



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

Report No: L081910602



**Report No:** L081910602

**Issue Date:** 8/21/2019

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

**Model Number:** 201-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:** 8/19/19 - 8/21/19

**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>	201-S-HI-3000-25/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>	921.18
<b>Efficacy:</b>	64.90
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.1189
<b>Input Power (W):</b>	14.19
<b>Input Power Factor:</b>	0.9946
<b>Current ATHD (%):</b>	5.6%

**Test Condition**

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

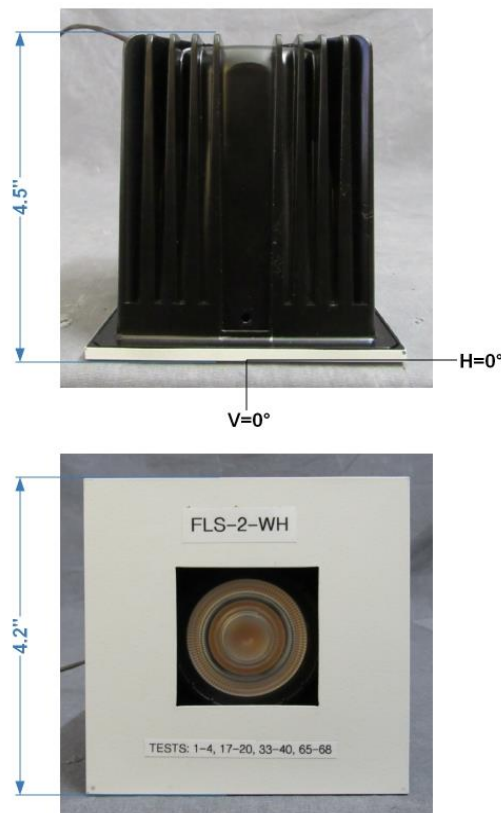


FIG. 1 LUMINAIRE

## 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 : L081910602.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910602  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 8/21/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 201-S-HI-3000-25/DIM1-2-SO/ FLS-2-WH  
[LUMINAIRE] LED Recessed Fixed Position Downlight, 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] 120.0VAC, 14.19W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	921
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	65
Total Luminaire Watts	14.19
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.48
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.46
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	13180	21629	13180
55	3333	5000	3333
65	0	0	0
75	0	0	0
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910602.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>	3329	3329	3329	3329	3329	3329	3329	3329	3329	3329
<b>1.0</b>	3340	3338	3340	3345	3349	3351	3353	3352	3348	3349
<b>3.0</b>	3292	3286	3286	3286	3290	3291	3291	3292	3294	3293
<b>5.0</b>	3134	3140	3139	3139	3138	3137	3140	3141	3140	3142
<b>7.0</b>	2926	2922	2919	2919	2919	2914	2914	2913	2912	2918
<b>9.0</b>	2638	2637	2633	2630	2627	2624	2620	2617	2617	2618
<b>11.0</b>	2280	2280	2281	2279	2275	2271	2269	2265	2263	2262
<b>13.0</b>	1880	1879	1880	1878	1874	1871	1866	1859	1862	1866
<b>15.0</b>	1482	1481	1482	1479	1475	1471	1467	1456	1456	1461
<b>17.0</b>	1104	1105	1106	1104	1101	1098	1094	1084	1080	1087
<b>19.5</b>	735	735	736	735	734	733	730	723	719	722
<b>22.5</b>	446	446	446	447	448	448	448	447	445	444
<b>25.5</b>	283	283	284	285	285	286	288	290	290	292
<b>29.0</b>	171	171	173	175	177	180	184	188	190	191
<b>33.0</b>	98	98	100	102	106	110	116	121	124	125
<b>37.5</b>	49	49	50	52	56	61	67	74	78	80
<b>42.5</b>	25	24	25	25	26	27	30	36	43	45
<b>47.5</b>	14	14	14	14	14	15	15	16	18	19
<b>55.0</b>	4	4	4	4	4	4	4	5	6	6
<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>	3329	3329	3329	3329	3329	3329	3329	3329	3329
<b>1.0</b>	3347	3348	3349	3348	3346	3334	3331	3335	3333
<b>3.0</b>	3298	3298	3292	3292	3286	3277	3277	3276	3281
<b>5.0</b>	3148	3149	3149	3150	3143	3138	3141	3141	3143
<b>7.0</b>	2925	2924	2926	2926	2923	2921	2931	2932	2930
<b>9.0</b>	2627	2628	2629	2632	2630	2630	2644	2644	2642
<b>11.0</b>	2270	2271	2275	2284	2284	2290	2301	2304	2303
<b>13.0</b>	1872	1872	1878	1892	1898	1904	1917	1918	1918
<b>15.0</b>	1470	1476	1479	1497	1503	1510	1519	1522	1520
<b>17.0</b>	1097	1101	1109	1124	1131	1139	1148	1149	1148
<b>19.5</b>	728	733	744	757	762	770	773	774	773
<b>22.5</b>	448	452	458	465	467	471	472	473	475
<b>25.5</b>	294	294	296	299	300	299	299	299	298
<b>29.0</b>	192	190	188	187	186	184	183	182	182
<b>33.0</b>	124	122	118	114	111	108	106	105	105
<b>37.5</b>	78	73	68	62	58	55	53	52	52
<b>42.5</b>	41	35	31	28	26	25	25	25	25
<b>47.5</b>	17	16	15	15	14	14	14	14	14
<b>55.0</b>	6	5	4	4	4	4	4	4	4
<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 : L081910602.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	667.51	N.A.	72.50
0-30	829.75	N.A.	90.10
0-40	887.80	N.A.	96.40
0-60	919.07	N.A.	99.80
0-80	921.18	N.A.	100.00
0-90	921.18	N.A.	100.00
10-90	689.20	N.A.	74.80
20-40	220.29	N.A.	23.90
20-50	245.29	N.A.	26.60
40-70	33.37	N.A.	3.60
60-80	2.11	N.A.	0.20
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	921.18	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	231.97
10-20	435.54
20-30	162.24
30-40	58.05
40-50	25.00
50-60	6.27
60-70	2.11
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

