

SONNEMAN - A WAY OF LIGHT

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

2191

PROJECT NUMBER

G104119984

REPORT NUMBER

104119984CRT-024

ISSUE DATE

5/13/2020

REVISED DATE

None

TEST DATES

5/13/2020

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

© 2017 INTERTEK



REPORT NUMBER

104119984CRT-024

MODEL NUMBER(s)

2191

REPORT RENDERED TO:

SONNEMAN - A WAY OF LIGHT
151 AIRPORT DRIVE
WAPPINGERS FALLS, NY 12590
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-01007713-2.

TEST STANDARDS

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:

Reviewer:



Gerald Gray
Associate Engineer
Lighting Division



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. 104119984CRT-024

ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2004291221-007	2191	Coral Surface LED Surface Mount	Production	4/29/2020

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	2191	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

REPORT NO. 104119984CRT-024

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	2191
Product Description:	Coral Surface LED Surface Mount
LED Model No.:	Not Provided
Driver Model No.:	LTF DA15W24VLP
Light Source:	LED

Criteria	Results
Light Output (lumens)	565.5
Input Power (W) @ 120 (Vac)	14.00
Lumen Efficacy (lm/W)	40.4
Input Power Factor () @ 120 (Vac)	0.983

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 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.

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

REPORT NO. 104119984CRT-024

Test Configuration	Tested Model No.	Pass/Fail/NA
1	2191	NA

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

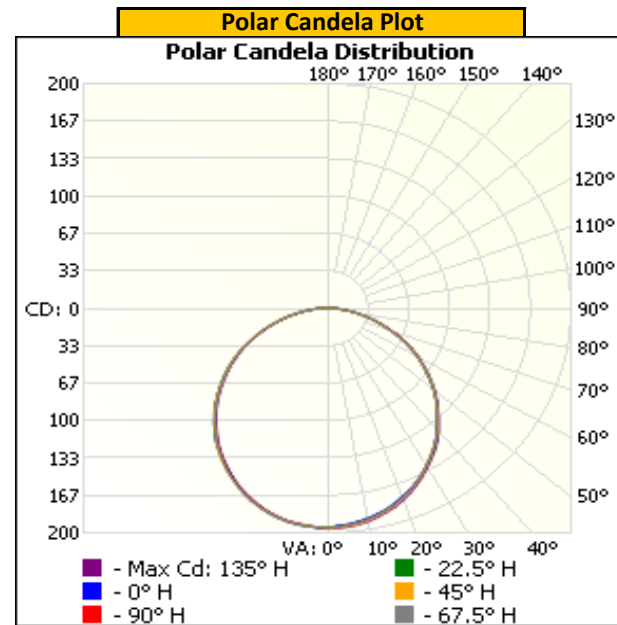
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.08	118.6	14.00	0.983

