

SONNEMAN - A WAY OF LIGHT TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

1XDXXRP20K w/1XZ010004K

PROJECT NUMBER

G103590523

REPORT NUMBER

103590523CRT-031

ISSUE DATE

August 22, 2018

REVISION DATE

None

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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TEST REPORT**REPORT NO.: 103590523CRT-031****REPORT DATE: August 22, 2018**

TEST OF (1) PRECISE CYLINDER W/PARACHUTE REFLECTOR

MODEL NO. 1XDXXRP20K W/1XZ010004K

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
CRT1808031053-001-16	1XDXXRP20K w/1XZ010004K	Luminaire	Production	8/2/2018

DATE OF TESTS

August 22, 2018.

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SUMMARY

MODEL NO:	1XDXXRP20K w/1XZ010004K
DESCRIPTION:	Precise Cylinder w/Parachute Reflector
LED MODEL NO:	Proprietary-Not Reported
DRIVER MODEL NO:	LTF TA60WA24LED

CRITERIA	RESULTS
Lumen Output (lumens)	237.6
Input Power (W) @ 120 (VAC)	6.16
Lumen Efficacy (lm/W)	38.6
Input Power Factor () @ 120 (VAC)	0.956

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	9/7/2018	8/22/2018
Elgar AC Power Supply	CW1251	---	VBU	8/22/2018
Sorenson DC Power Supply	XG 150-10	---	VBU	8/22/2018
Yokogawa Power Analyzer	WT210	E464	5/3/2019	8/22/2018
Omega Thermometer	DPi8-C24	M263	5/3/2019	8/22/2018
M-D Building Products Digital Level	Smart Tool	L112	4/21/2019	8/22/2018
NIST Luminous Intensity Standard Source	NBS10322	N1427	1/9/2019	8/22/2018
NIST Luminous Intensity Standard Source	NBS10332	N1435	1/9/2019	8/22/2018
NIST Luminous Intensity Standard Source	NBS10265	N1437	1/9/2019	8/22/2018
NIST Luminous Flux Standard Source	NBS10428	N1424	1/11/2019	8/22/2018

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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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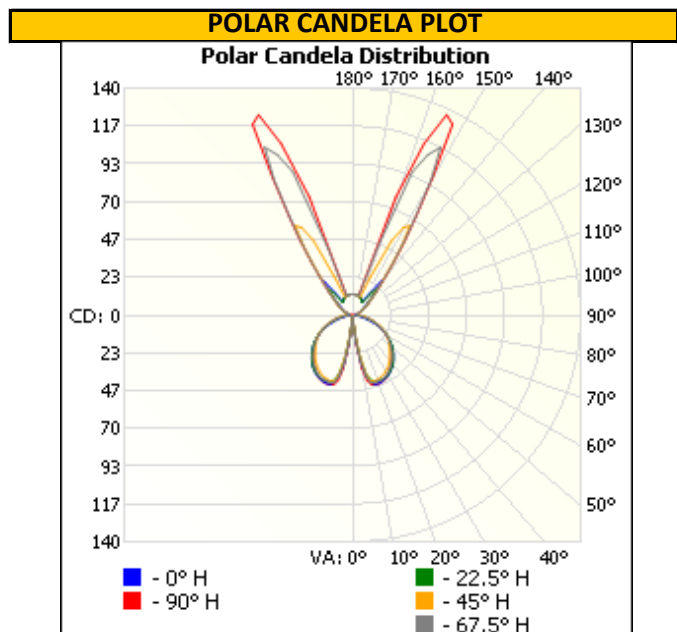
RESULTS OF TESTS

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)
CRT1808031053-001-16	Base Up	120.00	53.7	6.16	0.956	237.6	38.6

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	0	0	0	0	0
5	6	5	4	4	5
10	30	27	25	29	33
15	42	41	42	43	44
20	45	43	43	44	45
25	44	44	42	43	45
30	43	43	40	42	43
35	41	41	38	40	40
40	39	39	36	37	37
45	35	35	32	34	34
50	32	32	30	31	31
55	28	28	27	28	27
60	24	24	24	24	24
65	19	20	20	20	20
70	14	16	16	16	16
75	9	11	13	12	12
80	5	8	9	8	8
85	3	5	7	5	4
90	2	4	5	3	2
95	2	3	4	2	1
100	3	3	3	2	2
105	3	4	3	3	2
110	4	4	4	4	4
115	6	6	6	6	6
120	7	8	8	8	8
125	9	10	10	10	11
130	13	13	14	14	14
135	18	19	20	20	21
140	27	18	31	32	32
145	10	10	53	54	56
150	11	11	62	96	98
155	12	12	26	109	136
160	12	12	12	44	78
165	12	13	13	13	13
170	13	13	13	13	13
175	13	13	13	13	13
180	13	13	13	13	13



