



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

Report No: L081910604



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Issue Date: 8/21/2019

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

Model Number: 201-S-HI-3000-60/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

Manufacturer:	Number Eight Lighting Company
Model Number:	201-S-HI-3000-60/DIM1-2-SO/FLS-2-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Photometric & Electrical Test Results

Total Lumens:	1100.73
Efficacy:	77.37
Input Voltage (VAC/60Hz):	119.97
Input Current (Amp):	0.1194
Input Power (W):	14.23
Input Power Factor:	0.9932
Current ATHD (%):	5.5%

Test Condition

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

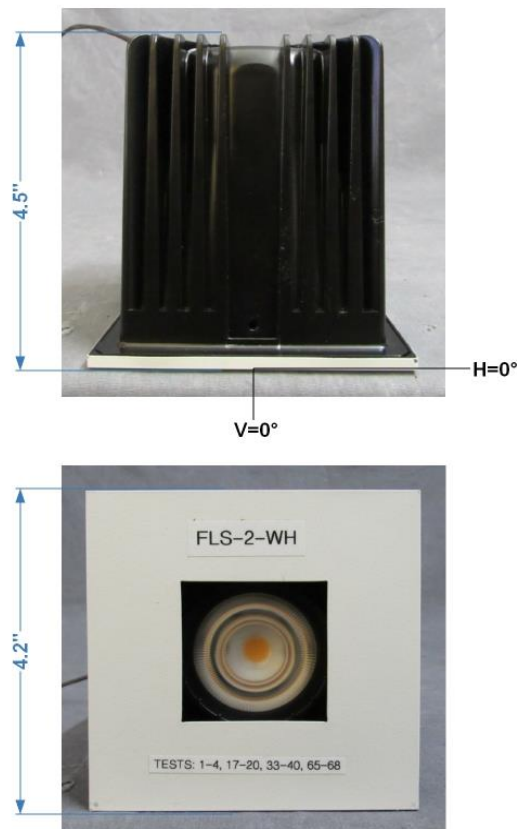


FIG. 1 LUMINAIRE

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 : L081910604.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081910604
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 8/21/2019
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 201-S-HI-3000-60/DIM1-2-SO/FLS-2-WH
[LUMINAIRE] LED Recessed Fixed Position Downlight, 3000K 90+ CRI, 60° 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] 119.97VAC, 14.23W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1101
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	14.23
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.90
Spacing Criterion (90-270)	0.90
Spacing Criterion (Diagonal)	0.84
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	25685	32106	26023
55	5000	8333	5000
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910604.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	1432	1432	1432	1432	1432	1432	1432	1432	1432	1432
1.0	1439	1438	1438	1439	1439	1438	1439	1440	1439	1439
3.0	1439	1441	1441	1442	1441	1441	1441	1440	1442	1440
5.0	1442	1444	1442	1444	1443	1442	1442	1443	1443	1442
7.0	1438	1440	1439	1440	1440	1440	1439	1438	1439	1440
9.0	1428	1428	1428	1428	1429	1428	1428	1428	1428	1428
11.0	1399	1400	1400	1399	1403	1402	1404	1406	1405	1406
13.0	1359	1359	1360	1361	1361	1362	1364	1367	1368	1369
15.0	1314	1313	1314	1314	1317	1315	1316	1318	1318	1320
17.0	1258	1256	1258	1259	1260	1260	1260	1260	1260	1261
19.5	1170	1170	1171	1173	1174	1176	1176	1175	1175	1175
22.5	1039	1037	1040	1040	1042	1043	1044	1045	1047	1048
25.5	851	852	858	865	871	876	878	880	881	882
29.0	551	554	563	579	597	617	635	647	650	651
33.0	263	265	272	282	298	316	335	355	369	375
37.5	106	107	109	112	119	128	139	151	159	163
42.5	50	50	51	51	53	55	57	61	64	66
47.5	26	26	26	27	27	27	28	28	29	29
55.0	6	6	6	7	7	8	8	9	9	10
65.0	0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0	0	0	0
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	1432	1432	1432	1432	1432	1432	1432	1432	1432
1.0	1439	1439	1437	1437	1437	1436	1437	1436	1437
3.0	1442	1441	1441	1440	1440	1440	1440	1441	1441
5.0	1442	1442	1442	1442	1443	1442	1441	1443	1442
7.0	1439	1440	1439	1440	1438	1439	1439	1439	1439
9.0	1428	1427	1427	1426	1426	1425	1425	1425	1424
11.0	1404	1403	1403	1403	1402	1401	1401	1400	1401
13.0	1369	1369	1368	1367	1366	1364	1363	1363	1362
15.0	1321	1323	1321	1321	1320	1318	1318	1317	1315
17.0	1263	1264	1265	1264	1263	1262	1261	1261	1260
19.5	1178	1178	1179	1179	1178	1178	1176	1175	1175
22.5	1049	1048	1047	1046	1045	1042	1040	1039	1038
25.5	883	881	879	874	866	859	852	847	846
29.0	651	644	633	617	599	582	571	561	558
33.0	369	354	337	317	300	287	277	270	268
37.5	159	151	140	130	121	115	113	111	110
42.5	65	62	59	56	54	52	52	51	51
47.5	29	29	28	28	27	27	26	26	26
55.0	10	9	8	8	7	7	6	6	6
65.0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0	0	0
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 : L081910604.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	481.85	N.A.	43.80
0-30	870.06	N.A.	79.00
0-40	1037.00	N.A.	94.20
0-60	1097.12	N.A.	99.70
0-80	1100.73	N.A.	100.00
0-90	1100.73	N.A.	100.00
10-90	989.51	N.A.	89.90
20-40	555.15	N.A.	50.40
20-50	604.06	N.A.	54.90
40-70	63.74	N.A.	5.80
60-80	3.61	N.A.	0.30
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	1100.73	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.22
10-20	370.63
20-30	388.21
30-40	166.94
40-50	48.91
50-60	11.22
60-70	3.61
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

