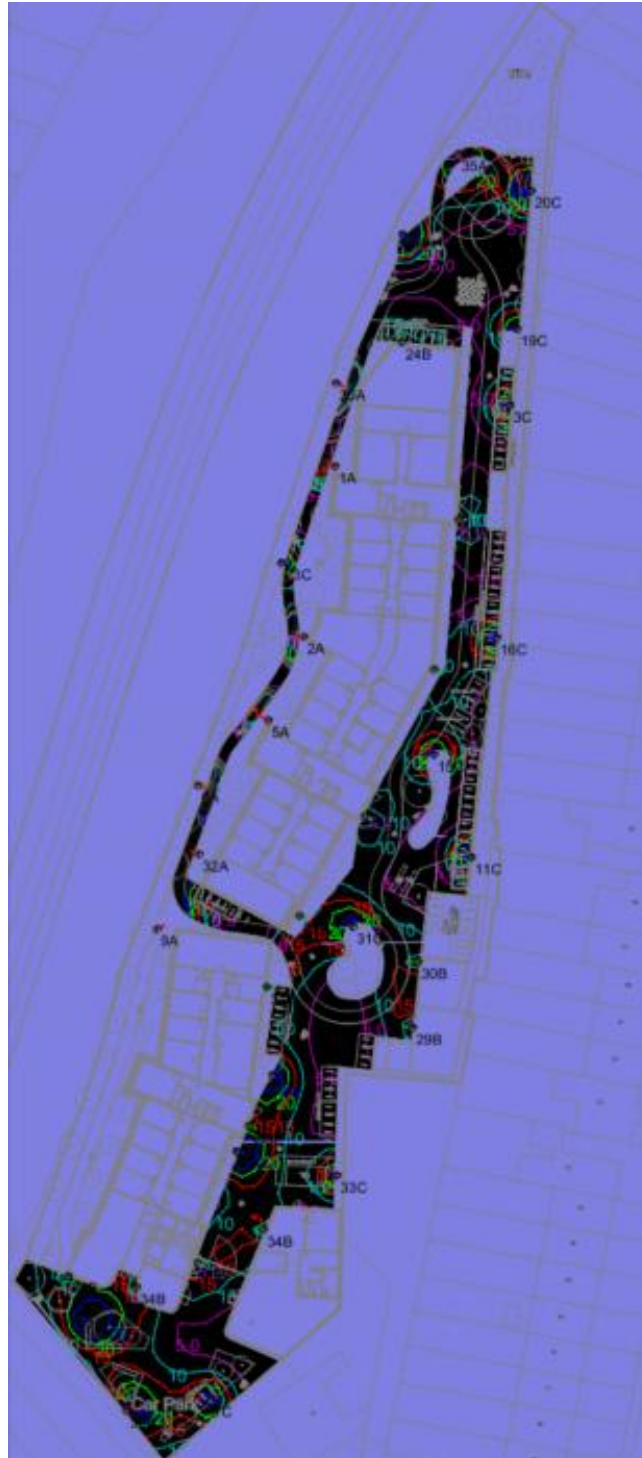
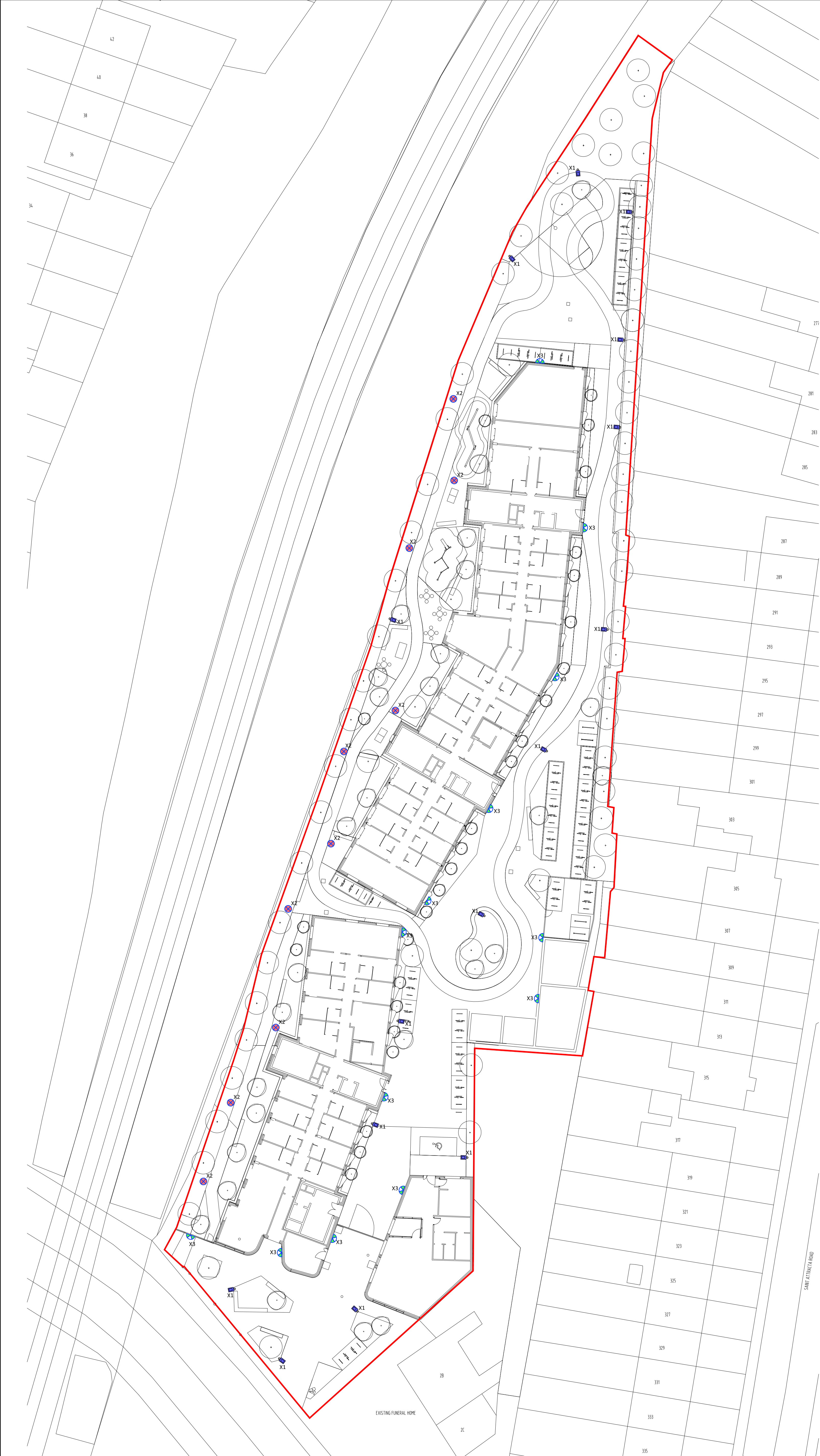


