

RSW Series

RSW™ LED Street Luminaire – Extra Large

Rev. Date: V3 10/16/2019

Product Description

The RSW Series, utilizing WaveMax® Technology, will transform the way cities and municipalities light their residential streets, interchanges, and expressways. With the first viable LED streetlight at warm CCT, the RSW Series delivers up to 128 LPW, enhanced visual comfort with reduced glare and high color contrast leading to improved overall illumination using less energy. The RSW Series provides warm, inviting dark sky friendly lighting that makes good economic sense.

Applications: Multi-lane freeways, express ways, major roads, parking lots, and general area spaces

Performance Summary

Utilizes WaveMax® Technology

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

Initial Delivered Lumens: Up to 31,300

Efficacy: Up to 128 LPW

CRI: Minimum 70 CRI

CCT: 3000K, 4000K, 5000K

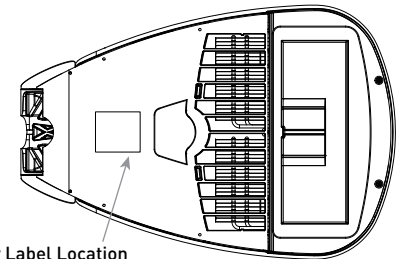
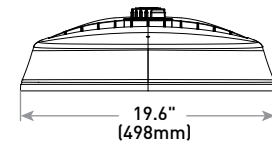
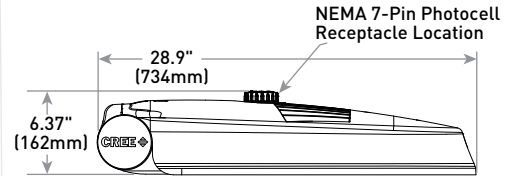
Limited Warranty*: 10 years

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

Accessories

Field-Installed

Shorting Cap
XA-XLSHRT



Utility Label Location

Weight

28.8 lbs. (13.1kg)

Ordering Information

Example: RSWX-A-HT-2ME-24L-30K7-UL-GY-N

RSWX	A	HT						N	
Product	Version	Mounting	Optic	Lumen Package*	CCT/CRI	Voltage	Color Options	Utility Label/Receptacle	Options
RSWX Extra Large	A	HT Horizontal Tenon	2LG Type II Long 2ME Type II Medium 3ME Type III Medium	24L 24,000 lumens 32L 32,000 lumens	30K7 3000K, 70 CRI 40K7 4000K, 70CRI 50K7 5000K, 70CRI	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze GY Grey	N Utility Label and NEMA® 7-Pin Photocell Receptacle - External wattage label per ANSI C136.15 - 7-pin receptacle per ANSI C136.41 - Factory connected 0-10V dim leads - Requires photocell or shorting cap by others	4BLT Four Bolt Mounting - Mounts to 1.25" (32mm) IP, 1.66" (42mm) O.D. or 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon PP Pallet Packaging - Multiple luminaires (up to 12 maximum per pallet) Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1 Field Adjustable Lumen Output - Must select Q9, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 - Offers full range lumen adjustability - Includes wattage label for setting selected - Refer to pages 7 & 8 for power and lumen values - Luminaire may also be dimmed through 7-Pin receptacle with use of dimming control by others - Refer to dimming spec sheet for dimming multipliers SS Stainless Steel Bolts X8/X7/X6/X5/X4/X3/X2/X1 Locked Lumen Output - Must select X8, X7, X6, X5, X4, X3, X2, or X1 - Lumen output is permanently locked to the setting selected - Includes wattage label for setting selected - Refer to pages 7 & 8 for power and lumen values - Dimming is only available through 7-Pin receptacle with use of dimming control by others - Refer to dimming spec sheet for dimming multipliers

* Lumen Package codes identify approximate light output only. Actual lumen output levels vary depending on CCT and optic selection. Refer to Initial Delivered Lumen tables for specific lumen values



US: creelighting.com (800) 236-6800

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

CREE LIGHTING

Product Specifications

WAVEMAX® TECHNOLOGY

Featuring up to 90% optical efficiency and precise control, WaveMax® Technology provides unmatched comfort and decreased LED source luminance by smoothly spreading brightness over a broader area. When integrated with luminous surfaces made of a polymer medium engineered with DiamondFacet™ optical elements, extremely high efficacy luminaires are the result – ultimately creating more visually comfortable and appealing environments while exceeding illumination performance.

