XSP High Output Series

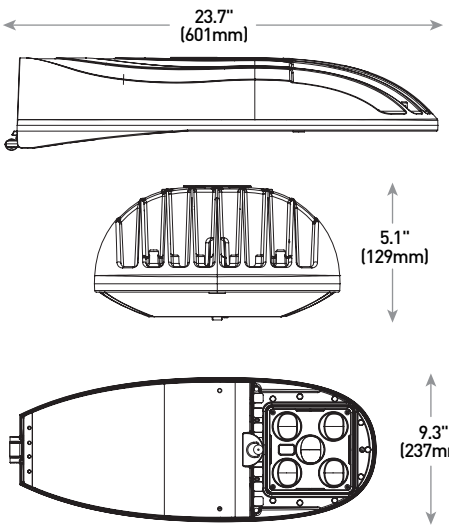
XSP1™ High Output LED Street/Area Luminaire – Single Module

Rev. Date: V6 11/04/2019

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

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 10,162

Efficacy: Up to 103 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K)

Limited Warranty†: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

† See http://creelighting.com/warranty for warranty terms

Accessories

Field-Installed		
Backlight Control Shield XA-SP1BLS - Provides 1 mounting height cutoff	**Bird Spikes** XA-SP1BRDSPK	**Shorting Cap** XA-XSLSHRT

Voltage	Weight
120-277V	14.5 lbs. (6.6kg)
347-480V	18.0 lbs. (8.2kg)

Ordering Information

Example: BXSP1-HO-HT-2ME-100W-30K-UL-SV

BXSP1-HO	HT		100W	30K			
Product	**Mounting**	**Optic**	**Input Power****	**CCT**	**Voltage**	**Color Options**	**Options**
BXSP1-HO	**HT** Horizontal Tenon	**2LG*** Type II Long **2ME*** Type II Medium **3ME*** Type III Medium **4ME*** Type IV Medium	**100W**	**30K** 3000K	**UL** Universal 120-277V **UH***** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**N-Q9/Q8/Q7/Q6/Q5/Q4** **Utility Label, NEMA® 7-Pin Photocell Receptacle & Field Adjustable Output** - Must select Q9, Q8, Q7, Q6, Q5 or Q4 - Settings Q3-Q1 are not available with N option - External wattage label per ANSI C136.15 based on Q setting selected - 7-pin receptacle per ANSI C136.41 - Factory connected 0-10V dim leads - Requires photocell or shorting cap (by others) - Power/lumens may only be adjusted down in the field - Refer to page 6 for power and lumen values **Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1** **Field Adjustable Output** - Must select Q9, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 - Power/lumens are fully adjustable in the field - Refer to page 6 for power and lumen values **R NEMA® 7-Pin Photocell Receptacle** - 7-pin receptacle per ANSI C136.41 - Factory connected 0-10V dim leads - Requires photocell or shorting cap (by others) **UTL Utility Label** - Includes exterior wattage label per ANSI C136.15 that indicates the maximum available wattage of the luminaire

* Available with Backlight Shield when ordered with field-installed accessory (see table above)
** Refer to Electrical Data table for system watts
*** 347-480V utilizes magnetic step-down transformer. For input power for 347-480V, refer to the Electrical Data table

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

Product Specifications

CONSTRUCTION & MATERIALS

- Die cast aluminum housing
- Tool-less entry
- Mounts on 1.25" (32mm) IP, 1.66" (42mm) O.D. or 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon (minimum 8" [203mm] in length) and is adjustable +/- 5˚ to allow for fixture leveling (includes two axis T-level to aid in leveling)
- Luminaire secures with two mounting bolts
- 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. Black, bronze, silver and white are available
- **Weight:** 120-277V: 14.5 lbs. (6.6kg); 347-480V: 18.0 lbs. (8.2kg)

ELECTRICAL SYSTEM

- **Input Voltage**: 120-277V or 347-480V, 50/60Hz
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Class 1 driver
- Integral 10kV surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current
- Designed with 0-10V dimming capabilities. Controls by others
- **10V Source Current:** 0.15mA

