



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

Report No: L081910610



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Issue Date: 8/28/2019

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

Model Number: 201-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: 8/23/19 - 8/28/19

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:	201-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:	997.42
Efficacy:	71.55
Input Voltage (VAC/60Hz):	120.05
Input Current (Amp):	0.1171
Input Power (W):	13.94
Input Power Factor:	0.9913
Current ATHD (%):	7.6%

Test Condition

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

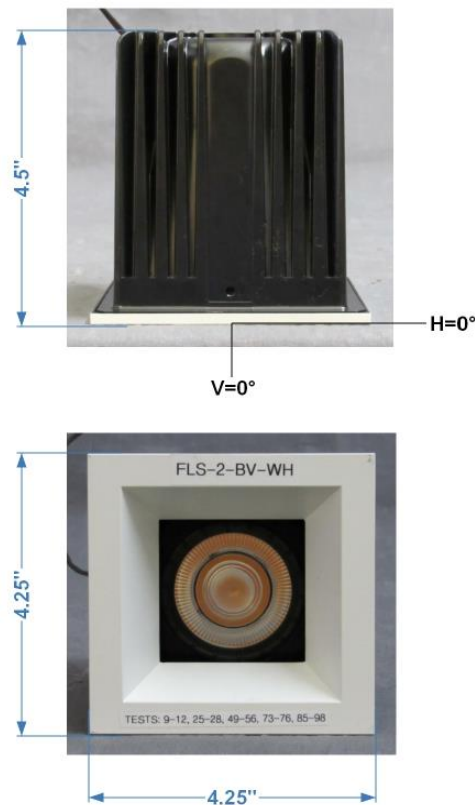


FIG. 1 LUMINAIRE

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 : L081910610.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L081910610
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 8/28/2019
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 201-S-BV-HI-3000-25/DIM1-2-SO/FLS-2-BV-WH
 [LUMINAIRE] LED Recessed Fixed Position Downlight, 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] 120.05VAC, 13.94W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	997
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	13.94
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)	0.27 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	4381	10744	4277
55	1286	2057	1029
65	1396	1047	1396
75	1140	1140	1140
85	1693	1693	1693

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910610.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	3425	3425	3425	3425	3425	3425	3425	3425	3425	3425
1.0	3433	3431	3425	3425	3428	3429	3436	3436	3435	3436
3.0	3382	3381	3382	3381	3379	3379	3384	3387	3387	3389
5.0	3236	3238	3240	3241	3238	3231	3235	3237	3240	3238
7.0	3023	3019	3015	3015	3012	3002	3005	3004	3007	3007
9.0	2720	2721	2721	2717	2710	2698	2697	2697	2701	2704
11.0	2372	2373	2368	2366	2357	2338	2335	2338	2342	2342
13.0	1978	1979	1974	1972	1966	1943	1938	1939	1942	1943
15.0	1576	1576	1575	1570	1566	1547	1539	1539	1542	1542
17.0	1197	1197	1195	1192	1184	1171	1169	1166	1166	1168
19.5	816	815	814	812	809	797	794	793	794	794
22.5	507	506	506	505	504	498	497	496	497	497
25.5	330	330	331	331	331	329	329	328	328	328
29.0	219	219	220	220	221	219	219	219	218	218
33.0	140	141	142	144	149	152	151	150	148	147
37.5	72	73	76	81	87	93	99	103	105	104
42.5	29	29	30	31	34	40	48	58	66	69
47.5	13	14	14	15	17	18	20	22	27	34
55.0	5	5	5	5	6	6	6	7	7	8
65.0	4	4	4	4	4	4	4	4	3	3
75.0	2	2	2	2	2	2	2	2	2	2
85.0	1	1	1	1	1	1	1	1	1	1
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	3425	3425	3425	3425	3425	3425	3425	3425	3425
1.0	3438	3438	3441	3436	3432	3431	3430	3431	3428
3.0	3388	3389	3388	3382	3382	3380	3376	3375	3380
5.0	3235	3236	3234	3229	3230	3230	3230	3231	3231
7.0	3005	3006	3006	3005	3006	3008	3006	3007	3007
9.0	2704	2704	2705	2708	2709	2712	2712	2714	2714
11.0	2343	2346	2347	2353	2356	2360	2361	2365	2365
13.0	1945	1948	1952	1958	1963	1966	1969	1969	1971
15.0	1544	1546	1551	1558	1561	1563	1564	1565	1563
17.0	1169	1172	1173	1177	1179	1179	1179	1179	1179
19.5	795	796	796	796	796	795	795	794	794
22.5	496	496	494	494	492	491	490	489	489
25.5	327	325	323	321	318	316	314	314	313
29.0	216	215	212	210	208	205	204	203	203
33.0	146	146	144	142	137	133	130	129	127
37.5	102	99	94	87	80	74	69	66	65
42.5	65	56	46	37	33	30	29	28	28
47.5	28	22	20	18	16	15	14	13	13
55.0	7	6	6	6	5	5	5	5	4
65.0	3	3	3	3	3	3	3	4	4
75.0	2	2	2	2	2	2	2	2	2
85.0	1	1	1	1	1	1	1	1	1
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910610.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	694.22	N.A.	69.60
0-30	872.95	N.A.	87.50
0-40	945.87	N.A.	94.80
0-60	988.29	N.A.	99.10
0-80	995.53	N.A.	99.80
0-90	997.42	N.A.	100.00
10-90	758.63	N.A.	76.10
20-40	251.65	N.A.	25.20
20-50	286.16	N.A.	28.70
40-70	46.83	N.A.	4.70
60-80	7.24	N.A.	0.70
70-80	2.83	N.A.	0.30
80-90	1.89	N.A.	0.20
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	997.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	238.79
10-20	455.43
20-30	178.74
30-40	72.92
40-50	34.50
50-60	7.91
60-70	4.41
70-80	2.83
80-90	1.89
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

