

SONNEMAN - A WAY OF LIGHT TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

2990C-MED

PROJECT NUMBER

G103590523

REPORT NUMBER

103590523CRT-050

ISSUE DATE

October 24, 2018

REVISION DATE

None

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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TEST REPORT

REPORT NO.: 103590523CRT-050

REPORT DATE: October 24, 2018

TEST OF (1) CANTINA MEDIUM LED PENDANT - CLEAR

MODEL NO. 2990C-MED

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-00895529.

STANDARDS USED

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

SAMPLE INFORMATION

CONTROL NO.	MODEL/SERIAL NO.	DESCRIPTION	TYPE	RECEIVED
CRT1810021331-003	2990C-MED	Cantina Medium LED Pendant - Clear	Production	10/2/2018

DATE OF TESTS

October 18, 2018.

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SUMMARY

MODEL NO:	2990C-MED
DESCRIPTION:	Cantina Medium LED Pendant - Clear
LED MODEL NO:	Integral to Luminaire
DRIVER MODEL NO:	LTF TA60WA24LED

CRITERIA	RESULTS
Lumen Output (lumens)	219.6
Input Power (W) @ 120 (VAC)	3.90
Lumen Efficacy (lm/W)	56.4
Input Power Factor () @ 120 (VAC)	0.766

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	11/5/2018	10/18/2018
Elgar AC Power Supply	CW1251	---	VBU	10/18/2018
Sorenson DC Power Supply	XG 150-10	---	VBU	10/18/2018
Yokogawa Power Analyzer	WT210	E464	5/3/2019	10/18/2018
Omega Thermometer	DPi8-C24	M263	5/3/2019	10/18/2018
M-D Building Products Digital Level	Smart Tool	L112	4/21/2019	10/18/2018
NIST Luminous Intensity Standard Source	NBS10322	N1427	1/9/2019	10/18/2018
NIST Luminous Intensity Standard Source	NBS10332	N1435	1/9/2019	10/18/2018
NIST Luminous Intensity Standard Source	NBS10265	N1437	1/9/2019	10/18/2018
NIST Luminous Flux Standard Source	NBS10428	N1424	1/11/2019	10/18/2018

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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 (candelas) 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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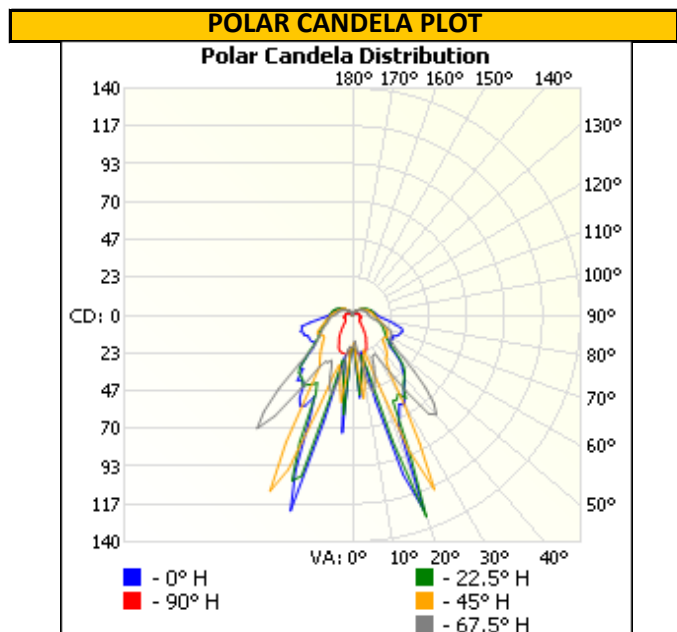
RESULTS OF TESTS

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)
CRT1810021331-003	Base Up	120.01	42.4	3.90	0.766	219.6	56.4

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	20	20	20	20	20
5	51	49	32	16	24
10	32	32	43	31	25
15	55	34	27	49	24
20	128	132	41	39	23
25	68	58	119	28	20
30	64	56	63	28	16
35	55	54	37	58	12
40	50	49	33	80	10
45	43	44	29	63	7
50	30	33	24	40	6
55	28	26	24	30	5
60	29	23	25	27	5
65	30	21	24	26	5
70	31	19	22	23	5
75	31	17	19	17	5
80	24	16	17	13	5
85	18	15	15	11	5
90	15	14	13	10	4
95	14	13	12	10	4
100	13	13	11	9	4
105	11	12	10	8	4
110	10	10	9	8	3
115	8	9	8	7	3
120	7	8	7	6	2
125	6	6	6	5	2
130	5	5	5	4	2
135	4	4	4	4	1
140	3	4	4	4	1
145	2	3	3	4	1
150	2	3	2	3	1
155	1	2	2	2	1
160	1	2	2	2	1
165	1	1	1	1	1



