

**Applegreen – Rathcoole Development of new Drive Through
External Lighting Design**

19.04.2021

To Whom it may concern,

Applegreen have requested Domus Projects Ltd. to prepare a lighting design for changes to their existing site in Rathcoole and to provide detailed drawings and lighting calculation results to form part of their planning application.

As part of our scope Domus Projects Ltd ensure that the lighting design will comply with all relevant standards and particular attention will be given to:

- Achieving minimum requirements for security and working purposes
- Minimise light pollution and spillage, with consideration to nearby properties and wildlife
- Petrol Filling Station Lighting and illumination designed to:
 - Prevent glare hazard
 - Enhance security
 - Avoid confusion to road users
 - Avoid negative impacts on visual amenities of the area
 - Avoid negative impacts on adjoining/ adjacent properties

Domus Projects Ltd. are proposing to use the same type of light fittings for the Pole Tops as per the existing fittings which are currently installed on site on both 6mtr & 10mtr poles.

Our design for this phase of the project has proposed all additional poles to be kept to 6mtrs in height, to reduce the possibility of light pollution and glare. Lighting cowls are available should they be needed, but we do not envisage that they will be required.

Drawings showing Lighting calculation results have been provided as part of this submittal and are also available upon request.

Supporting Documents:

- Site Plan drawing indicating light levels and minimum light spill (**180020-L-1101 Rathcoole External Rev A4**)

If you require any further information, please do not hesitate to contact me.

With Regards,



Leonard Downes MSL
Lighting Designer / Director

XSP High Output Series

XSP1™ High Output LED Street/Area Luminaire - Single Module

Product Description

Designed from the ground up as a totally optimized LED street and area lighting system, the XSP High Output Series delivers incredible efficiency without sacrificing application performance. Beyond substantial energy savings and reduced maintenance, Cree achieves greater optical control with our NanoOptic® Precision Delivery Grid™ optic when compared to traditional cobra head luminaires. The XSP High Output Series is the better alternative for traditional street and area lighting with quick payback and improved performance.

Applications: Roadway, parking lots, walkways and general area spaces.

Performance Summary

NanoOptic® Precision Delivery Grid™ optic

Efficacy: Up to 155 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

Field-Installed

KIT-XSP-AP60-48-G0
Fitter kit to mount to 48mm tenon

KIT-XSP-AP60-42-G0
Fitter kit to mount to 42mm tenon

KIT-XSP-AP60-34-G0
Fitter kit to mount to 34mm tenon

Ordering Information

Example: XSP-E-02-2LG-E-30K-+-24-SV-FX-S-00

XSP	- E	- 02	- 2LG	- E	- 30K	- +	- 24	- SV	- FX	- S	- 00
Product	Version	Mounting	Optic	Input Power	CCT	Insulation Class	Voltage	Color	Options	Variant	Cable length
XSP	E	02 horiz/vert tenon 60mm OD	2LG Type II long	E 94W	30K 3000K	+ Class 1 * Class 2	24 220-240V	SV Silver	FX* Input Power E: Fixed Input Power	S Stan- dard	00 Standard (w/o cable)
			275 Type II short 0.75	H 63W	40K 4000K			BK Black	Q Field Adjustable Output		
			210 Type II short 1,0		57K 5700K			BZ Bronze	Y-Z 1-10V on virtual mid- night reprogrammable		
			2SH Type II short					SB Silver Bronze	Input Power H: Fixed Input Power		
			3SH Type III short					WH White	G* Lineswitch		
			3ME Type III Medium					DL DALI			
		4ME Type IV medium			CL Constant lumen output						
		5ME Type V Medium			DC Dynamdimmer + Constant lumen output						
		5SH Type V Short			DY Dynamdimmer - Customized program ming options available on request						
					RF* Flux regulator						
						N Nema 7pin longjoin	01 Exit cable 30cm				
						F** Fuse	03 Exit cable 3m				
					06 Exit cable 6m						
					10 Exit cable 10m						

* Nema Variant not available as a standard option

** Fuse option available with Standard or Nema configurations (Specify SF or NF)

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



XSP1™ High Output LED Street/Area Luminaire - Single Module

Product Specifications

CONSTRUCTION & MATERIALS

- Die cast aluminum housing, low copper <0,01%
- Tool-less entry
- Removable tray
- Luminaire is designed to mount directly to 76mm or 60mm outer dimension tenons or poles and can be tilted +/- 20°, in steps of 5°
- Luminaire fitter 02 can mount to 60mm OD tenons and fitter 03 to 76mm
- Luminaire will also mount to 34-42-48mm outer dimension tenon or pole with an accessory fitter kit
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is Silver. Black, Bronze, Silver Bronze and White are also available

ELECTRICAL SYSTEM

- Input Voltage: 220-240V, 50/60Hz
- Total Harmonic Distortion: < 10% at full load
- Surge suppression protection standard up to integral 10kV
- To address inrush current, slow blow fuse or type B/C breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

- CE Listed
- ENEC Listed
- RoHS compliant
- Risk group exempt in accordance with Standard CEI EN 62471 for photobiological safety
- Enclosure rated IP66 per IEC 60529
- Impact resistance IK08
- 10kV surge suppression protection tested in accordance with EN 61000-4-5
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117

Electrical Data*			
Input Power Designator	System Watts 220-240V	Total Current ²	Power Factor
		@230V, 50Hz	
E	94	0,42	0,99
H	63	0,30	0,95

* Electrical data at 25°C (77°F)

Recommended Cree® XSP HO Luminaire Lumen Maintenance Factors (LMF) ¹						
Ambient	Input Power Designator	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
5°C	E	1.04	0.97	0.95	0.92	0.89
	H	1.04	0.99	0.97	0.94	0.91
10°C	E	1.03	0.97	0.95	0.92	0.89
	H	1.04	0.98	0.96	0.93	0.90
15°C	E	1.02	0.97	0.94	0.91	0.89
	H	1.04	0.98	0.96	0.93	0.90
20°C	E	1.01	0.96	0.93	0.90	0.87
	H	1.04	0.97	0.95	0.92	0.89
25°C	E	1.00	0.96	0.92	0.88	0.85
	H	1.04	0.97	0.95	0.92	0.89

¹ Lumen maintenance values at 25°C (77°F) are calculated per TM-21 based on LM-80 data and in-situ luminaire testing

² In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip

³ In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip

Weight and Maximum Wind Area	
Weight	Lateral Surface Wind Exposed
10.5 kg	0.090m ²

Available NEMA options		
Q-N	Nema 7 pin with Field Adj	(on-off + Dim)
Y-N / Z-N	Nema 7 pin with VM Reprog	(on-off)
DL-N	Nema 7 pin with DALI	(on-off + Dim)
DY-N	Nema 7 pin with Dynadimmer	(on-off)
CL-N	Nema 7 pin with CLO	(on-off)
DC-N	Nema 7 pin with Dynadimmer and CLO	(on-off + Dim)

- on-off: Nema allows for on-off control only

- on-off + Dim: Nema allows for on-off and dimming control

XSP1™ High Output LED Street/Area Luminaire - Single Module

Control options

Field Adjustable Output - Input Power Designator E						
Setting	System Watts	Lumen Multipliers	Nominal flux (lm)			
			5700K	4000K	3000K	
Q9	94	1,00	12426	12350	11731	
Q8	87	0,94	11736	11665	11080	
Q7	85	0,92	11469	11399	10828	
Q6	78	0,86	10706	10641	10108	
Q5	74	0,83	10344	10281	9766	
Q4	71	0,80	9986	9925	9428	
Q3	65	0,74	9195	9139	8681	
Q2	58	0,68	8449	8398	7977	
Q1	48	0,58	7158	7114	6758	

Lineswitch - 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
G6	63	8828	8774	8335	32	5207	5176	4916
G5	55	7939	7891	7496	28	4714	4685	4451
G4	50	7363	7318	6951	25	4342	4316	4100
G3	42	6414	6375	6056	21	3841	3818	3627
G2	35	5571	5538	5260	21	3841	3818	3627
G1	27	4593	4565	4336	21	3841	3818	3627

Virtual Midnight Y/Z - 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
Y1	94	12426	12350	11731	71	9986	9925	9428
Y2	94	12426	12350	11731	47	6995	6926	6579
Y3	94	12426	12350	11731	24	3743	3720	3533
Y4	71	9986	9925	9428	47	6995	6926	6579
Y5	71	9986	9925	9428	24	3743	3720	3533
Y6	47	6995	6926	6579	24	3743	3720	3533
Z1	82	11149	11081	10526	65	9195	9139	8681
Z2	82	11149	11081	10526	52	7583	7537	7159
Z3	82	11149	11081	10526	33	5063	5032	4780
Z4	65	9195	9139	8681	52	7583	7537	7159
Z5	65	9195	9139	8681	33	5063	5032	4780
Z6	52	7583	7537	7159	33	5063	5032	4780

