

SONNEMAN - A Way of Light

TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

2961

PROJECT NUMBER

G103703321

REPORT NUMBER

103703321CRT-058

ISSUE DATE

December 3, 2018

REVISION DATE

None

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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TEST REPORT**REPORT NO.: 103703321CRT-058****REPORT DATE: December 3, 2018****TEST OF (1) CHAMPAGNE BUBBLES LED PENDANT**

MODEL NO. 2961

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-00924150.

STANDARDS USED

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

SAMPLE INFORMATION

CONTROL NO.	MODEL/SERIAL NO.	DESCRIPTION	TYPE	RECEIVED
CRT1811131226-001	2961	Champagne Bubbles LED Pendant	Production	11/19/2018

DATE OF TESTS

November 30, 2018.

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SUMMARY

MODEL NO:	2961
DESCRIPTION:	Champagne Bubbles LED Pendant
LED MODEL NO:	Not Provided
DRIVER MODEL NO:	LTF TA60WA24LED

CRITERIA	RESULTS
Lumen Output (lumens)	154.5
Input Power (W) @ 120 (VAC)	4.09
Lumen Efficacy (lm/W)	37.8
Input Power Factor () @ 120 (VAC)	0.735

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	12/6/2018	11/30/2018
Elgar AC Power Supply	CW1251	---	VBU	11/30/2018
Sorenson DC Power Supply	XG 150-10	---	VBU	11/30/2018
Yokogawa Power Analyzer	WT210	E464	5/3/2019	11/30/2018
Omega Thermometer	DPi8-C24	M263	5/3/2019	11/30/2018
M-D Building Products Digital Level	Smart Tool	L112	4/21/2019	11/30/2018
NIST Luminous Intensity Standard Source	NBS10322	N1427	1/9/2019	11/30/2018
NIST Luminous Intensity Standard Source	NBS10332	N1435	1/9/2019	11/30/2018
NIST Luminous Intensity Standard Source	NBS10265	N1437	1/9/2019	11/30/2018
NIST Luminous Flux Standard Source	NBS10428	N1424	1/11/2019	11/30/2018

TEST REPORT**REPORT NO.: 103703321CRT-058****REPORT DATE: December 3, 2018****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.

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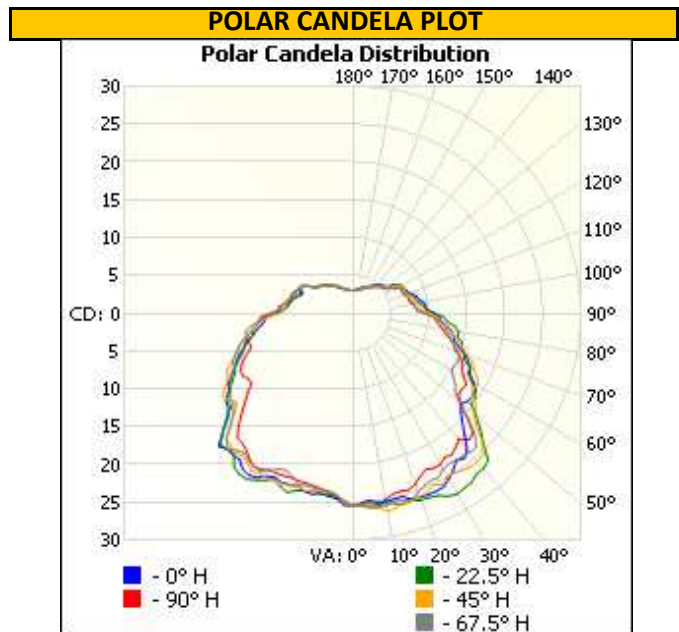
RESULTS OF TESTS

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)
CRT1811131226-001	Base Up	120.02	46.4	4.09	0.735	154.5	37.8

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	26	26	26	26	26
5	25	25	26	26	26
10	25	26	27	26	25
15	25	26	26	26	24
20	26	26	26	25	24
25	26	27	25	24	23
30	25	28	25	24	23
35	24	27	25	24	23
40	23	27	26	24	22
45	20	24	24	23	22
50	19	21	21	18	18
55	19	20	19	16	18
60	18	18	19	15	17
65	17	17	18	15	16
70	16	16	16	15	14
75	14	15	14	13	13
80	13	14	13	12	12
85	12	12	12	11	11
90	11	11	10	9	10
95	10	10	9	8	8
100	9	9	9	8	8
105	9	8	8	8	8
110	8	8	7	7	7
115	8	7	7	7	7
120	7	7	7	7	7
125	6	6	6	6	6
130	6	6	5	5	5
135	5	5	5	5	5
140	5	5	5	5	4
145	4	4	4	4	4
150	4	4	4	4	4
155	4	4	4	4	4
160	4	4	4	3	3
165	3	3	3	3	3
170	3	3	3	3	3
175	3	3	3	3	3
180	3	3	3	3	3



