



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

Report No: L081910651



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Issue Date: 9/10/2019

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

Model Number: 202-S-BV-HI-3000-25/DIM1-2-SO/FLS-2-BV-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: 9/3/19 - 9/10/19

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-BV-HI-3000-25/DIM1-2-SO/FLS-2-BV-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Photometric & Electrical Test Results

Total Lumens:	979.92
Efficacy:	70.09
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.1175
Input Power (W):	13.98
Input Power Factor:	0.9914
Current ATHD (%):	7.6%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:45

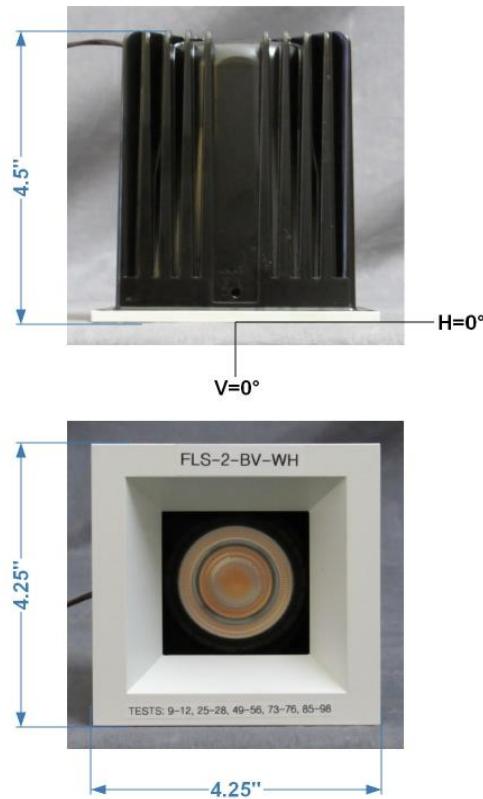


FIG. 1 LUMINAIRE

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 : L081910651.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081910651
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 9/10/2019
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 202-S-BV-HI-3000-25/DIM1-2-SO/FLS-2-BV-WH
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000K 90+ CRI, 25° Beam Spread,
[MORE] Standard Output 1% Dimming Driver, Square Flanged Bevel Trim, 2.25" x 2.25" 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] 120.0VAC, 13.98W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	980
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	13.98
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.50
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.27 ft
Luminous Width (90-270)	0.27 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2921	7823	2816
55	772	1029	772
65	1047	698	1047
75	1140	1140	1140
85	0	0	0

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910651.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	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211
1.0	3214	3218	3214	3219	3218	3216	3217	3218	3218	3220
3.0	3169	3177	3174	3172	3169	3173	3175	3174	3175	3174
5.0	3055	3058	3053	3058	3054	3058	3057	3058	3061	3057
7.0	2867	2873	2875	2878	2876	2874	2877	2877	2880	2874
9.0	2625	2626	2623	2626	2625	2625	2626	2619	2625	2623
11.0	2322	2320	2318	2320	2317	2312	2311	2311	2315	2315
13.0	1961	1966	1965	1962	1961	1959	1958	1957	1955	1959
15.0	1589	1590	1589	1589	1586	1582	1583	1582	1580	1580
17.0	1225	1225	1224	1223	1223	1221	1219	1218	1217	1216
19.5	836	837	838	838	839	838	837	837	836	835
22.5	517	518	519	518	521	523	524	524	527	527
25.5	335	335	335	337	338	340	342	346	348	350
29.0	211	212	214	217	220	223	226	230	232	232
33.0	119	120	124	129	135	143	149	154	155	156
37.5	49	50	52	56	63	72	84	95	102	105
42.5	21	21	22	23	25	26	29	37	50	58
47.5	7	8	8	8	9	10	12	14	16	17
55.0	3	3	3	3	3	3	3	4	4	4
65.0	3	3	3	3	3	3	3	2	2	2
75.0	2	2	2	2	2	2	2	2	2	2
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	3211	3211	3211	3211	3211	3211	3211	3211	3211
1.0	3218	3217	3217	3215	3217	3218	3215	3214	3220
3.0	3176	3170	3170	3179	3173	3175	3175	3174	3177
5.0	3060	3060	3058	3062	3062	3062	3061	3057	3064
7.0	2873	2877	2876	2875	2873	2880	2876	2874	2877
9.0	2625	2624	2621	2625	2625	2625	2624	2627	2619
11.0	2318	2313	2314	2313	2313	2314	2314	2317	2313
13.0	1957	1958	1958	1956	1959	1954	1954	1957	1959
15.0	1580	1580	1578	1577	1577	1577	1576	1577	1576
17.0	1215	1214	1212	1211	1211	1210	1209	1209	1209
19.5	834	833	831	830	829	828	827	826	825
22.5	526	525	522	520	518	516	516	515	516
25.5	349	347	345	342	340	339	337	337	338
29.0	233	233	231	227	224	220	216	213	213
33.0	157	156	152	146	137	130	125	122	121
37.5	102	94	84	72	62	55	51	49	48
42.5	49	35	29	26	24	23	21	21	20
47.5	16	14	12	10	9	8	8	8	7
55.0	4	4	3	3	3	3	3	3	3
65.0	2	2	2	3	3	3	3	3	3
75.0	2	2	2	2	2	2	2	2	2
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 : L081910651.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	685.11	N.A.	69.90
0-30	872.20	N.A.	89.00
0-40	943.25	N.A.	96.30
0-60	973.62	N.A.	99.40
0-80	978.84	N.A.	99.90
0-90	979.92	N.A.	100.00
10-90	752.76	N.A.	76.80
20-40	258.14	N.A.	26.30
20-50	284.00	N.A.	29.00
40-70	33.19	N.A.	3.40
60-80	5.22	N.A.	0.50
70-80	2.40	N.A.	0.20
80-90	1.08	N.A.	0.10
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	979.92	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	227.16
10-20	457.95
20-30	187.09
30-40	71.05
40-50	25.87
50-60	4.50
60-70	2.82
70-80	2.40
80-90	1.08
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