Dimming 8h

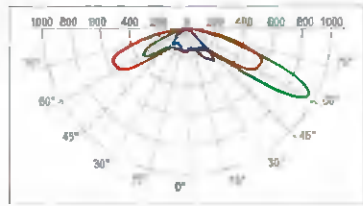
Dynadimmer - Input Power Designator H													
Setting		System Watts (High Mode)	Nominal flux (lm)			System Watts (Medium Mode)	Nominal flux (lm)			System Watts (Low Mode)	Nominal flux (lm)		
			5700K	4000K	3000K		5700K	4000K	3000K		5700K	4000K	3000K
8h	6h												
DY6	DY12	63	8828	8774	8335				32	5207	5176	4916	
DY5	DY11	55	7939	7891	7496				28	4714	4685	4451	
DY4	DY10	50	7363	7318	6951				25	4342	4316	4100	
DY3	DY9	42	6414	6375	6056				21	3841	3818	3627	
DY2	DY8	35	5571	5538	5260				21	3841	3818	3627	
DY1	DY7	27	4593	4565	4336				21	3841	3818	3627	
	DY17	63	8828	8774	8335	47	7006	6963	6614	32	5207	5176	4916
	DY16	55	7939	7891	7496	42	6414	6375	6056	28	4714	4685	4451
	DY15	50	7363	7318	6951	38	5936	5900	5604	25	4342	4316	4100
	DY14	42	6414	6375	6056	32	5207	5176	4916	21	3841	3818	3627
	DY13	35	5571	5538	5260	26	4471	4444	4221	21	3841	3818	3627

XSP1™ High Output LED Street/Area Luminaire - Single Module

Photometry

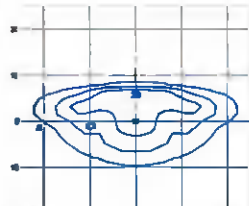
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory. To obtain an IES file specific to your project consult: <http://www.cree-europe.com>.

2LG - Type II Long



cd/klm
 C0 - C180 C90 - C270 C15 - C195

Test Report #: PL11703-033

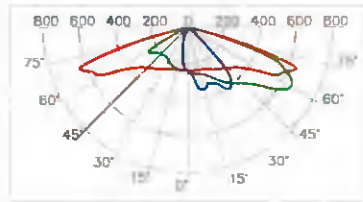


lux
 XSPD022LGE40K
 Mounting Height: 8m

Lumen Output - 2LG (Type II Long)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11051	10984	10434
H	7851	7803	7412

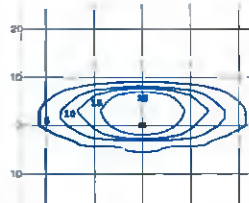
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

275 - Type II Short 0.75



cd/klm
 C0 - C180 C90 - C270 C15 - C195

Test Report #: PL11703-028

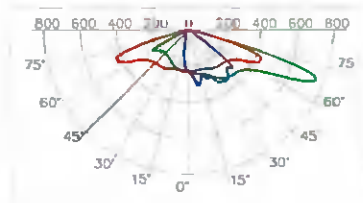


lux
 XSPD02275E40K
 Mounting Height: 8m

Lumen Output - 275 (Type II Short 0.75)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11330	11261	10697
H	8049	8000	7599

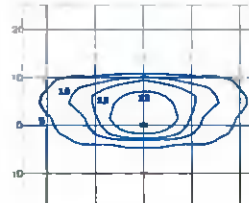
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

210 - Type II Short 1.0



cd/klm
 C0 - C180 C90 - C270 C15 - C195

Test Report #: PL11703-010

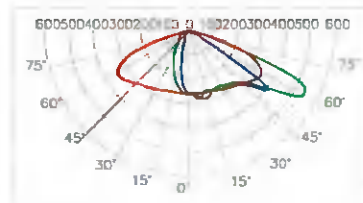


lux
 XSPD02210E40K
 Mounting Height: 8m

Lumen Output - 210 (Type II Short 1.0)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11439	11369	10800
H	8127	8077	7673

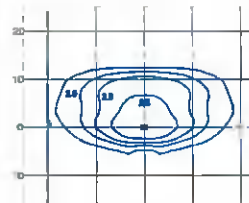
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

2SH - Type II Short



cd/klm
 C0 - C180 C90 - C270 C35 - C215

Test Report #: PL11703-029



lux
 XSPD022SHE40K
 Mounting Height: 8m

Lumen Output - 2SH (Type II Short)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11517	11447	10873
H	8182	8132	7725

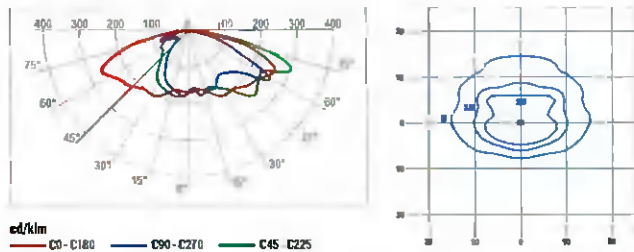
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -4 and +10% of initial delivered lumens

XSP1™ High Output LED Street/Area Luminaire - Single Module

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/klm
 C0 - C180 C90 - C270 C45 - C225

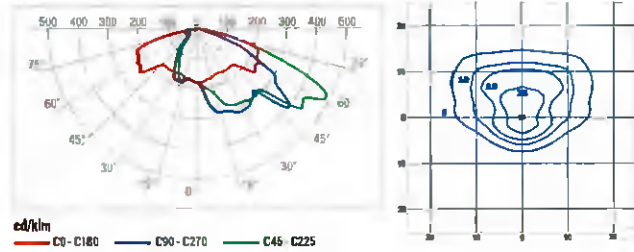
lux
 XSPD023SHE40K
 Mounting Height: 8m

Test Report #: PL11703-030

Lumen Output - 3SH (Type III Short)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	10521	10457	9934
H	7475	7429	7057

* 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/klm
 C0 - C180 C90 - C270 C45 - C225

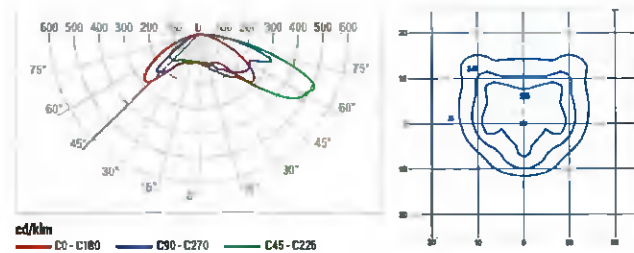
lux
 XSPD023MEE40K
 Mounting Height: 8m

Test Report #: PL11703-031

Lumen Output - 3ME (Type III Medium)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11060	10993	10442
H	7857	7809	7418

