

SONNEMAN - A WAY OF LIGHT TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

24Z0008K

PROJECT NUMBER

G104393027

REPORT NUMBER

104393027CRT-044

ISSUE DATE

7/29/2029

REVISED DATE

None

TEST DATES

7/29/2021

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104393027CRT-044

MODEL NUMBER(s)

24Z0008K

REPORT RENDERED TO:

SONNEMAN - A WAY OF LIGHT
151 AIRPORT DRIVE
WAPPINGERS FALLS, NY 12590
USA

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-01089188-0..

TEST STANDARDS

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

In Charge of Testing:



Gerald Gray
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Reviewer:



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SAMPLE INFORMATION

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ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2107191345-001	24Z0008K	Cubix 1-Light Medium LED Surface Mount	Production	7/19/2021

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	24Z0008K	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	24Z0008K
Product Description:	Cubix 1-Light Medium LED Surface Mount
LED Model No.:	Not Provided
Driver Model No.:	LTF DA15W24VLP
Light Source:	LED

Criteria	Results
Light Output (lumens)	640.7
Input Power (W) @ 120 (Vac)	15.03
Lumen Efficacy (lm/W)	42.6
Input Power Factor () @ 120 (Vac)	0.984

TEST METHODS

SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	24Z0008K	NA

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

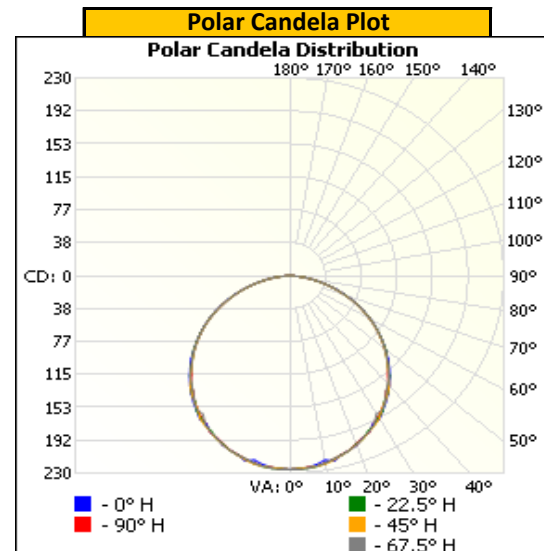
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)
Up	120.03	127.2	15.03	0.984

Light Output (lm)	Lumen Efficacy (lm/W)
640.7	42.6

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	226	226	226	226	226
5	224	225	224	225	224
10	218	222	223	222	221
15	216	216	216	216	215
20	210	209	210	210	208
25	201	199	201	201	202
30	193	191	192	186	190
35	180	178	179	179	178
40	166	165	166	164	165
45	151	150	149	150	150
50	134	135	133	133	134
55	117	117	116	117	117
60	100	99	99	98	99
65	81	80	80	80	80
70	62	61	60	60	61
75	43	42	42	42	42
80	25	24	24	24	24
85	10	9	9	9	9
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



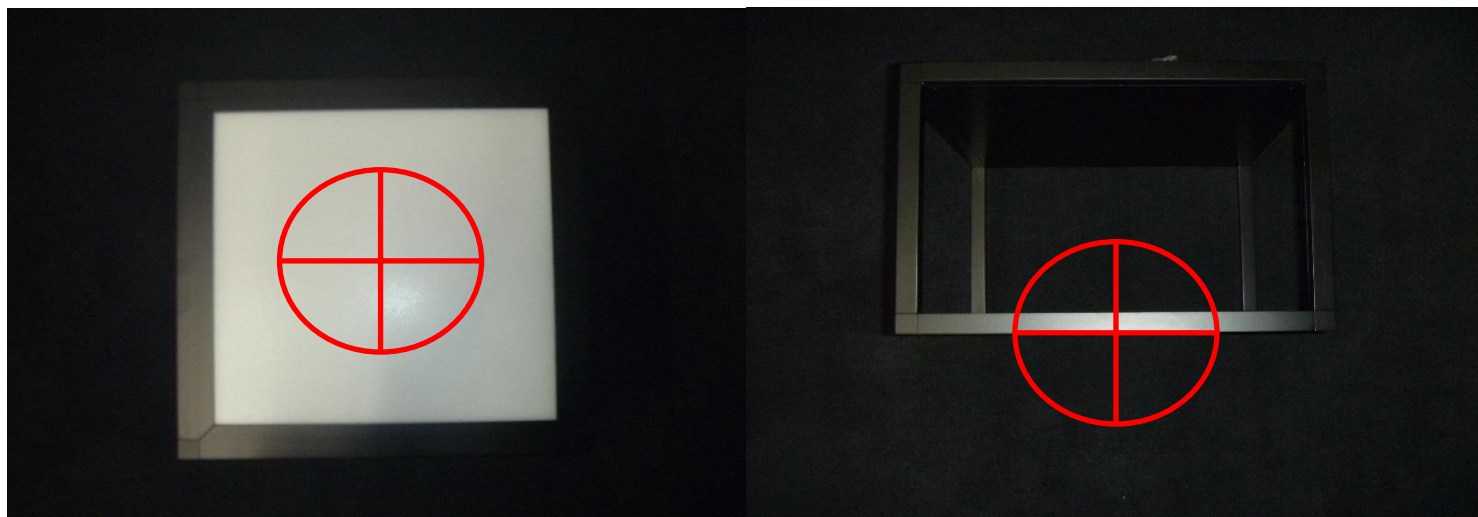
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ORIENTATION AND ALIGNMENT OF EUT

