# CS18™
## 8′ LED Linear Luminaire

CS18

## Product Description

The CS18™ LED linear luminaire delivers up to 8200 lumens of exceptional 90 CRI light. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology and Cree MicroMixing™ Optics with a unique thermal management approach. The CS18 is available in neutral or cool color temperatures and has 0-10V dimming as standard option. Its compact, lightweight design makes it easy to install, making the CS18 perfect for use in grocery retail, showrooms and light industrial applications in new or upgrade construction.

## Performance Summary

Utilizes Cree TrueWhite® Technology

Active Color Management

Room-Side Heat Sink

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

**Delivered Light Output**: 4400-8200 lumens

**Input Power**: 44-75 watts

**CRI**: 90

**CCT**: 3500K, 4000K

**Input Voltage**: 120-277 VAC

**Warranty**: 10 years†

**High Efficacy Lifetime:** Designed to last 75,000 hours minimum

**Base Lifetime:** Designed to last 50,000 hours minimum

**Dimming**: 0-10V Dimming to 5%*

**Mounting**: Suspended or Surface with Tong Hangers (Standard)

**CS18 Dimensions**: L 96″ x W 10″ x H 5.8″

**Weight**: max 13 lbs.

## Accessories
**Reference CS Series Accessories document for more details.**

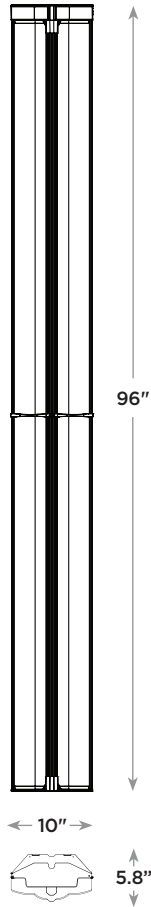| Accessories | |
|---|---|
| **TMM** <br> Metal Tong Hanger (Pair) - Recommended for surface mount | **AC5-18/5-48-Q14B-JB** <br> Adjustable Power Feeds with Cable Support Canopy Kits |
| | **AC5-12/3-48-Q14B-JB** <br> Adjustable Power Feeds with Cable Support Canopy Kits |
| **AC5-48-Q14B-TB** <br> Adjustable Cable Support Kits | |
| **AC2-48-Q14B-TB** <br> Adjustable Cable Support Kits | **AC5-18/2-48-Q14B-JB** <br> Adjustable Power Feeds with Cable Support Canopy Kits |
| **AC-144-Q14B-LP** <br> Adjustable Loop Cable Kits | **PC5-18/5-24-JB** <br> Adjustable Power Feed Canopy Cable Kits |
| | **PC5-12/3-24-JB** <br> Adjustable Power Feed Canopy Cable Kits |
| | **PC5-18/2-24-JB** <br> Adjustable Power Feed Canopy Cable Kits |

## Ordering Information
**Example: CS18-80L HE-35K-10V**

| Product | Lumen Output | Color Temperature | Voltage | Control |
|---|---|---|---|---|
| CS18 | **82L HE** <br> 72W 8200 lumens <br> **80L HE** <br> 73W 8000 lumens <br> **75L** <br> 75W 7500 lumens <br> **44L** <br> 44W 4400 lumens | **35K** <br> 3500 Kelvin <br> **40K** <br> 4000 Kelvin | **Blank** <br> 120-277 Volt | **10V** <br> 0-10V Dimming to 5% |

*Reference www.cree.com/lighting for recommended dimming control options.
† See www.cree.com/lighting for warranty terms.

96″

10″

5.8″

**CREE**
TRUE WHITE
TECHNOLOGY

c(UL)us LISTED

Rev. Date 03/22/2013

**CREE**®

## Product Specifications

### CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology mixes the light from the highest performing red and unsaturated yellow LEDs. This patented approach delivers an exclusive combination of 90 CRI, beautiful light characteristics, and lifelong color consistency, all while maintaining high luminous efficacy—a true no compromise solution.

### THERMAL MANAGEMENT

An innovative thermal management system designed to maximize cooling effectiveness by allowing free air movement around the heat sink and through the fixture. This breakthrough design and operating drive current of less than 350mA enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### LUMEN MAINTENANCE FACTORS

- Designed to a minimum of L85 at 75,000 hours with HE option and L88 at 50,000 hours with base option.
- Reference www.cree.com/lighting for detailed lumen maintenance factors.