* 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



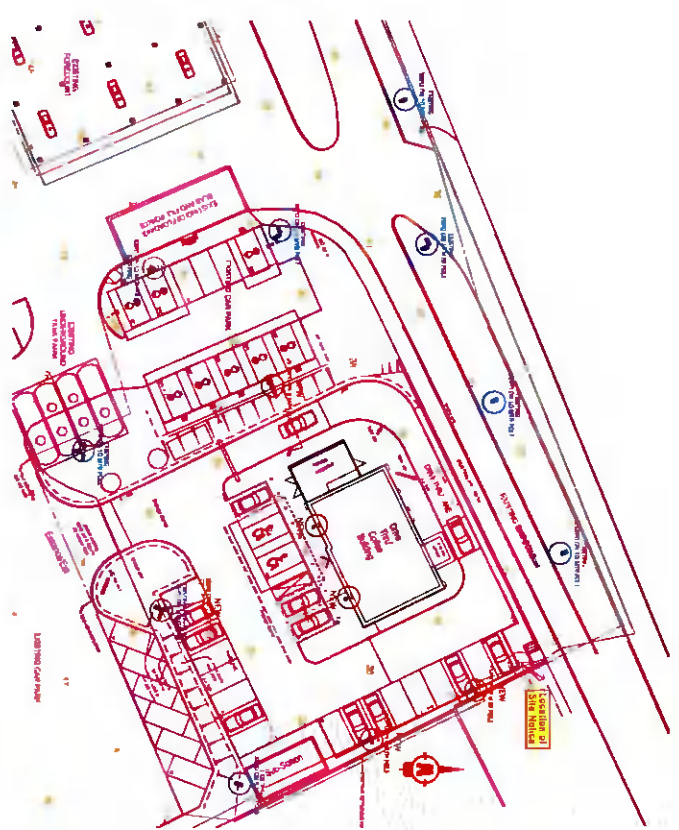
cd/klm
 C0 - C180 C90 - C270 C45 - C225

lux
 XSPD024MEE40K
 Mounting Height: 8m

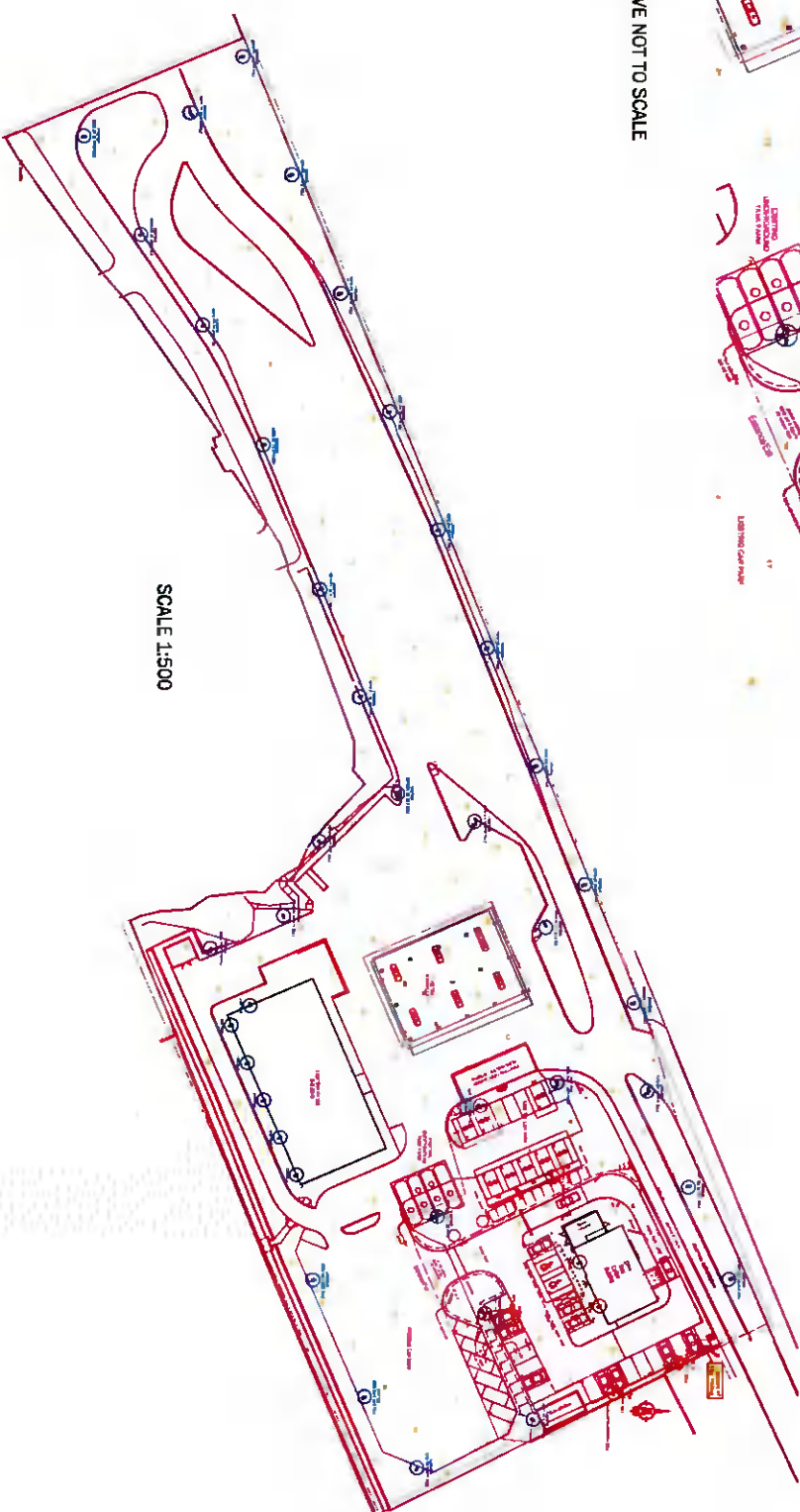
Test Report #: PL11703-032

Lumen Output - 4ME (Type IV Medium)			
Input Power Designator	5700K	4000K	3000K
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
E	11457	11387	10817
H	8139	8090	7684

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



ABOVE NOT TO SCALE



SCALE 1:500

XSP High Output Series
 Cree LED Floodlights
 Cree LED Floodlights are the most powerful and efficient lighting solution for outdoor applications. They are designed to provide high output, long life, and low energy consumption. Cree LED Floodlights are available in a variety of sizes and colors, and are suitable for a wide range of applications, including sports stadiums, arenas, and outdoor arenas.

CREE

LED FLOODLIGHT 7W 820 NM

Output Characteristics

Power (W)	Beam Angle (°)	Light Output (lm)	Beam Diameter (m)	Beam Diameter (ft)	Mounting Height (m)	Mounting Height (ft)
7	20	100	0.5	1.6	2.0	6.6
7	30	150	0.7	2.3	2.5	8.2
7	40	200	0.9	3.0	3.0	9.8
7	60	300	1.3	4.3	4.0	13.1
7	80	400	1.7	5.6	5.0	16.4
7	120	600	2.6	8.5	7.5	24.6

WIVA

Room	Area (m²)	Area (ft²)	Lighting
RECEPTION AREA	12	129	1x 7W Cree LED Floodlight
OFFICE	15	163	1x 7W Cree LED Floodlight
CONFERENCE ROOM	18	194	1x 7W Cree LED Floodlight
STAIRS	10	108	1x 7W Cree LED Floodlight
RESTROOM	5	54	1x 7W Cree LED Floodlight
LOBBY	20	215	1x 7W Cree LED Floodlight
ENTRANCE	15	163	1x 7W Cree LED Floodlight
PARKING	100	1076	10x 7W Cree LED Floodlights
LANDSCAPE	50	538	5x 7W Cree LED Floodlights
TOTAL	155	1663	15x 7W Cree LED Floodlights

pplegreen

Lighting Designers & Suppliers

DOMUS PROJECTS

Lighting Designers & Suppliers

161-201 171 0120
 161-201 171 0120
 161-201 171 0120
 161-201 171 0120

LED FLOODLIGHT 70W SMD NW



Item code	91100811
Product family	LED FLOODLIGHT SMD
Series	SPOT OUTDOOR
Fixture voltage (V)	220-240
Fixture current (A)	0.30
Fixture power (W)	70
CCT (K)	4000



General Characteristics

Power supply	INSIDE
Fixture voltage (V)	220-240
Fixture current (A)	0.30
Fixture power (W)	70
Working frequency (Hz)	50/60
Power factor	0.9
LED power (W)	70
CCT (K)	4000
Beam opening (°)	110
Orientability (°)	--
Colour type	NATURAL WHITE
LED type	SMD

Dimensional Characteristics

Length (mm)	235
Width (mm)	245
Height (mm)	80

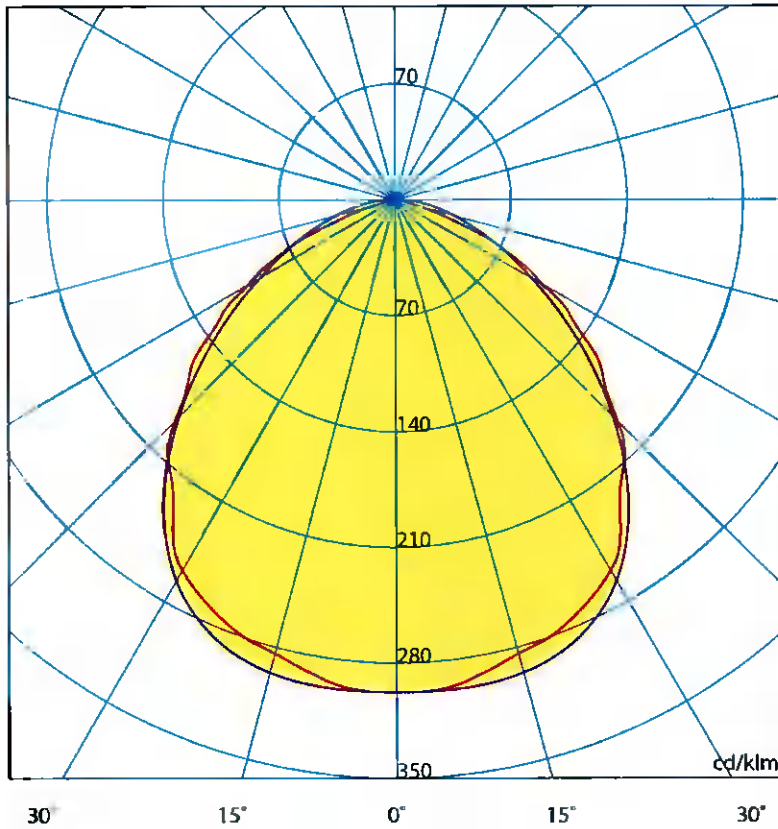
Performance

LED luminous flux (lm)	7300
Fixture luminous flux (lm)	5500
Fixture efficacy (lm/W)	79
Luminous intensity (cd)	2180
CRI	> 70
Average life time (h)	L70 35000h

Others characteristics

Safety screen	GLASS
Environmental temperature range (°C)	-20/+40
IP protection	65
Electric protection	I
Fire protection	--
Photobiological group	0

Lighting performance



H(m)	D(m)	Max lux	Med lux	Alpha 52.7°±52.7°	G=0.0 Max non a G	
1.50	3.93	961	290			
3.00	7.87	241	75			
4.50	11.80	107	33			
6.00	15.73	60	19			
7.50	19.67	39	12			

Note: In case of lighting fixture with more than one lighting source, the illuminance plane is referred to the single lighting source.