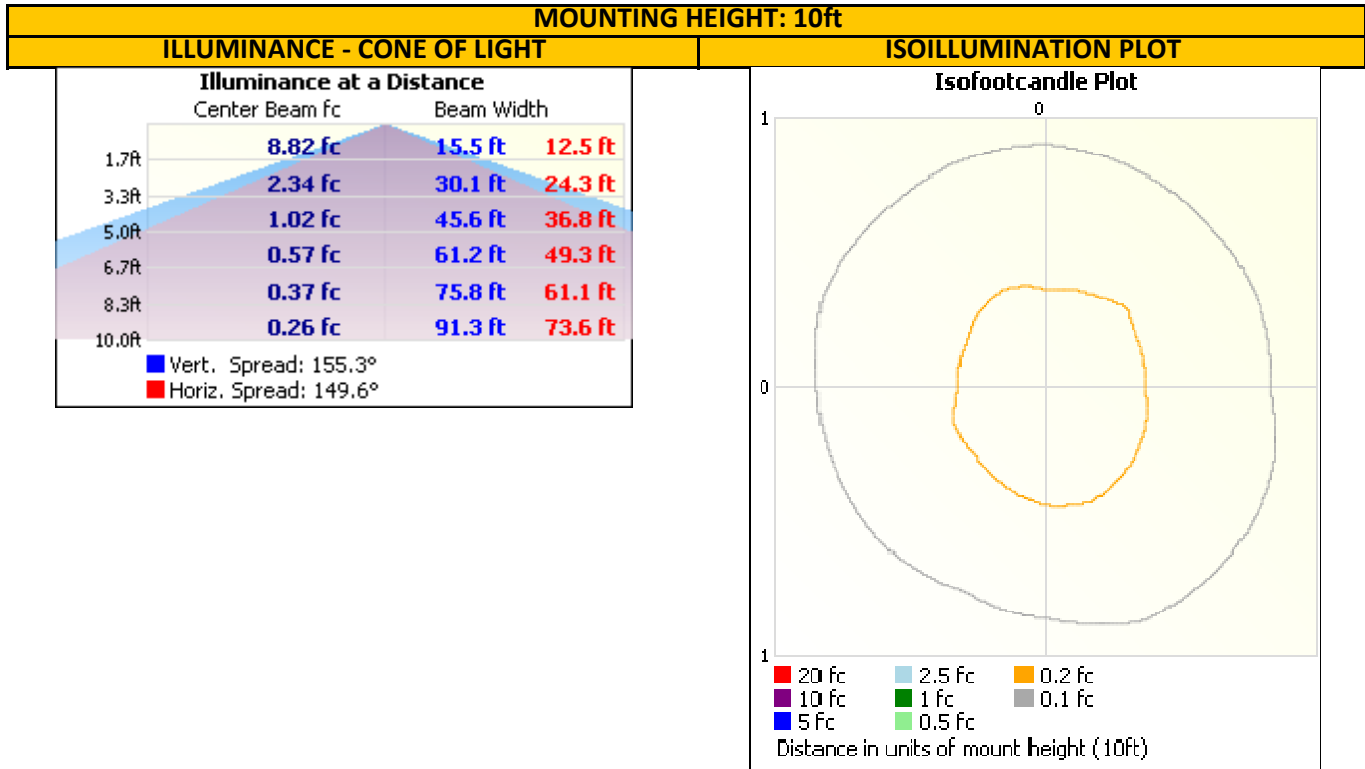
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RESULTS OF TESTS

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



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	20.7	13.4
0-40	35.8	23.2
0-60	69.3	44.8
60-90	44.2	28.6
0-90	113.5	73.4
90-180	41.1	26.6
0-180	154.5	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	2.4	1.5
10-20	7.0	4.5
20-30	11.3	7.3
30-40	15.1	9.8
40-50	16.9	11.0
50-60	16.5	10.7
60-70	16.4	10.6
70-80	15.0	9.7
80-90	12.8	8.3
90-100	9.9	6.4
100-110	8.5	5.5
110-120	7.4	4.8
120-130	5.5	3.6
130-140	4.0	2.6
140-150	2.8	1.8
150-160	1.8	1.1
160-170	0.9	0.6
170-180	0.3	0.2

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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:

Report Reviewed By:



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Lighting Division

Melanie Brittain
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Attachments: .IES File

REVISION HISTORY

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