

### PRODUCT DESCRIPTION

The Essentia® by Cree surface mounted LED wrap combines application flexibility and market leading energy efficiency and controls. The smart durable arc lens design provides smooth uniform light quality and an amazing 115 lumens per watt. The LED wrap features standard 0-10V dimming and optional occupancy sensing which delivers amazing energy savings and controllability.

**Applications:** Hospitality, retail, industrial, commercial, petroleum

### PRODUCT SPECIFICATIONS

#### OVERVIEW

- **Efficacy:** 115 LPW
- **Initial Delivered Lumens:** 2,070
- **Input Power:** 18 Watts
- **CCT:** 3000K, 3500K, 4000K
- **CRI:** 80
- **Input Voltage:** 120-277 VAC
- **L<sub>95</sub> Lifetime:** 100,000 hours at 25°C
- **Controls:** 0-10V dimming to 5%
- **Limited Warranty†:** 5 years on luminaires
- **Limited Warranty Emergency Back Up (EB) Battery:** 1 Year Battery Back Up. Test regularly in accordance with local codes
- **Mounting:** Surface mount

#### ACCESSORIES

##### DIMMING OCCUPANCY SENSOR W/PHOTOCELL

S-WRAC-OC-1

- Enables daylight harvesting
- Not for use with EB option
- Refer to installation instructions for details



### ORDERING INFORMATION

Example: S-WR2-20L-30K-10V

S-WR	2	20L			10V	
PRODUCT	SIZE	INITIAL DELIVERED LUMENS	CCT	VOLTAGE	CONTROL	OPTIONS
S-WR Essentia® by Cree LED Wrap	2 24"	20L 18W, 2,070 lumens	30K 3000K 35K 3500K 40K 4000K	Blank 120-277 Volt	10V 0-10V	EB Emergency Backup - Minimum 90 minutes - 550 lumens - For U.S. applications only

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

# LED WRAP

2' (0.6M)

## PRODUCT SPECIFICATIONS

### CONSTRUCTION & MATERIALS

- 24ga. steel frame provides strength and uniformity
- Luminaire is post-painted with a soft matte white paint
- Suitable for mounting in any orientation: uplight, downlight, wall
- Can be mounted individually or in continuous rows
- Maximum continuous run is up to 94 luminaires at 120V and 220 luminaires at 277V
- Keyhole slots allow for surface mounting; mounting hardware by others
- Suitable for through wiring
- **Weight:** 4.8 lbs. (2.2kg)

### OPTICAL SYSTEM

- IP40 lens assembly designed to prevent bug ingress
- Diffuse optical grade acrylic arc lens with matte finish
- Provides 4.7% uplight

### ELECTRICAL SYSTEM

- Integral, high-efficiency driver
- **Power Factor:** > 0.9 (standard luminaire); EB Option: 0.5 (120V) and 0.15 (277V)
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 60Hz
- **Operating Temperature Range:** 0°C - + 35°C (32°F - + 95°F)
- **Total Harmonic Distortion:** < 20%
- **10V Source Current:** 0.25mA

### ELECTRICAL DATA\*

Initial Delivered Lumens	System Watts 120-277V	Total Current (A)			
		120V	208V	240V	277V
20L	18	0.15	0.10	0.08	0.07

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

### RECOMMENDED ESSENTIA BY CREE LED WRAP LUMEN MAINTENANCE FACTORS (LMF)<sup>1</sup>

Ambient	Initial LMF	25K hr Projected <sup>2</sup> LMF	50K hr Calculated <sup>3</sup> LMF	75K hr Calculated <sup>3</sup> LMF	100K hr Calculated <sup>3</sup> LMF
25°C	1.00	0.98	0.97	0.96	0.95

<sup>1</sup> Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing

<sup>2</sup> 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)

<sup>3</sup> 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)

### CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- For use with Class 2 dimming systems only. Reference [www.creelink.com/exLink.asp?70982140Z58R34I26620963](http://www.creelink.com/exLink.asp?70982140Z58R34I26620963) for recommended dimming controls and wiring diagrams

### REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for damp locations
- Designed for indoor use
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids
- RoHS compliant. Consult factory for additional details
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- UL924 (EB option). Maximum mounting height: 12.0' (3.7m)
- DLC premium qualified for linear ambient and stairwell categories. Please refer to [www.designlights.org/QPL](http://www.designlights.org/QPL) for most current information

### APPLICATION REFERENCE

Open Space						
Spacing (ft)	Initial Delivered Lumens	Lumens	Wattage	LPW	w/ft <sup>2</sup>	Average fc
8x8	20L	2,070	18	115	0.27	29.0
8x10					0.23	24.1
10x10					0.18	19.3
10x12					0.14	15.4

9' ceiling: 80/50/20 reflectances; 2.5' workplane, Corridor.  
LLF: 1.0 Initial Open Space: 50' x 40'

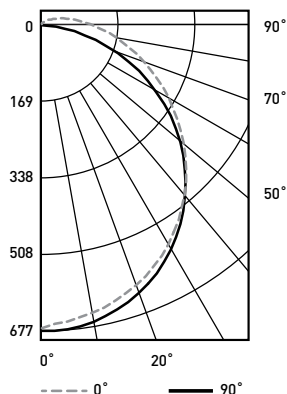
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## PHOTOMETRY

### S-WR2-20L-40K-10V BASED ON CESTL REPORT TEST #: PL08678-001B

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Initial Delivered Lumens: 2,198  
Efficacy: 118.0 LPW  
S/M: 1.28

#### Coefficients Of Utilization – Zonal Cavity Method

RCC%:	80			
RW%:	70	50	30	10
RCR: 0	118	118	118	118
1	106	101	96	92
2	96	87	80	74
3	87	76	67	61
4	80	67	58	51
5	73	60	51	44
6	68	54	45	38
7	63	49	40	33
8	58	44	36	30
9	54	41	32	27
10	51	38	30	24

Effective Floor Cavity Reflectance: 20%

#### Zonal Lumen Summary

Zone	Lumens	%Lamp	Luminaire
0-30	525	N/A	23.9%
0-40	863	N/A	39.3%
0-60	1,544	N/A	70.2%
0-90	2,096	N/A	95.3%
0-180	2,199	N/A	100.0%

Reference <http://lighting.cree.com> for detailed photometric data

#### Average Luminance Table (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	7,872	6,982	6,914
55°	7,419	6,391	6,438
65°	6,691	5,757	6,051
75°	5,407	5,084	5,779
85°	3,275	4,793	6,101