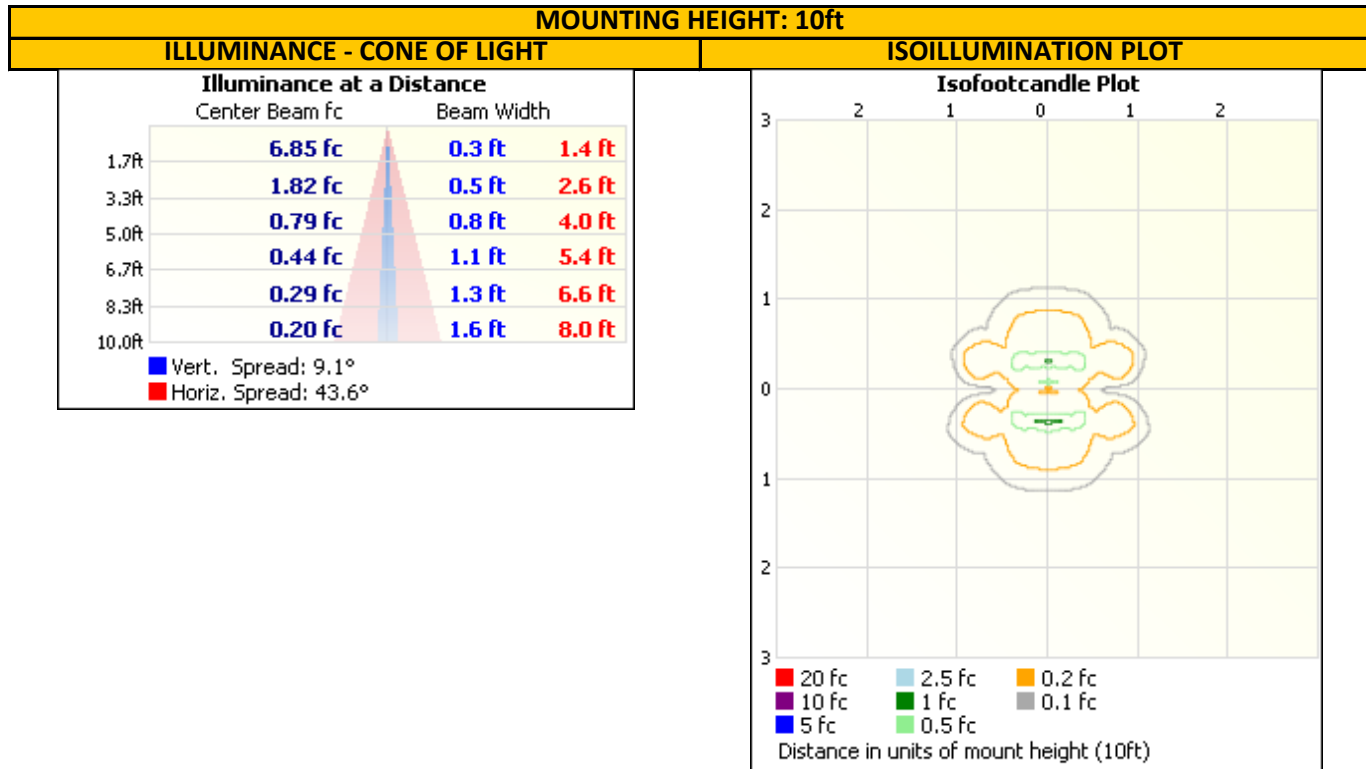
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RESULTS OF TESTS

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



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	44.2	20.1
0-40	73.1	33.3
0-60	125.0	56.9
60-90	54.3	24.7
0-90	179.3	81.6
90-180	40.3	18.4
0-180	219.6	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	3.2	1.5
10-20	13.8	6.3
20-30	27.2	12.4
30-40	28.9	13.1
40-50	30.3	13.8
50-60	21.6	9.8
60-70	21.1	9.6
70-80	18.6	8.5
80-90	14.5	6.6
90-100	12.0	5.4
100-110	10.0	4.5
110-120	7.5	3.4
120-130	5.0	2.3
130-140	3.0	1.4
140-150	1.7	0.8
150-160	0.9	0.4
160-170	0.2	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:

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Lighting Division

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				