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- Meets CALTrans 611 Vibration testing
- ANSI C136.2 10kV surge protection, tested in accordance with IEEE/ANSI C62.41.2
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- DLC and DLC Premium qualified versions available. Exceptions apply when UH voltage (347-480V) is selected and when N-Q9 or Q9 (select adjustments) options are ordered. Please refer to https://www.design-lights.org/search/ for most current information
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Meets Buy American requirements within ARRA
- RoHS compliant. Consult factory for additional details
- Dark Sky Friendly, IDA Approved when ordered with 30K CCT. Please refer to https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/fsa-products/ for most current information
- ⚠ **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – www.p65warnings.ca.gov

Electrical Data*

Input Power	System Watts		Total Current (A)					
	120-277V	347-480V	120V	208V	240V	277V	347V	480V
100W	99	107	0.86	0.49	0.42	0.37	0.32	0.23

* Electrical data at 25˚C (77˚F). Actual wattage may differ by +/- 10% when operating between 120-277V or 347-480V +/- 10%.

XSP1™ High Output Series Ambient Adjusted Lumen Maintenance[1]

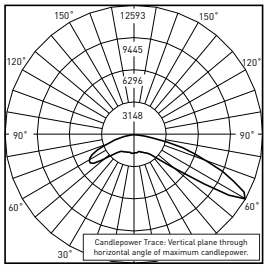
Ambient	Initial LMF	25K hr Reported[2] LMF	50K hr Reported[2] LMF	75K hr Reported[2] LMF	100K hr Estimated[3] LMF
5˚C (41˚F)	1.03	1.02	1.02	1.02	1.02
10˚C (50˚F)	1.03	1.02	1.02	1.02	1.02
15˚C (59˚F)	1.02	1.01	1.01	1.01	1.01
20˚C (68˚F)	1.01	1.00	1.00	1.00	1.00
25˚C (77˚F)	1.00	0.99	0.99	0.99	0.99

[1] Lumen maintenance values at 25˚C (77˚F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors. Please refer to the Temperature Zone Reference Document for outdoor average nighttime ambient conditions.
[2] In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED
[3] Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED

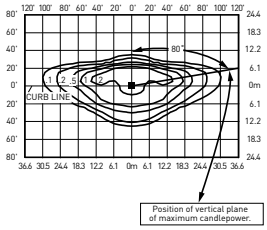
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards. To obtain an IES file specific to your project consult: http://creelighting.com/products/outdoor/street-and-roadway/xsp-high-output-series-1

2LG



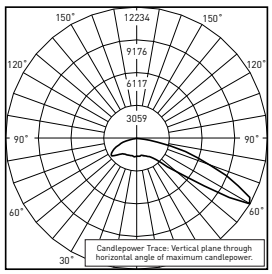
RESTL Test Report #: PL07625-001A
BXSP1-HO-**-2LG-100W-40K-UL
Initial Delivered Lumens: 10,905



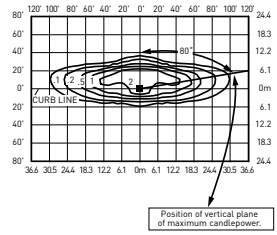
BXSP1-HO-**-2LG-100W-30K-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 10,162
Initial FC at grade

Type II Long Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
10,162	B3 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf



RESTL Test Report #: PL08272-001A
BXSP1-HO-**-2LG-100W-57K-UL w/XA-SP1BLS
Initial Delivered Lumens: 8,239

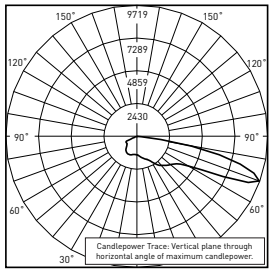


BXSP1-HO-**-2LG-100W-30K-UL w/XA-SP1BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 7,593
Initial FC at grade

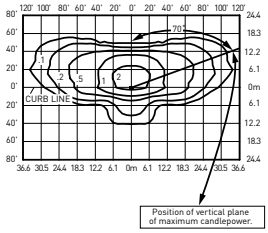
Type II Long w/BLS Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
7,593	B2 U0 G1

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf

2ME



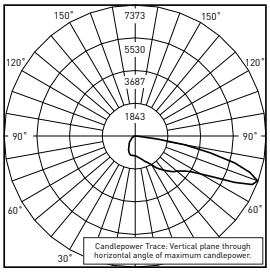
RESTL Test Report #: PL10140-001A
BXSP1-HO-**-2ME-100W-40K-UL
Initial Delivered Lumens: 10,702



