

SONNEMAN - A WAY OF LIGHT

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

2731

PROJECT NUMBER

G104119984

REPORT NUMBER

104119984CRT-031

ISSUE DATE

5/11/2020

REVISED DATE

None

TEST DATES

5/7/2020

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

© 2017 INTERTEK



REPORT NUMBER

104119984CRT-031

MODEL NUMBER(s)

2731

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:



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. 104119984CRT-031

ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2004291221-009	2731	Offset 24" Rectangle LED Surface Mount	Production	4/29/2020

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	2731	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

REPORT NO. 104119984CRT-031

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	2731
Product Description:	Offset 24" Rectangle LED Surface Mount
LED Model No.:	Not Provided
Driver Model No.:	ERP ESPT050W-1050-42-Z1
Light Source:	LED

Criteria	Results
Light Output (lumens)	2939.4
Input Power (W) @ 120 (Vac)	42.65
Lumen Efficacy (lm/W)	68.9
Input Power Factor () @ 120 (Vac)	0.987

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-031

Test Configuration	Tested Model No.	Pass/Fail/NA
1	2731	NA

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

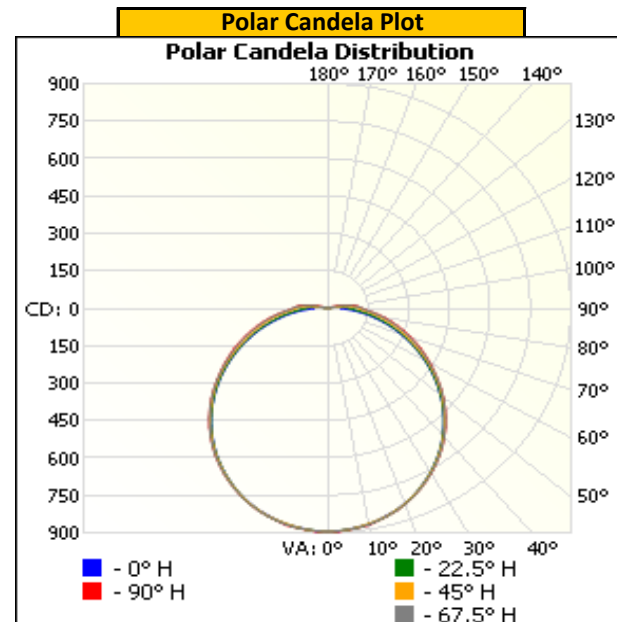
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.00	360.1	42.65	0.987