CONSTRUCTION & MATERIALS

- Housing constructed of high strength, lightweight bulk molding compound for long weathering and durability
- UV stabilized polymeric door with handle pocket for tool-less entry
- Straight in wiring to terminal block for power input (#6-#14 AWG)
- Optic box and driver enclosure inside optic box meet IP66 requirements
- Luminaire secured with two grade 5 steel mounting bolts w/clear zinc clad finish standard; optional 316 stainless steel mounting bolts available with SS option. Optional four bolt mounting is also available
- 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° in 2.5° increments to allow for fixture leveling (two axis T-level included)
- Comes standard with Utility Label per ANSI C136.15 and 7-pin NEMA® Photocell Receptacle per ANSI C136.41
- **Weight:** 28.8 lbs. (13.1kg)

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- 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
- **10V Source Current:** 0.15mA
- **Operating Temperature Range:** -40°C - +40°C [-40°F - + 104°F]

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
- 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
- DLC and DLC Premium qualified versions available. Please refer to <https://www.designlights.org/search/> for most current information
- **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – www.p65warnings.ca.gov

Electrical Data*										
Lumen Package	CCT/ CRI	System Watts 120-480V	Utility Label Wattage	Efficacy (LPW)	Total Current (A)					
					120V	208V	240V	277V	347V	480V
24L	30K7	223	220	107	1.87	1.09	0.93	0.81	0.64	0.46
	40K7	201	200	118	1.69	0.98	0.84	0.73	0.58	0.42
	50K7	189	190	126	1.59	0.92	0.79	0.69	0.55	0.39
32L	30K7	244	240	118	2.05	1.19	1.02	0.89	0.70	0.51
	40K7	244	240	127	2.05	1.19	1.02	0.89	0.70	0.51
	50K7	244	240	128	2.05	1.19	1.02	0.89	0.70	0.51

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

RSW Series (RSWX) Ambient Adjusted Lumen Maintenance ¹						
Ambient	Lumen Package	Initial LMF	25K hr Reported ² LMF	50K hr Reported ² LMF	75K hr Reported ² / Estimated ³ LMF	100K hr Estimated ³ LMF
5°C (41°F)	24L	1.04	1.03	1.02	1.02 ²	1.02
	32L	1.04	1.04	1.04	1.04 ³	1.04
10°C (50°F)	24L	1.03	1.02	1.01	1.01 ²	1.01
	32L	1.03	1.03	1.03	1.03 ³	1.03
15°C (59°F)	24L	1.02	1.01	1.00	1.00 ²	1.00
	32L	1.02	1.02	1.02	1.02 ³	1.02
20°C (68°F)	24L	1.01	1.00	0.99	0.99 ²	0.98
	32L	1.01	1.01	1.01	1.01 ³	1.01
25°C (77°F)	24L	1.00	0.98	0.98	0.98 ²	0.97
	32L	1.00	1.00	1.00	1.00 ³	1.00

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.