Figure 5 - Results

Appendix A **SITE LIGHTING DRAWING**



- DRAWINGS NOTES:**
1. LIGHTING TO BE SUPPLIED VIA A SOLAR TIME CLOCK WITHIN EACH PUBLIC LIGHTING MINI PILLAR.
 2. A MAXIMUM OF 6No. LUMINAIRES PER CIRCUIT & 4No. CIRCUITS PER PUBLIC LIGHTING MINI PILLAR.
 3. ALL COLUMNS TO BE 6 METRES HIGH WITH A 1 METRE OUTREACH BRACKET & SETBACK 1 METRE FROM KERB.
 4. ALL COLUMNS TO BE HINGED & TO BE AT LEAST 1 METRE CLEAR OF ALL OVERHEAD HIGH VOLTAGE POWER LINES.
 5. ALL EQUIPMENT TO BE SUITABLY IP RATED FOR THE ENVIRONMENT THEY ARE BEING INSTALLED.
 6. FOR SCHEDULES OF EQUIPMENT SEE SPECIFICATION.
 7. THE COMPLETE INSTALLATION TO BE CO-ORDINATED WITH ALL OTHER SERVICES.

- LEGEND OF SYMBOLS:**
- X1 COLUMN MOUNTED LIGHT
EN94ITEKA- WALL-MOUNTED FLOODLIGHT - NEUTRAL WHITE - A60
ASYMMETRICAL OPTIC - 28.8W 2950LM - 4000K H=4000
- X2 BOLLARD LIGHT
96262143-D-CO BOLLARD / D-CO LED BOLLARD 1000 30L50 840 CL2
CON- 14W- 4000K-583LM
- X3 WALL MOUNTED LIGHT
AREELEDWLD REEF CCT DIRECTIONAL WALL LIGHT BLACK OPTIC- 5W
- 430LM- 4000K H=2600
- X4 CATENARY LIGHTING

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DESIGN TEAM DRAWINGS AND SPECIFICATIONS.
- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS. DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
- NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF O'CONNOR SUTTON CRONIN AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DOCUMENT WAS ORIGINALLY ISSUED.

Rev No.	Date	Revision Note	Drn by	Chkd by
P01	28.07.25	SUITABLE FOR PLANNING.	C.T.	B.F.
P02	25.11.25	SUITABLE FOR PLANNING.	C.T.	B.F.



OCSC
O'CONNOR · SUTTON · CRONIN
MULTIDISCIPLINARY CONSULTING ENGINEERS
Civil / Structural / Environmental / Mechanical / Electrical / Sustainability
Dublin Office: 9 Prussia Street, Dublin 7, D07 KT57.
Tel: +353 (0)1 8682000 Web: www.ocsc.ie
Dublin · London · Belfast · Galway · Cork · Birmingham

Client: GRANT THORNTON IRELAND

Project: STUDENT RESIDENCE FASSAUGH AVENUE
CABRA, DUBLIN

Title: ELECTRICAL
PROPOSED SITE LIGHTING LAYOUT

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
G531	OCSC	XX	XX	DE	E	0001	S3	P02
Date: 11.07.25	Scale @ A1 1:250	Drn by: C.T.	Chkd by: H.K.	Aprvd by: B.F.				

Appendix B **LIGHTING CALCULATION REPORT**

DATE: 25 August 2025
DESIGNER: HK
PROJECT No: G531
PROJECT NAME: Faussagh Avenue

**LIGHTING
REALITY**

Outdoor Lighting Report

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	713803.91	736442.69	82.52	184.34	1.47	1.49
2	Grid 2	713802.59	736443.07	44.14	43.89	1.77	1.76
3	Grid 3	713809.26	736486.78	56.32	40.67	2.25	1.63
4	Grid 4	713819.42	736526.90	49.16	40.48	1.97	1.62
5	Grid 5	713837.86	736567.41	37.38	59.30	1.50	2.37

Luminaires

Luminaire A Data

Supplier	
Type	111-0192
Lamp(s)	12 LED, Warm White - 120° angle of beam
Lamp Flux (klm)	3.13
File Name	111-0192.ies
Maintenance Factor	0.90
Imax70,80,90(cd/klm)	398.6, 60.6, 0.0
No. in Project	9

Luminaire B Data

Supplier	
Type	115-1945
Lamp(s)	9 LED, Warm White - 120° angle of beam
Lamp Flux (klm)	1.14
File Name	115-1945.ies
Maintenance Factor	0.90
Imax70,80,90(cd/klm)	679.3, 231.1, 31.8
No. in Project	13

Luminaire C Data

Supplier	
Type	195-9521
Lamp(s)	LED, Fortimo, Warm White
Lamp Flux (klm)	1.41
File Name	195-9521.ies
Maintenance Factor	0.90
Imax70,80,90(cd/klm)	95.9, 47.5, 15.9
No. in Project	14

