

# Public Lighting Report

Residential Development  
at Adamstown Station, Co. Dublin

Project No. Q067

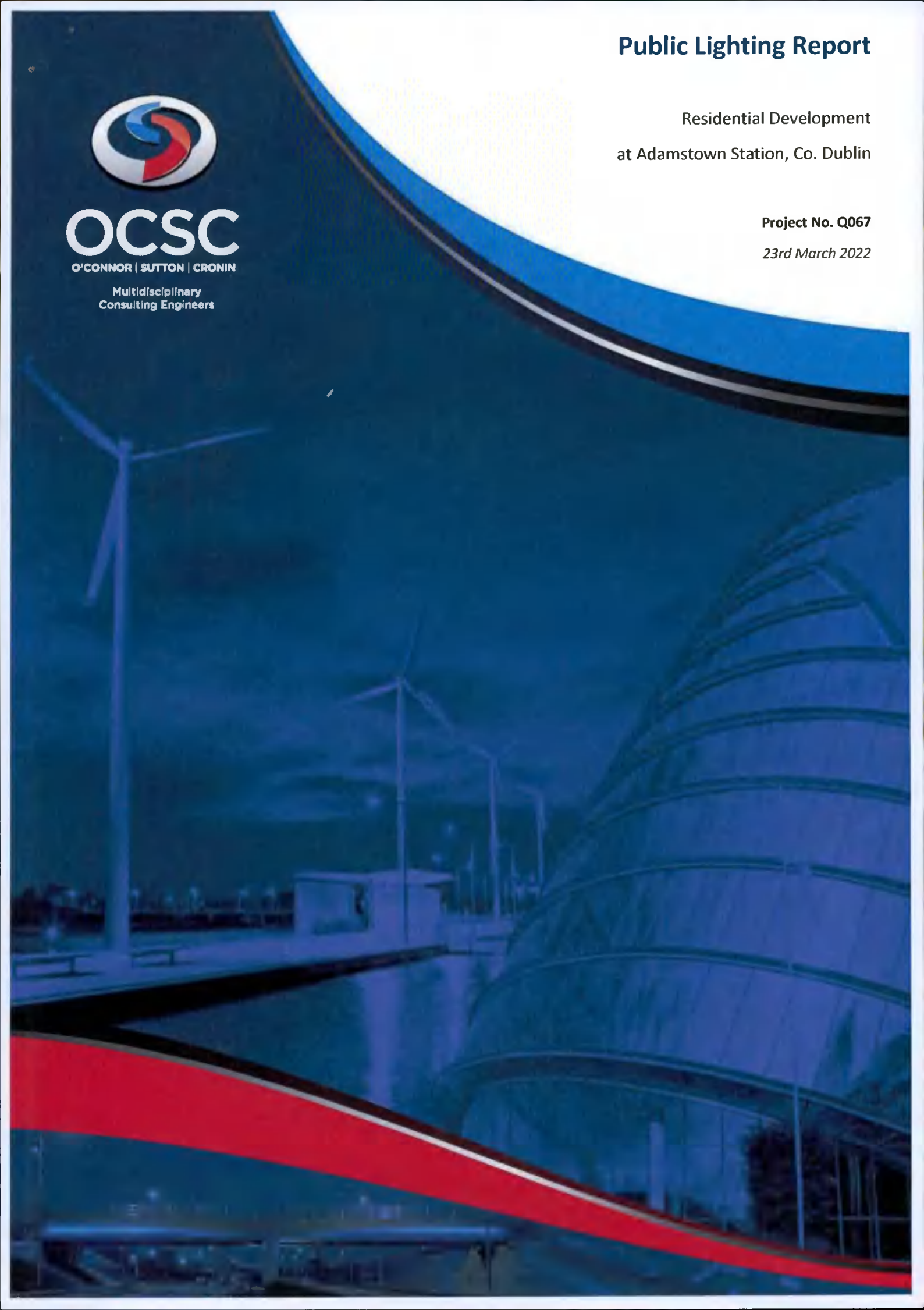
23rd March 2022



# OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary  
Consulting Engineers



# Public Lighting Report



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## DOCUMENT CONTROL & HISTORY