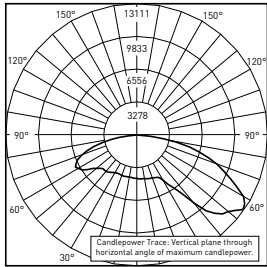
² In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED

³ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED

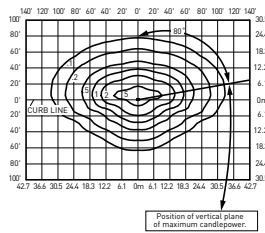
Photometry

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/rsw-series>

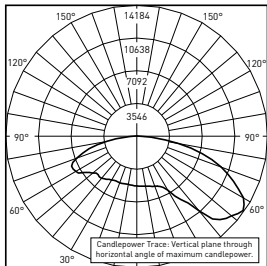
2LG



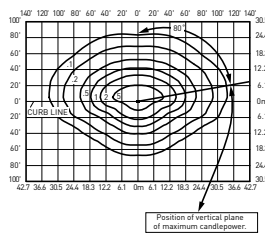
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RSWX-A-2LG-24L-30K7-UL-GY-N**
Initial Delivered Lumens: 23,330



RSWX-A-2LG-24L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 23,800
Initial FC at grade



UL Verification Services Test Report #: 11983840.10
RSWX-A-2LG-32L-30K7-UL-GY-N**
Initial Delivered Lumens: 29,236



RSWX-A-2LG-32L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 28,800
Initial FC at grade

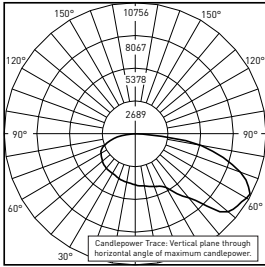
Type II Long Distribution						
Lumen Package	3000K		4000K		5000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
24L	23,800	B3 U0 G4	23,800	B3 U0 G4	23,800	B3 U0 G4
32L	28,800	B4 U0 G4	31,100	B4 U0 G4	31,300	B4 U0 G4

* 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>. Valid with no tilt

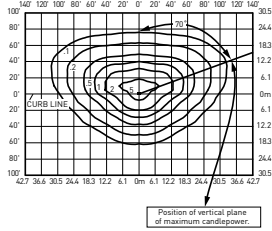
Photometry

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/rsw-series>

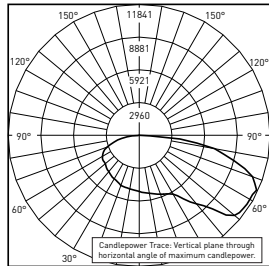
2ME



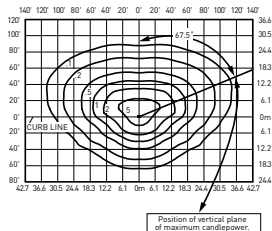
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RSWX-A-2ME-24L-30K7-UL-GY-N**
Initial Delivered Lumens: 23,505



RSWX-A-2ME-24L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 23,800
Initial FC at grade



UL Verification Services Test Report #: 11983840.08
RSWX-A-2ME-32L-30K7-UL-GY-N**
Initial Delivered Lumens: 29,513



RSWX-A-2ME-32L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 28,800
Initial FC at grade

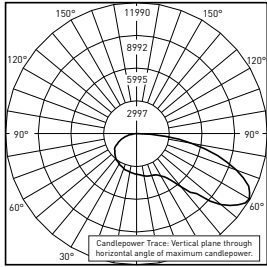
Type II Medium Distribution						
Lumen Package	3000K		4000K		5000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
24L	23,800	B3 U0 G4	23,800	B3 U0 G4	23,800	B3 U0 G4
32L	28,800	B3 U0 G5	31,100	B3 U0 G5	31,300	B3 U0 G5

* 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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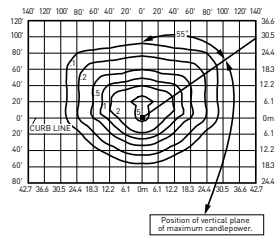
Photometry

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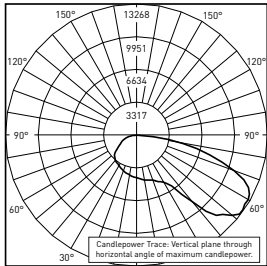
3ME