Layout

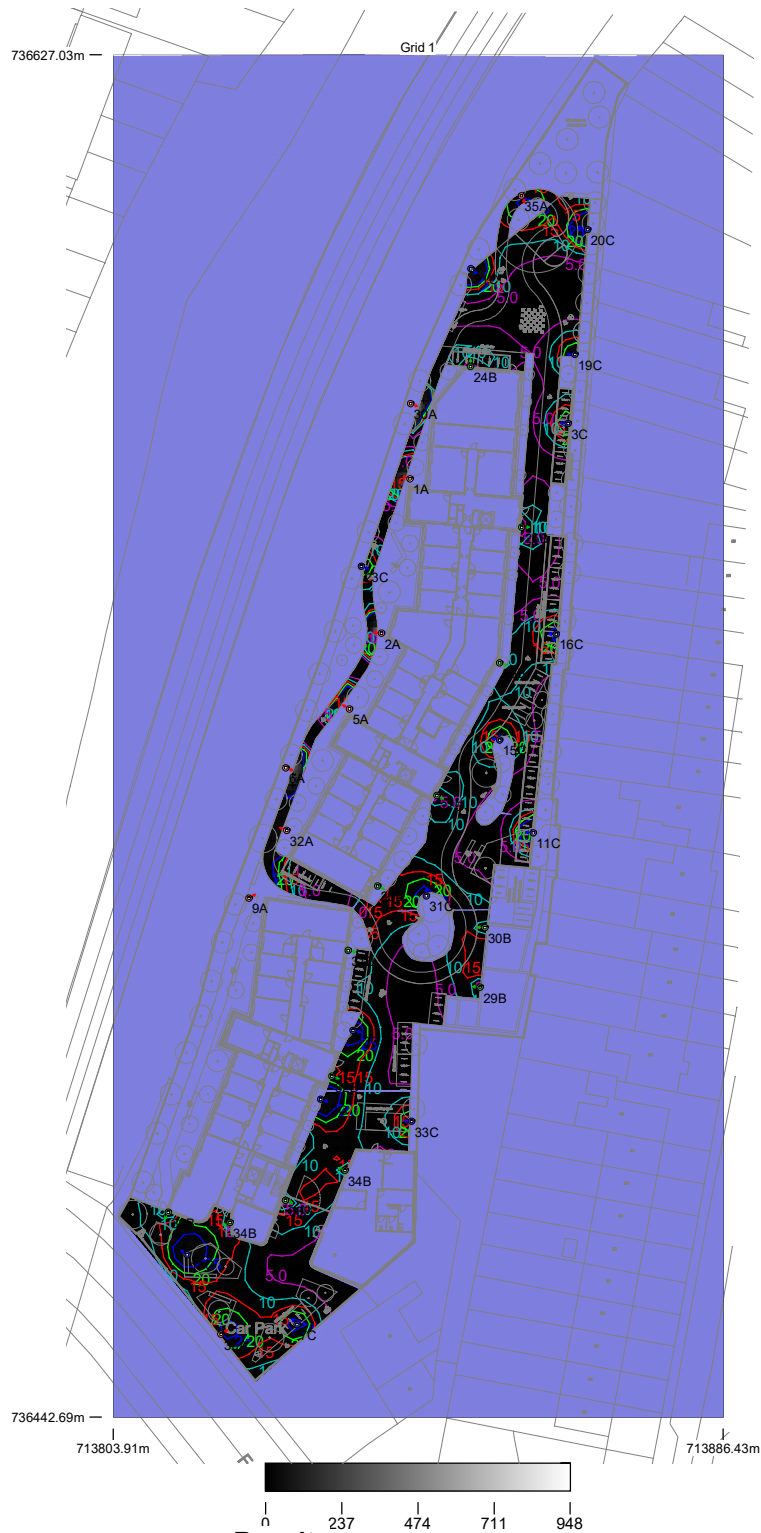
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	713844.07	736569.65	1.00	160.00	0.00	0.00	0.00			
2	A	713840.20	736548.77	1.00	172.00	0.00	0.00	0.00			
3	C	713865.43	736577.15	4.00	180.00	0.00	0.00	0.00			
5	A	713835.85	736538.53	1.00	151.00	0.00	0.00	0.00			
6	A	713827.24	736530.56	1.00	340.00	0.00	0.00	0.00			
9	A	713822.27	736512.95	4.00	30.00	0.00	0.00	0.00			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
7	C	713828.78	736455.26	4.00	133.00	0.00	0.00	0.00			
11	C	713813.92	736464.70	4.00	144.00	0.00	0.00	0.00			
12	C	713831.99	736485.73	4.00	340.00	0.00	0.00	0.00			
13	C	713836.36	736495.03	4.00	345.00	0.00	0.00	0.00			
11	C	713860.74	736521.75	2.60	172.00	0.00	0.00	0.00			
15	C	713856.16	736534.30	4.00	167.00	0.00	0.00	0.00			
16	C	713863.86	736548.65	4.00	180.00	0.00	0.00	0.00			
19	C	713866.36	736586.51	4.00	180.00	0.00	0.00	0.00			
20	C	713868.06	736603.38	2.50	178.00	0.00	0.00	0.00			
21	C	713852.29	736598.04	2.50	320.00	0.00	0.00	0.00			
23	C	713837.48	736557.83	4.00	340.00	0.00	0.00	0.00			
