



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

Report No: L081910653



**Report No:** L081910653

**Issue Date:** 9/10/2019

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

**Model Number:** 202-S-BV-HI-3000-40/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**

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	202-S-BV-HI-3000-40/DIM1-2-SO/FLS-2-BV-WH
<b>Driver Model Number:</b>	INTUITIVE SYSTEMS ISD-701-350-15-D

**Photometric & Electrical Test Results**

<b>Total Lumens:</b>	1139.13
<b>Efficacy:</b>	81.47
<b>Input Voltage (VAC/60Hz):</b>	120.01
<b>Input Current (Amp):</b>	0.1173
<b>Input Power (W):</b>	13.98
<b>Input Power Factor:</b>	0.9928
<b>Current ATHD (%):</b>	7.8%

**Test Condition**

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

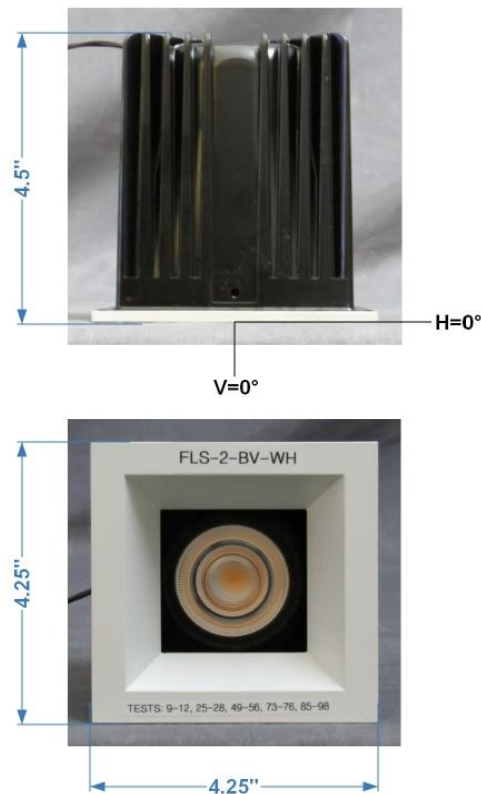


FIG. 1 LUMINAIRE

## 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 : L081910653.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910653  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUE DATE] 9/10/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 202-S-BV-HI-3000-40/DIM1-2-SO/FLS-2-BV-WH  
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000K 90+ CRI, 40° 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] 120.01VAC, 13.98W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1139
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	13.98
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.60
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	2190	7510	2086
55	772	772	772
65	1047	698	1047
75	1140	1140	1140
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910653.IES**

**CANDELA TABULATION**

	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>
<b>0.0</b>	2572	2572	2572	2572	2572	2572	2572	2572	2572	2572
<b>1.0</b>	2570	2572	2572	2574	2573	2569	2579	2574	2573	2573
<b>3.0</b>	2597	2598	2594	2597	2600	2592	2593	2586	2589	2589
<b>5.0</b>	2612	2617	2614	2612	2610	2605	2606	2606	2602	2601
<b>7.0</b>	2595	2591	2591	2591	2587	2584	2582	2578	2576	2578
<b>9.0</b>	2529	2526	2525	2524	2523	2513	2512	2507	2510	2512
<b>11.0</b>	2426	2416	2411	2409	2408	2403	2401	2399	2399	2398
<b>13.0</b>	2240	2230	2222	2218	2217	2213	2216	2217	2212	2211
<b>15.0</b>	1983	1979	1966	1967	1965	1967	1968	1964	1962	1961
<b>17.0</b>	1688	1685	1674	1674	1672	1674	1673	1674	1671	1667
<b>19.5</b>	1294	1291	1287	1284	1284	1283	1283	1282	1280	1278
<b>22.5</b>	846	844	840	840	835	837	838	839	838	832
<b>25.5</b>	507	506	503	503	501	504	506	508	509	500
<b>29.0</b>	275	274	275	276	276	277	280	282	282	276
<b>33.0</b>	149	150	154	157	162	168	171	173	170	170
<b>37.5</b>	38	39	41	46	55	72	90	100	104	104
<b>42.5</b>	16	16	16	17	18	19	20	27	48	60
<b>47.5</b>	5	5	5	5	6	7	9	11	12	12
<b>55.0</b>	3	3	3	3	3	3	3	3	3	3
<b>65.0</b>	3	3	3	3	2	2	2	2	2	2
<b>75.0</b>	2	2	2	2	2	2	2	2	2	2
<b>85.0</b>	0	0	0	0	0	0	0	0	0	0
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0

