

SONNEMAN - A WAY OF LIGHT TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

2567

PROJECT NUMBER

G104119984

REPORT NUMBER

104119984CRT-013

REPORT ISSUE DATE

February 24, 2020

REPORT REVISION DATE

None

PAGES

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REPORT NUMBER
104119984CRT-013

TEST OF (1) DAZZLE 12" ROUND LED SURFACE MOUNT

MODEL NUMBER
2567

REPORT RENDERED TO:
SONNEMAN - A WAY OF LIGHT
151 AIRPORT DRIVE
WAPPINGERS FALLS, NY 12590
ATTN: BRYAN CROWTHER

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

TEST DATES

February 11, 2020

In Charge of Testing:



Gerald Gray
Associate Engineer
Lighting Division

Reviewer:



Melanie Brittain
Senior Associate Engineer
Lighting Division

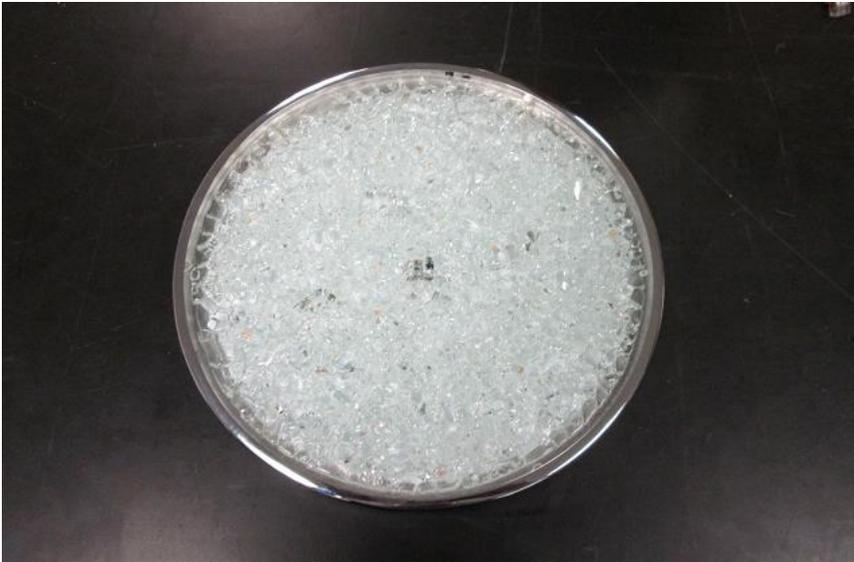
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SAMPLE INFORMATION

Control No.	Model No.	Description	Type	Received
CRT2002050800-004	2567	Dazzle 12" Round LED Surface Mount	Production	2/5/2020

SAMPLE PHOTOS



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SUMMARY OF DATA

Product Model No.:	2567
Product Description:	Dazzle 12" Round LED Surface Mount
LED Model No.:	Not Provided
Driver Model No.:	LTF TA60WA12LED
Light Source:	LED

Criteria	Results
Light Output (lumens)	1176.6
Input Power (W) @ 120 (Vac)	31.44
Lumen Efficacy (lm/W)	37.4
Input Power Factor () @ 120 (Vac)	0.950

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.

The calibration of the goniometer-photometer system is traceable to the National Institute of Standards and Technology.

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

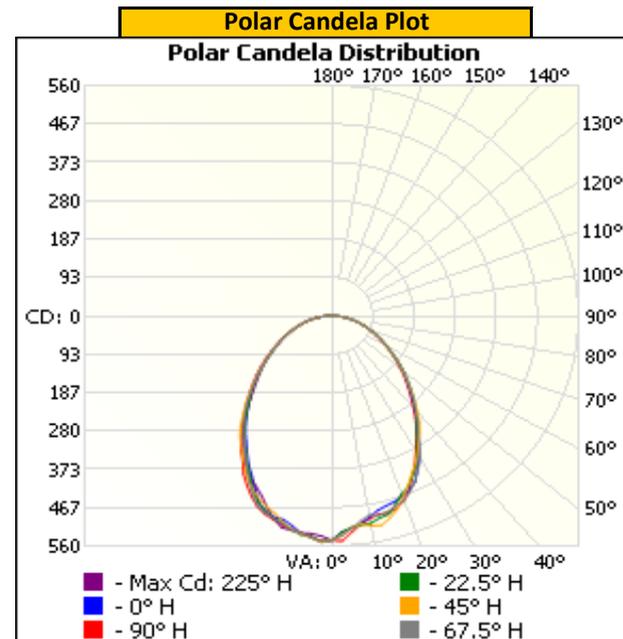
Fixture Model No.	2567	Fixture Control No.	CRT2002050800-004
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Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.00	275.9	31.44	0.950