Luminous Opening		
Length (ft)	Width (ft)	Height (ft)
0.86	0.86	0.00
0°-180° H	90°-270° H	0°-180° V

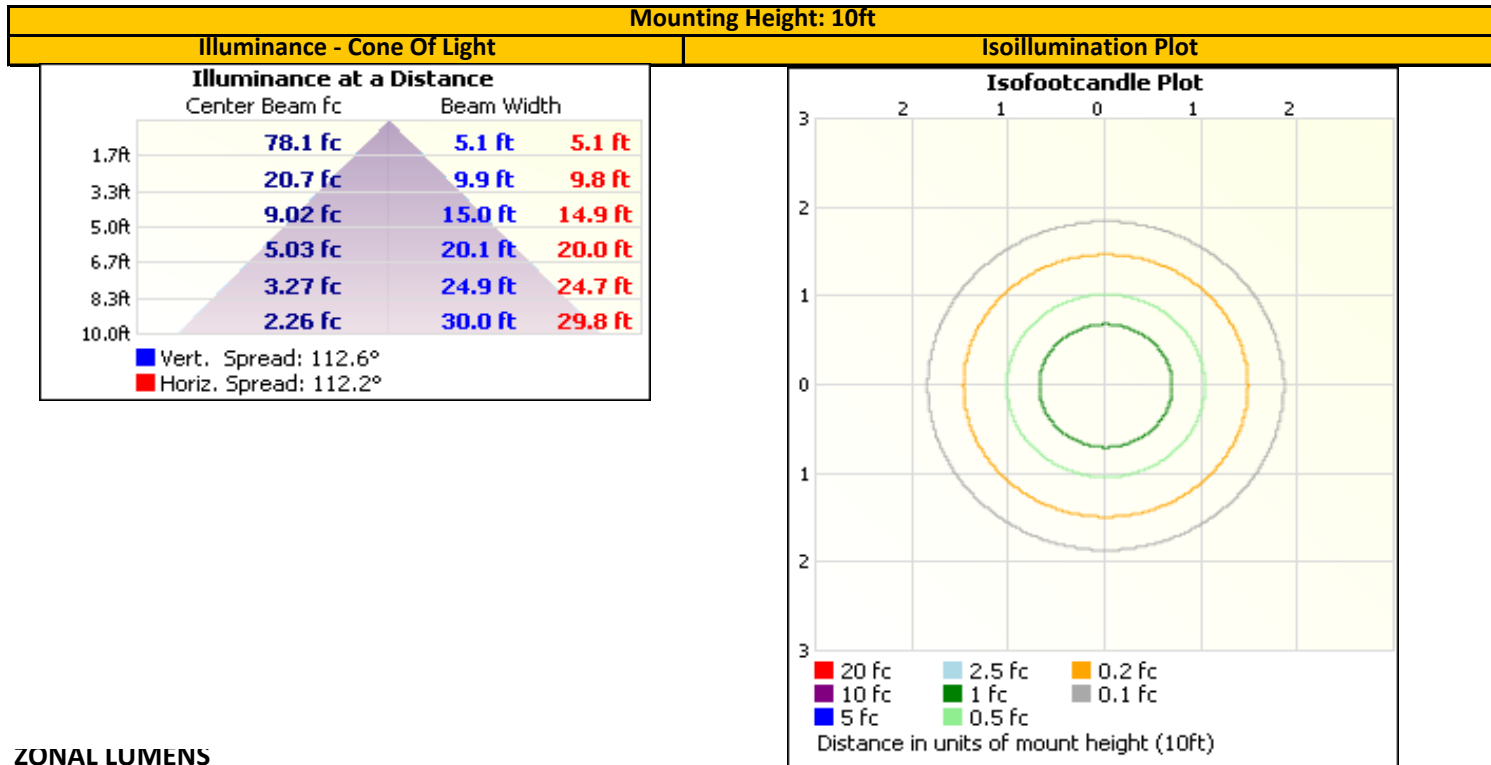
Test Distance (ft)
29.6

PHOTOMETRIC CENTER OF EUT



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ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	174.8	27.3%	0-10	21.3	3.3%
0-40	286.5	44.7%	10-20	61.0	9.5%
0-60	506.3	79.0%	20-30	92.4	14.4%
60-90	134.4	21.0%	30-40	111.7	17.4%
70-100	55.4	8.6%	40-50	115.6	18.0%
90-120	0.0	0.0%	50-60	104.3	16.3%
0-90	640.7	100.0%	60-70	79.0	12.3%
90-180	0.0	0.0%	70-80	44.3	6.9%
0-180	640.7	100.0%	80-90	11.1	1.7%
			90-100	0.0	0.0%
			100-110	0.0	0.0%
			110-120	0.0	0.0%
			120-130	0.0	0.0%
			130-140	0.0	0.0%
			140-150	0.0	0.0%
			150-160	0.0	0.0%
			160-170	0.0	0.0%
			170-180	0.0	0.0%

EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniophotometer	6440	---	5/14/2021	8/14/2021
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Yokogawa Power Analyzer	WT210	E464	5/11/2021	5/11/2022
4	Traceable Hygrothermometer	4800	L204	2/21/2021	2/21/2022
5	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
6	Omega Thermometer	DPi8-C24	M263	3/23/2021	3/23/2022
7	Bosch Distance Laser	Pro GLM 20	L211	3/3/2021	3/3/2022
8	M-D Building Products Digital Level	Smart Tool	L112	5/26/2021	5/26/2022

REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
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