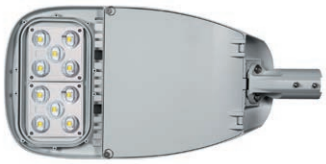
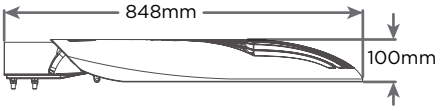
XSP High Output Series

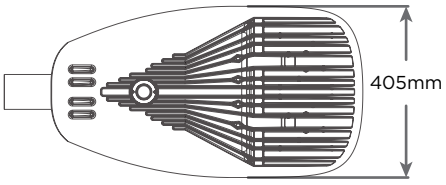
XSP2™ High Output LED Street/Area Luminaire - Double Module

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 146 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-F-30K-+-24-SV-FX-S-00

XSP	-	E	-	02	2LG	-	F	-	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 **03** horiz/vert tenon 76mm OD	**2LG** Type II long **275** Type II short 0.75 **210** Type II short 1,0 **2SH** Type II short **3SH** Type III short **3ME** Type III Medium **4ME** Type IV medium **5ME** Type V Medium **5SH** Type V Short	-	**F** 128W **I** 110W	-	**30K** 3000K **40K** 4000K **57K** 5700K	-	**+** Class 1 **^** Class 2	-	**24** 220-240V	-	**SV** Silver **BK** Black **BZ** Bronze **SB** Silver Bronze **WH** White	-	Input Power F: **FX*** **Fixed Imput Power** **Q** **Field Adjustable Output** **Y- Z** **1-10V on virtual mid-night reprogrammable** Input Power I: **FX *** **Fixed Imput Power** **G** **Lineswitch** **DL** **DALI** **CL** **Constant lumen output** **DC** **Dynadimmer + Constant lumen output** **DY** **Dynadimmer** - Customized programming options available on request **RF*** **Flux regulator**	-	**S** Standard **N** Nema 7pin longjoin **F**** Fuse	-	**00** Standard (w/o cable) **01** Exit cable 30cm **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

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Rev. Date: 01 June 2018

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 @230V, 50Hz	Power Factor
F	128	0,57	0,98
I	110	0,48	0,98

* 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	F	1.02	0.99	0.97	0.94	0.91
	I	1.02	0.99	0.97	0.94	0.91
10˚C	F	1.01	0.98	0.96	0.93	0.90
	I	1.01	0.98	0.96	0.93	0.90
15˚C	F	1.01	0.97	0.96	0.91	0.89
	I	1.01	0.98	0.96	0.93	0.90
20˚C	F	1.00	0.96	0.95	0.90	0.87
	I	1.00	0.97	0.95	0.92	0.89
25˚C	F	1.00	0.96	0.95	0.88	0.85
	I	1.00	0.97	0.95	0.92	0.89

[1] Lumen maintence 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
15.0 kg	0.090m2

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

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Control options

Field Adjustable Output - Input Power Designator F					
Setting	**System Watts**	**Lumen Multipliers**	**Nominal flux (lm)**		
			5700K	**4000K**	**3000K**
Q9	128	1,00	18814	18700	17763
Q8	116	0,92	17386	17280	16415
Q7	113	0,90	16905	16803	15961
Q6	104	0,84	15790	15694	14908
Q5	99	0,81	15176	15084	14329
Q4	95	0,77	14559	14470	13745
Q3	87	0,72	13462	13380	12710
Q2	77	0,65	12148	12074	11469
Q1	64	0,55	10257	10195	9684

Lineswitch - Input Power Designator I								
Setting	**System Watts** (High Mode)	**Nominal flux (lm)**			**System Watts** (Low Mode)	**Nominal flux (lm)**		
		5700K	**4000K**	**3000K**		**5700K**	**4000K**	**3000K**
G6	110	16513	16413	15591	56	9112	9057	8603
G5	107	16249	16150	15342	54	8803	8750	8311
G4	98	15096	15004	14252	50	8185	8135	7728
G3	89	13895	13811	13119	45	7422	7377	7007
G2	79	12538	12461	11837	39	6476	6437	6115
G1	70	11239	11171	10611	35	5840	5805	5514

