



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

Report No: L081910637



**Report No:** L081910637

**Issue Date:** 9/6/2019

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

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

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

**Photometric & Electrical Test Results**

<b>Total Lumens:</b>	1081.19
<b>Efficacy:</b>	77.53
<b>Input Voltage (VAC/60Hz):</b>	119.98
<b>Input Current (Amp):</b>	0.1171
<b>Input Power (W):</b>	13.95
<b>Input Power Factor:</b>	0.9928
<b>Current ATHD (%):</b>	7.6%

**Test Condition**

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

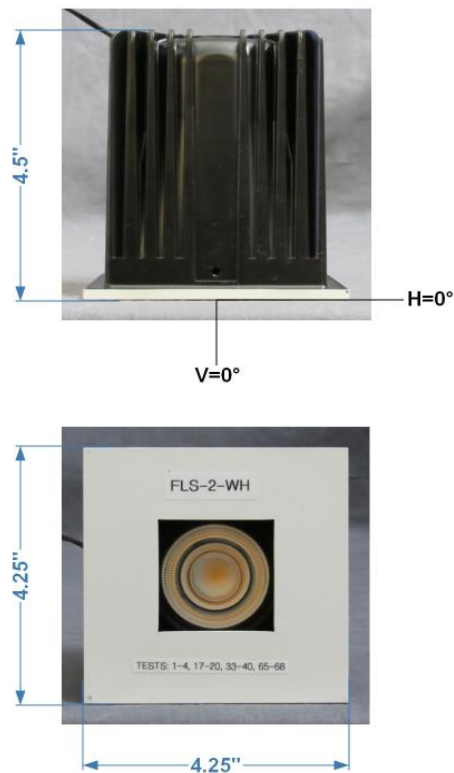


FIG. 1 LUMINAIRE

## 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 : L081910637.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910637  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 9/6/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 202-S-HI-3000-40/DIM1-2-SO/FLS-2-WH  
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000K 90+ CRI, 40° 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, 13.95W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1081
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	13.95
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.62
Spacing Criterion (90-270)	0.64
Spacing Criterion (Diagonal)	0.58
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	5745	8111	5745
55	833	833	833
65	0	0	0
75	0	0	0
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910637.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>
<b>0.0</b>	2759	2759	2759	2759	2759	2759	2759	2759	2759	2759
<b>1.0</b>	2757	2758	2758	2759	2760	2759	2760	2759	2759	2759
<b>3.0</b>	2779	2779	2781	2785	2782	2780	2780	2778	2773	2772
<b>5.0</b>	2780	2779	2784	2784	2783	2784	2783	2783	2781	2778
<b>7.0</b>	2733	2735	2736	2743	2744	2741	2741	2743	2743	2744
<b>9.0</b>	2635	2636	2639	2636	2638	2640	2644	2644	2642	2633
<b>11.0</b>	2465	2457	2460	2462	2464	2469	2470	2468	2464	2464
<b>13.0</b>	2221	2221	2217	2220	2221	2229	2223	2226	2226	2224
<b>15.0</b>	1934	1934	1933	1937	1944	1943	1941	1940	1937	1939
<b>17.0</b>	1618	1619	1625	1629	1629	1630	1628	1626	1627	1628
<b>19.5</b>	1205	1207	1214	1223	1219	1219	1221	1223	1223	1224
<b>22.5</b>	753	754	763	767	766	767	770	772	774	774
<b>25.5</b>	408	412	419	423	428	430	434	439	441	441
<b>29.0</b>	183	185	190	197	206	217	225	232	234	236
<b>33.0</b>	73	74	75	79	85	96	110	124	134	136
<b>37.5</b>	28	28	28	28	28	30	34	43	58	66
<b>42.5</b>	13	13	13	13	13	13	13	14	15	17
<b>47.5</b>	4	4	4	4	4	5	6	7	7	7
<b>55.0</b>	1	1	1	1	1	1	1	1	1	1
<b>65.0</b>	0	0	0	0	0	0	0	0	0	0
<b>75.0</b>	0	0	0	0	0	0	0	0	0	0
<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**

	<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>
<b>0.0</b>	2759	2759	2759	2759	2759	2759	2759	2759	2759
<b>1.0</b>	2760	2759	2757	2757	2751	2752	2754	2741	2749
<b>3.0</b>	2772	2771	2775	2778	2775	2776	2790	2799	2795
<b>5.0</b>	2778	2777	2787	2793	2789	2809	2809	2816	2818
<b>7.0</b>	2745	2735	2744	2754	2749	2770	2772	2780	2776
<b>9.0</b>	2633	2631	2644	2649	2657	2668	2670	2669	2670
<b>11.0</b>	2464	2466	2468	2476	2482	2488	2488	2489	2486
<b>13.0</b>	2225	2229	2239	2238	2239	2254	2251	2250	2248
<b>15.0</b>	1942	1946	1957	1953	1960	1968	1969	1964	1964
<b>17.0</b>	1630	1633	1641	1646	1645	1651	1649	1651	1647
<b>19.5</b>	1223	1227	1224	1231	1234	1231	1232	1234	1234
<b>22.5</b>	774	770	771	775	776	773	772	771	773
<b>25.5</b>	442	432	434	433	432	432	425	424	423
<b>29.0</b>	233	229	224	215	205	197	191	187	185
<b>33.0</b>	132	123	109	95	85	78	75	73	73
<b>37.5</b>	57	42	33	30	28	28	28	28	28
<b>42.5</b>	15	14	13	13	13	13	13	13	13
<b>47.5</b>	7	7	6	5	4	4	4	4	4
<b>55.0</b>	1	1	1	1	1	1	1	1	1
<b>65.0</b>	0	0	0	0	0	0	0	0	0
<b>75.0</b>	0	0	0	0	0	0	0	0	0
<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 : L081910637.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	758.67	N.A.	70.20
0-30	1012.64	N.A.	93.70
0-40	1066.41	N.A.	98.60
0-60	1080.71	N.A.	100.00
0-80	1081.19	N.A.	100.00
0-90	1081.19	N.A.	100.00
10-90	868.98	N.A.	80.40
20-40	307.74	N.A.	28.50
20-50	320.07	N.A.	29.60
40-70	14.78	N.A.	1.40
60-80	0.47	N.A.	0.00
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	1081.19	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	212.21
10-20	546.45
20-30	253.97
30-40	53.77
40-50	12.33
50-60	1.98
60-70	0.47
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