<b>OCSC Job No.: Q067</b>	<b>Project Code</b>	<b>Originator Code</b>	<b>Zone Code</b>	<b>Level Code</b>	<b>File Type</b>	<b>Role Type</b>	<b>Number Series</b>	<b>Status/ Suitability Code</b>	<b>Revision</b>
	Q067	OCSC	XX	XX	RP	E	0001	S2	P01
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P01	S2	BOB		TD	TD		23.03.22		

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## 1. INTRODUCTION

This report outlines the design criteria and considerations taken into account with regard to the lighting scheme within the proposed residential development at Adamstown Block a, C, D, Co. Dublin.

The report considers the lighting design as developed by O'Connor Sutton Cronin (OCSC), and should be read in conjunction with OCSC drawing number:

Q067-OCSC-XX-00-DR-ME-0001

The drawing is provided to demonstrate:

- Compliance with SDCC public lighting standards for areas to be taken in charge,

Standards and guidelines in relation to the lighting design are:

- BS 5489-1-2013
- South Dublin City Council Public Lighting General Specification.

The electrical services for the external lighting installation will be designed in accordance with IS: 10101.

## 2. THE DESIGN

The lighting design has been developed with the following principal considerations:

- Provide adequate illumination to contribute towards the safe use of Adamstown Block A, C and D.
- Provide the required illumination with minimum energy use.
- To control the lighting to prevent energy wastage.

All lighting within the area to be taken in charge is to be powered via a new lighting minipillar to meet SDCC specification.

The minimum lux level is to be in compliance with the required P class as advised by SDCC to comply with SDCC Public Lighting Specification and BS5489-2013

As per SDCC Public Lighting Specification BS5489:2013 the requirement for Adamstown Plaza will need to meet lux levels described in Annex A for pedestrians and cyclists only as a P3 class.

The luminaires to be LED, 1.5 S/P Ratio, 4000k CCT, LM80 >15 years using TM21-11 test results, driver current < 750mA, minimum IK08 impact resistance, at least IP65 ingress protection, as required by SDCC specification.

The lighting shall be by individual electronic solid state photocell per luminaire, with test switch in column base, to SDCC specification.

The luminaires proposed for these areas are combination of pole mounted and low level LED strip lighting to comply with SDCC standards and regulations.

Any lighting columns shall be tubular type, galvanised steel, fully in accordance with SDCC standard specification.

All wiring to be to SDCC standard specification and to IS: 10101 National Rules for Electrical Installations.

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. Any changes to be agreed with SDCC Public Lighting Department.

Calculation results are available as attached within Appendix A

Manufacturer's data sheets for the selected luminaires are attached to this document as Appendix B.

# APPENDIX A CALCULATION RESULTS.





## APPENDIX B MAUNFACTURERS DATA SHEET.

### XSP High Output Series

XSPR™ High Output LED Street/Area Luminaire

#### Product Description

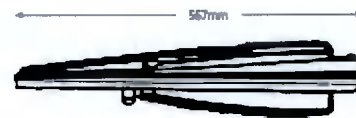
In addition to a low initial cost, the XSPR™ High Output LED Street Light maintains the familiar look of the traditional cobrahead design and delivers substantial energy savings while reducing maintenance time and costs. The hassle-free design of the XSPR HO luminaire includes simplified mounting solutions, horizontal tenon mount or adjustable arm, that allow for fixtures leveling of +/- 5°. Our NanoOptic™ Precision Delivery Grid™ optic achieves better optical control than traditional street lighting fixtures and efficiently delivers white uniform light for safer-feeling communities  
**Applications:** Roadway, parking lots, walkways and general area spaces

