

SONNEMAN - A WAY OF LIGHT TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

2212

PROJECT NUMBER

G103703321

REPORT NUMBER

103703321CRT-075

ISSUE DATE

April 22, 2019

REVISION DATE

None

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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TEST REPORT

REPORT NO.: 103703321CRT-075

REPORT DATE: April 22, 2019

TEST OF (1) WANDS 1-LIGHT PENDANT

MODEL NO. 2212

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.

STANDARDS USED

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

SAMPLE INFORMATION

CONTROL NO.	MODEL/SERIAL NO.	DESCRIPTION	TYPE	RECEIVED
CRT1904110958-004	2212	Wands 1-Light Pendant	Production	4/11/2019

DATE OF TESTS

April 16, 2019.

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SUMMARY

MODEL NO:	2212
DESCRIPTION:	Wands 1-Light Pendant
LED MODEL NO:	Not Provided
DRIVER MODEL NO:	ES LD-CU7006-02

CRITERIA	RESULTS
Lumen Output (lumens)	41.7
Input Power (W) @ 120 (VAC)	4.11
Lumen Efficacy (lm/W)	10.1
Input Power Factor () @ 120 (VAC)	0.460

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	5/5/2019	4/16/2019
Elgar AC Power Supply	CW1251	---	VBU	4/16/2019
Sorenson DC Power Supply	XG 150-10	---	VBU	4/16/2019
Yokogawa Power Analyzer	WT210	E464	5/3/2019	4/16/2019
Omega Thermometer	DPI8-C24	M263	5/3/2019	4/16/2019
M-D Building Products Digital Level	Smart Tool	L112	4/21/2019	4/16/2019
NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2021	4/16/2019
NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2021	4/16/2019
NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2021	4/16/2019
NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2021	4/16/2019

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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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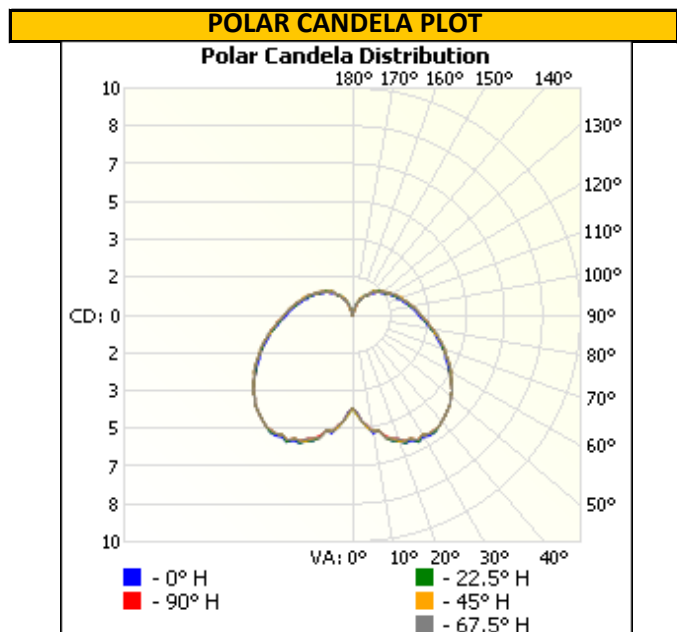
RESULTS OF TESTS

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)
CRT1904110958-004	Base Up	120.05	74.5	4.11	0.460	41.7	10.1

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	4	4	4	4	4
5	5	5	5	5	5
10	5	5	5	5	5
15	6	6	6	6	6
20	6	6	6	6	6
25	6	6	6	6	6
30	6	6	6	6	6
35	6	6	6	6	6
40	6	6	6	6	6
45	6	6	6	6	6
50	6	6	6	6	6
55	5	5	5	5	5
60	5	5	5	5	5
65	4	5	5	5	5
70	4	4	4	4	4
75	4	4	4	4	4
80	4	4	4	4	4
85	3	3	3	3	3
90	3	3	3	3	3
95	3	3	3	3	3
100	2	2	3	3	3
105	2	2	2	2	2
110	2	2	2	2	2
115	2	2	2	2	2
120	2	2	2	2	2
125	2	2	2	2	2
130	2	2	2	2	2
135	1	2	2	2	1
140	1	1	1	1	1
145	1	1	1	1	1
150	1	1	1	1	1
155	1	1	1	1	1
160	0	1	0	0	0



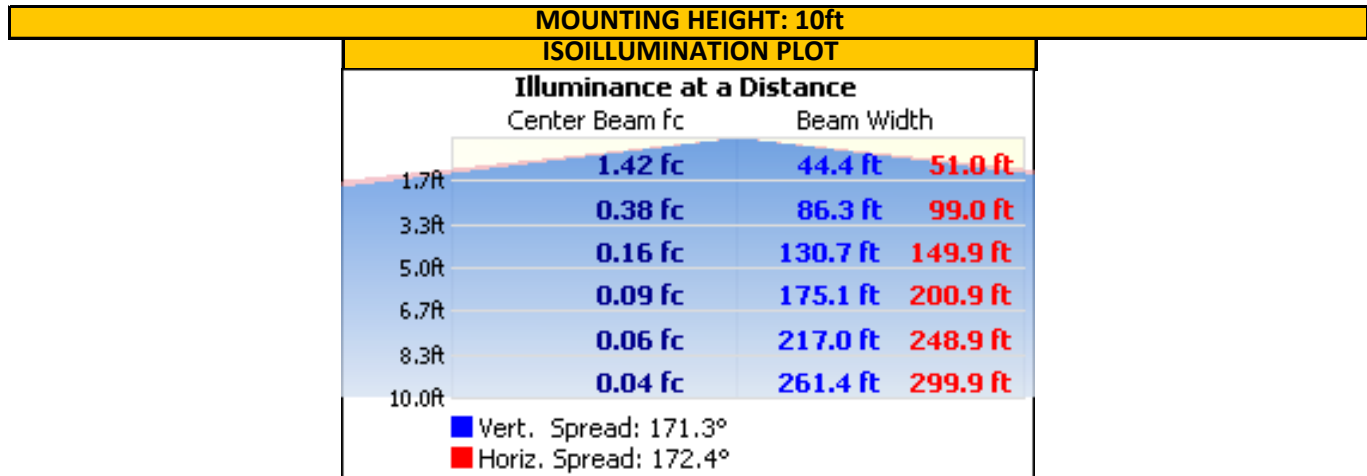
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RESULTS OF TESTS

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



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	4.9	11.6
0-40	8.7	21.0
0-60	18.0	43.3
60-90	12.2	29.3
0-90	30.3	72.6
90-180	11.4	27.4
0-180	41.7	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	0.5	1.1
10-20	1.6	3.8
20-30	2.8	6.8
30-40	3.9	9.3
40-50	4.6	10.9
50-60	4.7	11.4
60-70	4.6	10.9
70-80	4.1	9.9
80-90	3.5	8.5
90-100	3.0	7.3
100-110	2.5	6.1
110-120	2.1	4.9
120-130	1.6	3.8
130-140	1.1	2.7
140-150	0.7	1.7
150-160	0.3	0.8

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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:

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Report Reviewed By:

Ryan Siddon
Project Engineer
Lighting Division

Attachments: .IES File

REVISION HISTORY

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