

# SONNEMAN - A WAY OF LIGHT

## TEST REPORT

### SCOPE OF WORK

Electrical and Photometric tests as required to the IESNA test standard.

### MODEL NUMBER

2863

### PROJECT NUMBER

G103703321

### REPORT NUMBER

103703321CRT-092

### ISSUE DATE

July 12, 2019

### REVISION DATE

None

### DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**TEST REPORT****REPORT NO.: 103703321CRT-092****REPORT DATE: July 12, 2019**

TEST OF (1) 18" LED PENDANT

MODEL NO. 2863

RENDERED TO:

SONNEMAN - A WAY OF LIGHT  
151 AIRPORT DRIVE  
WAPPINGERS FALLS, NY 12590**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-00932265-0.

**STANDARDS USED**

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

**SAMPLE INFORMATION**

CONTROL NO.	MODEL/SERIAL NO.	DESCRIPTION	TYPE	RECEIVED
CRT1906241047-002	2863	18" LED Pendant	Production	6/24/2019

**DATE OF TESTS**

July 11, 2019.

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SUMMARY

<b>MODEL NO:</b>	2863
<b>DESCRIPTION:</b>	18" LED Pendant
<b>LED MODEL NO:</b>	Not Provided
<b>DRIVER MODEL NO:</b>	ERP EBR020U-0700-30

CRITERIA	RESULTS
Lumen Output (lumens)	847.5
Input Power (W) @ 120 (VAC)	20.62
Lumen Efficacy (lm/W)	41.1
Input Power Factor ( ) @ 120 (VAC)	0.985

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	8/8/2019	7/11/2019
Elgar AC Power Supply	CW1251	---	VBU	7/11/2019
Sorenson DC Power Supply	XG 150-10	---	VBU	7/11/2019
Yokogawa Power Analyzer	WT210	E464	5/7/2020	7/11/2019
Omega Thermometer	DPi8-C24	M263	5/7/2020	7/11/2019
M-D Building Products Digital Level	Smart Tool	L112	5/1/2020	7/11/2019
NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2021	7/11/2019
NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2021	7/11/2019
NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2021	7/11/2019
NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2021	7/11/2019

**TEST REPORT****REPORT NO.: 103703321CRT-092****REPORT DATE: July 12, 2019****TEST METHODS****SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS**

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

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD**

A Type C Mirror Goniometer was used to measure the intensity (candela) at each angle of distribution for the SSL sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniometer equipment. The SSL sample was operated on the client provided driver at rated input volts in its designated orientation. The SSL sample was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

The calibration of the goniometer-photometer system is traceable to the National Institute of Standards and Technology.

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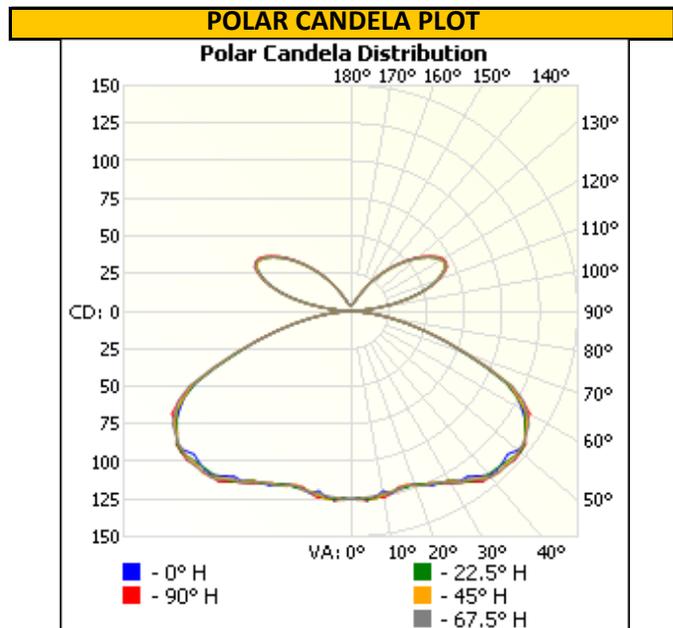
**RESULTS OF TESTS**

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

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR ( )	LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)
CRT1906241047-002	Base Up	120.05	174.4	20.62	0.985	847.5	41.1

**INTENSITY SUMMARY - CANDELA**

Angle	0	22.5	45	67.5	90
0	125	125	125	125	125
5	126	126	124	124	126
10	121	124	124	122	126
15	123	122	123	122	121
20	122	122	124	122	123
25	128	126	126	127	126
30	130	130	130	132	133
35	134	138	137	136	138
40	142	141	144	144	143
45	142	143	144	146	145
50	144	146	144	145	146
55	141	140	141	142	140
60	131	132	133	134	136
65	113	114	116	118	116
70	79	79	81	82	80
75	50	51	51	51	52
80	27	28	28	28	28
85	10	11	11	10	11
90	0	0	0	0	0
95	7	7	7	7	7
100	28	29	30	30	30
105	47	47	48	49	48
110	61	60	61	62	62
115	69	68	69	70	70
120	69	69	68	70	70
125	63	62	63	63	64
130	54	54	54	54	55
135	44	44	44	44	45
140	34	33	34	34	35
145	24	23	24	24	25
150	15	15	15	16	16
155	9	9	9	9	10
160	6	6	6	6	6
165	5	5	5	5	5
170	5	5	5	5	5
175	4	4	4	4	4
180	4	4	4	4	4