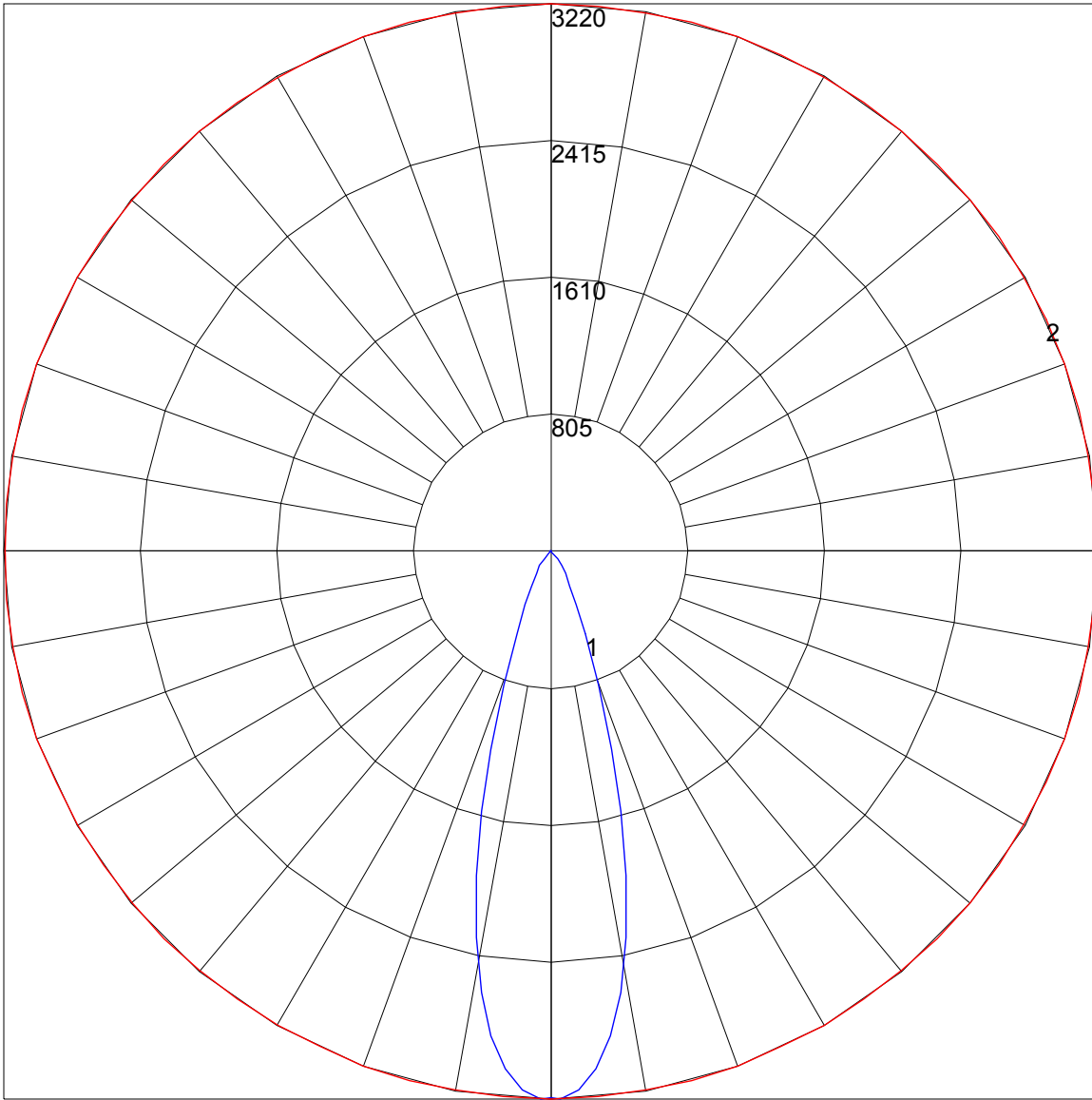
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91	91
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87	87
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	87	85	83	83
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80	80
6	95	88	83	79	93	87	82	79	86	82	79	84	81	78	83	80	78	77	77
7	91	84	79	76	90	83	79	76	82	78	75	81	78	75	80	77	75	74	74
8	88	81	76	73	87	80	76	73	79	75	72	78	75	72	78	74	72	71	71
9	85	78	73	70	85	77	73	70	77	73	70	76	72	69	75	72	69	68	68
10	83	75	70	67	82	75	70	67	74	70	67	73	70	67	73	69	67	66	66

POLAR GRAPH



Maximum Candela = 3220 Located At Horizontal Angle = 45, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

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