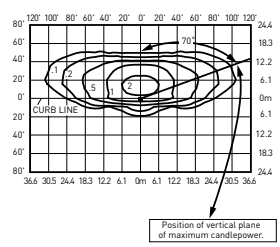
BXSP1-HO-**-2ME-100W-30K-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 10,162
Initial FC at grade

Type II Medium Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
10,162	B2 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf



RESTL Test Report #: PL10140-002B
BXSP1-HO-**-2ME-100W-40K-UL w/XA-SP1BLS
Initial Delivered Lumens: 8,283



BXSP1-HO-**-2ME-100W-30K-UL w/XA-SP1BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 8,040
Initial FC at grade

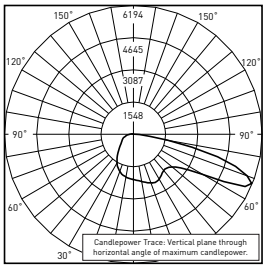
Type II Medium w/BLS Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
8,040	B1 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf

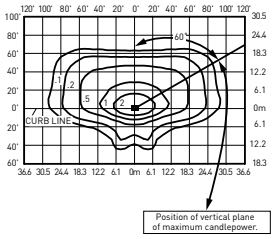
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards. To obtain an IES file specific to your project consult: http://creelighting.com/products/outdoor/street-and-roadway/xsp-high-output-series-1

3ME



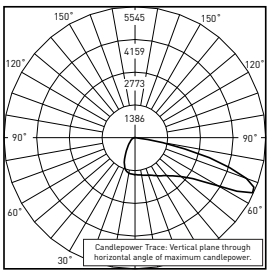
RESTL Test Report #: PL10471-001A
BXSP1-HO-**-3ME-100W-30K-UL
Initial Delivered Lumens: 9,628



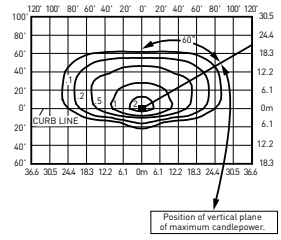
BXSP1-HO-**-3ME-100W-30K-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 10,162
Initial FC at grade

Type III Medium Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
10,162	B2 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf



RESTL Test Report #: PL10344-002A
BXSP1-HO-**-3ME-100W-40K-UL
w/XA-SP1BLS
Initial Delivered Lumens: 7,540

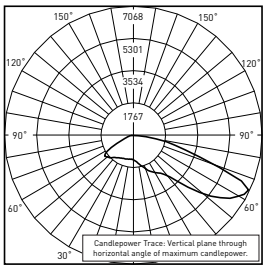


BXSP1-HO-**-3ME-100W-30K-UL
w/XA-SP1BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 7,150
Initial FC at grade

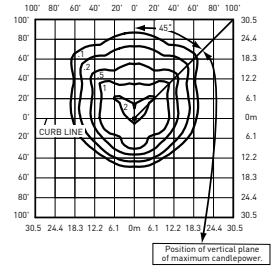
Type III Medium w/BLS Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
7,150	B1 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf

4ME



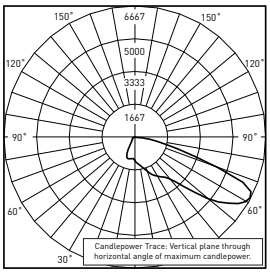
RESTL Test Report #: PL07626-001A
BXSP1-HO-**-4ME-100W-40K-UL
Initial Delivered Lumens: 10,983



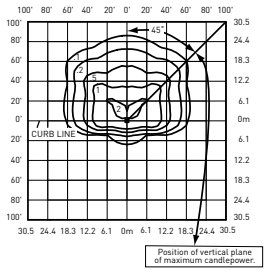
BXSP1-HO-**-4ME-100W-30K-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 10,162
Initial FC at grade

Type IV Medium Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
10,162	B2 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf



RESTL Test Report #: PL08273-001A
BXSP1-HO-**-4ME-100W-40K-UL
w/XA-SP1BLS
Initial Delivered Lumens: 8,463



BXSP1-HO-**-4ME-100W-30K-UL
w/XA-SP1BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 7,817
Initial FC at grade

