

XSP High Output Series

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

WISDOT C
 BXSP2HO9031&
 BXSP2-HO-HT-3ME-165W-40K-UL-SV-R

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 18,523

Efficacy: Up to 116 LPW

CRI: Minimum 70 CRI

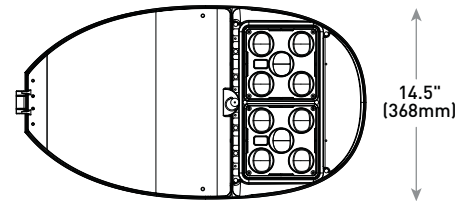
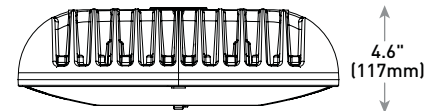
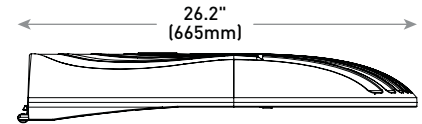
CCT: 3000K (+/- 300K), 4000K (+/- 300K); 5700K (+/- 500K)

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

* See <http://lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed	
Backlight Control Shield XA-SP2BLS - Provides 1/2 mounting height cutoff	Bird Spikes XA-SP2BRDSPK



Weight
24 lbs. (11kg)

Item number BXSP2HO9031&
 indicates with WISDOT C label

Ordering Information

Example: BXSP2-HO-HT-2ME-165W-40K-UL-SV

BXSP2-HO	HT	3ME	165W	40K	UL	SV	R
Product	Mounting	Optic	Input Power**	CCT	Voltage	Color Options	Options
BXSP2-HO	HT Horizontal Tenon	2LG* Type II Long 2ME* Type II Medium 3ME* Type III Medium 4ME* Type IV Medium	165W	30K 3000K 40K 4000K 57K 5700K	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 - Photocell and 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 - Photocell and 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

Rev. Date: V6 10/19/2017



US: lighting.cree.com

T (800) 236-6800 F (262) 504-5415

Canada: www.cree.com/canada



T (800) 473-1234 F (800) 890-7507

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

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: 24 lbs. [11kg]**

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:** 1.0mA

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
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- 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
- DLC qualified. Exceptions apply when Q1 options is ordered. Please refer to <https://www.designlights.org/search/> for most current information
- **RoHS compliant.** Consult factory for additional details
- Dark Sky Friendly, IDA Approved when ordered with 30K CCT. Please refer to <http://darksky.org/fsa/fsa-products/> for most current information

Electrical Data*							
Input Power	System Watts 120-480V	Total Current (A)					
		120V	208V	240V	277V	347V	480V
165W	160	1.39	0.79	0.69	0.59	0.47	0.34

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

XSP2™ High Output Series Ambient Adjusted Lumen Maintenance ¹					
Ambient	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
5°C (41°F)	1.04	1.02	1.01	1.00	0.99
10°C (50°F)	1.03	1.01	1.00	0.99	0.98
15°C (59°F)	1.02	1.00	0.99	0.98	0.97
20°C (68°F)	1.01	0.99	0.98	0.97	0.96
25°C (77°F)	1.00	0.98	0.97	0.96	0.95

¹ Lumen maintenance values at 25°C (77°F) are calculated per TM-21 based on LM-80 data and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors
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

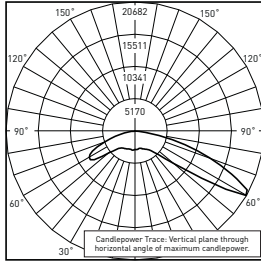


XSP2™ High Output LED Street/Area Luminaire – Double Module

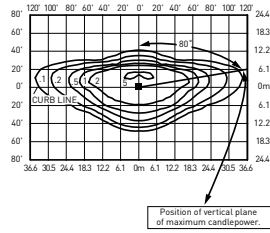
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: <http://lighting.cree.com/products/outdoor/street-and-roadway/xsp-high-output-series-1>

2LG



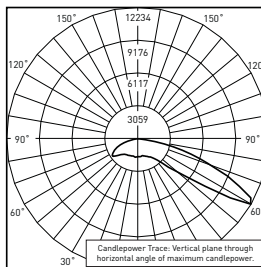
RESTL Test Report #: PL07602-001B
BXSP2-HO--2LG-165W-40K-UL**
Initial Delivered Lumens: 18,305



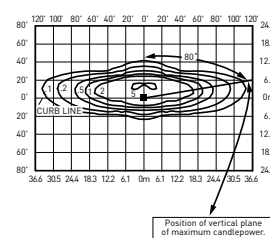
BXSP2-HO--2LG-165W-40K-UL**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 18,144
Initial FC at grade

Type II Long Distribution					
3000K		4000K		5700K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
17,195	B3 U0 G3	18,144	B3 U0 G3	18,523	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