24	B	713852.24	736584.84	2.60	90.00	0.00	0.00	0.00			
25	B	713859.18	736563.11	2.60	0.00	0.00	0.00	0.00			
26	B	713856.19	736544.74	2.60	340.00	0.00	0.00	0.00			
27	B	713847.68	736526.84	2.60	330.00	0.00	0.00	0.00			
28	B	713839.69	736514.57	2.60	335.00	0.00	0.00	0.00			
29	B	713853.53	736500.89	2.60	176.00	0.00	0.00	0.00			
30	B	713854.18	736508.93	2.60	176.00	0.00	0.00	0.00			
31	B	713835.71	736505.82	2.60	349.00	0.00	0.00	0.00			
32	B	713833.49	736488.84	2.60	340.00	0.00	0.00	0.00			
33	B	713827.20	736472.04	2.60	341.00	0.00	0.00	0.00			
34	B	713835.27	736476.10	2.60	160.00	0.00	0.00	0.00			
30	A	713844.12	736579.82	1.00	340.00	0.00	0.00	0.00			
31	C	713846.25	736513.21	4.00	87.00	0.00	0.00	0.00			
32	A	713827.38	736522.10	4.00	160.00	0.00	0.00	0.00			
32	B	713811.38	736470.43	2.60	242.00	0.00	0.00	0.00			
33	C	713844.27	736482.76	4.00	178.00	0.00	0.00	0.00			
34	B	713819.72	736469.05	2.60	202.00	0.00	0.00	0.00			
35	A	713859.12	736607.92	6.00	297.00	0.00	0.00	0.00			
36	A	713818.51	736453.96	6.00	32.00	0.00	0.00	0.00			