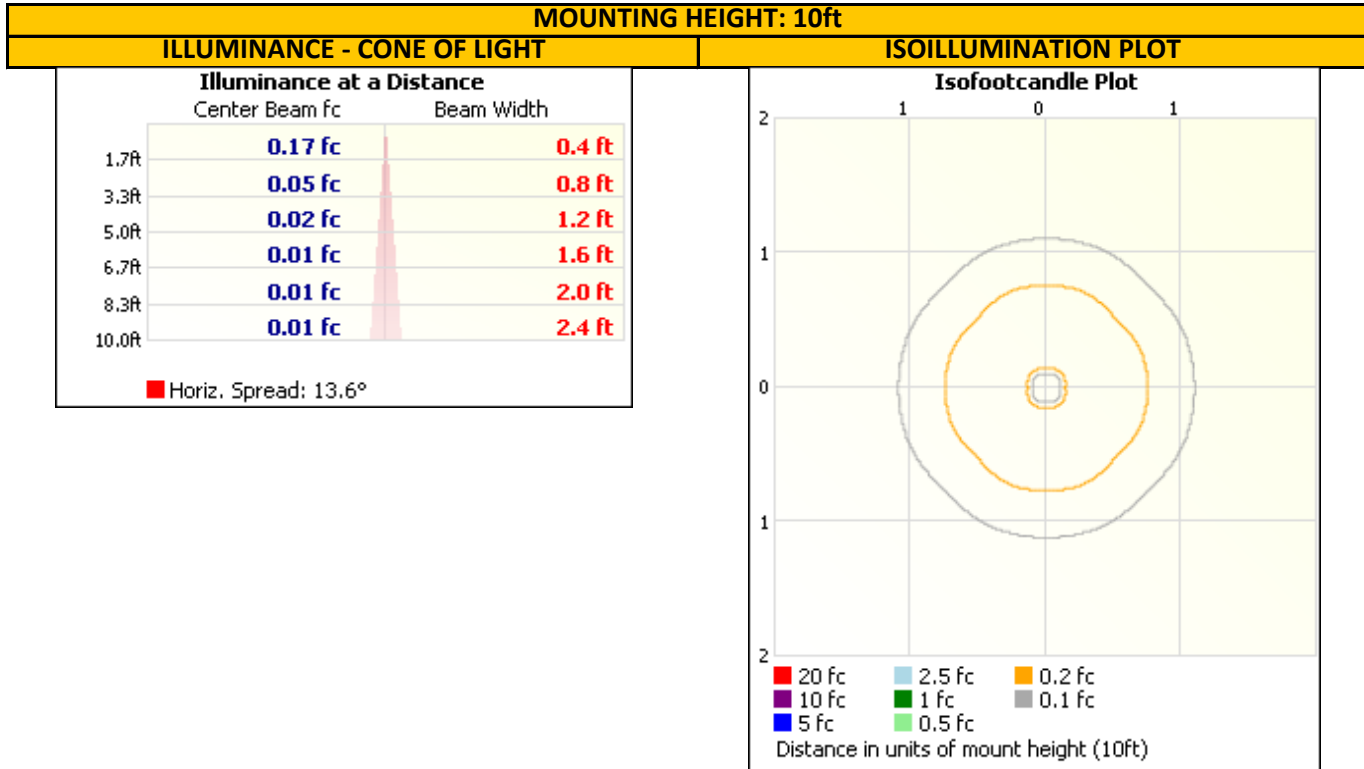
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RESULTS OF TESTS

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



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	32.8	13.8
0-40	57.8	24.3
0-60	108.9	45.8
60-90	37.9	15.9
0-90	146.8	61.8
90-180	90.8	38.2
0-180	237.6	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	1.3	0.5
10-20	11.5	4.9
20-30	20.0	8.4
30-40	25.0	10.5
40-50	26.4	11.1
50-60	24.7	10.4
60-70	19.8	8.3
70-80	12.3	5.2
80-90	5.8	2.4
90-100	3.0	1.3
100-110	3.4	1.4
110-120	5.6	2.4
120-130	9.3	3.9
130-140	15.5	6.5
140-150	24.2	10.2
150-160	24.3	10.2
160-170	4.3	1.8
170-180	1.2	0.5

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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:

A handwritten signature in black ink, appearing to read "Jerry Gray".

Jerry Gray
Associate Engineer
Lighting Division

Report Reviewed By:

A handwritten signature in black ink, appearing to read "Ryan Siddon".

Ryan Siddon
Project Engineer
Lighting Division

Attachments: IES File

REVISION HISTORY

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