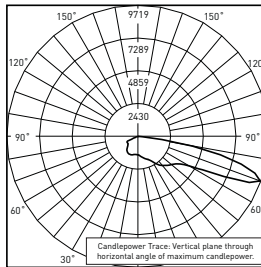


BXSP2-HO--2LG-165W-40K-UL**
w/XA-SP2BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 13,558
Initial FC at grade

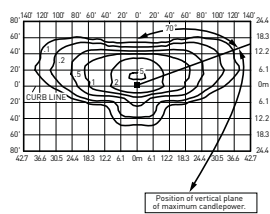
Type II Long w/BLS Distribution					
3000K		4000K		5700K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
12,849	B2 U0 G2	13,558	B2 U0 G2	13,841	B2 U0 G2

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
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2ME



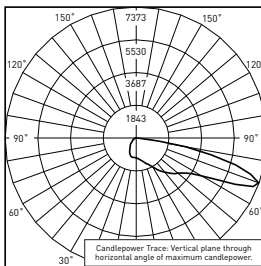
RESTL Test Report #: PL10140-001A
BXSP1-HO--2ME-100W-40K-UL**
Initial Delivered Lumens: 10,702



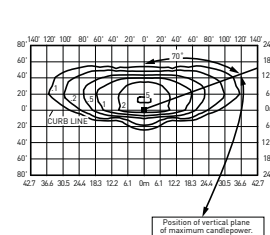
BXSP2-HO--2ME-165W-40K-UL**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 18,144
Initial FC at grade

Type II Medium Distribution					
3000K		4000K		5700K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
17,195	B3 U0 G3	18,144	B3 U0 G3	18,523	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 #: PL10140-002B
BXSP1-HO--2ME-100W-40K-UL**
w/XA-SP1BLS
Initial Delivered Lumens: 8,283



BXSP2-HO--2ME-165W-40K-UL**
w/XA-SP2BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 14,355
Initial FC at grade

Type II Medium w/BLS Distribution					
3000K		4000K		5700K	
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
13,605	B1 U0 G2	14,355	B1 U0 G2	14,656	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>

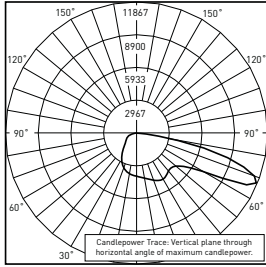


XSP2™ High Output LED Street/Area Luminaire – Double Module

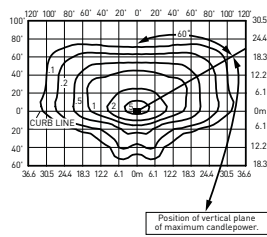
Photometry

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3ME



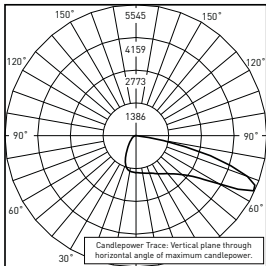
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BXSP2-HO--3ME-165W-40K-UL**
Initial Delivered Lumens: 18,304



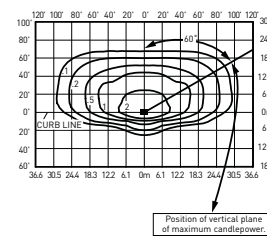
BXSP2-HO--3ME-165W-40K-UL**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 18,144
Initial FC at grade

Type III Medium Distribution					
3000K		4000K	5700K		
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
17,195	B3 U0 G3	18,144	B3 U0 G3	18,523	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 #: PL10344-002A
BXSP1-HO--3ME-100W-40K-UL**
w/XA-SP1BLS
Initial Delivered Lumens: 7,540

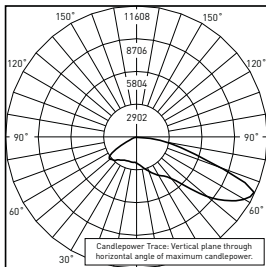


BXSP2-HO--3ME-165W-40K-UL**
w/XA-SP2BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 12,775
Initial FC at grade

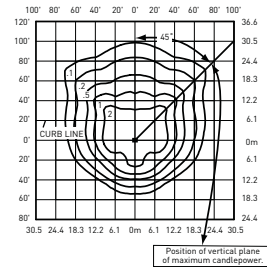
Type III Medium w/BLS Distribution					
3000K		4000K	5700K		
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
12,100	B2 U0 G2	12,775	B2 U0 G2	13,050	B2 U0 G2

* 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>

4ME



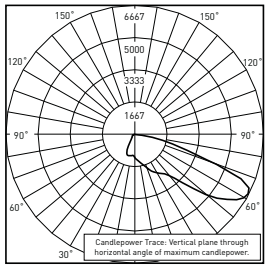
RESTL Test Report #: PL08038-001B
BXSP2-HO--4ME-165W-40K-UL**
Initial Delivered Lumens: 18,487



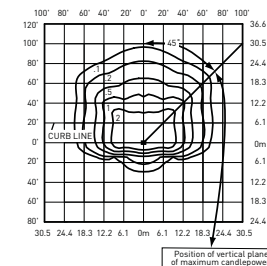
BXSP2-HO--4ME-165W-40K-UL**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 18,144
Initial FC at grade

