

SCOUT LIGHTING

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

SS-S-FF-M-30-M-EF-1-N-N-12

PROJECT NUMBER

G105054548

REPORT NUMBER

105054548CRT-002

ISSUE DATE

5/19/2022

REVISED DATE

None

TEST DATES

5/11/22 through 5/18/2022

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

© 2017 INTERTEK



REPORT NUMBER

105054548CRT-002

MODEL NUMBER(s)

SS-S-FF-M-30-M-EF-1-N-N-12

REPORT RENDERED TO:

SCOUT LIGHTING
221 WEST 21ST, UNIT 1B
NEW YORK, NY 10011
USA

STATEMENT OF LIMITATION

NVLAP Lab Code 100402-0. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-01263221-1.

TEST STANDARDS

ANSI/IES LM-79-19: Optical and Electrical Measurements of Solid State Lighting Products

IES LM-79-08: Electrical and Photometric Measurements of Solid State Lighting

ANSI/UL 1598-2018: Standard for Safety - Luminaires

In Charge of Testing:



Gerald Gray
Associate Engineer
Lighting Division

Reviewer:



Melanie Brittain
Senior Associate Engineer
Lighting Division

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

SAMPLE INFORMATION

REPORT NO. 105054548CRT-002

ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2204251036-001-5	SS-S-FF-M-30-M-EF-1-N-N-12	Scout Surface - 1" aperture - Frosted Lens	Production	4/25/2022

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	SS-S-FF-M-30-M-EF-1-N-N-12	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

REPORT NO. 105054548CRT-002

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	SS-S-FF-M-30-M-EF-1-N-N-12
Product Description:	Scout Surface - 1" aperture - Frosted Lens
LED Model No.:	CREE 2835 18V
Driver Model No.:	Advance XI013C036V054DNM1
Light Source:	LED

Criteria	Results
Light Output (lumens)	484.6
Input Power (W) @ 120 (Vac)	6.59
Lumen Efficacy (lm/W)	73.5
Input Power Factor (PF) @ 120 (Vac)	0.974
Max LED Source Temperature (°C)	40.7
Max Driver Case Temperature (°C)	34.5

TEST METHODS

SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

INSITU TEMPERATURE MEASUREMENT TESTING*

Thermal measurements were taken on the EUT using a thermocouple and temperature meter. The EUT was allowed to reach thermal equilibrium for three and a half to seven and a half hours before measurements were taken. Temperatures were measured at the TMPs or Ts point as indicated by the included diagram in accordance with manufacturers declared thermal test point location, or at a thermal test point location found with a thermal camera when no diagram from the manufacturer is given. The maximum temperature was recorded for the sample. A simulated ceiling or other enclosure may be used in accordance to UL 1598, UL 153, or UL 1993 as applicable.

*Not NVLAP Accredited

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

REPORT NO. 105054548CRT-002

Test Configuration	Tested Model No.	Pass/Fail/NA
1	SS-S-FF-M-30-M-EF-1-N-N-12	NA

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

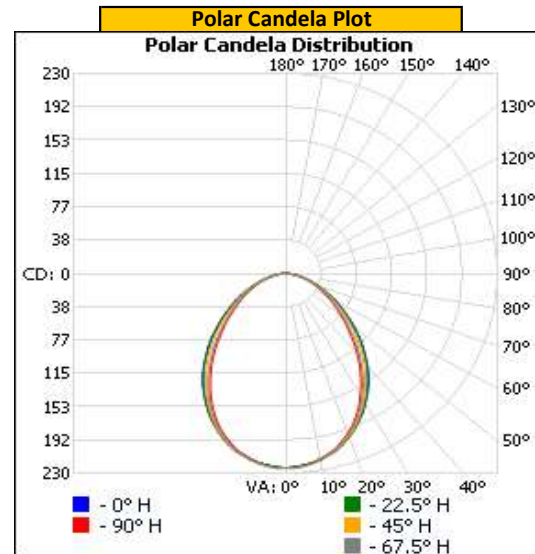
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.03	56.4	6.59	0.974

Light Output (lm)	Lumen Efficacy (lm/W)
484.6	73.5

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	224	224	224	224	224
5	222	222	223	223	222
10	218	218	218	218	217
15	212	211	211	210	209
20	201	201	200	198	197
25	188	188	186	184	181
30	173	172	169	166	162
35	157	155	151	147	142
40	138	137	132	125	121
45	119	117	112	105	100
50	98	97	91	85	81
55	79	78	74	68	65
60	63	62	58	54	52
65	47	47	44	41	39
70	33	34	32	30	29
75	21	23	22	21	20
80	11	13	14	13	13
85	3	5	6	7	7
90	0	0	1	2	2
95	0	0	0	0	1
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



