

# 228 Series™

LED Soffit Luminaire – Non-IC Rated

## Product Description

High performance energy-efficient LED down light for new construction and remodel soffit applications. The recessed mount is for use in drywall, plywood or hard lid ceilings with 16" (406mm) to 24" (610mm) on center building construction. Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling. An oversized junction box is listed for eight #12 AWG feed through wires. The recessed remodel mount is entirely supported by the ceiling material and is designed to accept ceiling thickness from 0.375" (10mm) to 2.25" (57mm) and is an ideal replacement for recessed HID luminaires.

**Applications:** Petroleum stations, convenience stores, drive-thru banks and restaurants, retail and grocery

## Performance Summary

Patented NanoOptic® Product Technology

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

**CRI:** Minimum 70 CRI

**CCT:** 4000K (+/- 300K), 5700K (+/- 500K) standard

**Limited Warranty\*:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

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

## Accessories

Field-Installed	
<b>RM Mount Accessories</b> <b>Mounting C-Channel</b> XA-MC14 - Pair of 14" [356mm] rigid 3/4" x 1/2" [19mm x 13mm] galvanized C-Channel bars XA-MC22 - Pair of 22" [559mm] rigid 3/4" x 1/2" [19mm x 13mm] galvanized C-Channel bars XA-MC30 - Pair of 30" [762mm] rigid 3/4" x 1/2" [19mm x 13mm] galvanized C-Channel bars	<b>Hanger Bar Mounting Brackets</b> XA-MB4 - Kit contains 4

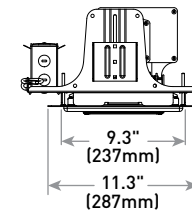
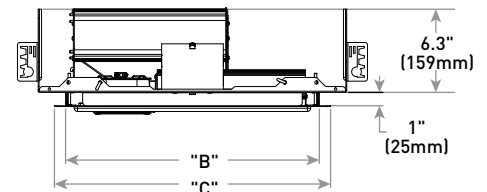
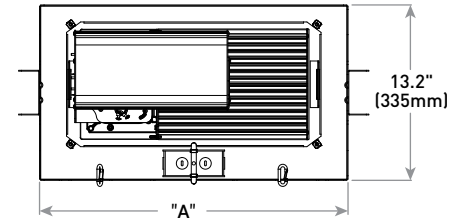
## Ordering Information

Example: SFT-228-SL-RM-03-E-12-WH-350

SFT-228	Product	Optic	Mounting	LED Count (x10)	Series	Voltage	Color Options	Drive Current*	Options
	SFT-228	SL Sparkle Petroleum PS Petroleum Symmetric	RM Recessed RR Recessed Remodel	03 06	E	12 120V 27 277V	BK Black BZ Bronze WH White	350 350mA 525 525mA	<b>DIM 0-10V Dimming</b> - Control by others - Refer to Dimming spec sheet for details <b>ML Multi-Level</b> - Refer to ML spec sheet for details <b>PML Programmable Multi-Level</b> - Refer to PML spec sheet for details <b>40K 4000K Color Temperature</b> - Color temperature per luminaire - Minimum 70 CRI

\* Requires marked spacing 48" x 24" x 0.5" [1,219mm x 610mm x 13mm]; 48" [1,219mm] center-to-center of adjacent luminaires, 24" [610mm] luminaire center to side building member, 0.5" [13mm] top of luminaire to overhead building member

## RM Mount



LED Count (x10)	Dimension	Measurement	Weight
03	A	20.2" [513mm]	28.8 lbs. (13.1kg)
	B	14.4" [366mm]	
	C	16.3" [414mm]	
06	A	23.2" [589mm]	34.6 lbs. (15.7kg)
	B	19.1" [485mm]	
	C	20.8" [528mm]	

RR Mount - see page 4 for weight & dimensions



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Rev. Date: V2 02/13/2018

Canada: [www.cree.com/canada](http://www.cree.com/canada)



T (800) 473-1234 F (800) 890-7507

**Product Specifications**

**CONSTRUCTION & MATERIALS**

- Luminaire sides are rugged die cast aluminum with high performance extruded aluminum heat sinks specifically designed for high power LEDs, factory assembled to the trim and wired to the driver
- Driver compartment is constructed of anodized extruded aluminum for exceptional thermal performance. On the RM mount, driver is factory wired to the LED modules
- Driver is factory wired to the LED modules and features quick connect power harness
- Voltage specific thermal protector to detect overheating
- Includes an oversized junction box which is listed for eight #12 AWG feed through wires
- Includes four #10-24 x 2.5" screws for installation
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze and white are available
- **Weight:** See Weight and Dimension Chart on pages 1 and page 4

**RM**

- High performance energy-efficient LED down light, designed for use in new construction applications with drywall, plywood or hard lid ceilings and 16" (406mm) to 24" (610mm) on center building construction
- Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling

**RR**

- High performance energy-efficient LED down light, designed for remodel applications
- Entirely supported by the ceiling material
- Accepts ceiling thicknesses from 0.375" (10mm) to 2.25" (57mm)
- An ideal replacement for existing recessed HID luminaires

