RSW Series

RSW™ LED Street Luminaire – Small (S1)

Product Description

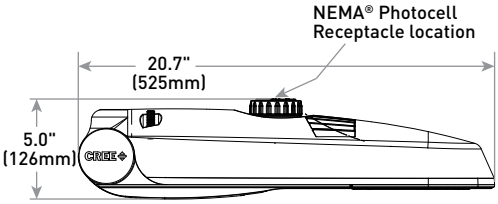
The Cree® RSW-S1 Series, utilizing WaveMax® Technology, will transform the way cities and municipalities light their residential streets. With the first viable LED streetlight at warm CCT, the RSW-S1 Series delivers up to 115 LPW, enhanced visual comfort with reduced glare and high color contrast leading to improved overall illumination using less energy. The RSW-S1 Series provides warm, inviting dark sky friendly lighting that makes good economic sense.

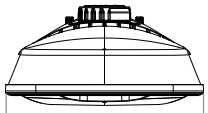
Applications: Roadway - Local/Collector

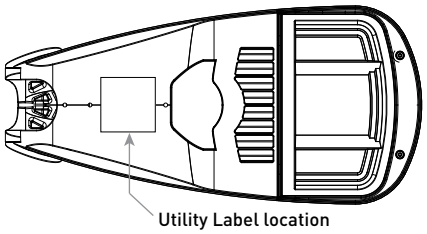
Performance Summary

Utilizes Cree WaveMax® Technology
Efficacy: Up to 110 LPW
CRI: 80 CRI
CCT: 3000K (+/- 175K); 4000K (+/- 300K)
Limited Warranty†: 10 years

† See http://lighting.cree.com/warranty for warranty terms







Accessories

Field-Installed	
Backlight Control Shield RSW-BLSS - Provides 1 mounting height cutoff	**Bird Guard** RSW-BRDGRDS

Weight*
8.45 lbs (3.8kg)

*RSW-BLSS Accessory: add 0.4 lbs. (0.2kg)

Ordering Information

Example: RSW-S1-HT-2ME-30W-30K-UL-GY-N

RSW-S1	HT				UL	GY	N	
Product	**Mounting**	**Optic**	**Input Power**	**CCT**	**Voltage**	**Color Options**	**Utility Label/Receptacle**	**Options**
RSW-S1	**HT** Horizontal Tenon	**2ME*** Type II Medium **2LG*** Type II Long **3ME*** Type III Medium	**30W** 30W **50W** 50W	**30K** 3000K **40K** 4000K	**UL** Universal 120-277V	**GY** Grey	**N** **Utility Label and NEMA® Photocell Receptacle** - External wattage label per ANSI C136.15 - 7-pin receptacle per ANSI C136.41 - Factory connected 0-10V dim leads - Photocell and shorting cap by others	**Q** **Field Adjustable Output** - Refer to Field Adjustable Output spec sheet for details

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

Rev. Date: V1 02/09/2017

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

Product Specifications

CREE WAVEMAX® TECHNOLOGY

Featuring up to 90% optical efficiency and precise control, Cree 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)
- IP66 rated optic box and driver enclosure inside optic box
- Luminaire secured with two mounting bolts
- 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:** 8.45 lbs. (3.8kg); add 0.4 lbs. (0.2kg) for RSW-BLSS accessory

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V, 50/60Hz
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used
- **10V Source Current:** 0.22mA
- **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
- 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
- RoHS compliant. Consult factory for additional details
- Dark Sky Friendly, IDA Approved when ordered with 30K CCT
- DLC qualified, premium classification. Please refer to www.designlights.org/QPL for most current information

Electrical Data*

Input Power	System Watts 120-277V	Total Current (A)			
		120V	208V	240V	277V
30W	30	0.25	0.15	0.13	0.12
50W	50	0.41	0.24	0.21	0.19

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

Recommended RSW Series Lumen Maintenance Factors (LMF)[1]

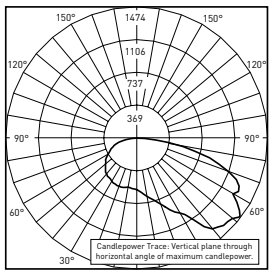
Ambient	Input Power	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5˚C (41˚F)	30W	1.04	0.99	0.95	0.92	0.89
	50W					
10˚C (50˚F)	30W	1.03	0.98	0.94	0.91	0.88
	50W					
15˚C (59˚F)	30W	1.02	0.97	0.93	0.90	0.87
	50W					
20˚C (68˚F)	30W	1.01	0.96	0.93	0.89	0.86
	50W					
25˚C (77˚F)	30W	1.00	0.95	0.92	0.88	0.85
	50W					

[1] Lumen maintenance values at 4000K and 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)

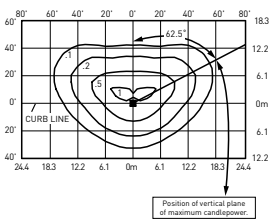
Photometry

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/rsw-series

2ME



ITL Test Report #: 86560
RSW-S1-**-2ME-30W-30K-UL-GY-N
Initial Delivered Lumens: 3,245

