

SONNEMAN - A WAY OF LIGHT

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

2064

PROJECT NUMBER

G104119984

REPORT NUMBER

104119984CRT-032

ISSUE DATE

6/2/2020

REVISED DATE

None

TEST DATES

5/30/2020

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104119984CRT-032

MODEL NUMBER(s)

2064

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-01007713-2.

TEST STANDARDS


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

In Charge of Testing:

Reviewer:



Gerald Gray
Associate Engineer
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SAMPLE INFORMATION

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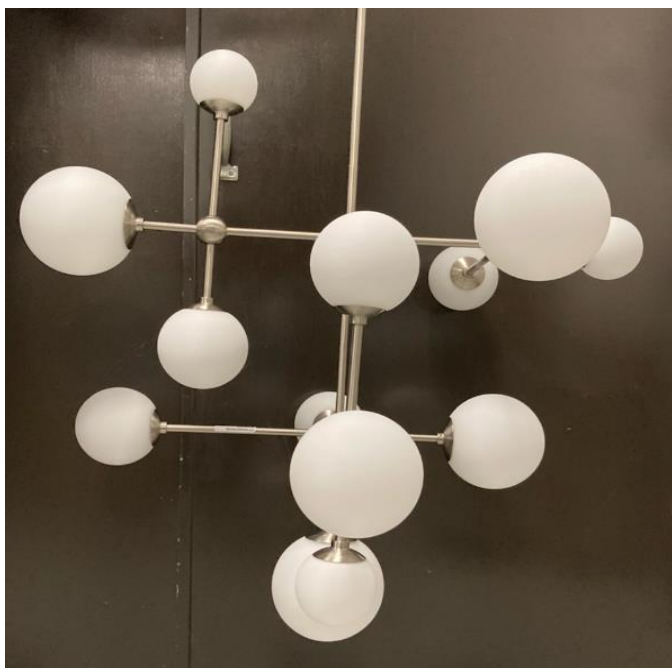
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2005201143-023	2064	Sabon LED Pendant	Production	5/20/2020

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	2064	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY**REPORT NO. 104119984CRT-032****PRODUCT INFORMATION AND SUMMARY OF DATA**

Product Model No.:	2064
Product Description:	Sabon LED Pendant
LED Model No.:	Not Provided
Driver Model No.:	LTF DA40W24VOC1-0000
Light Source:	LED

Criteria	Results
Light Output (lumens)	2318.4
Input Power (W) @ 120 (Vac)	46.6
Lumen Efficacy (lm/W)	49.7
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	2064	NA

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

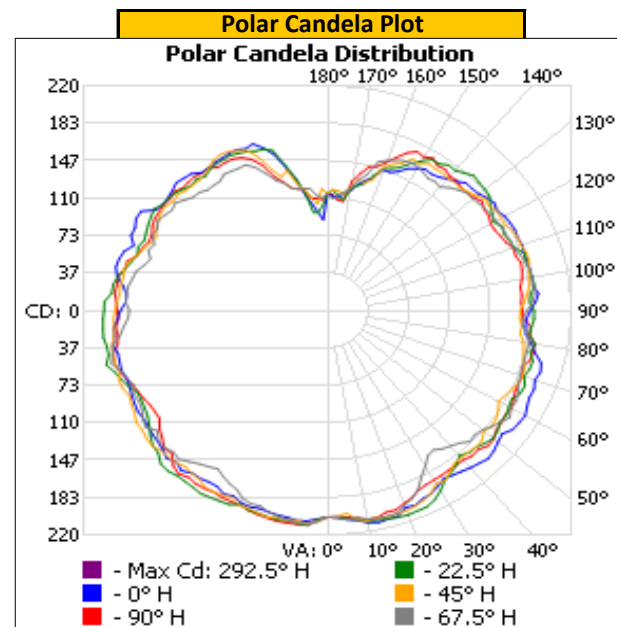
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.07	394.6	46.64	0.984