Shipment characteristics

Barcode	8054247484293
Inner box (pcs)	1
Master box (pcs)	4
Fixture weight (Kg)	2,7

is designed, manufactured, tested and verified in compliance to the following product European Standards:

EN 61547, EN 55015, EN 61000-3-2, EN 61000-3-3, EN 62471, IEC TR 62471-2, EN 62031+A1+A2, EN 60598-1, EN 60598-2-5, EN 61347-1, EN 61347-2-13+A1, EN 62493, EN 55015+A1

2014/35/EU, 2014/30/EU, 2011/65/EU, 2012/19/EU, 2010/30/EU, 874/2012/EU, 2009/125/EC, 1194/2012/EU



DOMUS
PROJECTS

CREE XSPD

Installation : Applegreen Rathcoole

Project number : 180020 Rev A4

Customer : Applegreen / Petrogas

Processed by : LD

Date : 13.04.2021

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

Domus Projects Ltd. 330 The Capel Building, Mary's Abbey, Dublin 7
www.domusprojects.ie leonard@domusprojects.ie 01 6770535

Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021



DOMUS PROJECTS

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Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021



DOMUS
PROJECTS

Luminaire data

CREE, XSP1D - E - Type 2SH -... (XSPD022SHE40K_2...)

Data sheet

Manufacturer: CREE

XSPD022SHE40K_24-Q9

XSP1D - E - Type 2SH - Q9 4K

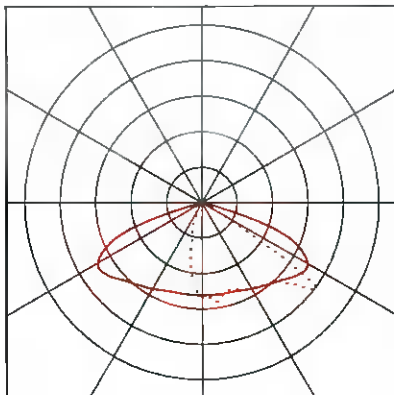
Luminaire data

Luminaire efficiency : 87.67%
Luminaire efficacy : 108.25 lm/W
Classification : A30 ↓100.0% ↑0.0%
CIE Flux Codes : 38 77 99 100 87
UGR 4H 8H : 40.3 / 26.0
Power : 98 W
Luminous flux : 10608.1 lm

Equipped with

Quantity : 1
Designation : 5 MD-A1450 Q9
4K 12V
Colour : 4000
Luminous flux : 12100 lm
Colour reproduction : 70

Dimensions : 800 mm x 303 mm x 100 mm



Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS
PROJECTS

CREE, XSP1D - E - Type 2SH -... (XSPD022SHE40K_2...)

Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	594274	88804	[991975]	526735	77945	77704	70254	77704	114098	52673	[991975]	888041
70°	528525	913207	787676	116405	88390	53040	46211	53040	86425	116405	787676	913207
75°	214996	345519	159077	89936	59406	40825	36734	40825	59598	89936	159077	345519
80°	39097	51448	46531	45626	52662	38114	33355	38114	50725	45626	46531	51448
85°	22805	22256	31974	26096	28006	24137	24607	24137	28486	26096	31974	22256

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	594274	164879	79929	79983	38777	41341	46044	41341	42802	79983	84298	164879
70°	528525	98592	76036	81138	42841	51403	53020	51403	46543	81138	73522	98592
75°	214996	57292	50612	58242	46911	54468	51407	54468	48877	58242	50582	57292
80°	39097	36895	41452	44879	54393	57190	51251	57190	56040	44879	41118	36895
85°	22805	29780	35892	32757	42602	35500	25861	35500	42318	32757	36078	29780

Luminance [cd/m²]

Manufacturer	: CREE	Efficiency factor	: 87.67%
Order number	: XSPD022SHE40K_24-Q9	Luminaire efficacy	: 108.25 lm/W (A30)
Luminaire name	: XSP1D - E - Type 2SH - Q9 4K	Light distribution	: sym. to C90-C270
Equipment	: 1 x 5 MD-A1450 Q9 4K 12V 98 W / 1	Beam Angle	: 135.4° C0-C180
Dimensions	: L 800 mm x W 303 mm x H 100 mm		-- C90
File name	: XSPD022SHE40K_24-Q9-PL11096-C		-- C270

Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS PROJECTS

CREE, XSP1D - E - Type 2SH -... (XSPD022SHE40K_2...)

Glare Rating (UGR)

Reflectance of										
Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor Cavity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	36.4	38.1	36.7	38.4	38.7	19.2	20.9	19.6	21.2	21.5
	3H	39.1	40.7	39.5	41.0	41.4	21.7	23.3	22.1	23.6	24.0
	4H	39.5	40.9	39.9	41.3	41.6	22.9	24.4	23.3	24.7	25.1
	6H	39.5	40.8	39.9	41.2	41.6	23.9	25.2	24.3	25.6	26.0
	8H	39.4	40.7	39.8	41.1	41.5	24.1	25.4	24.5	25.8	26.2
	12H	39.4	40.6	39.8	41.0	41.4	24.2	25.5	24.6	25.8	26.2
4H	2H	37.3	38.8	37.7	39.1	39.5	21.5	23.0	21.9	23.3	23.7
	3H	40.0	41.2	40.4	41.6	42.0	23.5	24.8	23.9	25.1	25.5
	4H	40.3	41.4	40.8	41.8	42.3	24.7	25.8	25.1	26.2	26.6
	6H	40.3	41.3	40.8	41.7	42.1	25.6	26.6	26.1	27.1	27.5
	8H	40.3	41.2	40.7	41.6	42.1	26.0	26.9	26.4	27.3	27.8
	12H	40.3	41.1	40.7	41.5	42.0	26.1	27.0	26.6	27.4	27.9
8H	4H	40.2	41.1	40.7	41.6	42.0	25.2	26.1	25.7	26.5	27.0
	6H	40.2	40.9	40.7	41.4	41.9	26.3	27.1	26.8	27.5	28.0
	8H	40.2	40.9	40.7	41.4	41.9	26.8	27.5	27.4	28.0	28.5
	12H	40.2	40.7	40.7	41.3	41.8	27.0	27.6	27.6	28.1	28.6
12H	4H	40.2	41.1	40.7	41.5	42.0	25.3	26.1	25.7	26.5	27.0
	6H	40.2	40.9	40.7	41.4	41.9	26.5	27.1	27.0	27.6	28.1
	8H	40.2	40.7	40.7	41.3	41.8	27.0	27.5	27.5	28.0	28.5

Distance between luminaires: 0.25

Due to missing symmetry characteristics the values apply only to the indicated line of sight.

Manufacturer	: CREE	Efficiency factor	: 87.67%
Order number	: XSPD022SHE40K_24-Q9	Luminaire efficacy	: 108.25 lm/W (A30)
Luminaire name	: XSP1D - E - Type 2SH - Q9 4K	Light distribution	: sym. to C90-C270
Equipment	: 1 x 5 MD-A1450 Q9 4K 12V 98 W / 1	Beam Angle	: 135.4° C0-C180
Dimensions	: L 800 mm x W 303 mm x H 100 mm		-- C90
File name	: XSPD022SHE40K_24-Q9-PL11096-C		-- C270

Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021



DOMUS
PROJECTS

Luminaire data

CREE, CPY Series FLAT Lens 72 Led 6K (XCCA0A08+4*)

Data sheet

Manufacturer: CREE

XCCA0A08+4* CPY Series FLAT Lens 72 Led 6K

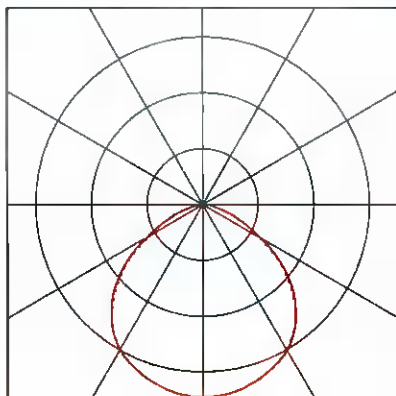
Luminaire data

Luminaire efficiency : 90.01%
Luminaire efficacy : 108.89 lm/W
Classification : A40 ↓100.0% ↑0.0%
CIE Flux Codes : 53 85 97 100 90
UGR 4H 8H : 29.2 / 29.2
Power : 81 W
Luminous flux : 8820.3 lm

Equipped with

Quantity : 1
Designation : 72 LED 350mA
6K
Colour : 4000
Luminous flux : 9799.2 lm
Colour reproduction : 70

Dimensions : 382 mm x 382 mm x 50 mm



Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS
PROJECTS

CREE, CPY Series FLAT Lens 72 Led 6K (XCCA0A08+4*)

Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	[51178]	50090	48700	47571	48032	48473	50186	48473	47885	47571	48538	50090
70°	41120	39468	38186	36947	37206	38481	39798	38481	37275	36947	38186	39468
75°	30654	29620	28644	28574	29220	30484	31745	30484	29104	28574	28655	29620
80°	23657	22403	21858	21840	22142	22853	24019	22853	22290	21840	21777	22403
85°	15235	14547	14158	14334	14908	15691	17230	15691	14831	14334	13985	14547