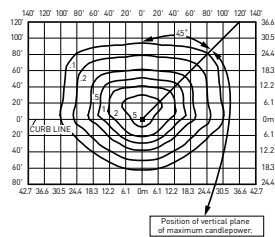
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RSWX-A--3ME-24L-30K7-UL-GY-N**
Initial Delivered Lumens: 24,647



RSWX-A--3ME-24L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 23,800
Initial FC at grade



UL Verification Services Test Report #: 11983840.01A
RSWX-A--3ME-32L-30K7-UL-GY-N**
Initial Delivered Lumens: 28,281








RSWX-A--3ME-32L-30K7-UL-GY-N**
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 28,800
Initial FC at grade

Type III Medium Distribution						
Lumen Package	3000K		4000K		5000K	
	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
24L	23,800	B3 U0 G5	23,800	B3 U0 G5	23,800	B3 U0 G5
32L	28,800	B3 U0 G5	31,100	B3 U0 G5	31,300	B3 U0 G5

* 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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Luminaire EPA

Horizontal Tenon Mount – Weight: 28.8 lbs. (13.1kg)					
Luminaire	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)
Standard Luminaire	1.17	1.93	2.33	3.09	3.85

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>Wall Mount Brackets - Mounts to wall or roof WM-2L – Extended Horizontal</p>	<p>Round External Mount Horizontal Tenons (Aluminum) - Mounts to 2.375"-3" (60-76mm) O.D. round aluminum or steel poles or tenons 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>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

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

The Field Adjustable Output option enables the street and area luminaire within the RSW Series on this page to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected lumen output, will be fully adjustable between the outputs, and will include a wattage label that indicates the wattage of the luminaire at the selected lumen output (Rounded to nearest 10 watts per ANSI C136.15-2015.). Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the RSW Series street and area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected, and will include a wattage label that indicates the wattage of the setting selected. When this option is selected, the luminaire output is not able to be adjusted in the field except if a dimming control (by others) is used in the 7-Pin receptacle.

Q & X Option Power & Lumen Data – 24L

Q Option Setting	X Option Setting	CCT/CRI	System Watts [†]		Lumen Values [†]				Optics Qualified on DLC QPL	
			120-480V	Label Wattage	2LG, 2ME & 3ME	2LG w/BLS	2ME w/BLS	3ME w/BLS	Standard	Premium
Q9 (Full Power)	N/A (Full Power)	30K7	223	220	23,800	20,100	21,100	22,800	2LG, 2ME, 3ME	
		40K7	201	200					2LG, 2ME, 3ME	
		50K7	189	190						2LG, 2ME, 3ME
Q8	X8	30K7	212	210	22,800	19,200	20,200	21,800	2LG, 2ME, 3ME	
		40K7	191	190					2LG, 2ME, 3ME	
		50K7	180	180						2LG, 2ME, 3ME
Q7	X7	30K7	200	200	21,700	18,300	19,200	20,800	2LG, 2ME, 3ME	
		40K7	180	180						2LG, 2ME, 3ME
		50K7	170	170						2LG, 2ME, 3ME
Q6	X6	30K7	191	190	20,900	17,700	18,500	20,000	2LG, 2ME, 3ME	
		40K7	172	170						2LG, 2ME, 3ME
		50K7	162	160						2LG, 2ME, 3ME
Q5	X5	30K7	172	170	19,100	16,100	16,900	18,300	2LG, 2ME, 3ME	
		40K7	155	160						2LG, 2ME, 3ME
		50K7	146	150						2LG, 2ME, 3ME
Q4	X4	30K7	156	160	17,800	15,100	15,800	17,100	2LG, 2ME, 3ME	
		40K7	141	140						2LG, 2ME, 3ME
		50K7	133	130						2LG, 2ME, 3ME
Q3	X3	30K7	138	140	15,900	13,450	14,125	15,300	2LG, 2ME, 3ME	
		40K7	124	120						2LG, 2ME, 3ME
		50K7	117	120						2LG, 2ME, 3ME
Q2	X2	30K7	121	120	14,350	12,100	12,700	13,725	2LG, 2ME, 3ME	
		40K7	109	110						2LG, 2ME, 3ME
		50K7	103	100						2LG, 2ME, 3ME
Q1*	X1*	30K7	107	110	12,875	10,875	11,425	12,325		2LG, 2ME, 3ME
		40K7	96	100						2LG, 2ME, 3ME
		50K7	91	90						2LG, 2ME, 3ME

