

# SONNEMAN - A WAY OF LIGHT

## TEST REPORT

**SCOPE OF WORK**

LED Performance Testing

**MODEL NUMBER**

7470

**PROJECT NUMBER**

G104119984

**REPORT NUMBER**

104119984CRT-042

**ISSUE DATE**

7/7/2020

**REVISED DATE**

None

**TEST DATES**

7/7/2020

**DOCUMENT CONTROL NUMBER**

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104119984CRT-042

**MODEL NUMBER(s)**

7470

**REPORT 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-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:



Ryan Siddon  
Manager, Operations & Engineering  
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## SAMPLE INFORMATION

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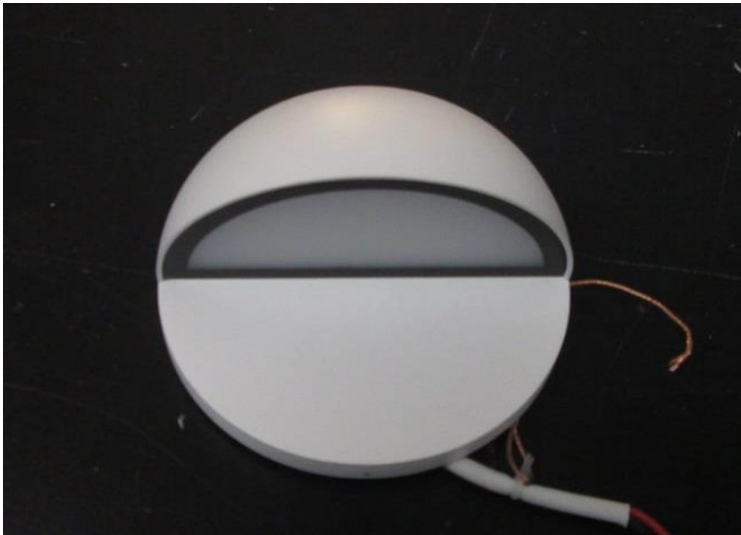
### ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2006151018-006	7470	Mezza Cupola 5" Sconce	Production	6/15/2020

### TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	7470	1

### SAMPLE PHOTOS - TESTED CONFIGURATIONS



**SUMMARY****REPORT NO. 104119984CRT-042****PRODUCT INFORMATION AND SUMMARY OF DATA**

Product Model No.:	7470
Product Description:	Mezza Cupola 5" Sconce
LED Model No.:	Not Provided
Driver Model No.:	EBR010U-0200-42
Light Source:	LED

Criteria	Results
Light Output (lumens)	547.7
Input Power (W) @ 120 (Vac)	8.1
Lumen Efficacy (lm/W)	68.0
Input Power Factor (PF) @ 120 (Vac)	0.989

**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.

## TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	7470	NA

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

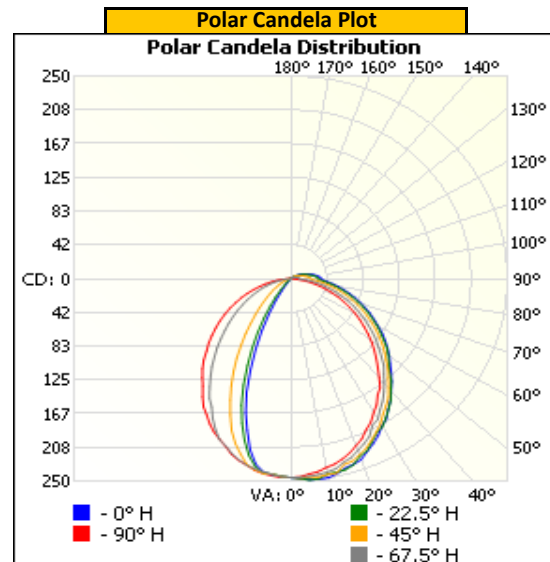
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Horizontal	120.01	67.8	8.05	0.989