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	[51178]	50090	48700	47571	48032	48473	50186	48473	47885	47571	48538	50090
70°	41120	39468	38186	36947	37206	38481	39798	38481	37275	36947	38186	39468
75°	30654	29620	28644	28574	29220	30484	31745	30484	29104	28574	28655	29620
80°	23657	22403	21858	21840	22142	22853	24019	22853	22290	21840	21777	22403
85°	15235	14547	14158	14334	14908	15691	17230	15691	14831	14334	13985	14547

Luminance [cd/m²]

Manufacturer	: CREE	Efficiency factor	: 90.01%
Order number	: XCCA0A08+4*	Luminaire efficacy	: 108.89 lm/W (A40)
Luminaire name	: CPY Series FLAT Lens 72 Led 6K	Light distribution	: sym. to C0-C180 / C90-C270
Equipment	: 1 x 72 LED 350mA 6K 81 W / 9799 2	Beam Angle	: 106.7° C0-C180
Dimensions	: L 382 mm x W 382 mm x H 50 mm		: 105.8° C90-C270
File name	: XCCA0A08+4-ITL76866.LDT		

Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS PROJECTS

CREE, CPY Series FLAT Lens 72 Led 6K (XCCA0A08+4*)

Glare Rating (UGR)

Reflectance of										
Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor Cavity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	27.3	28.8	27.6	29.2	29.5	27.1	28.7	27.5	29.0	29.3
	3H	28.1	29.5	28.5	29.8	30.2	27.9	29.3	28.3	29.7	30.0
	4H	28.3	29.7	28.7	30.0	30.4	28.2	29.5	28.6	29.9	30.2
	6H	28.5	29.7	28.9	30.1	30.5	28.4	29.6	28.8	30.0	30.4
	8H	28.5	29.7	28.9	30.1	30.5	28.4	29.6	28.8	29.9	30.3
	12H	28.5	29.6	28.9	30.0	30.4	28.4	29.5	28.8	29.9	30.3
4H	2H	27.7	29.0	28.1	29.4	29.7	27.6	28.9	28.0	29.2	29.6
	3H	28.6	29.8	29.0	30.1	30.6	28.5	29.6	28.9	30.0	30.4
	4H	29.0	30.0	29.4	30.4	30.8	28.9	29.9	29.3	30.3	30.7
	6H	29.2	30.1	29.6	30.5	30.9	29.1	30.0	29.6	30.4	30.9
	8H	29.2	30.1	29.7	30.5	31.0	29.2	30.0	29.6	30.4	30.9
	12H	29.3	30.0	29.8	30.5	31.0	29.2	30.0	29.7	30.4	30.9
8H	4H	29.1	29.9	29.5	30.3	30.8	29.0	29.8	29.4	30.2	30.7
	6H	29.3	30.0	29.8	30.5	31.0	29.2	29.9	29.7	30.4	30.9
	8H	29.5	30.1	30.0	30.6	31.1	29.4	30.0	29.9	30.5	31.0
	12H	29.5	30.0	30.1	30.5	31.1	29.5	30.0	30.0	30.5	31.0
12H	4H	29.1	29.8	29.6	30.3	30.8	29.0	29.7	29.4	30.2	30.7
	6H	29.4	30.0	29.9	30.5	31.0	29.3	29.9	29.8	30.4	30.9
	8H	29.5	30.0	30.0	30.5	31.0	29.4	29.9	30.0	30.4	31.0

Distance between luminaires: 0.25

Manufacturer	: CREE	Efficiency factor	: 90.01%
Order number	: XCCA0A08+4*	Luminaire efficacy	: 108.89 lm/W (A40)
Luminaire name	: CPY Series FLAT Lens 72 Led 6K	Light distribution	: sym. to C0-C180 / C90-C270
Equipment	: 1 x 72 LED 350mA 6K 81 W / 9799.2	Beam Angle	: 106.7° C0-C180
Dimensions	: L 382 mm x W 382 mm x H 50 mm		: 105.8° C90-C270
File name	: XCCA0A08+4-ITL76866.LDT		

Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021



DOMUS
PROJECTS

Luminaire data

Wiva Group S.p.A., LED FLOODLIGHT 70W SMD 4000K (91100811_r00)

Data sheet

Manufacturer: Wiva Group S.p.A.

91100811_r00 LED FLOODLIGHT 70W SMD 4000K

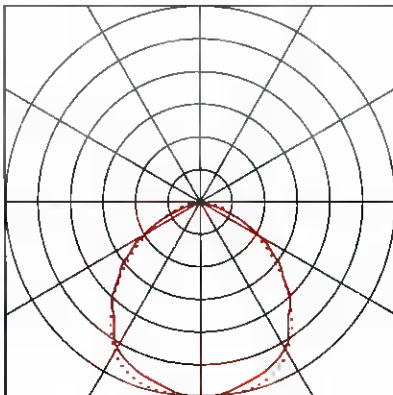
Luminaire data

Luminaire efficiency : 75.01%
Luminaire efficacy : 78.22 lm/W
Classification : A50 ↓100.0% ↑0.0%
CIE Flux Codes : 55 88 99 100 75
UGR 4H 8H : 28.5 / 28.9
Power : 70 W
Luminous flux : 5475.7 lm

Equipped with

Quantity : 1
Designation :
Colour : 4000
Luminous flux : 7300 lm
Colour reproduction : 70

Dimensions : 245 mm x 235 mm x 80 mm



Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS
PROJECTS

Wiva Group S.p.A., LED FLOODLIGHT 70W SMD 4000K (91100811_r00)

Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	51236	51901 [53267]	50614	46281	45331	50000	45821	46281	50339 [53267]	51973		
70°	33076	33069	34505	35203	31406	35986	45341	36442	31406	34524	34505	33059
75°	10383	10066	10533	15629	12748	26754	42073	26450	12748	16856	10533	9815
80°	7054	7366	7545	7025	7764	12975	40433	14851	7764	7063	7545	7442
85°	2204	2244	2506	3474	4864	10319	41953	7899	4864	3538	2506	2235

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	51236	51901 [53267]	50614	46281	45331	50000	45821	46281	50339 [53267]	51973		
70°	33076	33069	34505	35203	31406	35986	45341	36442	31406	34524	34505	33059
75°	10383	10066	10533	15629	12748	26754	42073	26450	12748	16856	10533	9815
80°	7054	7366	7545	7025	7764	12975	40433	14851	7764	7063	7545	7442
85°	2204	2244	2506	3474	4864	10319	41953	7899	4864	3538	2506	2235

Luminance [cd/m²]

Manufacturer	: Wiva Group S.p.A.	Efficiency factor	: 75.01%
Order number	: 91100811_r00	Luminaire efficacy	: 78.22 lm/W (A50)
Luminaire name	: LED FLOODLIGHT 70W SMD 4000K	Light distribution	: asymmetric
Equipment	: 1 x 132xLED-NW_0.4W 70 W / 7300	Beam Angle	: 52.6° C0 50.7° C90
Dimensions	: L 245 mm x W 235 mm x H 80 mm		52.6° C180
File name	: 91100811_r00.ltd		50.7° C270

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Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS
PROJECTS

Wiva Group S.p.A., LED FLOODLIGHT 70W SMD 4000K (91100811_r00)

Glare Rating (UGR)

Reflectance of	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor Cavity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	27.3	28.8	27.7	29.2	29.5	26.8	28.3	27.2	28.6	29.0
	3H	28.0	29.4	28.4	29.7	30.1	27.7	29.0	28.0	29.4	29.7
	4H	28.0	29.3	28.4	29.7	30.0	28.0	29.3	28.4	29.6	30.0
	6H	28.0	29.2	28.4	29.5	29.9	28.3	29.5	28.7	29.8	30.2
	8H	27.9	29.1	28.3	29.4	29.8	28.4	29.5	28.8	29.9	30.3
12H	27.9	29.0	28.3	29.4	29.8	28.5	29.6	28.9	29.9	30.4	
4H	2H	27.8	29.1	28.2	29.4	29.8	27.4	28.6	27.7	29.0	29.3
	3H	28.5	29.6	28.9	30.0	30.4	28.2	29.3	28.6	29.7	30.1
	4H	28.6	29.5	29.0	29.9	30.4	28.6	29.5	29.0	29.9	30.4
	6H	28.5	29.3	29.0	29.8	30.2	28.8	29.6	29.3	30.1	30.5
	8H	28.5	29.2	28.9	29.7	30.2	28.9	29.7	29.4	30.1	30.6
12H	28.5	29.2	28.9	29.6	30.1	29.0	29.7	29.5	30.2	30.7	
8H	4H	28.5	29.3	29.0	29.7	30.2	28.5	29.3	29.0	29.7	30.2
	6H	28.4	29.1	28.9	29.6	30.1	28.7	29.4	29.2	29.9	30.4
	8H	28.5	29.0	29.0	29.5	30.0	28.9	29.5	29.4	30.0	30.5
	12H	28.4	28.9	28.9	29.4	29.9	29.0	29.5	29.5	30.0	30.5
12H	4H	28.5	29.2	29.0	29.7	30.2	28.5	29.2	29.0	29.7	30.2
	6H	28.5	29.0	29.0	29.5	30.0	28.8	29.3	29.3	29.8	30.3
	8H	28.4	28.9	29.0	29.4	29.9	28.9	29.3	29.4	29.8	30.3

Distance between luminaires: 0.25

Due to missing symmetry characteristics the values apply only to the indicated line of sight.