### CONSTRUCTION & MATERIALS

- High strength, lightweight polymer forms the reflector and driver housing.
- Multi-functional heat sink and light bar doubles as the wireway for through wiring harness.
- Two plastic tong hangers provided for surface or suspended installations. One tong hanger per unit plus one per row is required.
- Hangers are adjustable along fixture to accommodate existing mounting points for upgrade projects. Hanger support required within 18 inches of end of fixture.
- Individual fixtures may be connected end to end for continuous row mounting. Easy removal of individual fixtures mounted in continuous row.
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids.

### OPTICAL SYSTEM

- High-efficiency reflector with MicroMixing™ Optics which integrates the intense direct LED light and distributes optimally mixed indirect white light resulting in a comfortable appearance while maintaining high-efficiency optics.
- Indirect LED strip eliminates direct view of highly efficient, lighting quality LEDs.

### ELECTRICAL SYSTEM

- Room-side wiring access chamber with hinged door for easy electrical access.
- Integral through wiring harness (3#12 AWG power and 2#18 0-10V) with quick-connect plug connectors for easy and efficient continuous row installations while minimizing branch circuit wiring.
- Integral, high-efficiency driver and power supply.
- **Power Factor** = 0.9 nominal
- **Input Power:** Stays constant over life.
- **Input Voltage:** 120V-277V, 50/60Hz
- **Dimming:** Dimmable to 5% with 0 to 10V DC control protocol. Class 1 or Class 2 wiring. Use only lighting controls with relay or FET-based outputs, or lighting controls with neutral connection. Reference www.cree.com/lighting for recommended dimming controls.
- **Temperature Rating:** Designed to operate in temperatures 0 C to 35 C
- **Total Harmonic Distortion:** < 20%
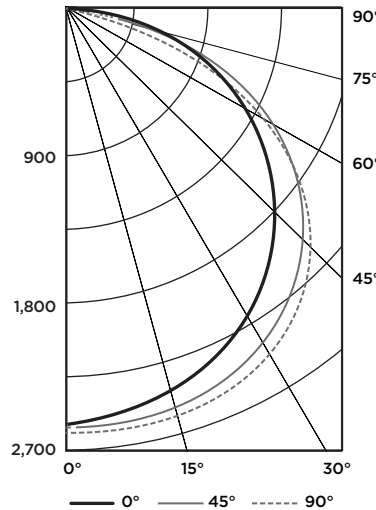- **Operating Humidity:** < 80% non-condensing

### REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for damp locations
- LDL (Lighting Design Lab) qualified

## Photometry

### CS18
CS18-80L HE-40K-10V / Based on DTC Report Test #: 11135-G



— 0°  — 45°  ----- 90°

#### Coefficients Of Utilization

| RCC %: | 80 | | | |
|---|---|---|---|---|
| RW %: | 70 | 50 | 30 | 0 |
| RCR: 0 | 119 | 119 | 119 | 119 |
| 1 | 108 | 103 | 99 | 95 |
| 2 | 98 | 90 | 83 | 77 |
| 3 | 89 | 79 | 70 | 63 |
| 4 | 82 | 69 | 60 | 53 |
| 5 | 75 | 62 | 52 | 46 |
| 6 | 69 | 55 | 46 | 40 |
| 7 | 64 | 50 | 41 | 35 |
| 8 | 59 | 45 | 37 | 31 |
| 9 | 55 | 42 | 33 | 28 |
| 10 | 52 | 38 | 30 | 25 |

Effective Floor Cavity Reflectance: 20%

### Average Luminance Table (cd/m2)

| Vertical Angle | Horizontal Angle | | |
|---|---|---|---|
| | 0° | 45° | 90° |
| 45° | 4346 | 5003 | 5127 |
| 55° | 4377 | 5080 | 5013 |
| 65° | 4329 | 4754 | 4159 |
| 75° | 4121 | 3021 | 2870 |
| 85° | 2753 | 2986 | 3259 |

### Zonal Lumen Summary

| Zone | Lumens | Luminaire |
|---|---|---|
| 0-30 | 2,059 | 24.8% |
| 0-40 | 3,456 | 41.7% |
| 0-60 | 6,429 | 77.6% |
| 0-90 | 8,233 | 99.3% |
| 0-180 | 8,288 | 100% |

Reference www.cree.com/lighting for detailed photometric data.