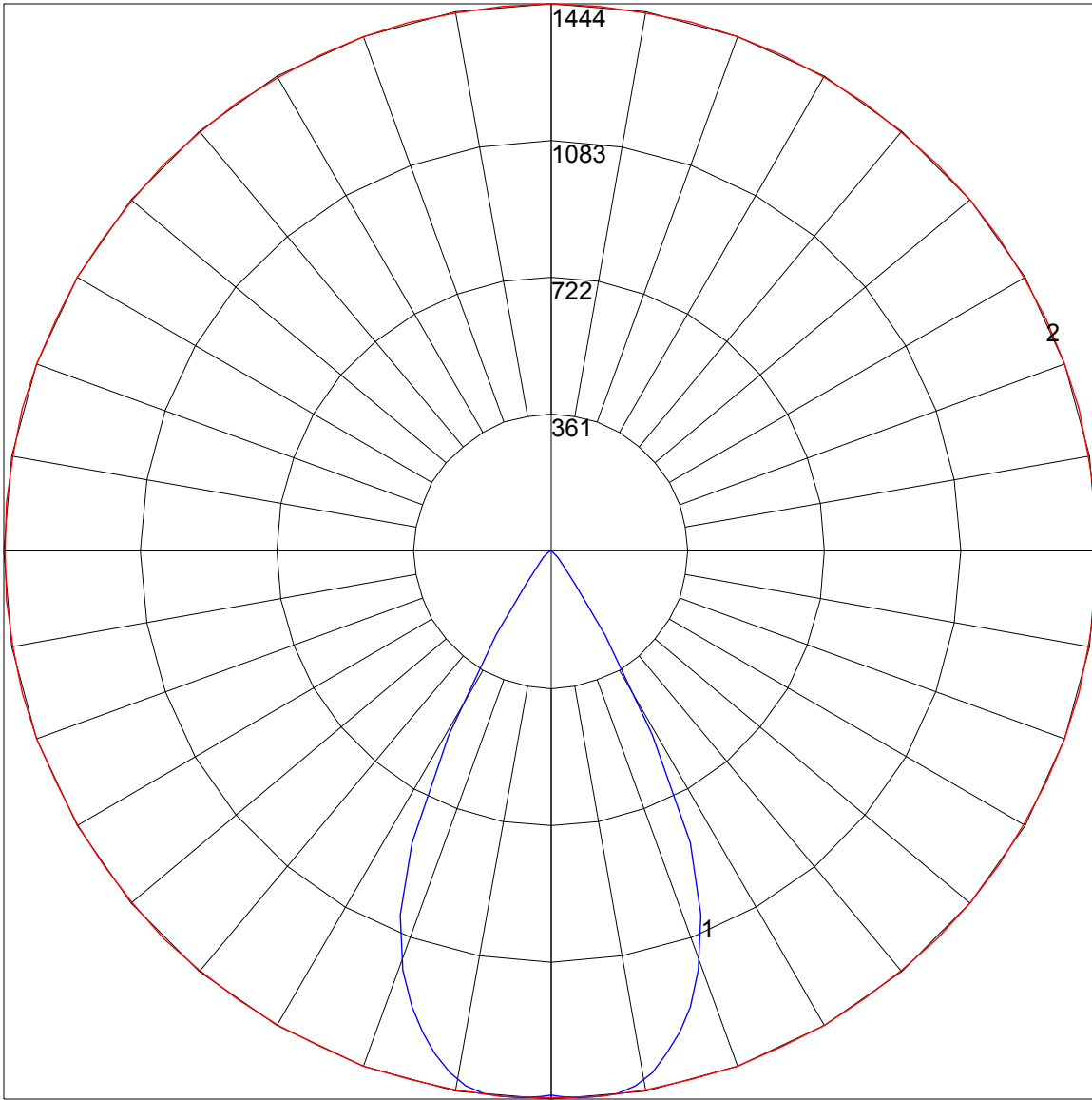
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88
3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	88	86	84	82
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	78	77
5	94	86	80	76	92	85	80	76	83	78	75	81	77	74	80	76	74	72
6	89	81	75	71	88	80	75	71	78	74	70	77	73	70	76	72	69	68
7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60
9	77	68	63	59	76	68	62	59	67	62	58	66	61	58	65	61	58	57
10	74	65	59	55	73	64	59	55	63	59	55	63	58	55	62	58	55	54

POLAR GRAPH



Maximum Candela = 1444 Located At Horizontal Angle = 5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (5 - 185) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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