Light Output (lm)	Lumen Efficacy (lm/W)
565.5	40.4

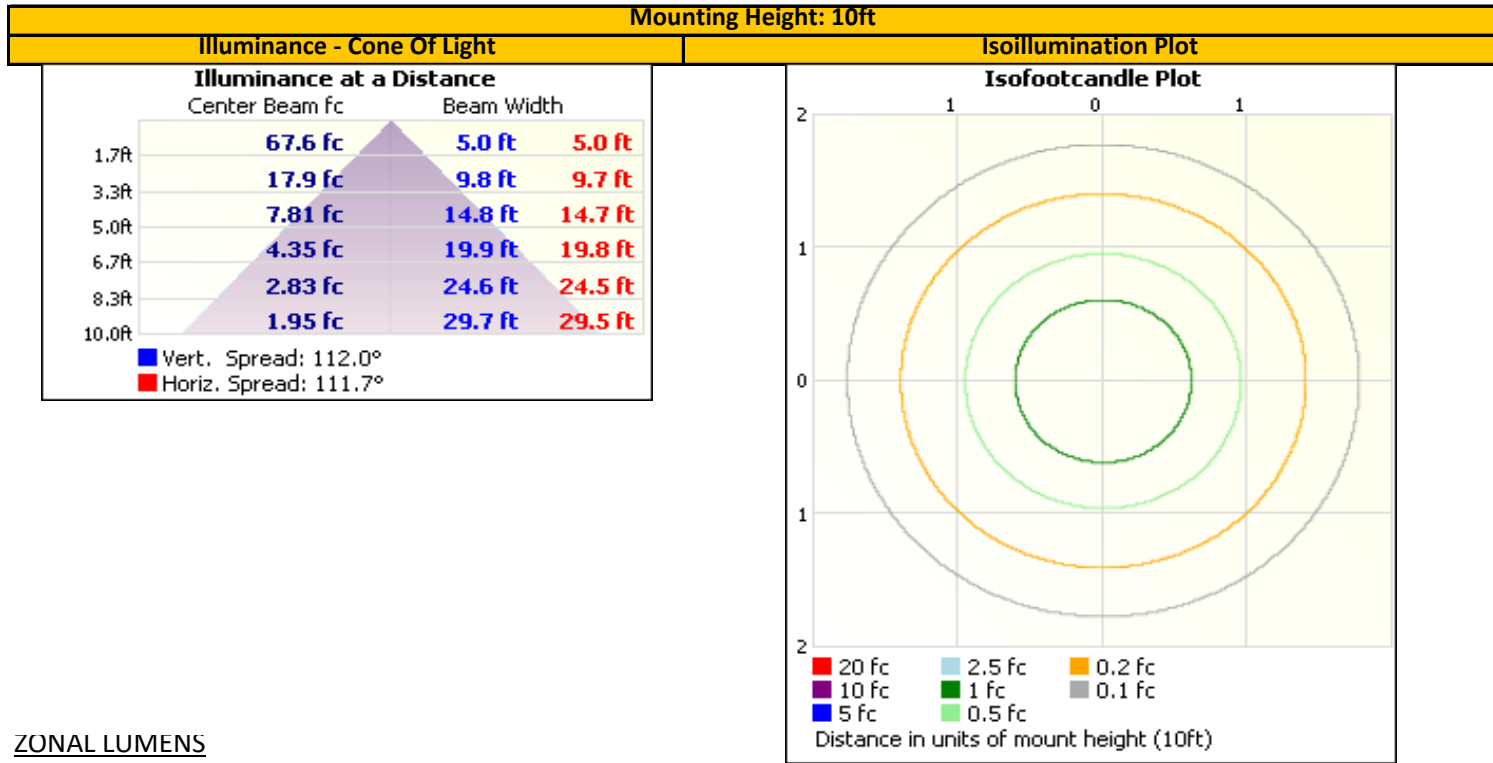
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	195	195	195	195	195
5	193	194	194	194	194
10	190	191	192	191	191
15	185	186	187	186	186
20	178	180	180	180	180
25	171	172	172	172	171
30	162	163	162	162	163
35	152	153	152	152	152
40	140	140	141	140	140
45	127	127	127	128	128
50	114	114	114	114	114
55	99	99	100	100	100
60	85	84	85	85	85
65	70	69	69	69	70
70	54	53	53	53	54
75	39	38	38	38	38
80	25	24	24	24	24
85	14	13	14	13	13
90	5	5	4	6	6
95	1	0	0	1	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



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire			
0-30	151.0	26.7%			
0-40	247.0	43.7%			
0-60	436.6	77.2%			
60-90	127.0	22.5%			
70-100	59.2	10.5%			
90-120	1.9	0.3%			
0-90	563.6	99.7%			
90-180	1.9	0.3%			
0-180	565.5	100.0%			
Zone	Lumens	Total	Zone	Lumens	Total
0-10	18.5	3.3%	90-100	1.9	0.3%
10-20	52.8	9.3%	100-110	0.0	0.0%
20-30	79.7	14.1%	110-120	0.0	0.0%
30-40	96.0	17.0%	120-130	0.0	0.0%
40-50	99.4	17.6%	130-140	0.0	0.0%
50-60	90.2	16.0%	140-150	0.0	0.0%
60-70	69.6	12.3%	150-160	0.0	0.0%
70-80	41.5	7.3%	160-170	0.0	0.0%
80-90	15.8	2.8%	170-180	0.0	0.0%

EQUIPMENT LIST

REPORT NO. 104119984CRT-024

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniometer	6440	---	4/21/2020	5/21/2020
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
4	Yokogawa Power Analyzer	WT210	E464	5/11/2020	5/11/2020
5	Omega Thermometer	DPI8-C24	M263	2/27/2020	2/27/2021
6	M-D Building Products Digital Level	Smart Tool	E499	6/27/2019	6/27/2020
7	NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2019	2/11/2021
8	NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2019	2/11/2021
9	NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2019	2/11/2021
10	NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2019	1/3/2021

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

REVISION HISTORY

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