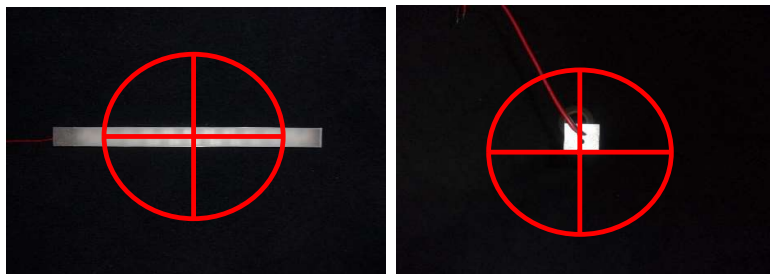
REPORT NO. 105054548CRT-002

ORIENTATION AND ALIGNMENT OF EUT

Luminous Opening		
Length (ft)	Width (ft)	Height (ft)
1.00	0.08	0.00
0°-180° H	90°-270° H	0°-180° V

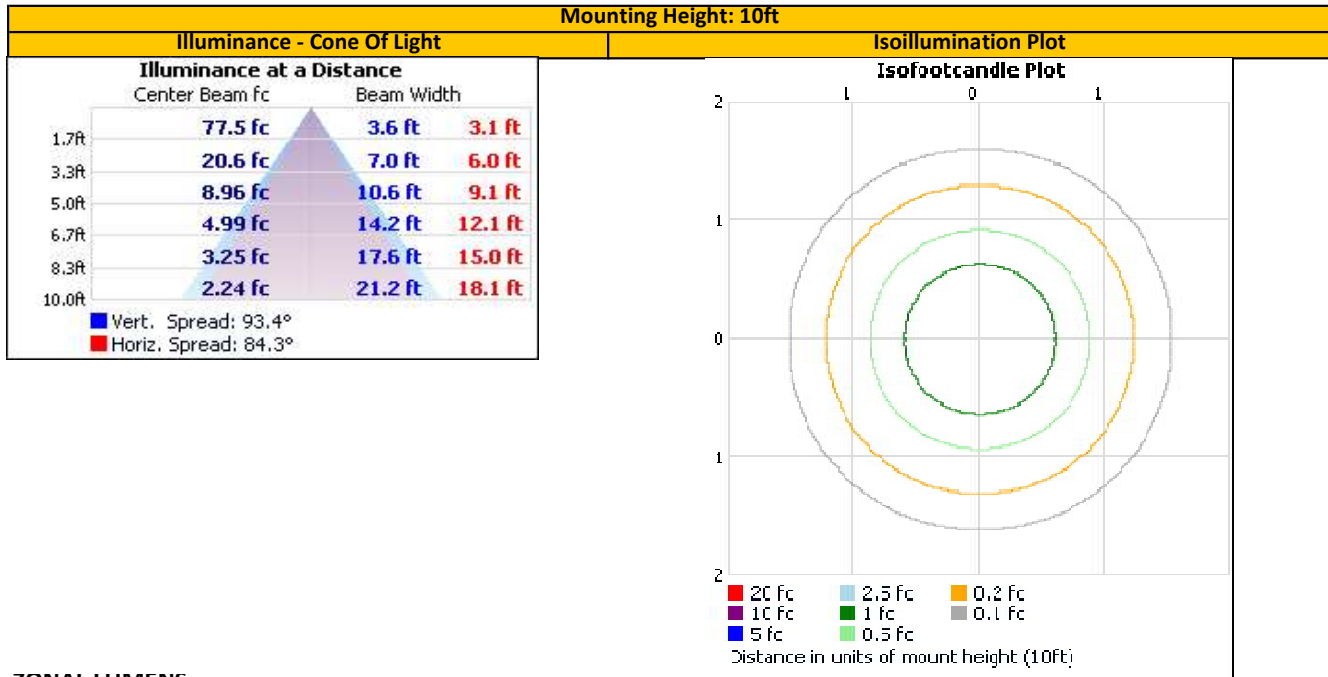
Test Distance (ft)
29.6

PHOTOMETRIC CENTER OF EUT



REPORT NO. 105054548CRT-002

ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary								
Zone	Lumens	Luminaire	Zone	Lumens	Total	Zone	Lumens	Total
0-30	165.4	34.1%	0-10	21.1	4.3%	90-100	0.4	0.1%
0-40	259.4	53.5%	10-20	59.1	12.2%	100-110	0.0	0.0%
0-60	410.5	84.7%	20-30	85.2	17.6%	110-120	0.0	0.0%
60-90	73.8	15.2%	30-40	94.0	19.4%	120-130	0.0	0.0%
70-100	30.4	6.3%	40-50	85.3	17.6%	130-140	0.0	0.0%
90-120	0.4	0.1%	50-60	65.7	13.6%	140-150	0.0	0.0%
0-90	484.3	99.9%	60-70	43.7	9.0%	150-160	0.0	0.0%
90-180	0.4	0.1%	70-80	23.2	4.8%	160-170	0.0	0.0%
0-180	484.6	100.0%	80-90	6.9	1.4%	170-180	0.0	0.0%