Type IV Medium w/BLS Distribution	
3000K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
7,817	B1 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf

Luminaire EPA

Horizontal Tenon Mount – Weight: 120-277V: 14.5 lbs. (6.6kg); 347-480V: 18.0 lbs. (8.2kg)				
Single	2 @ 90˚	2 @ 180˚	3 @ 90˚	4 @ 90˚
Tenon Configuration If used with Cree Lighting tenons, please add tenon EPA with luminaire EPA				
				
PD-1H4; PT-1H	PD-2H4(90); PT-2H(90)	PD-2H4(180); PT-2H(180)	PD-3H4(90); PT-3H(90)	PD-4H4(90); PT-4H(90)
0.71	1.02	1.43	1.74	2.04

Tenon EPA

Part Number	EPA
PD Series Tenons	0.09
PT Series Tenons	0.10
WM-2L	0.13
XA-TMDA8	0.19

Tenons and Brackets‡ (must specify color)

Square Internal Mount Horizontal Tenons (Aluminum)
- Mounts to 4" (102mm) square aluminum or steel poles

PD-1H4 – Single
PD-2H4(90) – 90˚ Twin
PD-2H4(180) – 180˚ Twin
PD-3H4(90) – 90˚ Triple
PD-4H4(90) – 90˚ Quad

Wall Mount Brackets
- Mounts to wall or roof

WM-2L – Extended Horizontal

Round External Mount Horizontal Tenons (Aluminum)
- Mounts to 2.375"-3" (60-76mm) O.D. round aluminum or steel poles or tenons
- Mounts to 3" (76mm), 5" (127mm), or 6" (152mm) square pole with PB-1A* tenon

PT-1H – Single
PT-2H(90) – 90˚ Twin
PT-2H(180) – 180˚ Twin
PT-3H(90) – 90˚ Triple
PT-4H(90) – 90˚ Quad

Direct Arm Pole Adaptor Bracket
- Mounts to 3-6" (76-152mm) round or square aluminum or steel poles

XA-TMDA8

‡ Refer to the Bracket and Tenons spec sheet for more details
* Specify pole size: 3 (3"), 4 (4"), 5 (5"), or 6 (6") for single, double or triple luminaire orientation or 4 (4"), 5 (5"), or 6 (6") for quad luminaire orientation

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables luminaires within the XSP Series on this page to be tuned to the exact needs of a particular application through multiple levels of adjustment. When a setting other than Q9 is specified with the N option, that setting becomes the maximum wattage of the luminaire, and a NEMA label reflecting this wattage is affixed to the luminaire. Lumen output and power consumption can only be adjusted downward from the maximum wattage.

Q Option Power & Lumen Data

Q Option Setting	CCT	System Watts†		Lumen Values					Optics Qualified on DLC QPL	
		120-277V	347-480V	2LG/2ME/3ME/4ME	2LG w/BLS	2ME w/BLS	3ME w/BLS	4ME w/BLS	DLC Standard (120-277V only)	DLC Premium (120-277V only)
9	30K	99	107	10,162	7,593	8,040	7,150	7,817	2LG, 2ME, 3ME, 4ME	N/A
8	30K	88	95	9,349	6,986	7,397	6,578	7,192	2LG, 2ME, 3ME, 4ME	N/A
7	30K	79	86	8,841	6,606	6,995	6,221	6,801	2LG, 2ME, 3ME, 4ME	N/A
6	30K	69	75	7,926	5,923	6,271	5,577	6,097	2LG, 2ME, 3ME, 4ME	N/A
5	30K	61	66	7,215	5,391	5,708	5,077	5,550	2LG, 2ME, 3ME, 4ME	N/A
4	30K	52	56	6,504	4,860	5,146	4,576	5,003	N/A	N/A
3*	30K	43	46	5,081	3,797	4,020	3,575	3,909	N/A	N/A
2*	30K	34	37	4,573	3,417	3,618	3,218	3,518	N/A	N/A
1*	30K	25	27	3,557	2,658	2,814	2,503	2,736	N/A	N/A

* Not available with N option
† Electrical and lumen data at 25˚C (77˚F). Actual wattage and lumen output may differ by +/-10% when operating between 120-480V +/-10%

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING
A COMPANY OF *IDEAL INDUSTRIES, INC.*