



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L081910635



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Issue Date: 9/6/2019

Report Prepared For: Number Eight Lighting Company
526 Portal Street, Cotati, CA 94931

Model Number: 202-S-HI-3000-25/DIM1-2-SO/FLS-2-WH

Test: Photometric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 8/16/19

Date of Tests: 8/28/19 - 9/6/19

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	1/9/21
BK PRECISION	1747	PS-DC04	1/10/21
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/21
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

General Information

Manufacturer:	Number Eight Lighting Company
Model Number:	202-S-HI-3000-25/DIM1-2-SO/FLS-2-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Photometric & Electrical Test Results

Total Lumens:	895.89
Efficacy:	64.41
Input Voltage (VAC/60Hz):	119.98
Input Current (Amp):	0.1170
Input Power (W):	13.91
Input Power Factor:	0.9913
Current ATHD (%):	7.7%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:00
Total Operating Time (Hours):	2:00

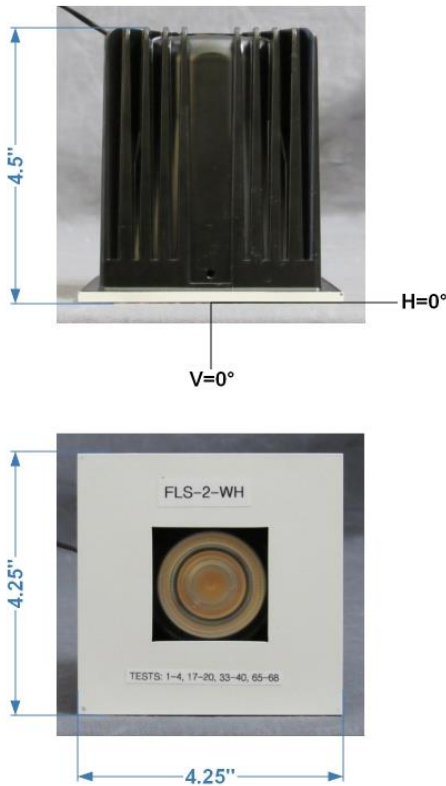


FIG. 1 LUMINAIRE

Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Keyur Patel

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 9*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910635.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L081910635
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 9/6/2019
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 202-S-HI-3000-25/DIM1-2-SO/FLS-2-WH
 [LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000K 90+ CRI, 25° Beam Spread,
 [MORE] Standard Output 1% Dimming Driver, Square Flanged Trim, 1.875" x 1.875" Aperture
 [BALLASTCAT] INTUITIVE SYSTEMS ISD-701-350-15-D
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 119.98VAC, 13.91W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	896
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	13.91
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.50
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.48
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.15 ft
Luminous Width (90-270)	0.15 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7773	11153	7773
55	833	1667	833
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910635.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	3286	3286	3286	3286	3286	3286	3286	3286	3286	3286
1.0	3288	3284	3285	3287	3287	3287	3290	3289	3289	3287
3.0	3227	3227	3227	3228	3229	3229	3228	3227	3231	3233
5.0	3096	3093	3091	3090	3091	3093	3093	3092	3091	3093
7.0	2883	2885	2884	2885	2885	2883	2884	2884	2885	2886
9.0	2602	2603	2604	2603	2603	2605	2605	2611	2612	2613
11.0	2262	2262	2263	2261	2266	2267	2271	2276	2279	2277
13.0	1892	1892	1891	1891	1890	1891	1893	1892	1892	1892
15.0	1505	1504	1505	1506	1505	1507	1505	1501	1497	1497
17.0	1132	1132	1133	1134	1136	1136	1134	1131	1130	1131
19.5	749	750	750	752	753	753	753	755	756	758
22.5	445	445	446	448	449	450	453	457	461	463
25.5	268	269	269	272	273	276	283	288	293	294
29.0	151	151	152	154	158	163	170	176	181	183
33.0	75	75	76	77	81	87	94	102	108	111
37.5	37	37	36	36	37	38	41	47	55	59
42.5	17	17	17	17	18	18	19	19	21	23
47.5	6	6	6	6	7	7	8	9	10	10
55.0	1	1	1	1	1	2	2	2	2	2
65.0	0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	3286	3286	3286	3286	3286	3286	3286	3286	3286
1.0	3287	3288	3286	3289	3287	3288	3288	3286	3289
3.0	3232	3231	3231	3232	3233	3232	3233	3233	3232
5.0	3095	3093	3096	3097	3099	3101	3100	3102	3102
7.0	2888	2891	2893	2894	2895	2898	2901	2899	2900
9.0	2615	2615	2617	2616	2616	2618	2618	2616	2616
11.0	2279	2279	2276	2275	2275	2275	2278	2278	2279
13.0	1894	1895	1900	1901	1902	1903	1906	1909	1908
15.0	1500	1507	1511	1518	1519	1522	1525	1526	1527
17.0	1134	1138	1144	1150	1153	1155	1157	1159	1159
19.5	760	762	765	767	770	771	772	773	774
22.5	463	461	460	459	460	461	460	459	459
25.5	294	292	287	282	279	277	276	275	275
29.0	182	179	173	166	161	158	156	155	155
33.0	109	103	96	89	83	80	79	78	78
37.5	56	48	42	39	37	36	36	37	37
42.5	21	19	19	18	18	17	17	17	17
47.5	10	9	8	7	7	7	7	6	6
55.0	2	2	2	2	2	1	1	1	1
65.0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910635.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	669.10	N.A.	74.70
0-30	829.20	N.A.	92.60
0-40	876.56	N.A.	97.80
0-60	895.15	N.A.	99.90
0-80	895.89	N.A.	100.00
0-90	895.89	N.A.	100.00
10-90	666.87	N.A.	74.40
20-40	207.46	N.A.	23.20
20-50	223.13	N.A.	24.90
40-70	19.33	N.A.	2.20
60-80	0.74	N.A.	0.10
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	895.89	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	229.01
10-20	440.09
20-30	160.10
30-40	47.36
40-50	15.67
50-60	2.92
60-70	0.74
70-80	0.00
80-90	0.00
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