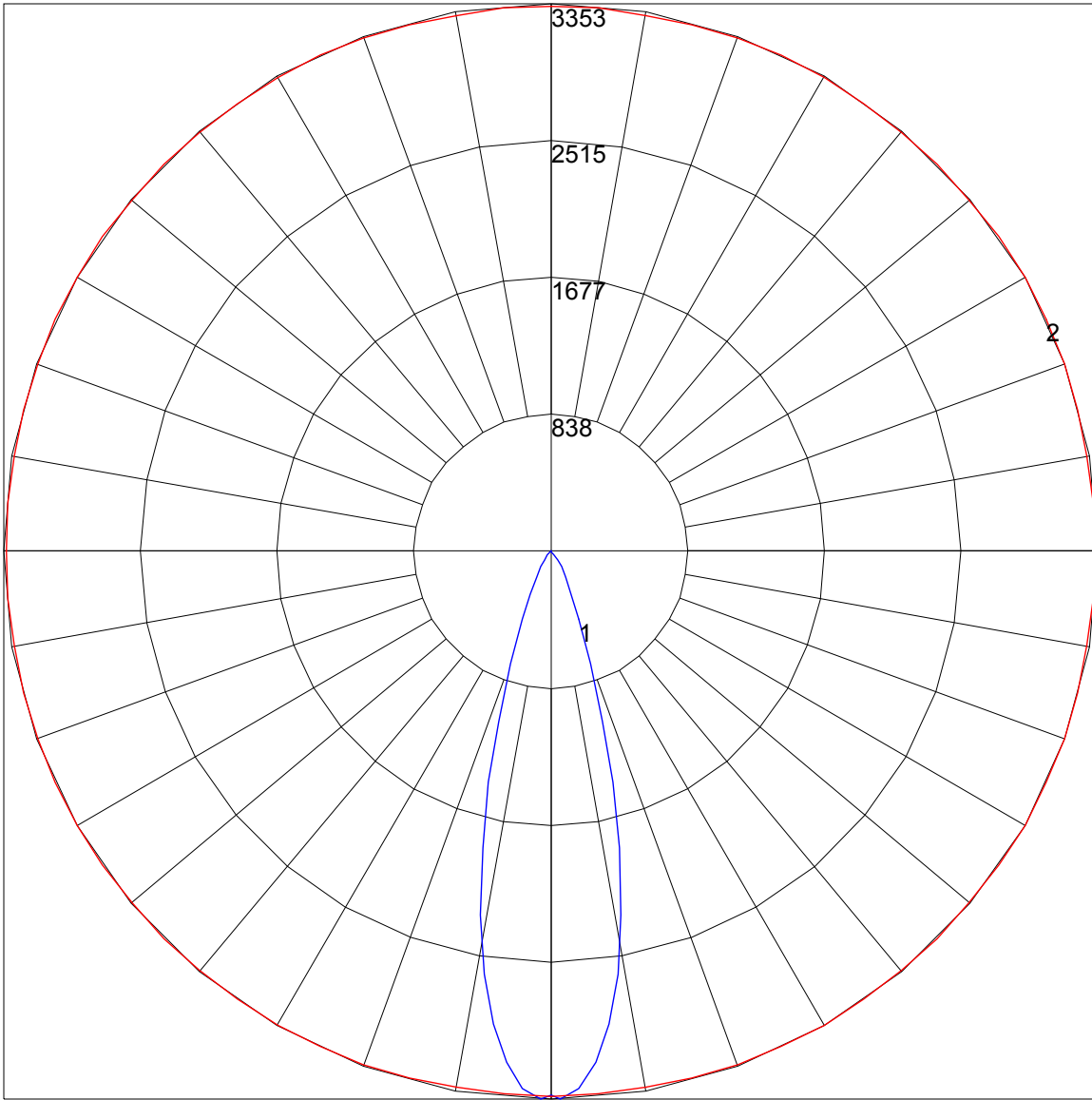
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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

POLAR GRAPH



Maximum Candela = 3353 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