Manufacturer	: Wiva Group S.p.A.	Efficiency factor	: 75.01%
Order number	: 91100811_r00	Luminaire efficacy	: 78.22 lm/W (A50)
Luminaire name	: LED FLOODLIGHT 70W SMD 4000K	Light distribution	: asymmetric
Equipment	: 1 x 132xLED-NW_0.4W 70 W / 7300	Beam Angle	: 52.6° C0
Dimensions	: L 245 mm x W 235 mm x H 80 mm		: 50.7° C90
File name	: 91100811_r00.ltd		: 52.6° C180
			: 50.7° C270

Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS
PROJECTS

Site Boundary

Description, Site Boundary

Luminaire data/Room elements

Product data:

Type No.\Make

		CREE	
1	46	Order No.	: XSPD022SHE40K_24-Q9
		Luminaire name	: XSP1D - E - Type 2SH - Q9 4K
		Equipment	: 1 x 5 MD-A1450 Q9 4K 12V 98 W / 12100 lm
2	15	Order No.	: XCCA0A08+4*
		Luminaire name	: CPY Series FLAT Lens 72 Led 6K
		Equipment	: 1 x 72 LED 350mA 6K 81 W / 9799.2 lm
		Wiva Group S.p.A.	
3	8	Order No.	: 91100811_r00
		Luminaire name	: LED FLOODLIGHT 70W SMD 4000K
		Equipment	: 1 x 132xLED-NW_0.4W 70 W / 7300 lm

No.	Centre point			Rotation angle			Target coordinates		
	X [m]	Y [m]	Z [m]	Z [°]	C0 [°]	C90 [°]	Xa [m]	Ya [m]	Za [m]
CREE XSP1D - E - Type 2SH - Q9 4K XSPD022SHE40K_24-Q9									
1	142.10	110.80	9.95	202.55	0.00	0.00	147.07	98.82	0.00
2	119.00	101.26	9.95	202.55	0.00	0.00	123.97	89.29	0.00
3	95.89	91.71	9.95	202.55	0.00	0.00	100.87	79.73	0.00
4	72.79	82.16	9.95	202.55	0.00	0.00	77.76	70.18	0.00
5	49.68	72.62	9.95	202.55	0.00	0.00	54.66	60.65	0.00
6	26.58	63.07	9.95	202.55	0.00	0.00	31.55	51.09	0.00
7	3.44	53.53	9.95	202.55	0.00	0.00	8.42	41.56	0.00
8	-19.66	43.98	9.95	202.55	0.00	0.00	-14.69	32.01	0.00
9	32.72	36.24	9.95	33.96	0.00	0.00	25.48	46.99	0.00
12	-9.20	33.74	9.95	268.00	0.00	0.00	3.76	33.29	0.00
13	165.20	120.35	9.95	202.55	0.00	0.00	170.18	108.37	0.00
14	182.87	122.89	9.95	202.55	0.00	0.00	187.84	110.92	0.00
15	182.10	123.25	9.95	116.29	0.00	0.00	170.48	117.50	0.00
16	201.08	131.18	9.95	202.55	0.00	0.00	206.05	119.21	0.00
17	219.28	139.45	9.95	202.55	0.00	0.00	224.26	127.48	0.00
18	180.69	105.33	9.95	116.29	0.00	0.00	169.07	99.58	0.00
19	185.27	90.21	9.95	151.01	0.00	0.00	178.98	78.86	0.00
20	149.84	103.07	9.95	116.29	0.00	0.00	138.22	97.33	0.00
21	-8.33	34.11	9.95	315.54	0.00	0.00	0.75	43.36	0.00
22	15.06	24.14	9.95	33.96	0.00	0.00	7.82	34.90	0.00
23	-4.08	12.99	9.95	179.91	0.00	0.00	-4.10	0.02	0.00
24	56.15	48.09	9.95	23.36	0.00	0.00	51.01	60.00	0.00
25	84.31	59.20	9.95	23.36	0.00	0.00	79.17	71.10	0.00
26	105.33	66.99	9.95	23.36	0.00	0.00	100.19	78.89	0.00
27	124.08	74.56	9.95	23.36	0.00	0.00	118.94	86.46	0.00
28	130.29	89.21	9.95	202.55	0.00	0.00	135.27	77.24	0.00
29	133.78	58.93	9.95	315.71	0.00	0.00	142.84	68.21	0.00
30	124.82	74.06	9.95	294.81	0.00	0.00	136.59	79.50	0.00
31	129.46	89.52	9.95	112.55	0.00	0.00	117.49	84.54	0.00
32	148.24	51.82	9.95	287.83	0.00	0.00	160.59	55.79	0.00
36	206.55	82.00	9.95	85.26	0.00	0.00	193.63	83.07	0.00

Domus Projects Ltd. 330 The Capel Building, Mary's Abbey, Dublin 7
 www.domusprojects.ie leonard@domusprojects.ie 01 6770535

Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



DOMUS PROJECTS

Site Boundary

Description, Site Boundary

Luminaire data/Room elements

37	207.12	81.20	9.95	175.26	0.00	0.00	206.05	68.28	0.00
38	207.89	81.85	9.95	265.26	0.00	0.00	220.82	80.78	0.00
39	225.91	90.77	9.95	155.28	0.00	0.00	220.49	78.99	0.00
41	181.49	105.09	9.95	208.72	0.00	0.00	187.72	93.71	0.00
2.1	219.67	57.58	5.95	24.80	0.00	0.00	216.42	64.62	0.00
2.3	154.84	37.61	5.95	265.37	0.00	0.00	162.57	36.99	0.00
2.4	256.56	77.85	5.95	59.36	0.00	0.00	249.89	81.81	0.00
2.5	247.00	100.51	5.95	161.81	0.00	0.00	244.58	93.14	0.00
42	242.61	67.60	5.95	24.80	0.00	0.00	239.36	74.64	0.00
43	226.77	91.07	9.95	245.28	0.00	0.00	238.55	85.65	0.00
44	235.83	128.80	5.95	111.29	0.00	0.00	228.60	125.98	0.00
45	198.93	104.29	5.95	111.29	0.00	0.00	191.71	101.47	0.00
46	199.83	104.67	5.95	291.29	0.00	0.00	207.05	107.49	0.00
47	226.04	91.71	9.95	16.90	0.00	0.00	222.27	104.12	0.00
48	241.75	116.30	5.95	111.29	0.00	0.00	234.52	113.49	0.00
CREE CPY Series FLAT Lens 72 Led 6K XCCA0A08+4*									
1.1	165.59	74.00	4.48	22.54	0.00	0.00	165.59	74.00	0.00
1.2	149.52	93.28	4.48	22.54	0.00	0.00	149.52	93.28	0.00
1.3	151.86	87.76	4.48	22.54	0.00	0.00	151.86	87.76	0.00
1.4	154.23	82.24	4.48	22.54	0.00	0.00	154.23	82.24	0.00
1.5	156.56	76.72	4.48	22.54	0.00	0.00	156.56	76.72	0.00
1.6	158.90	71.20	4.48	22.54	0.00	0.00	158.90	71.20	0.00
1.7	162.93	98.89	4.48	22.54	0.00	0.00	162.93	98.89	0.00
1.8	165.27	93.37	4.48	22.54	0.00	0.00	165.27	93.37	0.00
1.9	167.64	87.85	4.48	22.54	0.00	0.00	167.64	87.85	0.00
1.10	169.97	82.33	4.48	22.54	0.00	0.00	169.97	82.33	0.00
1.11	172.31	76.81	4.48	22.54	0.00	0.00	172.31	76.81	0.00
1.12	156.21	96.08	4.48	22.54	0.00	0.00	156.21	96.08	0.00
1.13	158.55	90.56	4.48	22.54	0.00	0.00	158.55	90.56	0.00
1.14	160.92	85.04	4.48	22.54	0.00	0.00	160.92	85.04	0.00
1.15	163.25	79.52	4.48	22.54	0.00	0.00	163.25	79.52	0.00
Viva Group S.p.A. LED FLOODLIGHT 70W SMD 4000K 91100811_r00									
3.1	165.26	45.18	3.46	293.38	-10.00	0.00	164.70	44.94	0.00
3.2	199.10	53.94	3.46	23.38	-10.00	0.00	199.34	53.38	0.00
3.3	191.77	50.76	3.46	23.38	-10.00	0.00	192.01	50.20	0.00
3.4	184.41	47.59	3.46	23.38	-10.00	0.00	184.65	47.03	0.00
3.5	177.08	44.41	3.46	23.38	-10.00	0.00	177.32	43.85	0.00
3.6	169.72	41.24	3.46	23.38	-10.00	0.00	169.96	40.68	0.00
49	224.86	113.29	3.46	23.38	-10.00	0.00	225.10	112.73	0.00
50	216.22	109.43	3.46	23.38	-10.00	0.00	216.46	108.87	0.00