Light Output (lm)	Lumen Efficacy (lm/W)
547.7	68.0

### INTENSITY SUMMARY - CANDELA

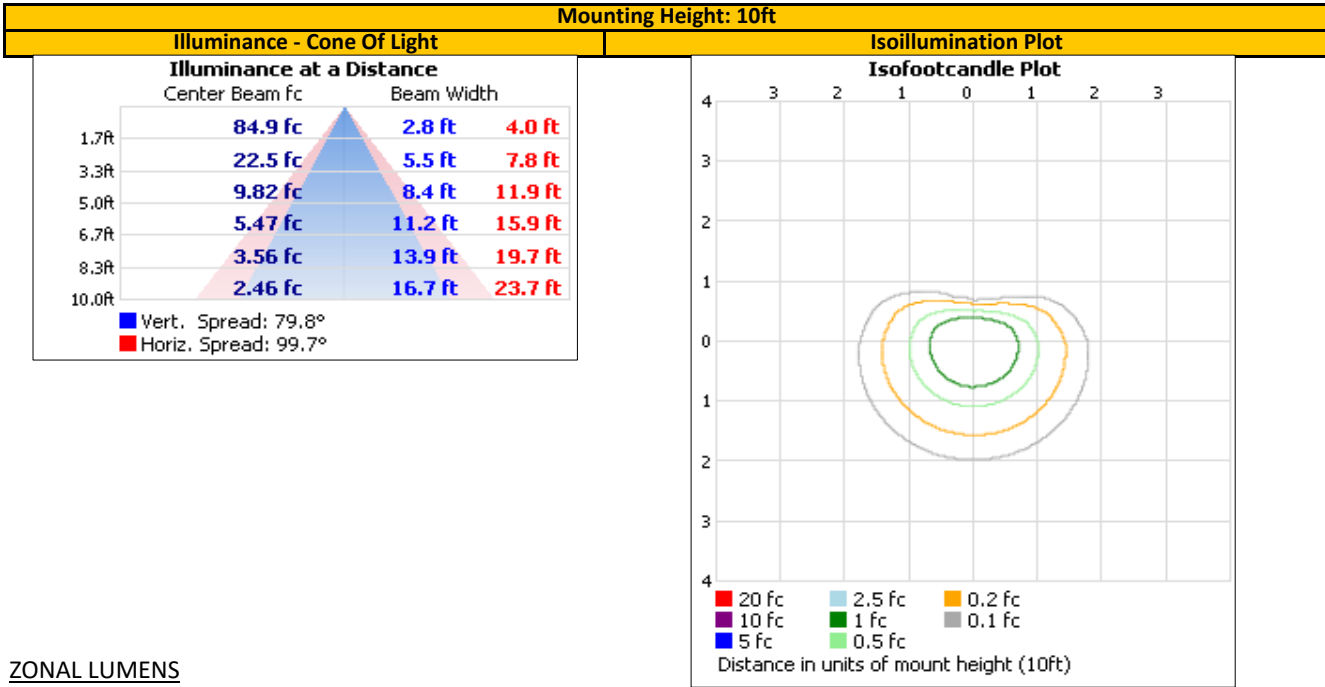
Angle	0	22.5	45	67.5	90
0	246	246	246	246	246
5	249	249	246	245	242
10	250	245	246	242	237
15	242	244	237	235	230
20	238	233	232	226	220
25	225	222	220	215	206
30	210	211	207	201	191
35	196	197	192	185	175
40	180	180	176	168	159
45	164	160	159	152	140
50	148	147	141	132	122
55	133	130	124	115	103
60	116	114	108	97	85
65	101	98	91	80	68
70	85	82	75	63	50
75	70	67	59	46	34
80	56	52	44	31	19
85	42	39	31	18	7
90	35	32	23	10	0
95	32	29	21	9	0
100	27	24	17	7	0
105	22	19	13	6	0
110	16	14	10	4	0
115	12	10	7	3	0
120	8	7	5	2	0
125	4	4	3	1	0
130	1	1	2	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



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**ILLUMINANCE SUMMARY**



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	173.3	31.6%	90-100	10.7	1.9%
0-40	262.7	48.0%	100-110	6.9	1.3%
0-60	416.7	76.1%	110-120	3.5	0.6%
60-90	108.6	19.8%	120-130	1.2	0.2%
70-100	64.3	11.7%	130-140	0.1	0.0%
90-120	21.0	3.8%	140-150	0.0	0.0%
0-90	525.4	95.9%	150-160	0.0	0.0%
90-180	22.3	4.1%	160-170	0.0	0.0%
0-180	547.7	100.0%	170-180	0.0	0.0%

**EQUIPMENT LIST**

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniometer	6440	---	6/22/2020	7/22/2020
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Yokogawa Power Analyzer	WT210	E464	5/11/2020	5/11/2021
4	Omega Thermometer	DPi8-C24	M263	2/27/2020	2/27/2021
5	M-D Building Products Digital Level	Smart Tool	307-L112	5/14/2020	5/14/2021
6	NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2019	2/11/2021
7	NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2019	2/11/2021
8	NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2019	2/11/2021
9	NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2019	1/3/2021
10	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU

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
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