#### Performance Summary

- NanoOptic™ Precision Delivery Grid™ optic
- Efficacy: Up to 142 lm/W
- CRI: Minimum 70 CRI
- CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)
- Initial Colour consistency: 4 MacAdam steps
- Limited Warranty: Class 1 – 10 years on luminaire / 10 years on Colorfast DeltaGuard® finish  
 Class 2 – 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish

#### Accessories

For mounting system 07 only	
<b>ADAPTOR KIT 34MM</b> Adaptor Kit for dia. 34mm poles	<b>ADAPTOR KIT 48MM</b> Adaptor Kit for dia. 48mm poles
<b>ADAPTOR KIT 42MM</b> Adaptor Kit for dia. 42mm poles	



Ordering Information											
Example: XSPR-E-HT-2LG-A-30K-4-24-SV-FX-S-01											
XSPR	E	HT	2LG	A	30K	4	24	SV	FX	S	01
Product	Version	Mounting	Optic	Input Power	CCT	Insulation Class	Voltage	Color	Options	Variant	Cable length
XSPR	E	HT Horizontal Tenon	2LG Type II long	A 52W	30K 3000K	4 Class 1	24 220-240V	SV Silver	FX Fixed Input Power	S Standard	01 Exit cable 30cm
			275 Type II short 0.75	B 38W	40K 4000K				DQ 1-10V Dimming	F Fuse	03 Exit cable 3m
		07 Adjustable Mount (80mm)	210 Type II short 1.0	57K 5700K	V-Z 1-10V on virtual mid-night reprogrammable	04 Exit cable 6m					
			22H Type II short						06 Exit cable 10m		
		08 Adjustable Mount (76mm)	33H Type II short	FX Fixed Input Power	07 Exit cable 14m						
			40E Type IV recess	02 Constant current output	08 Exit cable 18m						
						0V Dynamometer (DY1...DY8) - Customised programming options available on request					
						0L DALI					
						0R Flux regulator					

† See www.cree.com/lighting/products/warranty for warranty terms.



www.cree-europe.com

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Rev. Date: 01 June 2010



XSPR™ High Output LED Street/Area Luminaire

Control options

Field Adjustable Output - Input Power Designator E					
Setting	System Watts	Lumen Multiplier	Nominal flux (lm)		
			5700K	4000K	3000K
Q8-Q9*	52	1.00	7043	7000	6649
Q7	47	0.93	6531	6402	6167
Q6	42	0.80	5944	5900	5612
Q5	37	0.70	5267	5204	5068
Q4	32	0.62	4710	4689	4454
Q3	27	0.55	3984	3948	3743
Q2	22	0.45	3152	3134	2977
Q1	17	0.38	2345	2331	2214

Virtual Midnight 1/2 - Input Power Designator E								
Setting	System Watts (High Mode)	Nominal flux (lm)			System Watts (Low Mode)	Nominal flux (lm)		
		5700K	4000K	3000K		5700K	4000K	3000K
C1	52	7043	7000	6649	39	5679	5546	5267
C2	52	7043	7000	6649	26	3894	3781	3591
C3	52	7043	7000	6649	17	2346	2331	2214
C4	39	5679	5546	5267	26	3894	3781	3591
C5	39	5679	5546	5267	17	2346	2331	2214
C6	26	3894	3781	3591	17	2346	2331	2214
D1	45	6278	6240	5927	36	5152	5122	4866
D2	45	6278	6240	5927	29	4212	4186	3976
D3	45	6278	6240	5927	17	2346	2331	2214
D4	36	5152	5122	4866	29	4212	4186	3976
D5	36	5152	5122	4866	17	2346	2331	2214
D6	29	4212	4186	3976	17	2346	2331	2214