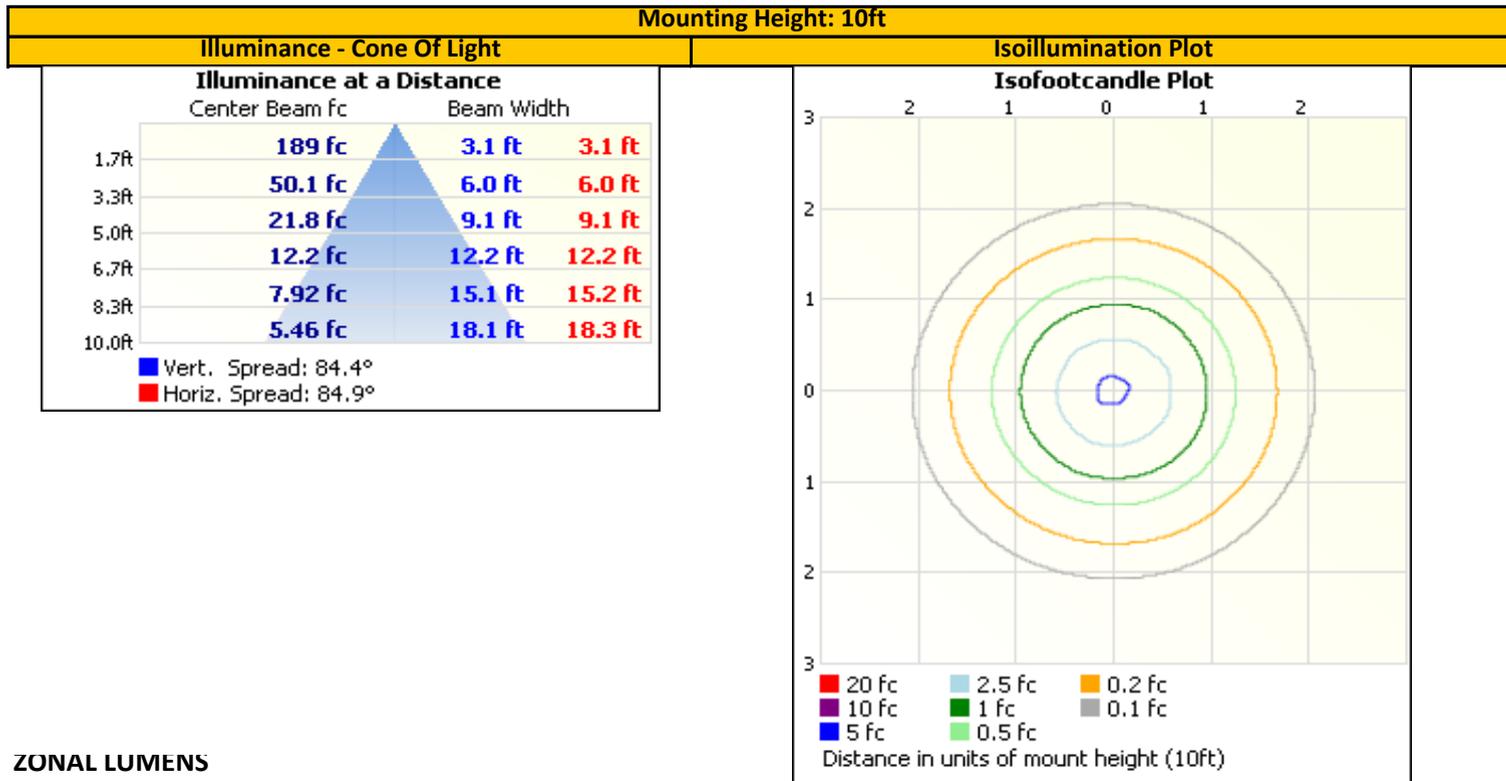
Light Output (lm)	Lumen Efficacy (lm/W)
1176.6	37.4

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	546	546	546	546	546
5	519	516	518	519	528
10	496	512	519	492	501
15	478	499	509	492	496
20	467	462	471	478	478
25	446	432	428	446	430
30	397	387	388	400	381
35	340	336	347	341	335
40	293	296	301	295	288
45	250	255	254	252	246
50	213	214	212	213	207
55	174	176	174	173	171
60	140	143	140	141	140
65	113	113	112	112	112
70	88	87	87	87	87
75	65	65	65	64	64
80	44	43	44	42	43
85	24	23	23	23	23
90	6	5	5	5	5
95	2	2	2	2	2
100	1	1	1	1	1
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



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire			
0-30	391.6	33.3%			
0-40	608.0	51.7%			
0-60	963.3	81.9%			
60-90	210.4	17.9%			
70-100	99.3	8.4%			
90-120	2.9	0.2%			
0-90	1,173.7	99.8%			
90-180	2.9	0.2%			
0-180	1,176.6	100.0%			
Zone	Lumens	Total	Zone	Lumens	Total
0-10	50.3	4.3%	90-100	2.8	0.2%
10-20	140.4	11.9%	100-110	0.1	0.0%
20-30	200.9	17.1%	110-120	0.0	0.0%
30-40	216.4	18.4%	120-130	0.0	0.0%
40-50	196.9	16.7%	130-140	0.0	0.0%
50-60	158.4	13.5%	140-150	0.0	0.0%
60-70	113.9	9.7%	150-160	0.0	0.0%
70-80	69.7	5.9%	160-170	0.0	0.0%
80-90	26.8	2.3%	170-180	0.0	0.0%

Test Equipment Used:	1 through 10				
Ambient Temp (°C):	24.2	Relative Hum (%):	NA	Test Completion Date	2/11/2020

See last page for equipment details

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EQUIPMENT LIST

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniometer	6440	---	1/14/2020	2/14/2020
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
4	Yokogawa Power Analyzer	WT210	E464	5/7/2019	5/7/2020
5	Omega Thermometer	DPi8-C24	M263	5/7/2019	5/7/2020
6	M-D Building Products Digital Level	Smart Tool	L112	5/1/2019	5/1/2020
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