

# Essentia® Series Wrap

LED Wrap – 2' (0.6M)

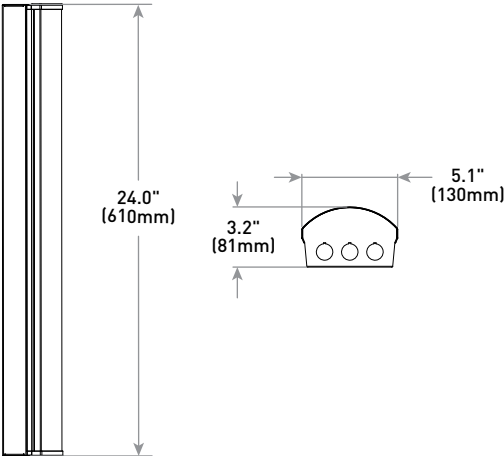
## Product Description

The Essentia® Series Wrap 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

## Performance Summary

|   |
|---|
| <b>Initial Delivered Lumens:</b> 2,070 lumens   |
| <b>Input Power:</b> 18 watts  |
| <b>Efficacy:</b> 115 LPW  |
| <b>CRI:</b> 80  |
| <b>CCT:</b> 3000K, 3500K, 4000K   |
| <b>Input Voltage:</b> 120-277 VAC   |
| <b>L<sub>70</sub> Lifetime:</b> 100,000 hours at 25°C   |
| <b>Limited Warranty<sup>1</sup>:</b> 5 years  |
| <b>Dimming:</b> 0-10V dimming to 5%   |
| <b>Limited Warranty Emergency Back Up (EB) Battery:</b> 1 Year Battery Back Up. Test regularly in accordance with local codes |
| <b>Mounting:</b> Surface Mount  |



## Accessories

| Field-Installed   |   |
|---|---|
| <b>Dimming Occupancy Sensor w/Photocell</b><br>S-WRAC-OC-1<br>- Enables daylight harvesting<br>- Not for use with EB option<br>- Refer to installation instructions for details         |  |
| <b>Decorative End Cap Accessory</b><br>S-WR-EC<br>- Two per pack<br>- Not for use when conduit enters the end of the luminaire<br>- Not for use with S-WRAC-OC-1 accessory or EB option |  |

## Ordering Information

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

| S-WR                         | 2        | 20L                      |  |                       | 10V          |   |
|------------------------------|----------|--------------------------|--|-----------------------|--------------|---|
| Product                      | Size     | Initial Delivered Lumens | CCT  | Voltage               | Control      | Options   |
| S-WR<br>Essentia Series Wrap | 2<br>24" | 20L<br>18W, 2,070 lumens | 30K<br>3000K<br>35K<br>3500K<br>40K<br>4000K | Blank<br>120-277 volt | 10V<br>0-10V | EB14 Emergency Backup<br>- Minimum 90 minutes<br>- 550 lumens |



Rev. Date: V5 05/02/2018



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

CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- For use with Class 2 dimming systems only
- Use only lighting controls with neutral connection or controls intended for use with LED fixtures

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 qualified for linear ambient category, and DLC Premium qualified for stairwell category.

| 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® Series Flat Panel 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 [77°F]  | 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)

Application Reference

| Open Space   |                          |        |         |     |       |            |
|--------------|--------------------------|--------|---------|-----|-------|------------|
| Spacing (ft) | Initial Delivered Lumens | Lumens | Wattage | LPW | w/ft² | 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       |

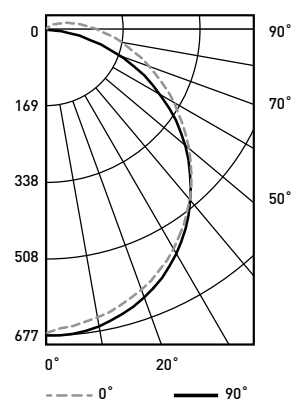
9' Ceiling, 80/50/20 Reflectances, 2.5 workplane. LLF: 1.0 Initial. Open Space: 50' x 40'



Photometry

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

Luminaire photometry has been conducted 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 |     |     |     |     |
|---|-----|-----|-----|-----|
| RC %:   | 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%

| Average Luminance Table (cd/m <sup>2</sup> ) |                  |       |       |       |
|--|------------------|-------|-------|-------|
| 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 |

| 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/products/indoor/surface-ambient/essentia-series-wrap> for detailed photometric data