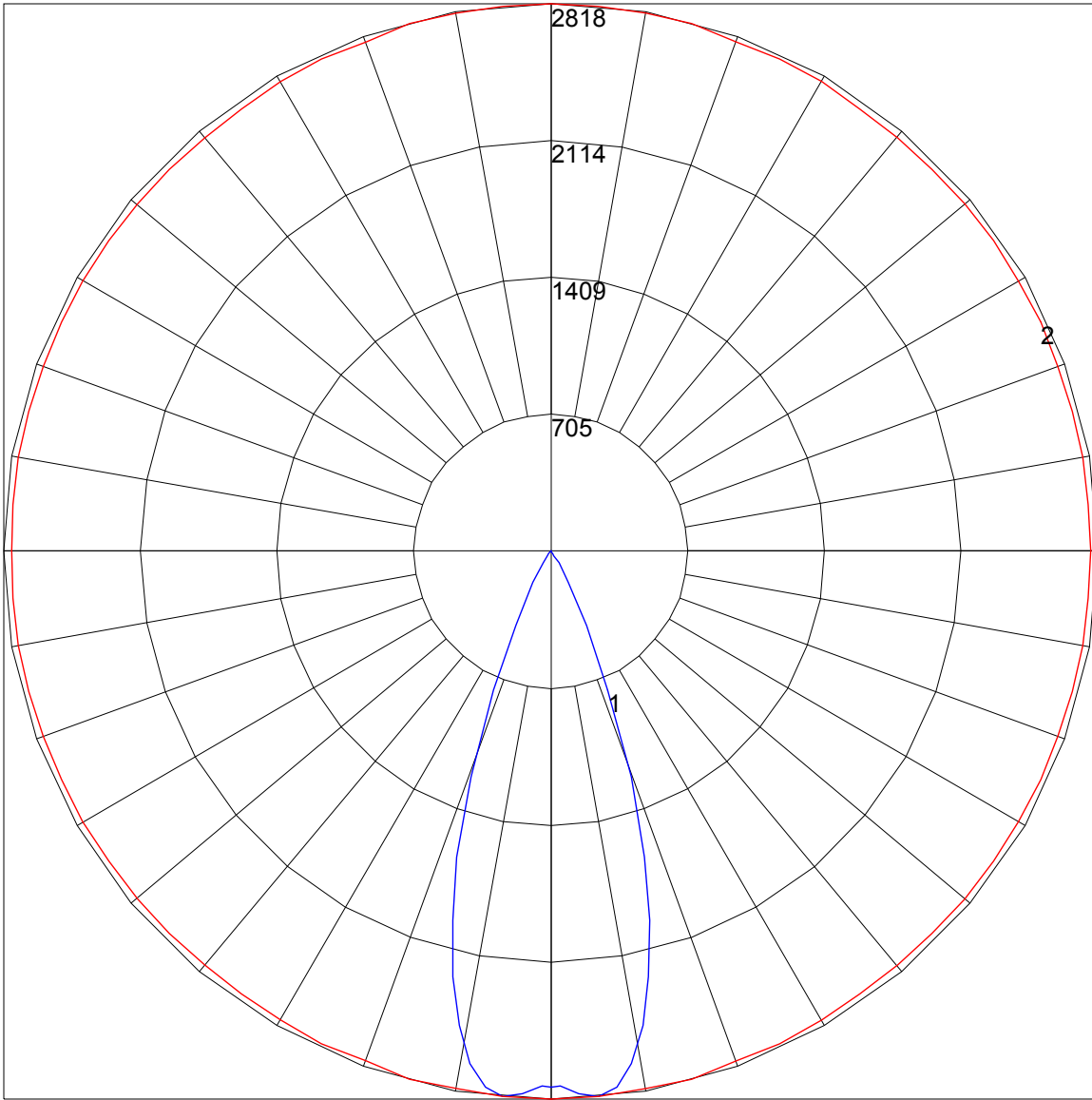
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	105	102	99	102	99	97	99	97	95	96	94	93	92
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	88
4	102	96	92	89	101	95	91	88	93	90	87	91	88	86	90	87	85	84
5	99	92	87	84	97	91	87	84	90	86	83	88	85	82	87	84	82	80
6	95	88	83	80	94	87	83	80	86	82	79	85	81	79	84	81	78	77
7	92	85	80	77	91	84	79	76	83	79	76	82	78	76	81	78	75	74
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	70	69
10	83	75	71	68	82	75	70	68	74	70	67	73	70	67	73	69	67	66

POLAR GRAPH



Maximum Candela = 2818 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