Type IV Medium Distribution					
3000K		4000K	5700K		
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
17,195	B3 U0 G3	18,144	B3 U0 G3	18,523	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 #: PL08273-001A
BXSP1-HO--4ME-100W-40K-UL**
w/XA-SP1BLS
Initial Delivered Lumens: 8,463



BXSP2-HO--4ME-165W-40K-UL**
w/XA-SP2BLS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 13,957
Initial FC at grade






Type IV Medium w/BLS Distribution					
3000K		4000K	5700K		
Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
13,227	B2 U0 G2	13,957	B2 U0 G2	14,248	B2 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
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XSP2™ High Output LED Street/Area Luminaire – Double Module

Luminaire **EPA**

Horizontal Tenon Mount – Weight: 24 lbs. (11kg)				
Single	2 @ 90°	2 @ 180°	3 @ 90°	4 @ 90°
Tenon Configuration If used with Cree 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)
0.69	1.14	1.38	1.83	2.28

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)	
<p>Square Internal Mount Horizontal Tenons (Aluminum) - Mounts to 4" (102mm) square aluminum or steel poles PD-1H4 – Single PD-3H4(90) – 90° Triple PD-2H4(90) – 90° Twin PD-4H4(90) – 90° Quad PD-2H4(180) – 180° Twin</p>	<p>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-3H(90) – 90° Triple PT-2H(90) – 90° Twin PT-4H(90) – 90° Quad PT-2H(180) – 180° Twin</p>
<p>Wall Mount Brackets - Mounts to wall or roof WM-2L – Extended Horizontal</p>	<p>Direct Arm Pole Adaptor Bracket - Mounts to 3-6" (76-152mm) round or square aluminum or steel poles XA-TMDA8</p>

* Refer to the [Bracket and Tenons spec sheet](#) for more details

* Specify pole size: 3 (3"), 5 (5"), or 6 (6") for single, double or triple luminaire orientation or 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	
		120-480V	2LG/2ME/3ME/4ME	2LG w/BLS	2ME w/BLS	3ME w/BLS	4ME w/BLS	DLC Standard
9	30K	160	17,195	12,849	13,605	12,100	13,227	2LG, 2ME, 3ME, 4ME
	40K		18,144	13,558	14,355	12,775	13,957	2LG, 2ME, 3ME, 4ME
	57K		18,523	13,841	14,656	13,050	14,248	2LG, 2ME, 3ME, 4ME
8	30K	151	16,507	12,335	13,061	11,616	12,698	2LG, 2ME, 3ME, 4ME
	40K		17,418	13,016	13,781	12,264	13,399	2LG, 2ME, 3ME, 4ME
	57K		17,782	13,287	14,070	12,528	13,678	2LG, 2ME, 3ME, 4ME
7	30K	143	15,647	11,693	12,381	11,011	12,037	2LG, 2ME, 3ME, 4ME
	40K		16,511	12,338	13,063	11,625	12,701	2LG, 2ME, 3ME, 4ME
	57K		16,856	12,595	13,337	11,876	12,966	2LG, 2ME, 3ME, 4ME
6	30K	125	14,100	10,536	11,156	9,922	10,846	2LG, 2ME, 3ME, 4ME
	40K		14,878	11,118	11,771	10,476	11,445	2LG, 2ME, 3ME, 4ME
	57K		15,189	11,350	12,018	10,701	11,683	2LG, 2ME, 3ME, 4ME
5	30K	112	12,896	9,637	10,204	9,075	9,920	2LG, 2ME, 3ME, 4ME
	40K		13,608	10,169	10,766	9,581	10,468	2LG, 2ME, 3ME, 4ME
	57K		13,892	10,381	10,992	9,788	10,686	2LG, 2ME, 3ME, 4ME
4	30K	107	12,552	9,380	9,932	8,833	9,656	2LG, 2ME, 3ME, 4ME
	40K		13,245	9,897	10,479	9,326	10,189	2LG, 2ME, 3ME, 4ME
	57K		13,522	10,104	10,699	9,527	10,401	2LG, 2ME, 3ME, 4ME
3*	30K	85	10,317	7,709	8,163	7,260	7,936	2LG, 2ME, 3ME, 4ME
	40K		10,886	8,135	8,613	7,665	8,374	2LG, 2ME, 3ME, 4ME
	57K		11,114	8,305	8,794	7,830	8,549	2LG, 2ME, 3ME, 4ME
2*	30K	65	8,082	6,039	6,394	5,687	6,217	2LG, 2ME, 3ME, 4ME
	40K		8,528	6,372	6,747	6,004	6,560	2LG, 2ME, 3ME, 4ME
	57K		8,706	6,505	6,888	6,134	6,697	2LG, 2ME, 3ME, 4ME
1*	30K	48	6,190	4,626	4,898	4,356	4,762	N/A
	40K		6,532	4,881	5,168	4,599	5,025	
	57K		6,668	4,983	5,276	4,698	5,129	

* 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%