Continued on

Dynamometer - Input Power Designator H								
Setting	System Watts (High Mode)	Nominal flux (lm)			System Watts (Low Mode)	Nominal flux (lm)		
		5700K	4000K	3000K		5700K	4000K	3000K
DY8	38	5481	5448	5175	30	4629	4592	4236
DY7	38	5481	5448	5175	21	3290	3270	3107
DY6	38	5481	5448	5175	15	2346	2331	2214
DY5	35	5163	5131	4874	17	2662	2647	2514
DY4	30	4629	4592	4276	21	3290	3270	3107
DY3	30	4629	4592	4276	15	2346	2331	2214
DY2	25	3862	3829	3647	15	2346	2331	2214
DY1	21	3290	3270	3107	15	2346	2331	2214

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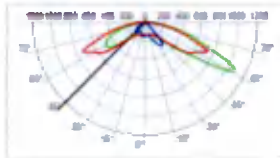


XSPR™ High Output LED Street/Area Luminaire

**Photometry**

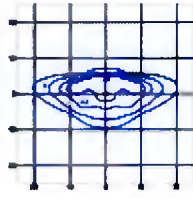
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory. To obtain an IES file specific to your project consult: <http://www.cree-europe.com>.

**2LG - Type II Long**



cd/ft<sup>2</sup>  
 — 0° C100 — 15° C200 — 30° C300

Test Report #: PL11706-015A

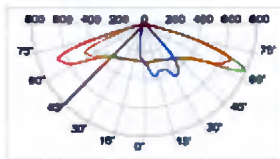


IES  
**XSPRCHT2LG40K**  
 Mounting Height: 5m

Lumen Output - 2LG (Type II Long)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	6373	6334
A	4960	4938	4663
B			

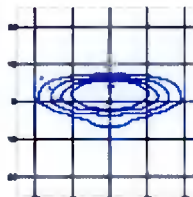
\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

**275 - Type II Short 0.75**



cd/ft<sup>2</sup>  
 — 0° C100 — 15° C200 — 30° C300

Test Report #: PL11706-010A

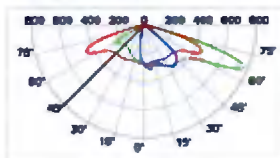


IES  
**XSPRCHT275A0K**  
 Mounting Height: 5m

Lumen Output - 275 (Type II Short 0.75)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	6418	6371
A	4988	4958	4710
B			

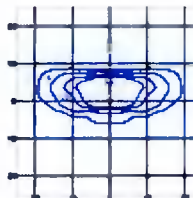
\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

**210 - Type II Short 1.0**



cd/ft<sup>2</sup>  
 — 0° C100 — 15° C200 — 30° C300

Test Report #: PL11706-001A

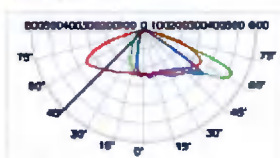


IES  
**XSPRCHT210A0K**  
 Mounting Height: 5m

Lumen Output - 210 (Type II Short 1.0)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	6425	6386
A	5080	4970	4721
B			

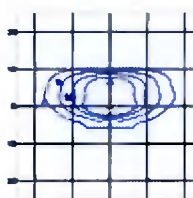
\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

**2SH - Type II Short**



cd/ft<sup>2</sup>  
 — 0° C100 — 15° C200 — 30° C300

Test Report #: PL11706-011A



IES  
**XSPRCHT2SH40K**  
 Mounting Height: 5m

Lumen Output - 2SH (Type II Short)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	6364	6325
A	4953	4922	4676
B			

\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

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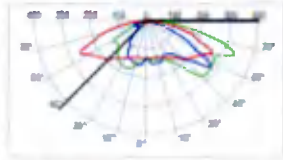


XSPR™ High Output LED Street/Area Luminaire

**Photometry**

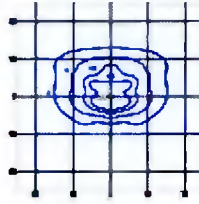
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory. To obtain an IES file specific to your project consult <http://www.cree-europe.com>

