FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP LAB
CODE 100402-0.

SONNEMAN - A WAY OF LIGHT

TEST REPORT

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

MODEL NUMBER
22QxRL01120PHA

PROJECT NUMBER
G103703321

REPORT NUMBER
103703321CRT-094

ISSUE DATE
July 29, 2019

REVISION DATE
None

DOCUMENT CONTROL NUMBER
RTTDS-R-AMER-Test-3407

PAGES
7

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TEST REPORT

REPORT NO.: 103703321CRT-094
REPORT DATE: July 29, 2019

TEST OF (1) OLA 1-LIGHT PENDANT

MODEL NO. 22QXRL01120PHA

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
CRT1907101031-001	22QxRL01120PHA	Ola 1-Light Pendant	Production	7/10/2019

DATE OF TESTS

July 24, 2019.

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TEST REPORT

REPORT NO.: 103703321CRT-094
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SUMMARY

MODEL NO:	22QxRL01120PHA
DESCRIPTION:	Ola 1-Light Pendant
LED MODEL NO:	Not Provided
DRIVER MODEL NO:	LTF DA30W24V

CRITERIA	RESULTS
Lumen Output (lumens)	672.2
Input Power (W) @ 120 (VAC)	14.10
Lumen Efficacy (lm/W)	47.7
Input Power Factor ( ) @ 120 (VAC)	0.847

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	8/8/2019	7/24/2019
Elgar AC Power Supply	CW1251	---	VBU	7/24/2019
Sorenson DC Power Supply	XG 150-10	---	VBU	7/24/2019
Yokogawa Power Analyzer	WT210	E464	5/7/2020	7/24/2019
Omega Thermometer	DPi8-C24	M263	5/7/2020	7/24/2019
M-D Building Products Digital Level	Smart Tool	L112	5/1/2020	7/24/2019
NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2021	7/24/2019
NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2021	7/24/2019
NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2021	7/24/2019
NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2021	7/24/2019

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TEST REPORT

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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

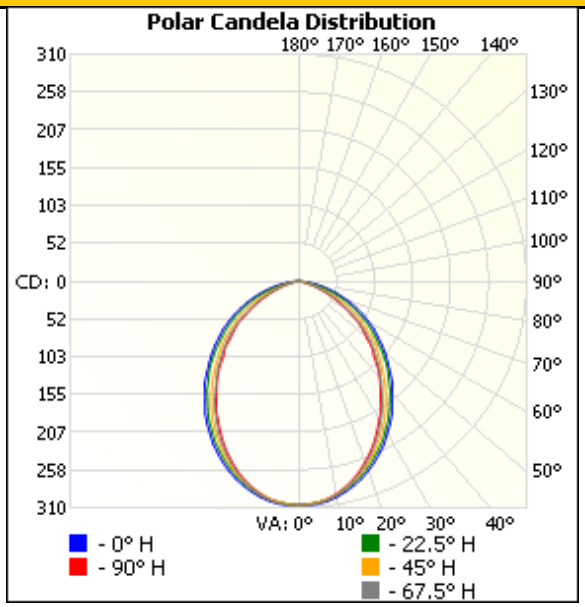
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR ( )	LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)
CRT1907101031-001	Base Up	120.00	138.7	14.10	0.847	672.2	47.7

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	306	306	306	306	306
5	306	303	303	305	303
10	300	297	296	297	295
15	290	286	285	284	282
20	276	273	269	266	263
25	260	255	250	245	243
30	241	236	229	222	219
35	221	215	206	199	194
40	198	194	182	173	172
45	176	171	158	150	144
50	154	148	137	127	121
55	131	124	111	102	100
60	109	102	89	77	72
65	87	79	64	53	49
70	64	56	41	32	29
75	43	33	20	14	13
80	23	13	6	3	2
85	7	1	0	0	0
90	0	0	0	0	0

POLAR CANDELA PLOT



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TEST REPORT

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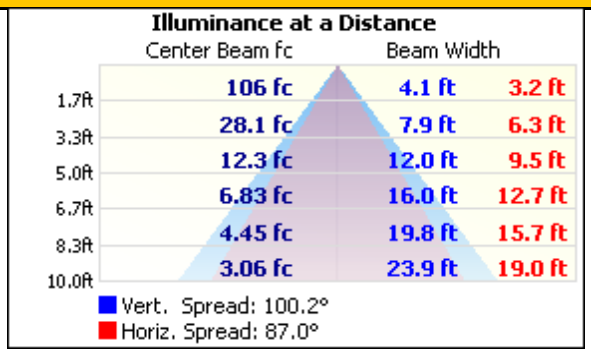
RESULTS OF TESTS