**ELECTRICAL SYSTEM**

- **Input Voltage:** 120 or 277V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- **10V Source Current:** 0.15mA
- Field adjustable drive current available on 30 LED luminaires with 525mA drive current and all 60 LED luminaires
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

**REGULATORY & VOLUNTARY QUALIFICATIONS**

- cULus Listed
- Suitable for wet locations under covered ceilings
- Meets FCC Part 15 standards for conducted and radiated emissions
- Consult factory for CE Certified products
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Thermally protected Type NON-IC in accordance with Article 410 of the NEC and UL 1598
- Listed for eight #12 AWG, 70°C rated through branch circuit wires
- Meets Buy American requirements within ARRA

Electrical Data*					
LED Count (x10)	System Watts 120-277V	Total Current			
		120V	208V	240V	277V
350mA					
03	34	0.30	0.19	0.18	0.20
06	68	0.56	0.34	0.30	0.27
525mA					
03	54	0.45	0.28	0.25	0.23
06	99	0.83	0.48	0.42	0.38

\* Electrical data at 25°C (77°F)

Recommended 228 Series™ Lumen Maintenance Factors (LMF) <sup>1</sup>					
Ambient	Initial LMF	25K hr Projected <sup>2</sup> LMF	50K hr Projected <sup>2</sup> LMF	75K hr Calculated <sup>3</sup> LMF	100K hr Calculated <sup>3</sup> LMF
5°C (41°F)	1.04	0.99	0.97	0.95	0.93
10°C (50°F)	1.03	0.98	0.96	0.94	0.92
15°C (59°F)	1.02	0.97	0.95	0.93	0.91
20°C (68°F)	1.01	0.96	0.94	0.92	0.90
25°C (77°F)	1.00	0.95	0.93	0.91	0.89

<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

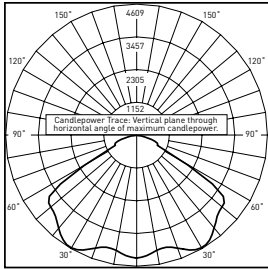
<sup>3</sup> In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip



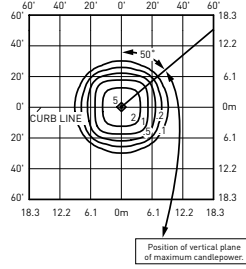
**Photometry**

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/canopy-and-soffit/228-series>

**SL**



RESTL Test Report #: PL05297-001  
CAN-228-SL-\*\*-06-E-UL-700-40K  
Initial Delivered Lumens: 13,102

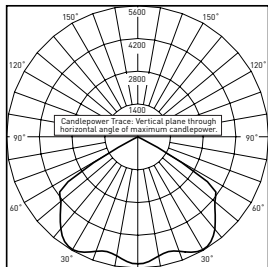


SFT-228-SL-\*\*-03-E-UL-350-40K  
Mounting Height: 15' (4.6m) A.F.G.  
Initial Delivered Lumens: 3,730  
Initial FC at grade

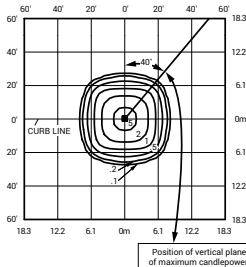
Sparkle Petroleum Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
<b>350mA</b>				
03	3,730	B2 U0 G1	3,874	B2 U0 G1
06	7,365	B3 U0 G1	7,648	B3 U0 G1
<b>525mA</b>				
03	5,223	B2 U0 G1	5,424	B2 U0 G1
06	10,311	B3 U0 G1	10,708	B3 U0 G1

\* Initial delivered lumens at 25°C (77°F)  
\*\* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: [www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf](http://www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf)

**PS**



RESTL Test Report #: PL05295-001  
CAN-228-PS-\*\*-06-E-UL-700-40K  
Initial Delivered Lumens: 13,753



SFT-228-PS-\*\*-03-E-UL-350-40K  
Mounting Height: 15' (4.6m) A.F.G.  
Initial Delivered Lumens: 4,005  
Initial FC at grade

Petroleum Symmetric Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
<b>350mA</b>				
03	3,856	B2 U0 G0	4,005	B2 U0 G0
06	7,613	B3 U0 G0	7,906	B3 U0 G0
<b>525mA</b>				
03	5,399	B2 U0 G0	5,606	B2 U0 G0
06	10,659	B3 U0 G0	11,069	B3 U0 G0

\* Initial delivered lumens at 25°C (77°F)  
\*\* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: [www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf](http://www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf)

228 Series™ LED Soffit Luminaire – Non-IC Rated

RR Mount



LED Count (x10)	Dimension	Measurement	Weight
03	A	18.4" (468mm)	28.8 lbs. (13.1kg)
	B	14.4" (366mm)	
	C	16.3" (414mm)	
06	A	23.2" (589mm)	34.6 lbs. (15.7kg)
	B	19.1" (485mm)	
	C	20.8" (528mm)	