**Vert. Angles**      **Horizontal Angles**

	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	<b>80</b>	<b>85</b>	<b>90</b>
<b>0.0</b>	2572	2572	2572	2572	2572	2572	2572	2572	2572
<b>1.0</b>	2568	2566	2563	2563	2567	2563	2574	2573	2576
<b>3.0</b>	2588	2591	2586	2584	2586	2580	2593	2595	2599
<b>5.0</b>	2606	2605	2596	2598	2610	2613	2611	2608	2622
<b>7.0</b>	2578	2580	2567	2569	2567	2578	2576	2592	2590
<b>9.0</b>	2517	2515	2510	2501	2520	2507	2506	2525	2525
<b>11.0</b>	2397	2396	2388	2400	2393	2381	2403	2400	2394
<b>13.0</b>	2208	2206	2205	2203	2198	2205	2204	2206	2202
<b>15.0</b>	1960	1959	1955	1956	1952	1955	1951	1952	1949
<b>17.0</b>	1665	1663	1658	1659	1672	1659	1658	1657	1657
<b>19.5</b>	1271	1265	1262	1258	1268	1265	1260	1259	1258
<b>22.5</b>	828	821	816	822	825	822	819	820	819
<b>25.5</b>	497	493	493	490	492	490	489	489	487
<b>29.0</b>	276	274	274	271	270	268	266	265	264
<b>33.0</b>	169	170	168	163	159	155	151	148	147
<b>37.5</b>	102	99	90	71	55	45	40	38	38
<b>42.5</b>	47	27	20	18	17	17	16	16	15
<b>47.5</b>	12	11	9	7	6	5	5	5	5
<b>55.0</b>	3	3	3	3	3	3	3	3	3
<b>65.0</b>	2	2	2	2	2	3	3	3	3
<b>75.0</b>	2	2	2	2	2	2	2	2	2
<b>85.0</b>	0	0	0	0	0	0	0	0	0
<b>90.0</b>	0	0	0	0	0	0	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910653.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	744.72	N.A.	65.40
0-30	1025.52	N.A.	90.00
0-40	1107.4	N.A.	97.20
0-60	1133.24	N.A.	99.50
0-80	1138.05	N.A.	99.90
0-90	1139.13	N.A.	100.00
10-90	939.90	N.A.	82.50
20-40	362.68	N.A.	31.80
20-50	385.12	N.A.	33.80
40-70	28.39	N.A.	2.50
60-80	4.81	N.A.	0.40
70-80	2.26	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	1139.13	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	199.23
10-20	545.49
20-30	280.80
30-40	81.88
40-50	22.43
50-60	3.40
60-70	2.56
70-80	2.26
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

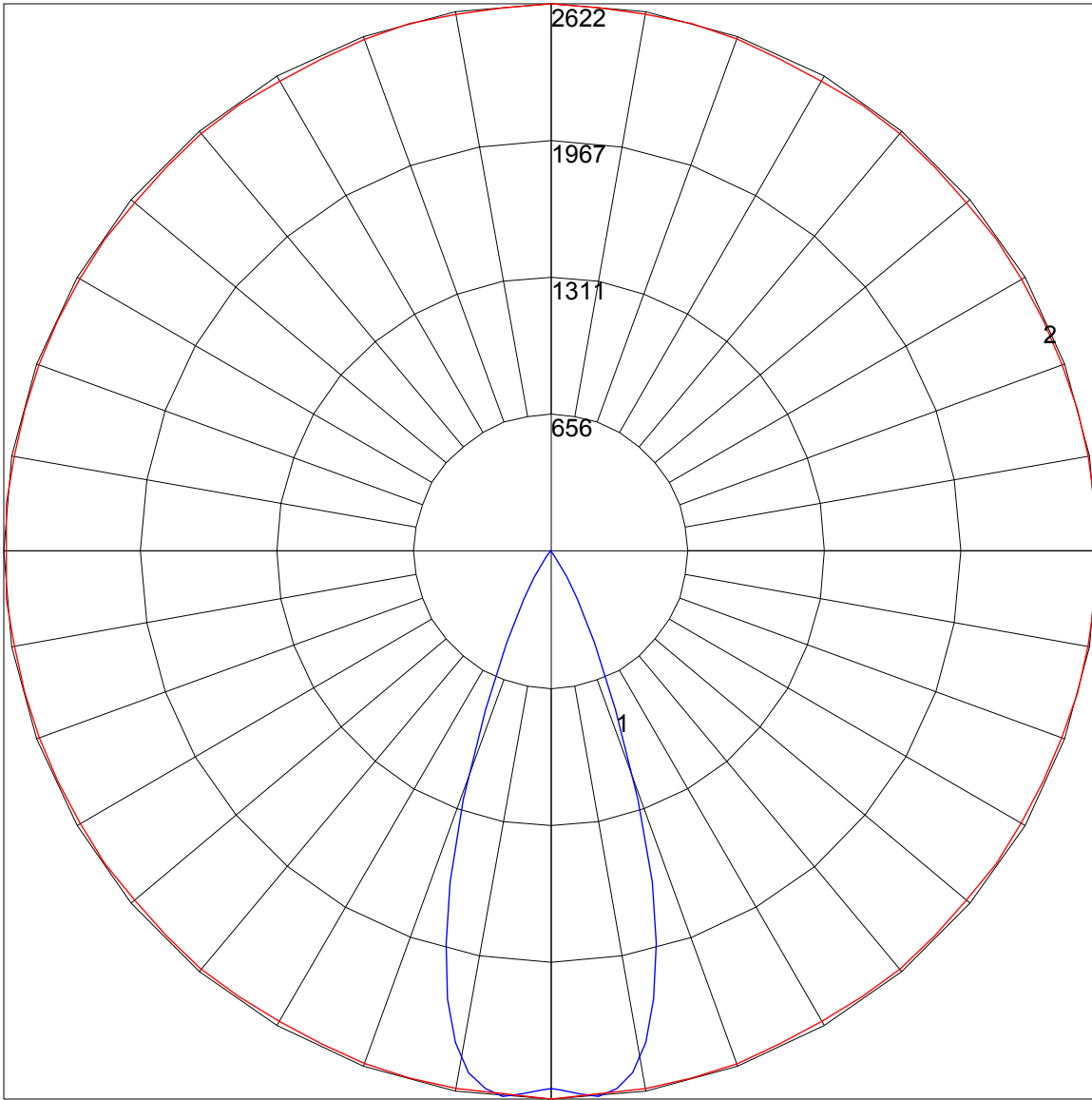
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	90	88	86
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78
6	94	86	81	78	92	86	81	78	84	80	77	83	79	77	82	79	76	75
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69
9	84	76	71	68	83	75	71	68	75	70	67	74	70	67	73	70	67	66
10	81	73	68	65	80	73	68	65	72	68	65	71	67	65	70	67	64	63

POLAR GRAPH



Maximum Candela = 2622 Located At Horizontal Angle = 90, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)



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