Light Output (lm)	Lumen Efficacy (lm/W)
2939.4	68.9

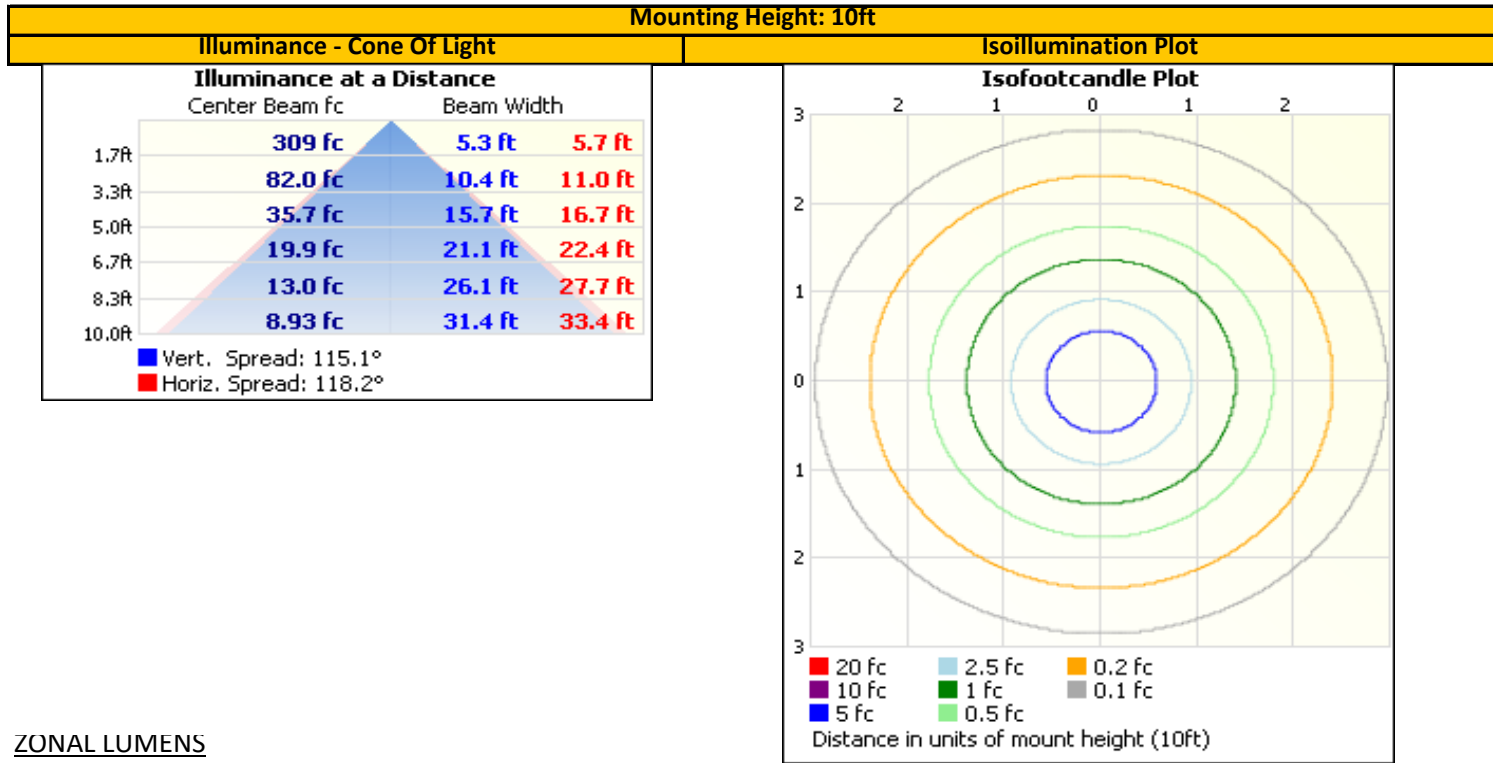
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	893	893	893	893	893
5	889	890	890	889	891
10	878	878	876	879	882
15	858	860	859	861	860
20	832	834	834	836	836
25	800	800	801	803	803
30	760	760	762	764	764
35	715	715	717	720	720
40	664	664	667	671	671
45	608	608	612	617	617
50	546	548	553	559	559
55	482	484	492	497	497
60	415	418	427	434	437
65	347	351	360	375	379
70	280	286	301	317	322
75	214	223	246	261	266
80	153	168	195	210	214
85	98	118	148	162	163
90	50	82	116	129	127
95	49	58	88	104	109
100	32	29	43	64	76
105	14	10	12	28	38
110	4	2	1	10	14
115	0	0	0	2	4
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	Zone	Lumens	Total
0-30	696.5	23.7%	0-10	84.5	2.9%
0-40	1,145.3	39.0%	10-20	242.7	8.3%
0-60	2,056.2	70.0%	20-30	369.3	12.6%
60-90	771.1	26.2%	30-40	448.9	15.3%
70-100	498.9	17.0%	40-50	472.3	16.1%
90-120	112.1	3.8%	50-60	438.5	14.9%
0-90	2,827.3	96.2%	60-70	359.3	12.2%
90-180	112.1	3.8%	70-80	257.3	8.8%
0-180	2,939.4	100.0%	80-90	154.6	5.3%
			90-100	87.0	3.0%
			100-110	23.4	0.8%
			110-120	1.7	0.1%
			120-130	0.0	0.0%
			130-140	0.0	0.0%
			140-150	0.0	0.0%
			150-160	0.0	0.0%
			160-170	0.0	0.0%
			170-180	0.0	0.0%

EQUIPMENT LIST

REPORT NO. 104119984CRT-031

#	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	5/7/2019	5/7/2020
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

*Validated by calibration on 5/11/20.

REVISION HISTORY

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