Structural elements

Virtual measuring surface

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle	
							L axis	Q axis
Ref. plane 1.1	0.00	-0.00	0.00	312.98	285.86	36.28	0.00	0.00

Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021



DOMUS
PROJECTS

Site Boundary

Description, Site Boundary

Luminaire data/Room elements

Others

No.	xm[m]	ym[m]	zm[m]	Length	Width	Rotation angle		
						z axis	L axis	Q axis
A 1	146.59	92.67	4.50	28.75	31.30	0.00	0.00	0.00
A 4	167.62	40.83	0.00	40.42	31.08	0.00	0.00	0.00
A 5	213.50	108.28	0.00	19.60	18.17	0.00	0.00	0.00
A 6	210.16	115.17	0.00	7.56	8.73	0.00	0.00	0.00

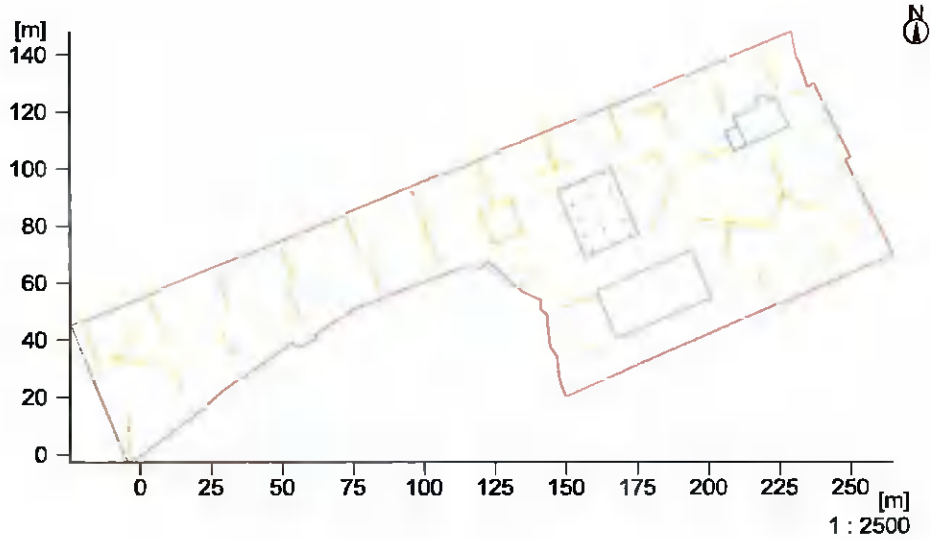
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PROJECTS

Description, Site Boundary

Floor plan



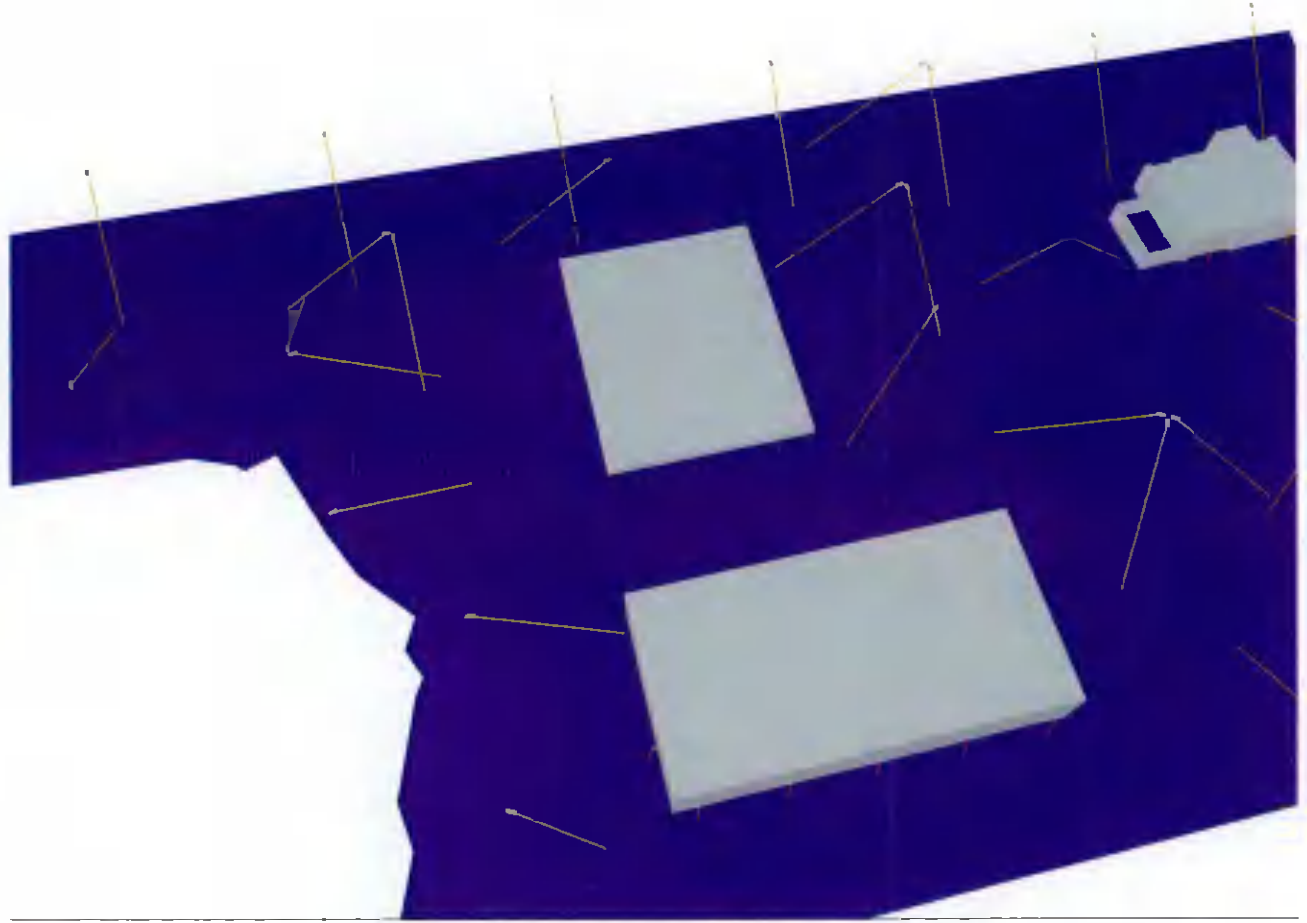
Object : CREE XSPD
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Project number : 180020 Rev A4
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DOMUS PROJECTS

Description, Site Boundary

3D view, View 1



Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
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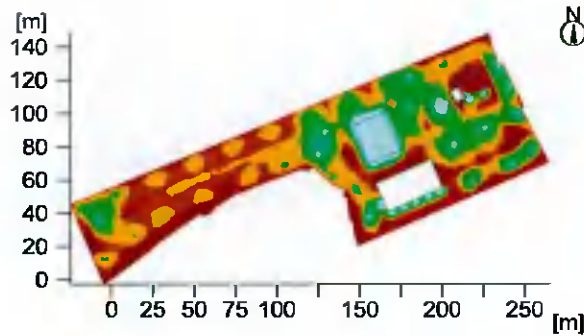


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PROJECTS

Site Boundary

Summary, Site Boundary

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	761987.813 lm
Total power	6283.0 W
Total power per area (16414.43 m ²)	0.38 W/m ² (1.22 W/m ² /100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	31.5 lx
Emin	1.9 lx
Emin/Eav (Uo)	0.06
Emin/Emax (Ud)	0.01
Position	0.00 m

Type No. Make

	CREE	
1	46	Order No. : XSPD022SHE40K_24-Q9
		Luminaire name : XSP1D - E - Type 2SH - Q9 4K
		Equipment : 1 x 5 MD-A1450 Q9 4K 12V 98 W / 12100 lm
2	15	Order No. : XCCA0A08+4*
		Luminaire name : CPY Series FLAT Lens 72 Led 6K
		Equipment : 1 x 72 LED 350mA 6K 81 W / 9799.2 lm

Object : CREE XSPD
Installation : Applegreen Rathcoole
Project number : 180020 Rev A4
Date : 13.04.2021




DOMUS
PROJECTS

Site Boundary

Summary, Site Boundary

Result overview, Evaluation area 1

3	8	Wiva Group S.p.A.
		Order No. : 91100811_r00
		Luminaire name : LED FLOODLIGHT 70W SMD 4000K
		Equipment : 1 x 132xLED-NW_0.4W 70 W / 7300 lm