Virtual Midnight Y/Z - Input Power Designator F								
Setting	**System Watts** (High Mode)	**Nominal flux (lm)**			**System Watts** (Low Mode)	**Nominal flux (lm)**		
		5700K	**4000K**	**3000K**		**5700K**	**4000K**	**3000K**
Y1	128	18814	18700	17763	96	14781	14691	13955
Y2	128	18814	18700	17763	64	10257	10195	9684
Y3	128	18814	18700	17763	32	5113	5082	4827
Y4	96	14781	14691	13955	64	10257	10195	9684
Y5	96	14781	14691	13955	32	5113	5082	4827
Y6	64	10257	10195	9684	32	5113	5082	4827
Z1	111	16769	16667	15833	88	13715	13632	12949
Z2	111	16769	16667	15833	70	11167	11099	10543
Z3	111	16769	16667	15833	45	7185	7142	6784
Z4	88	13715	13632	12949	70	11167	11099	10543
Z5	88	13715	13632	12949	45	7185	7142	6784
Z6	70	11167	11099	10543	45	7185	7142	6784

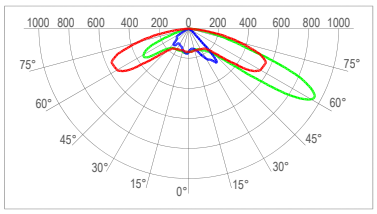
Dimming 8h

Dynadimmer - Input Power Designator I													
Setting		**System Watts** (High Mode)	**Nominal flux (lm)**			**System Watts** (Medium Mode)	**Nominal flux (lm)**			**System Watts** (Low Mode)	**Nominal flux (lm)**		
8h	**6h**		**5700K**	**4000K**	**3000K**		**5700K**	**4000K**	**3000K**		**5700K**	**4000K**	**3000K**
DY6	DY12	110	16513	16413	15591					56	9112	9057	8603
DY5	DY11	107	16249	16150	15342					54	8803	8750	8311
DY4	DY10	98	15096	15004	14252					50	8185	8135	7728
DY3	DY9	89	13895	13811	13119					45	7422	7377	7007
DY2	DY8	79	12538	12461	11837					39	6476	6437	6115
DY1	DY7	70	11239	11171	10611					35	5840	5805	5514
DY18		110	16513	16413	15591	83	13057	12978	12328	56	9112	9057	8603
DY17		107	16249	16150	15342	80	12668	12591	11960	54	8803	8750	8311
DY16		98	15096	15004	14252	73	11693	11622	11040	50	8185	8135	7728
DY15		89	13895	13811	13119	66	10640	10575	10045	45	7422	7377	7007
DY14		79	12538	12461	11837	59	9567	9508	9032	39	6476	6437	6115
DY13		70	11239	11171	10611	52	8494	8442	8020	35	5840	5805	5514

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



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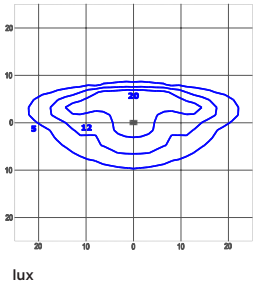
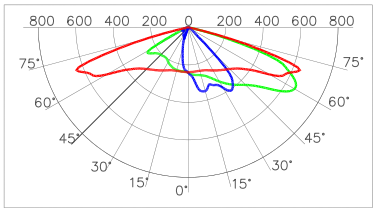


XSPD022LGE40K
Mounting Height: 10m

Lumen Output - 2LG (Type II Long)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	16869	16766	15926
I	14806	14716	13979

* 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



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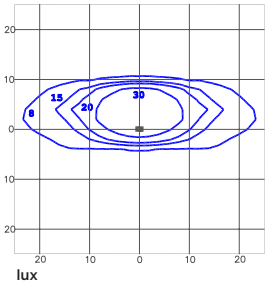
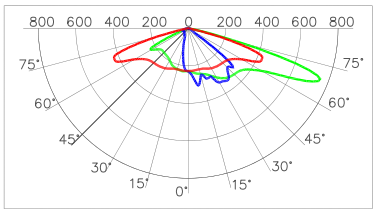