Horizontal Illuminance (lux)

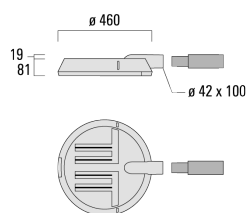
Grid 1



Results

Eav	12.19
Emin	1.21
Emax	304.14
Emin/Emax	0.00
Emin/Eav	0.10

Appendix C **LUMINAIRE DATA SHEETS**



Description

IP66, Class I. Class II on request. IK07. Marine-grade, die-cast aluminium alloy. 5CE superior corrosion protection including PCS hardware. Silicone CCG® Controlled Compression Gasket. Non-reflecting safety glass lens, hinged with safety switch. Integral EC electronic converter in thermally separated compartment. DALI. CAD-optimised optics for superior illumination and glare control. OLC® One LED Concept. Factory installed LED circuit board. The luminaire is factory-sealed and does not need to be opened during installation.

Optional 2200 K version up to max. 1050mA available. To be specified at time of ordering.

Brackets to be ordered separately.

Pole mounted**Specifications****Material description**

Body	Marine-grade, die-cast aluminium alloy
Lens	Non-reflecting safety glass lens, hinged
Colours	 RAL9004 Signal black  RAL9006 White aluminium  RAL9007 Grey aluminium  RAL7016 Anthracite grey  RAL9016 Traffic white
Gasket	Silicone CCG® Controlled Compression Gasket
Fasteners	PCS Polymer Coated Stainless Steel Hardware
Ingress protection	IP66
Impact resistance	IK07
Corrosion resistance	5CE
Windage	0.166 m ²