Light Output (lm)	Lumen Efficacy (lm/W)
2318.4	49.7

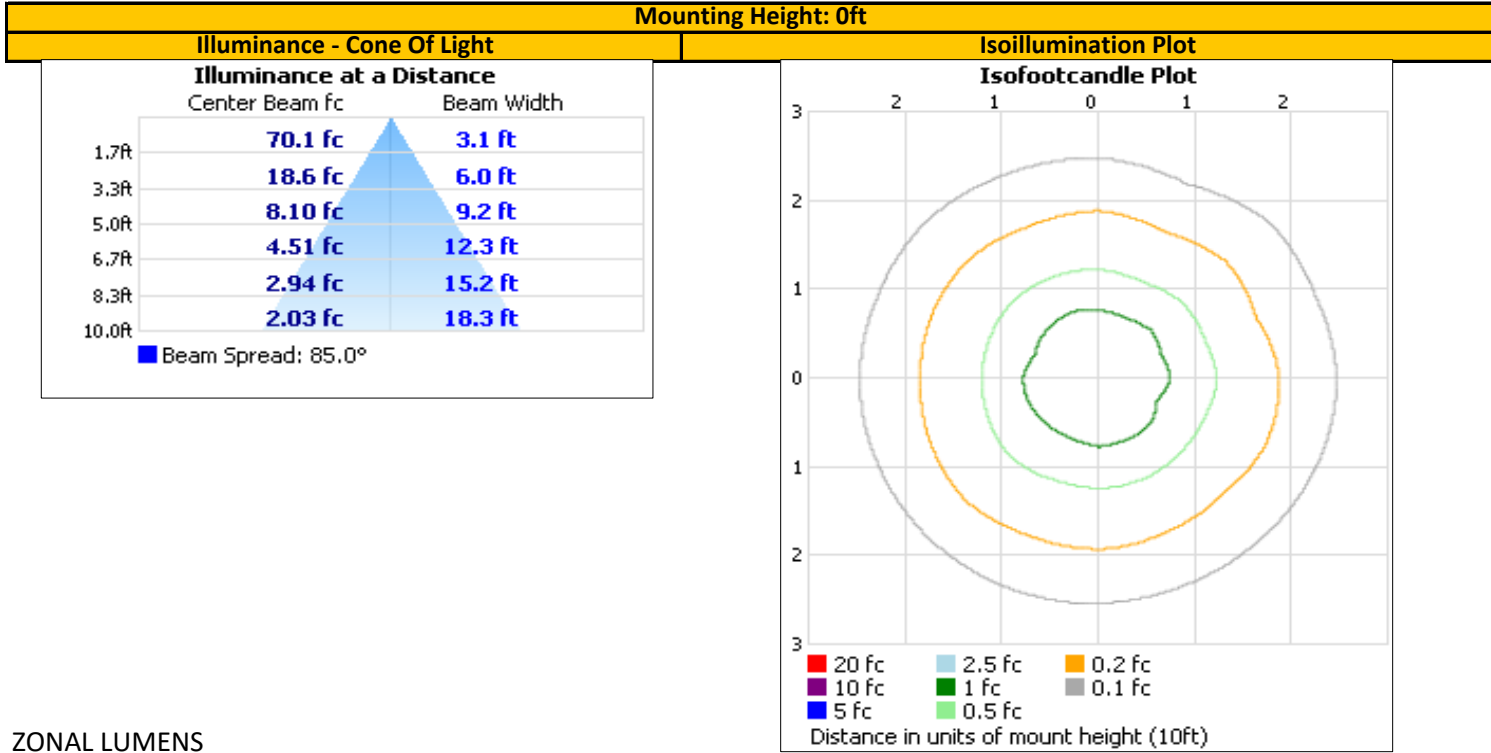
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	202	202	202	202	202
5	206	204	199	205	203
10	211	210	209	208	208
15	212	211	210	209	205
20	205	213	209	203	201
25	204	212	206	193	194
30	199	204	196	176	192
35	197	194	193	167	191
40	201	186	188	173	191
45	205	190	189	182	193
50	201	195	184	182	196
55	204	190	186	191	192
60	206	189	178	191	192
65	201	192	184	190	187
70	199	189	187	185	188
75	200	192	183	184	189
80	187	190	180	185	190
85	179	185	176	177	184
90	183	187	174	180	176
95	191	184	181	188	176
100	187	188	185	188	178
105	187	185	188	185	181
110	187	180	186	179	179
115	187	176	185	177	172
120	185	173	181	176	170
125	184	179	178	174	173
130	178	185	175	171	172
135	177	187	170	167	170
140	168	179	169	158	171
145	163	175	169	158	173
150	161	169	166	162	174
155	150	154	159	162	170
160	147	148	150	156	154
165	132	129	129	138	146
170	119	121	123	122	128
175	111	112	117	114	108
180	115	115	115	115	115

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire			
0-30	170.9	7.4%			
0-40	293.2	12.6%			
0-60	618.7	26.7%			
60-90	598.2	25.8%			
70-100	612.0	26.4%			
90-120	575.8	24.8%			
0-90	1,216.8	52.5%			
90-180	1,101.6	47.5%			
0-180	2,318.4	100.0%			
Zone	Lumens	Total	Zone	Lumens	Total
0-10	19.8	0.9%	90-100	203.6	8.8%
10-20	58.7	2.5%	100-110	194.5	8.4%
20-30	92.4	4.0%	110-120	177.6	7.7%
30-40	122.3	5.3%	120-130	159.2	6.9%
40-50	151.9	6.6%	130-140	134.2	5.8%
50-60	173.5	7.5%	140-150	106.5	4.6%
60-70	189.8	8.2%	150-160	75.6	3.3%
70-80	203.9	8.8%	160-170	39.4	1.7%
80-90	204.4	8.8%	170-180	10.9	0.5%

EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniometer	6440	---	5/21/2020	6/21/2020
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
4	Yokogawa Power Analyzer	WT210	E464	5/11/2020	5/11/2021
5	Omega Thermometer	DPI8-C24	M263	2/27/2020	2/27/2021
6	M-D Building Products Digital Level	Smart Tool	E499	6/27/2019	6/27/2020
7	NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2019	2/11/2021
8	NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2019	2/11/2021
9	NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2019	2/11/2021
10	NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2019	1/3/2021

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
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