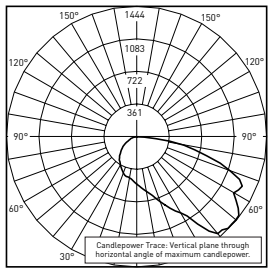


RSW-S1-**-2ME-30W-30K-UL-GY-N
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 3,300
Initial FC at grade

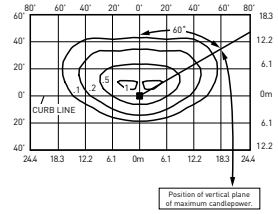
Type II Medium Distribution

Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	3,300	B1 U0 G1	3,300	B1 U0 G1
50W	5,000	B1 U0 G2	5,000	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: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf. Valid with no tilt



RESTL Test Report #: PL07397-002A
RSW-S1-**-2ME-30W-30K-UL-GY-N w/RSW-BLSS
Initial Delivered Lumens: 2,770



RSW-S1-**-2ME-30W-30K-UL-GY-N w/RSW-BLSS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 2,800
Initial FC at grade

Type II Medium w/BLS Distribution

Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	2,800	B1 U1 G1	2,800	B1 U1 G1
50W	4,200	B1 U1 G2	4,200	B1 U1 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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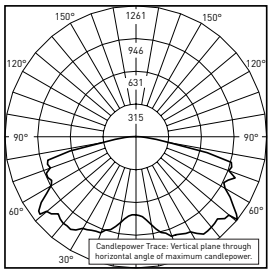
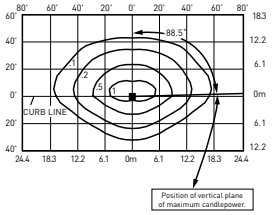
2LG



ITL Test Report #: 86227
RSW-S1-**-2LG-30W-30K-UL-GY-N
Initial Delivered Lumens: 3,306



RSW-S1-**-2LG-30W-30K-UL-GY-N
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 3,300
Initial FC at grade

Type II Long Distribution

Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	3,300	B1 U0 G1	3,300	B1 U0 G1
50W	5,000	B1 U0 G2	5,000	B1 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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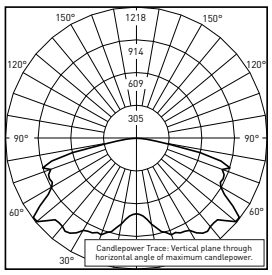
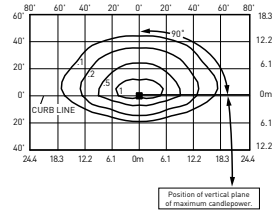


RESTL Test Report #: PL07397-003A
RSW-S1-**-2LG-30W-30K-UL-GY-N w/RSW-BLSS
Initial Delivered Lumens: 2,794



RSW-S1-**-2LG-30W-30K-UL-GY-N w/RSW-BLSS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 2,800
Initial FC at grade

Type II Long w/BLS Distribution

Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	2,800	B1 U1 G1	2,800	B1 U1 G1
50W	4,200	B1 U1 G2	4,200	B1 U1 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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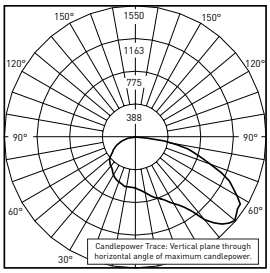
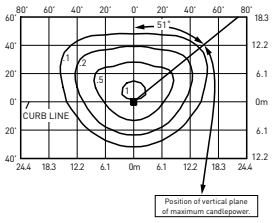
3ME



ITL Test Report #: 86228
RSW-S1-**-3ME-30W-30K-UL-GY-N
Initial Delivered Lumens: 3,294



RSW-S1-**-3ME-30W-30K-UL-GY-N
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 3,300
Initial FC at grade

Type III Medium Distribution				
Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	3,300	B1 U0 G1	3,300	B1 U0 G1
50W	5,000	B1 U0 G2	5,000	B1 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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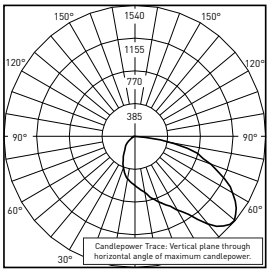

RESTL Test Report #: PL07397-001A
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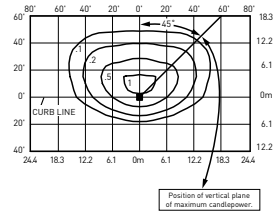
Initial Delivered Lumens: 2,829



RSW-S1-**-3ME-30W-30K-UL-GY-N w/ RSW-BLSS
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 2,800
Initial FC at grade

Type III Medium w/BLS Distribution				
Input Power	3000K		4000K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
30W	2,800	B1 U1 G1	2,800	B1 U1 G1
50W	4,200	B1 U1 G2	4,200	B1 U1 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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Luminaire EPA

Horizontal Tenon Mount – Weight: 8.45 lbs. (3.8kg); RSW-BLSS Accessory: add 0.4 lbs. (0.2kg)					
Luminaire	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)
Standard Luminiare	0.59	1.17	0.85	1.44	1.57
Luminiare w/RSW-BLSS Accessory	0.63	1.17	1.22	1.80	2.12

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
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

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