Electrical description

Power supply	220-240V / 50-60 Hz
Driver / Ballast	Integral EC electronic converter. DALI
Power factor	> 0.9
Surge protection	6/6 kV

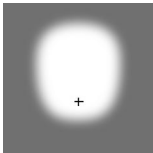
Additional information

Lifetime	Ta=25° L90B10 > 90000h
Energy efficiency class	C-D (Light source)

Options

Light distribution	Colour temperature	Nominal Watt
 asymmetric, side throw beam [S60]	 3000 K	33 W
 asymmetric, side throw [S70]		61 W
 asymmetric, side throw [S70]	 4000 K	15 W
 asymmetric, forward throw [A60]		32 W
 asymmetric, forward throw [A60]	 2700 K	18 W
 asymmetric, side throw beam [S65]		72 W
 rectangular, side throw [R65]		81 W
 pedestrian/bicycle lane [P65]		

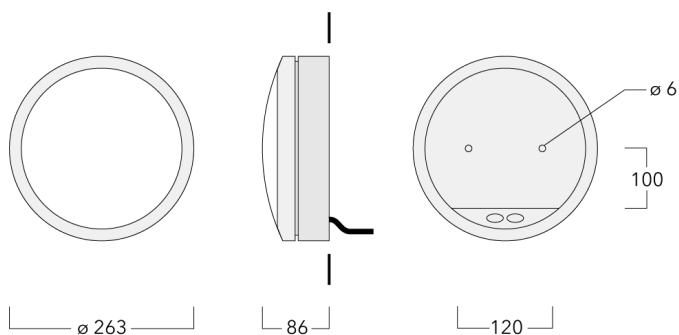
Configurations

Light distribution	Part ID	Light source	Rated lumens	Rated input power	CRI	Weight (kg)
asymmetric, forward throw [A60] 	111-0275	LED-12/24W / 700 mA - 3000 K	2891.7	27 W	80	9.30
	111-0275-70	LED-12/24W / 700 mA - 3000 K	3290.6	27 W	70	9.30
	111-0277	LED-24/48W / 700 mA - 3000 K	5783.5	54 W	80	9.30
	111-0277-70	LED-24/48W / 700 mA - 3000 K	6581.2	54 W	70	9.30
	111-0353	LED-12/24W / 700 mA - 4000 K	3091.2	27 W	80	9.30
	111-0353-70	LED-12/24W / 700 mA - 4000 K	3490	27 W	70	9.30
	111-0355	LED-24/48W / 700 mA - 4000 K	6182.3	54 W	80	9.30
	111-0355-70	LED-24/48W / 700 mA - 4000 K	6980	54 W	70	9.30
	111-0414	LED-12/12W / 350 mA - 4000 K	1784.4	13.9 W	80	9.30
	111-0414-70	LED-12/12W / 350 mA - 4000 K	1994.3	13.9 W	70	9.30
	111-0415	LED-24/24W / 350 mA - 4000 K	3568.7	26.5 W	80	9.30
	111-0415-70	LED-24/24W / 350 mA - 4000 K	3988.6	26.5 W	70	9.30
	111-0455	LED-12/12W / 350 mA - 3000 K	1626.9	13.9 W	80	9.30
	111-0455-70	LED-12/12W / 350 mA - 3000 K	1889.3	13.9 W	70	9.30
	111-0457	LED-24/24W / 350 mA - 3000 K	3253.8	26.5 W	80	9.30
	111-0457-70	LED-24/24W / 350 mA - 3000 K	3778.7	26.5 W	70	9.30
	111-0908	LED-24/72W / 1050 mA - 3000 K	9180.5	79 W	80	9.30
	111-0908-70	LED-24/72W / 1050 mA - 3000 K	10461.5	79 W	70	9.30
	111-0909	LED-24/72W / 1050 mA - 4000 K	9607.5	79 W	80	9.30
	111-0909-70	LED-24/72W / 1050 mA - 4000 K	10888.5	79 W	70	9.30
	111-1046	LED-12/12W / 350 mA - 2700 K	1522	13.9 W	80	9.30
	111-1046-70	LED-12/12W / 350 mA - 2700 K	1626.9	13.9 W	70	9.30
	111-1047	LED-12/24W / 700 mA - 2700 K	2692.3	27 W	80	9.30
	111-1047-70	LED-12/24W / 700 mA - 2700 K	2891.7	27 W	70	9.30
	111-1048	LED-24/24W / 350 mA - 2700 K	3043.9	26.5 W	80	9.30
	111-1048-70	LED-24/24W / 350 mA - 2700 K	3253.8	26.5 W	70	9.30
	111-1049	LED-24/48W / 700 mA - 2700 K	5384.6	54 W	80	9.30
	111-1049-70	LED-24/48W / 700 mA - 2700 K	5783.5	54 W	70	9.30
	111-1050	LED-24/72W / 1050 mA - 2700 K	8753.5	79 W	80	9.30
	111-1050-70	LED-24/72W / 1050 mA - 2700 K	10034.5	79 W	70	9.30
asymmetric, side throw [S70]	111-0230	LED-12/24W / 700 mA - 3000 K	2984.1	27 W	80	9.30
	111-0230-70	LED-12/24W / 700 mA - 3000 K	3395.7	27 W	70	9.30
	111-0234	LED-24/48W / 700 mA - 3000 K	5968.1	54 W	80	9.30
	111-0234-70	LED-24/48W / 700 mA - 3000 K	6791.3	54 W	70	9.30