[†] Electrical and lumen data at 25°C [77°F]. Actual wattage and lumen output may differ by +/-10% when operating between 120-277V or 347-480V +/-10%
 * Q1/X1 settings are qualified for 120-240V and 347-480V only

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

The Field Adjustable Output option enables the street and area luminaire within the RSW Series on this page to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected lumen output, will be fully adjustable between the outputs, and will include a wattage label that indicates the wattage of the luminaire at the selected lumen output (Rounded to nearest 10 watts per ANSI C136.15-2015.). Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the RSW Series street and area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected, and will include a wattage label that indicates the wattage of the setting selected. When this option is selected, the luminaire output is not able to be adjusted in the field except if a dimming control (by others) is used in the 7-Pin receptacle.

Q & X Option Power & Lumen Data – 32L

Q Option Setting	X Option Setting	CCT/CRI	System Watts [†]		Lumen Values [†]		Optics Qualified on DLC QPL	
			120-480V	Label Wattage	2LG, 2ME & 3ME	2LG, 2ME, 3ME w/BLS	Standard	Premium
Q9 (Full Power)	N/A (Full Power)	30K7	244	240	28,800	26,200		2LG, 2ME, 3ME
		40K7			31,100	28,300		2LG, 2ME, 3ME
		50K7			31,300	28,400		2LG, 2ME, 3ME
Q8	X8	30K7	232	230	27,300	24,800		2LG, 2ME, 3ME
		40K7			29,500	26,800		2LG, 2ME, 3ME
		50K7			29,700	27,000		2LG, 2ME, 3ME
Q7	X7	30K7	217	220	26,000	23,700		2LG, 2ME, 3ME
		40K7			28,100	25,600		2LG, 2ME, 3ME
		50K7			28,300	25,700		2LG, 2ME, 3ME
Q6	X6	30K7	209	210	25,000	22,700		2LG, 2ME, 3ME
		40K7			27,000	24,500		2LG, 2ME, 3ME
		50K7			27,200	24,700		2LG, 2ME, 3ME
Q5	X5	30K7	188	190	22,700	20,700		2LG, 2ME, 3ME
		40K7			24,500	22,300		2LG, 2ME, 3ME
		50K7			24,700	22,500		2LG, 2ME, 3ME
Q4	X4	30K7	171	170	21,000	19,100		2LG, 2ME, 3ME
		40K7			22,700	20,600		2LG, 2ME, 3ME
		50K7			22,800	20,800		2LG, 2ME, 3ME
Q3	X3	30K7	150	150	18,800	17,100		2LG, 2ME, 3ME
		40K7			20,300	18,500		2LG, 2ME, 3ME
		50K7			20,400	18,600		2LG, 2ME, 3ME
Q2	X2	30K7	133	130	16,800	15,300		2LG, 2ME, 3ME
		40K7			18,100	16,500		2LG, 2ME, 3ME
		50K7			18,200	16,600		2LG, 2ME, 3ME
Q1	X1	30K7	118	120	15,100	13,750		2LG, 2ME, 3ME
		40K7			16,300	14,825		2LG, 2ME, 3ME
		50K7			16,400	14,925		2LG, 2ME, 3ME

[†] Electrical and lumen data at 25°C (77°F). Actual wattage and lumen output may differ by +/-10% when operating between 120-277V or 347-480V +/-10%