**3SH - Type III Short**



cd/ft<sup>2</sup>  
C9-C100 C90-C100 C85-C100

Test Report #: PL11706-012A

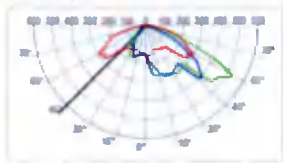


lx  
XSPRCHT3SH40K  
Mounting Height: 6m

Lumen Output - 3SH (Type III Short)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
A	6045	6048	5745
B	4735	4707	4471

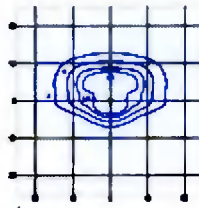
\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

**3ME - Type III Medium**



cd/ft<sup>2</sup>  
C9-C100 C90-C100 C85-C100

Test Report #: PL11706-013A

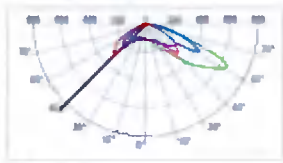


lx  
XSPRCHT3ME40K  
Mounting Height: 6m

Lumen Output - 3ME (Type III Medium)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
A	6285	6246	5834
B	4891	4861	4614

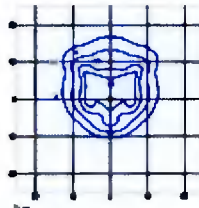
\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

**4ME - Type IV Medium**



cd/ft<sup>2</sup>  
C9-C100 C90-C100 C85-C100

Test Report #: PL11706-014A



lx  
XSPRCHT4ME40K  
Mounting Height: 6m

Lumen Output - 4ME (Type IV Medium)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
A	6369	6331	6013
B	4957	4927	4688

\* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens.

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## LUMIN. WITH BRACKET LINEA-2 1200

10.10231.0V005 LEVO3 21-50W SKI (3000K)/01

.hess

### Luminaire with bracket LINEA-2 1200

Suitable for Hess poles and wall brackets Linea-2

1 luminaire Linea-2 1200

Dimension 1200 mm x 160 mm x 105 mm

Luminaire housing of extruded aluminium

Luminaire cover of toughened safety glass (ESG), clear, with black printing

Light distribution: Asymmetrical, optimised for luminance

(Characteristic: For main road illumination)

Elec. equip.: LED LEVO3 O1 approx. 21-50W (3000K)

With electronic ballast (220-240V/50-60Hz)

Current rating 200 - 500mA

- with CLM (current rating, power corresponds to output mA and W -10%)

- without CLM (200mA, power 21W)

- without CLM (250mA, power 26W)

- without CLM (300mA, power 30W)

- without CLM (350mA, power 35W)

- without CLM (400mA, power 40W)

- without CLM (450mA, power 45W)

- without CLM (500mA, power 50W)

(Please specify mA and W in the order)

Ingress protection IP65, protection rating I

Following versions are available:

Without dimming and without CLM

(luminous output degradation compensation)

Or with dimming via DALI, StepDim or AstroDim

(under 300mA dimming only to minimum 50%,

from 300mA dimming to minimum 30% possible)

AND/OR with CLM (please specify on your purchase order)

SKI - Internally wired to DALI terminal assignment L/N/PE/DA

+ /DA-

(except for StepDim)

Pre-cabling optionally:

For pole 4500 mm, cable length 4500 mm

For pole 6000 mm, cable length 6000 mm

For pole 8000 mm, cable length 8000 mm

For wall bracket, cable length 500 mm

(please specify on your purchase order)

Colour: DB 703 or all RAL- (classic- single shades).

Hess-DB and Hess-Glimmer-colours.

RAL pearl-mica-metallic-shades on request.



### Technical data

Width [mm]	160
Height [mm]	105
Length [mm]	1200
Area exposed to wind	0,126 m <sup>2</sup>
Safety class	I
IK-Value	IKo8
Rated input power	21 - 50 W

Technical changes reserved, illustrations simplify.  
Hess Leuchten Licht (HPL) | www.hess.eu

DATA SHEET | LUMIN. WITH BRACKET LINEA-2 1200 | 23.03.2022 | Page 1