Description

IP55, Class I. Class II on request. IK10. Marine-grade, die-cast aluminium alloy. 5CE superior corrosion protection including PCS hardware. Silicone rubber gasket. Polycarbonate main lens. Two cable entries. Factory installed LED circuit board. Integral EC electronic converter.



Specifications**Material description**

Body	Marine-grade, die-cast aluminium alloy
Lens	Polycarbonate lens
Colours	RAL9004 Signal black RAL9006 White aluminium RAL9007 Grey aluminium RAL7016 Anthracite grey RAL9016 Traffic white
Gasket	Silicone rubber gasket
Fasteners	PCS Polymer Coated Stainless Steel Hardware
Ingress protection	IP55
Impact resistance	IK10
Corrosion resistance	5CE

Electrical description

Power supply	220-240V / 50-60 Hz
Driver / Ballast	Integral EC electronic converter
Surge protection	1/2 kV

Additional information

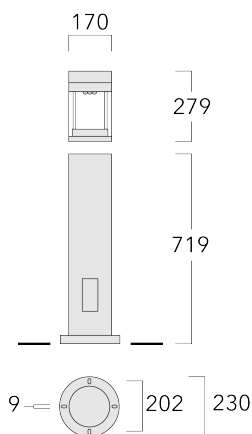
Lifetime	Ta=25° L70B50 > 50000h
Energy efficiency class	D-E (Light source)

Options

Light distribution	Colour temperature	Nominal Watt
 diffused distribution	 3000 K	15 W
	 4000 K	
	 2700 K	

Configurations

Light distribution	Part ID	Light source	Rated lumens	Rated input power	CRI	Weight (kg)
diffused distribution 	195-0893	LED-FT-17W / 500 mA - 2700 K	1346.8	20 W	80	2.00
	195-9521	LED-FT-17W / 500 mA - 3000 K	1408.7	20 W	80	2.00
	195-9522	LED-FT-17W / 500 mA - 4000 K	1468.4	20 W	80	2.00

**Description**

IP66, Class I. Class II on request. IK10. Marine-grade, die-cast aluminium alloy. 5CE superior corrosion protection including PCS hardware. Silicone CCG® Controlled Compression Gasket. Polycarbonate main lens. Integral EC electronic converter in thermally-separated compartment. Factory installed LED circuit board. CAD-optimised optics for superior illumination and glare control. Pre-wired post complete with cable connecting box and service door for mains connection.

Optional 2200 K version available. To be specified at time of ordering.

Optional Eco Step Dim® Motion version available. To be specified at time of ordering.

Supplied as a complete luminaire (luminaire head and standpipe). Please note: The standpipe height must be entered for the photometric calculation.