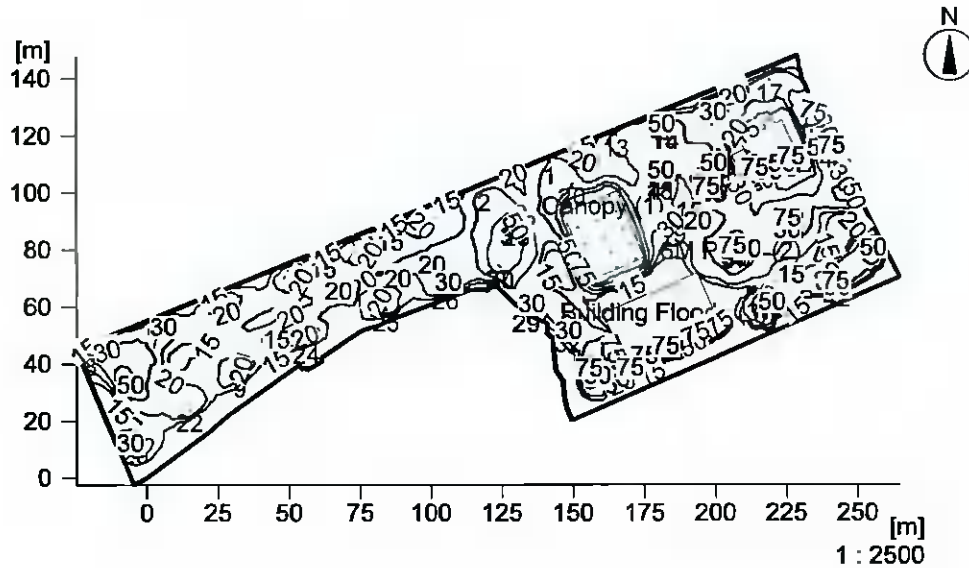
Object : CREE XSPD
 Installation : Applegreen Rathcoole
 Project number : 180020 Rev A4
 Date : 13.04.2021



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 PROJECTS

Calculation results, Site Boundary

Isolines representation, Reference plane 1.1 (E)



Illuminance [lx]

Height of the reference plane

		: 0.00 m
Average illuminance	Eav	: 31 lx
Minimum illuminance	Emin	: 2 lx
Maximum illuminance	Emax	: 182 lx
Uniformity Uo	Emin/Eav	: 1 : 16.49 (0.06)
Diversity Ud	Emin/Emax	: 1 : 95.27 (0.01)

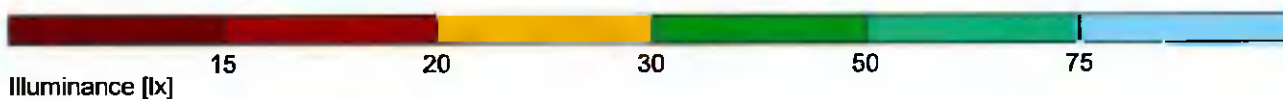
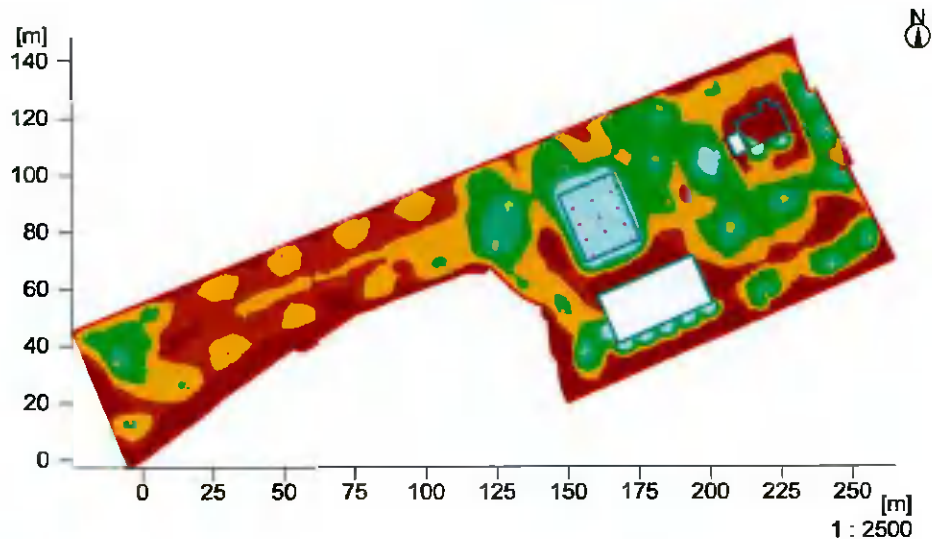
Object : CREE XSPD
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PROJECTS

Calculation results, Site Boundary

Pseudo colours, Reference plane 1.1 (E)



Height of the reference plane

Average illuminance	Eav	: 31 lx
Minimum illuminance	Emin	: 2 lx
Maximum illuminance	E _{max}	: 182 lx
Uniformity U _o	E _{min} /E _{av}	: 1 : 16.49 (0.06)
Diversity U _d	E _{min} /E _{max}	: 1 : 95.27 (0.01)

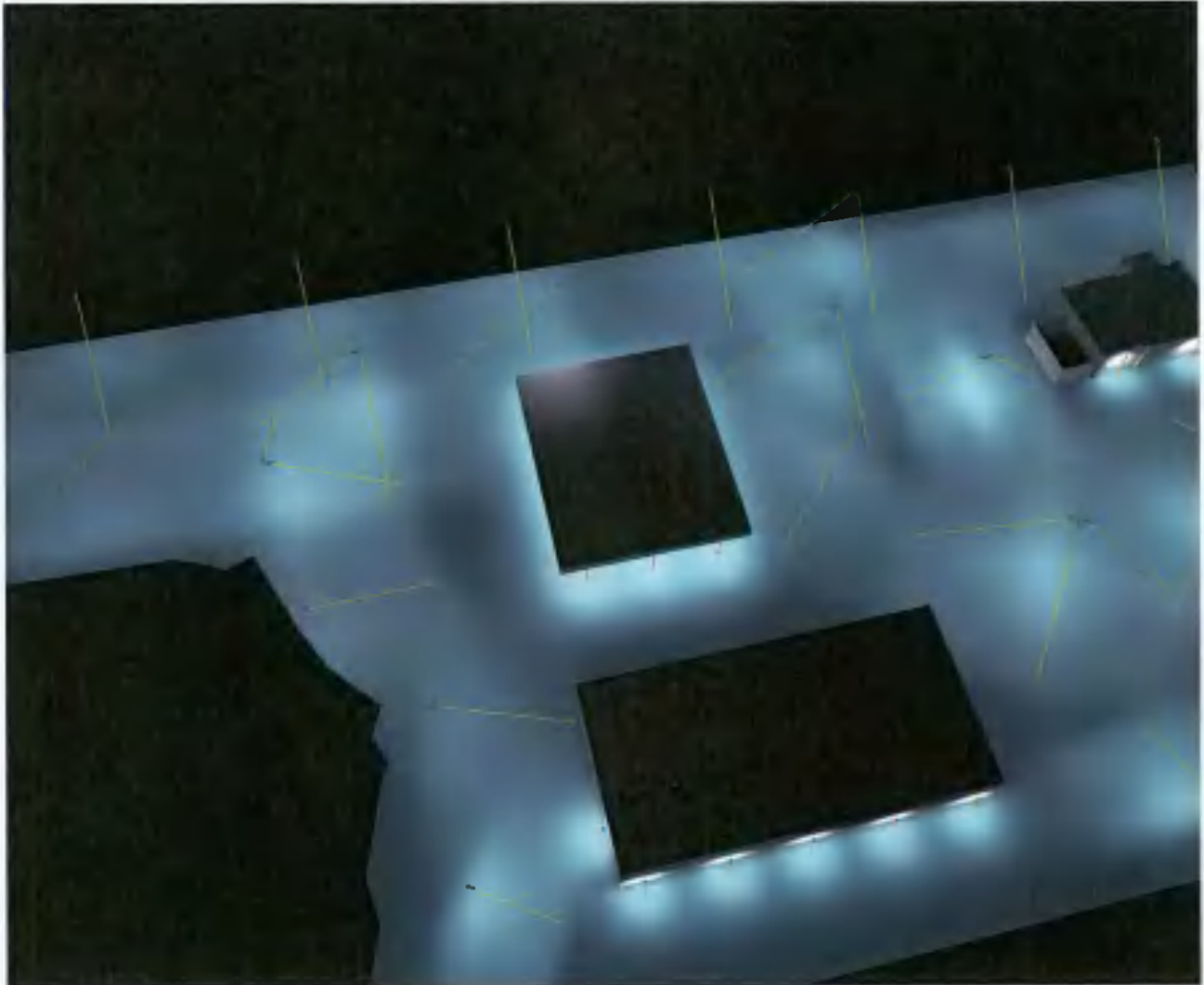
Object : CREE XSPD
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Calculation results, Site Boundary

3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²
Maximum: : 103 cd/m²

Object : CREE XSPD
Installation : Applegreen Rathcoole
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DOMUS
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Calculation results, Site Boundary
3D pseudo colours, View 1 (E)