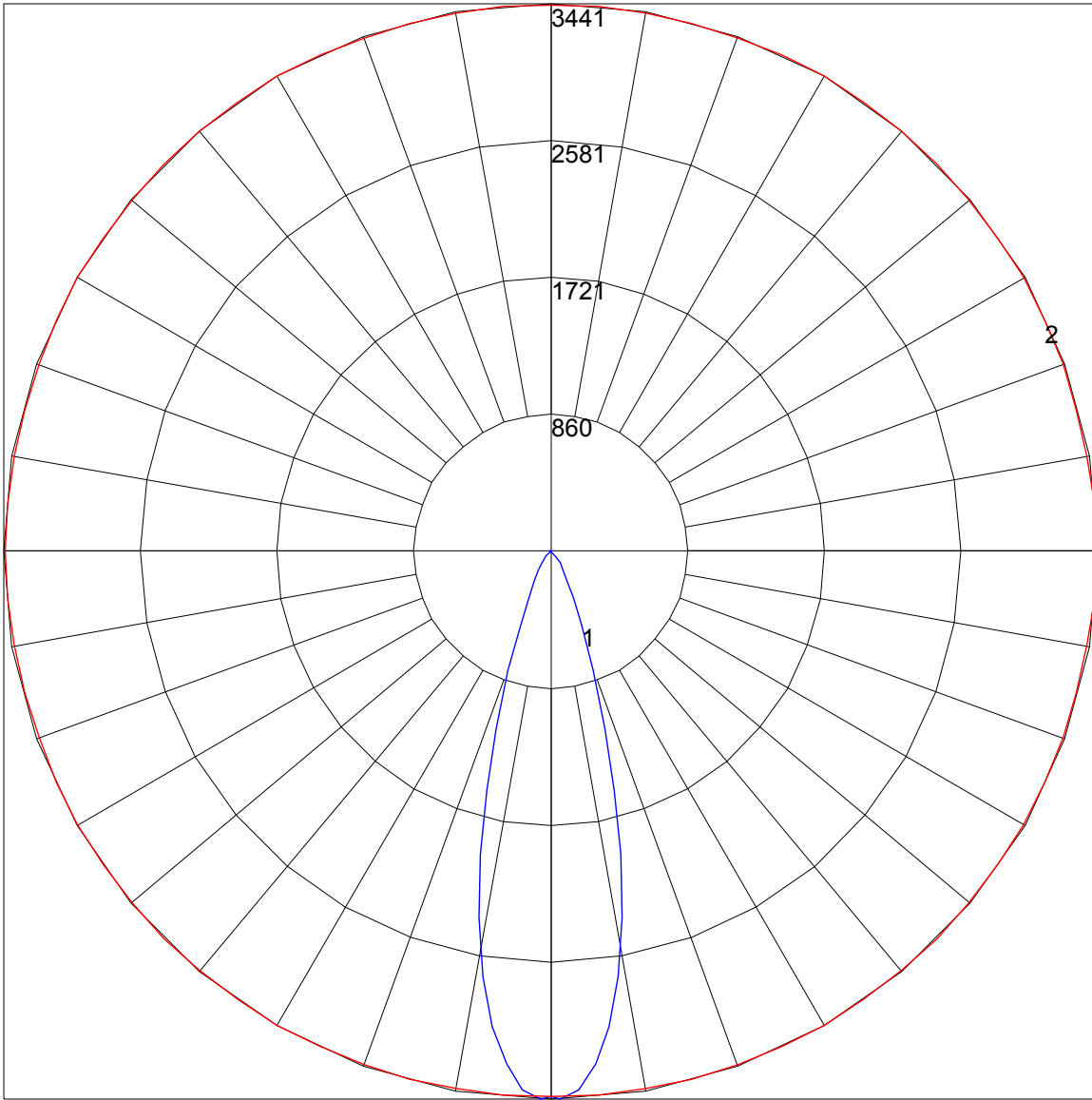
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91	94	92	89	92	90	88	87
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79
6	95	87	83	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	76	90	83	79	75	82	78	75	81	77	75	80	77	74	73
8	88	81	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70
9	85	78	73	70	84	77	73	70	76	72	69	75	72	69	75	71	69	68
10	83	75	70	67	82	74	70	67	74	70	67	73	69	67	72	69	67	65

POLAR GRAPH



Maximum Candela = 3441 Located At Horizontal Angle = 60, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

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