XSPD02275F40K
Mounting Height: 10m

Lumen Output - 275 (Type II Short 0.75)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	17175	17071	16216
I	15075	14983	14232

* 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



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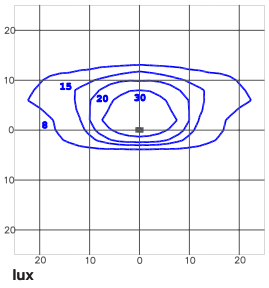
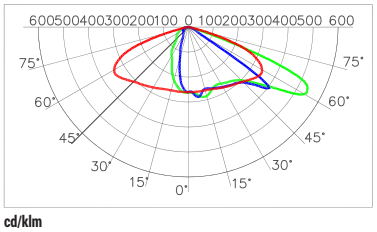


XSPD02210F40K
Mounting Height: 10m

Lumen Output - 210 (Type II Short 1.0)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	17178	17074	16219
I	15077	14986	14235

* 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



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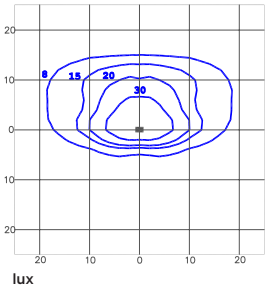

XSPD022SHF40K
Mounting Height: 10m

Lumen Output - 2SH (Type II Short)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	16998	16895	16048
I	14919	14828	14086

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

Photometry

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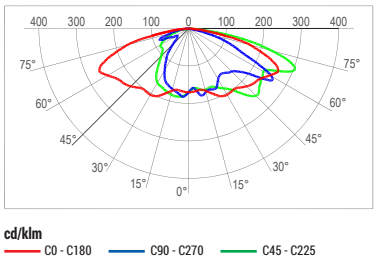
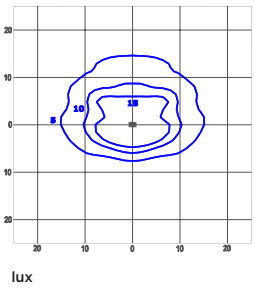
3SH - Type III Short





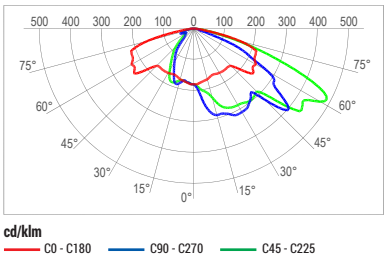
Test Report #: PL11704-012

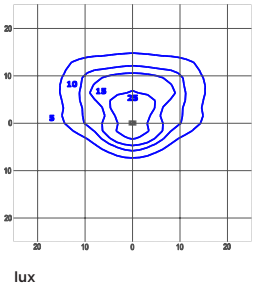
XSPD023SHE40K
Mounting Height: 10m

Lumen Output - 3SH (Type III Short)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	15956	15859	15064
I	14004	13919	13222

* 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





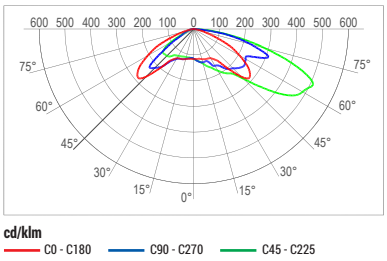
Test Report #: PL11704-013

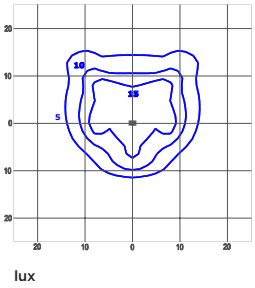
XSPD023MEE40K
Mounting Height: 10m

Lumen Output - 3ME (Type III Medium)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	16738	16636	15803
I	14691	14601	13870

* 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





Test Report #: PL11704-014

XSPD024MEE40K
Mounting Height: 10m

Lumen Output - 4ME (Type IV Medium)			
Input Power Designator	**5700K** Initial Delivered Lumens*	**4000K** Initial Delivered Lumens*	**3000K** Initial Delivered Lumens*
F	16757	16655	15821
I	14708	14618	13886

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