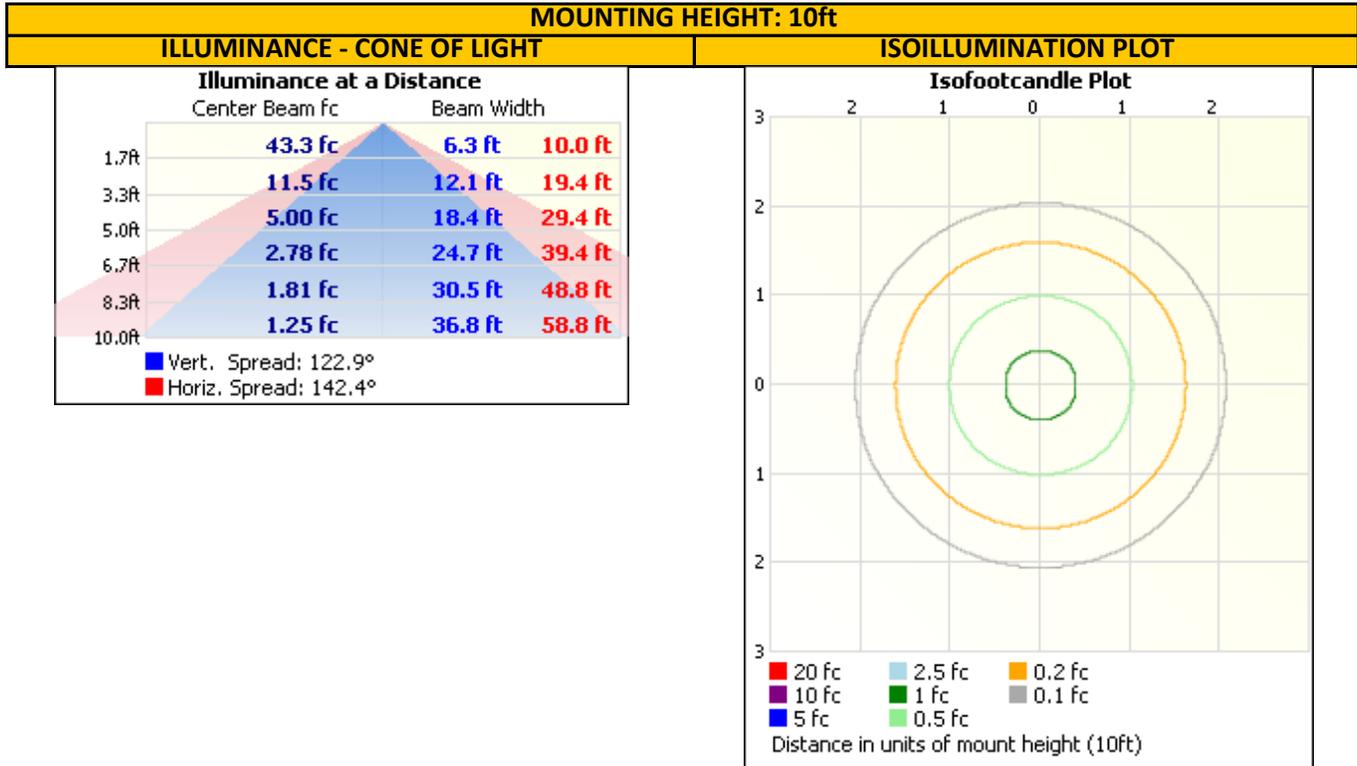
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RESULTS OF TESTS

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



**ZONAL LUMEN SUMMARY AND PERCENTAGES**

ZONE	LUMENS	% LUMINAIRE
0-30	105.4	12.4
0-40	191.8	22.6
0-60	429.5	50.7
60-90	177.9	21.0
0-90	607.3	71.7
90-180	240.2	28.3
0-180	847.5	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	11.9	1.4
10-20	34.7	4.1
20-30	58.8	6.9
30-40	86.4	10.2
40-50	111.7	13.2
50-60	126.0	14.9
60-70	110.1	13.0
70-80	55.1	6.5
80-90	12.7	1.5
90-100	11.1	1.3
100-110	49.7	5.9
110-120	66.9	7.9
120-130	56.2	6.6
130-140	34.3	4.1
140-150	15.4	1.8
150-160	4.6	0.5
160-170	1.4	0.2
170-180	0.4	0.1

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## PICTURES



## CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:

Gerald Gray  
Associate Engineer  
Lighting Division

Report Reviewed By:

Kristie Ray  
Engineer  
Lighting Division

Attachments: .IES File

## REVISION HISTORY

JOB NUMBER	DATE OF REVISION	PROJECT HANDLER	REVIEWED BY	REVISION NOTE
None				