INSITU TEMPERATURE MEASUREMENT TESTING

REPORT NO. 105054548CRT-002

Test Configuration	Tested Model No.	Pass/Fail/NA
1	SS-S-FF-M-30-M-EF-1-N-N-12	NA

LED MEASUREMENTS AND RATINGS

Mounting Type	Input Voltage (Vac)
Ceiling Surface	120.00

LED Model No.	CREE 2835 18V
---------------	---------------

Max Junction Temp - Tj (°C)	Max Thermal Resistance - Rth (°C/W)	Max Forward Voltage - Vf (V)
125.0	15.0	20.0

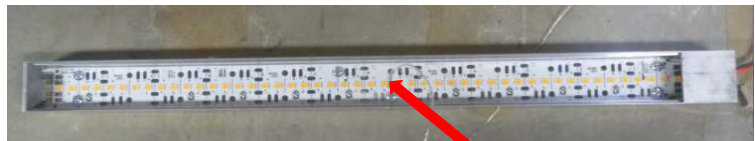
Measured LED Current (mA)	Measured LED Temp - Ts (°C)	Max LED Temp - Ts Max (°C)
6.1	40.7	123.2

Max LED Temp = Max Junction Temp – (LED Wattage x Thermal Resistance)

ISTMT Photo - Ts

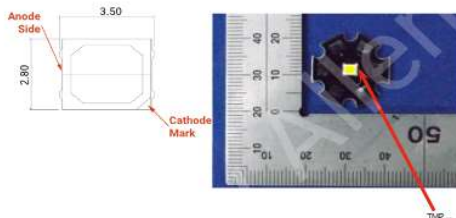


ISTMT Photo - Ts Location



LED SOURCE MANUFACTURER'S SUPPORTING DOCUMENTATION

MECHANICAL DIMENSIONS & TEMPERATURE MEASUREMENT POINT
All measurements are ± 0.2 mm unless otherwise indicated.



CHARACTERISTICS

Characteristics	Unit	Minimum	Typical	Maximum
Thermal resistance, junction to solder point	$^{\circ}\text{C}/\text{W}$		15	
Viewing angle (FWHM)	degrees		120	
Temperature coefficient of voltage	$\text{mV}/^{\circ}\text{C}$		-9.6	
ESD withstand voltage (JEDEC JS-001-2012)			Class 2	
DC forward current	mA			60
Reverse voltage	V			5
Forward voltage (@ 50 mA, 25 $^{\circ}\text{C}$)	V		18.2	20
LED junction temperature	$^{\circ}\text{C}$			125
Operating temperature	$^{\circ}\text{C}$	-40		105

REPORT NO. 105054548CRT-002

DRIVER MEASUREMENTS AND RATINGS

Measured Case Temp - Td (°C)	Max Case Temp (°C)
34.5	80.0

ISTMT Photo - Td



DRIVER MANUFACTURER'S SUPPORTING DOCUMENTATION

Specifications

Input Voltage (Vrms)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max. Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W)	Inrush Current (A _p /10%--µs)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	Weight (Lbs/Kgs)	Envir. Protection Rating
120	150	44-140	1.05	90.7	80	1.4	169	57 / 300	<10%	>0.95	4/4	21/0.95	UL Dry & Damp
277				92.8		0.6		132 / 276	<10%				

*Measurement location marked on driver.

EQUIPMENT LIST

REPORT NO. 105054548CRT-002

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniophotometer	6440	---	4/4/2022	7/4/2022
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Yokogawa Power Analyzer	WT1600	307-E537	3/10/2022	3/10/2023
4	Traceable Hygrothermometer	4800	L204	2/21/2022	2/21/2023
5	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
6	Omega Thermometer	DPi8-C24	M263	3/1/2022	3/1/2023
7	Bosch Distance Laser	Pro GLM 20	L210	3/21/2022	3/15/2023
8	M-D Building Products Digital Level	Smart Tool	L112	5/26/2021	5/26/2022
9	Tape Measure	Crescent	---	9/21/2021	9/21/2024
10	Fluke Temperature Meter	53II	307-D587	2/16/2022	2/16/2023
11	Fluke Multimeter	87V	D590	8/4/2021	8/4/2022

REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
---	---	---	---	---
---	---	---	---	---