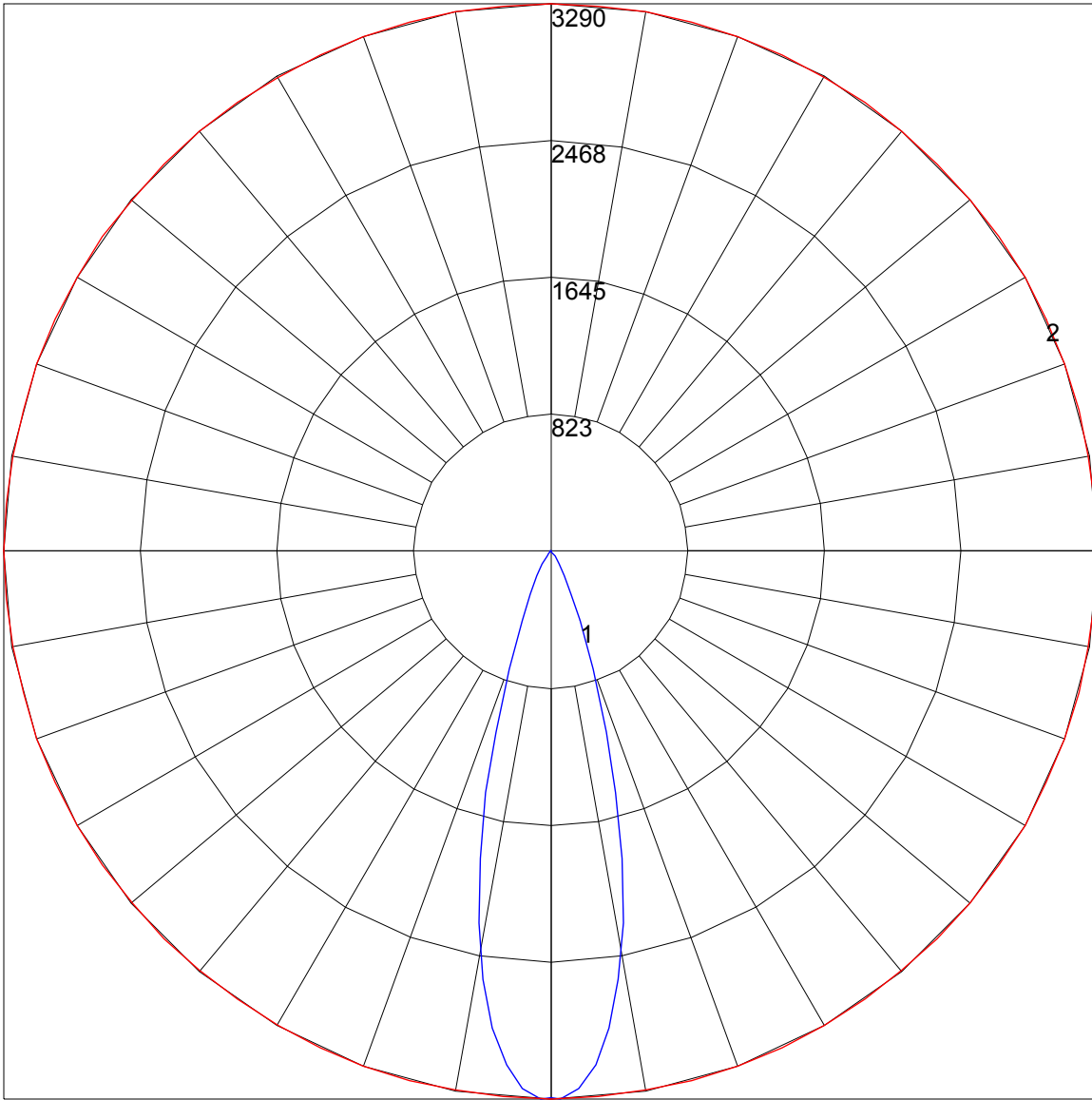
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	112	110	109	112	110	109	107	106	105	104	103	102	101	99	98	98	96
2	111	107	104	101	109	105	102	100	102	100	98	99	97	96	96	95	94	92
3	107	102	98	95	105	100	97	94	98	95	93	96	93	91	93	91	90	88
4	103	97	93	90	101	96	92	89	94	91	88	92	89	87	91	88	86	85
5	99	93	89	85	98	92	88	85	91	87	84	89	86	84	88	85	83	82
6	96	89	85	82	95	89	84	81	87	84	81	86	83	80	85	82	80	79
7	93	86	82	78	92	85	81	78	84	81	78	83	80	77	82	79	77	76
8	90	83	78	75	89	82	78	75	82	78	75	81	77	75	80	77	74	73
9	87	80	76	73	86	80	75	73	79	75	72	78	75	72	77	74	72	71
10	85	77	73	70	84	77	73	70	76	73	70	76	72	70	75	72	70	69

POLAR GRAPH



Maximum Candela = 3290 Located At Horizontal Angle = 30, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (30 - 210) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

ILLUMINANCE CONE DIAGRAM: BEAM (50%)
MOUNT HEIGHT(Ft): 12