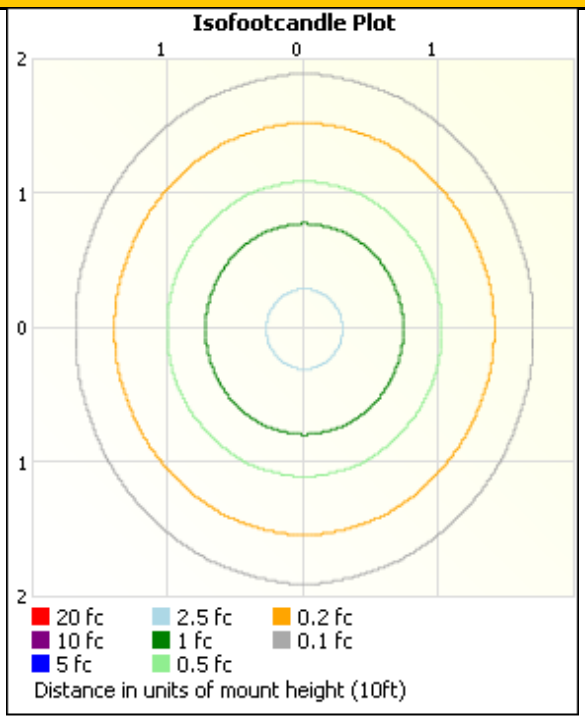
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT



ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	224.2	33.3
0-40	353.4	52.6
0-60	578.3	86.0
60-90	93.9	14.0
0-90	672.2	100.0
90-180	0.0	0.0
0-180	672.2	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	28.8	4.3
10-20	80.2	11.9
20-30	115.2	17.1
30-40	129.2	19.2
40-50	123.6	18.4
50-60	101.4	15.1
60-70	65.4	9.7
70-80	26.0	3.9
80-90	2.5	0.4

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TEST REPORT

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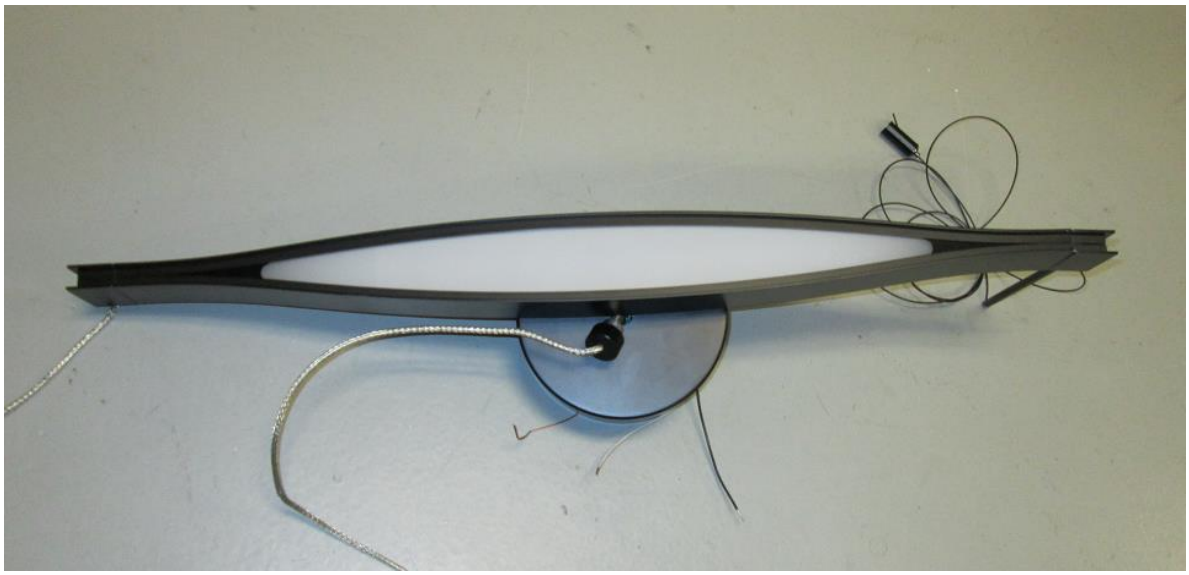
PICTURES



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				