Specifications

Material description

Body	Marine-grade, all-aluminium construction
Lens	Polycarbonate
Colours	RAL9004 Signal black RAL9006 White aluminium RAL9007 Grey aluminium RAL7016 Anthracite grey RAL9016 Traffic white
Gasket	Silicone CCG® Controlled Compression Gasket
Fasteners	PCS Polymer Coated Stainless Steel Hardware
Ingress protection	IP66
Impact resistance	IK10
Corrosion resistance	5CE

Electrical description

Power supply	220-240V / 50-60 Hz
Driver / Ballast	Standard. Optional DALI version available. To be specified at time of ordering.
Power factor	> 0.9
Surge protection	10/10kV (SP10)

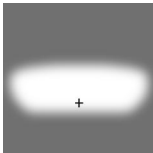
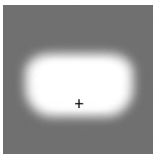
Additional information

Lifetime	Ta=25° L90B10 > 90000h
Energy efficiency class	C-D (Light source)

Options

Light distribution	Colour temperature	Nominal Watt
 rectangular, side throw [R65]	 2700 K	0 W
 asymmetric, side throw [S65]	 3000 K	
	 4000 K	

Configurations

Light distribution	Part ID	Light source	Rated lumens	Rated input power	CRI	Weight (kg)
asymmetric, side throw [S65] 	115-1956	LED-9/9W / 350 mA - 2700 K	974.2	11 W	80	11.50
	115-1957	LED-9/9W / 350 mA - 3000 K	1041.4	11 W	80	11.50
	115-1958	LED-9/9W / 350 mA - 4000 K	1142.1	11 W	80	11.50
	115-1959	LED-9/13W / 500 mA - 2700 K	1343.7	15.8 W	80	11.50
	115-1960	LED-9/13W / 500 mA - 3000 K	1444.5	15.8 W	80	11.50
	115-1961	LED-9/13W / 500 mA - 4000 K	1545.3	15.8 W	80	11.50
	115-1962	LED-9/18W / 700 mA - 2700 K	1814	20 W	80	11.50
	115-1963	LED-9/18W / 700 mA - 3000 K	1948.4	20 W	80	11.50
	115-1964	LED-9/18W / 700 mA - 4000 K	2082.7	20 W	80	11.50
	115-1965	LED-9/27W / 1050 mA - 2700 K	2754.6	29 W	80	11.50
	115-1966	LED-9/27W / 1050 mA - 3000 K	2889	29 W	80	11.50
	115-1967	LED-9/27W / 1050 mA - 4000 K	3023.3	29 W	80	11.50
rectangular, side throw [R65] 	115-1944	LED-9/9W / 350 mA - 2700 K	1067.2	11 W	80	11.50
	115-1945	LED-9/9W / 350 mA - 3000 K	1140.8	11 W	80	11.50
	115-1946	LED-9/9W / 350 mA - 4000 K	1251.2	11 W	80	11.50
	115-1947	LED-9/13W / 500 mA - 2700 K	1472	15.8 W	80	11.50
	115-1948	LED-9/13W / 500 mA - 3000 K	1582.4	15.8 W	80	11.50
	115-1949	LED-9/13W / 500 mA - 4000 K	1692.8	15.8 W	80	11.50
	115-1950	LED-9/18W / 700 mA - 2700 K	1987.2	20 W	80	11.50
	115-1951	LED-9/18W / 700 mA - 3000 K	2134.4	20 W	80	11.50
	115-1952	LED-9/18W / 700 mA - 4000 K	2281.6	20 W	80	11.50
	115-1953	LED-9/27W / 1050 mA - 2700 K	3017.6	29 W	80	11.50
	115-1954	LED-9/27W / 1050 mA - 3000 K	3164.8	29 W	80	11.50
	115-1955	LED-9/27W / 1050 mA - 4000 K	3312	29 W	80	11.50



O'CONNOR • SUTTON • CRONIN
MULTIDISCIPLINARY CONSULTING ENGINEERS

Head Office

9 Prussia Street
Dublin 7
Ireland
D07KT57

T: +353 (0)1 8682000

E: ocsc@ocsc.ie | W: www.ocsc.ie

Civil | Structural | Mechanical | Electrical | Sustainability | Environmental