



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

Report No: L081910617



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Issue Date: 8/23/2019

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

Model Number: 201-S-WD-3018-15-NFL/DIM1-2-SO/FLS-2-WH

Test: Photometric/Colorimetric/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: 8/21/19 - 8/23/19

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-WD-3018-15-NFL/DIM1-2-SO/FLS-2-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Test Summary

Total Lumens:	580.66
Efficacy:	39.77
Color Redering Index:	96.2
Correlated Color Temperature:	3097
Input Voltage (VAC/60Hz):	119.96
Input Current (Amp):	0.1225
Input Power (W):	14.60
Input Power Factor:	0.9936
Current ATHD (%):	7.2%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:00
Total Operating Time (Hours):	2:05

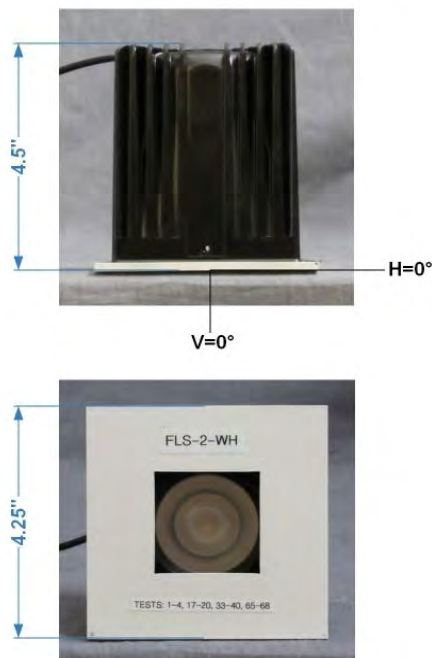
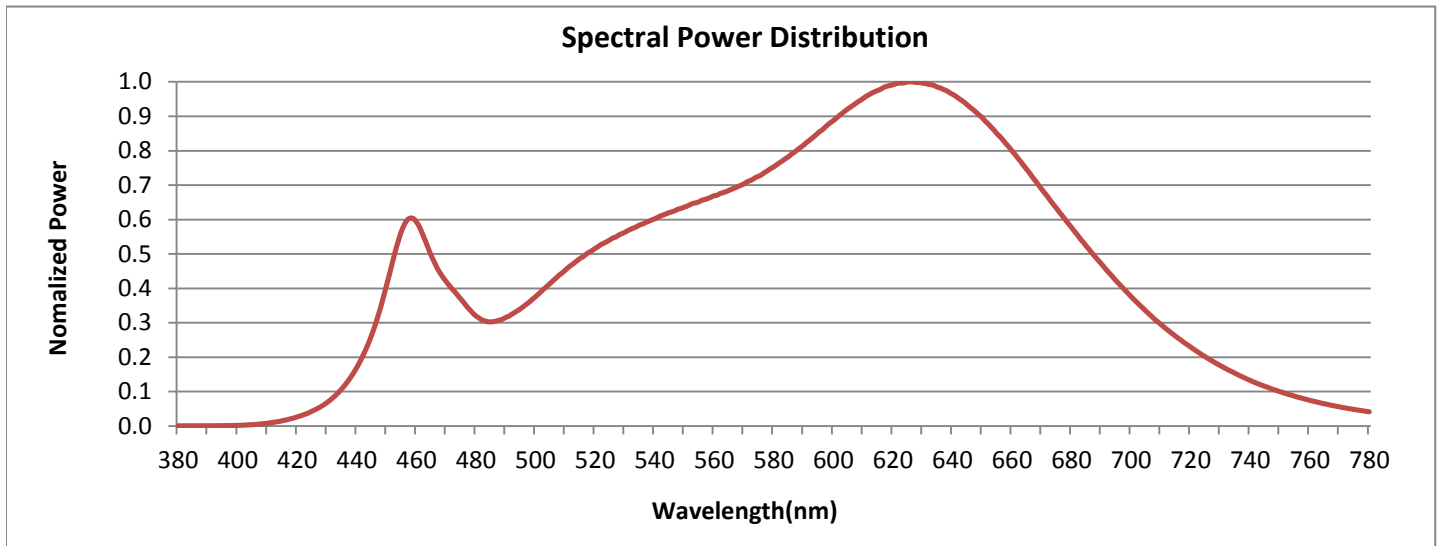


FIG. 1 LUMINAIRE

Colorimetry Test Results

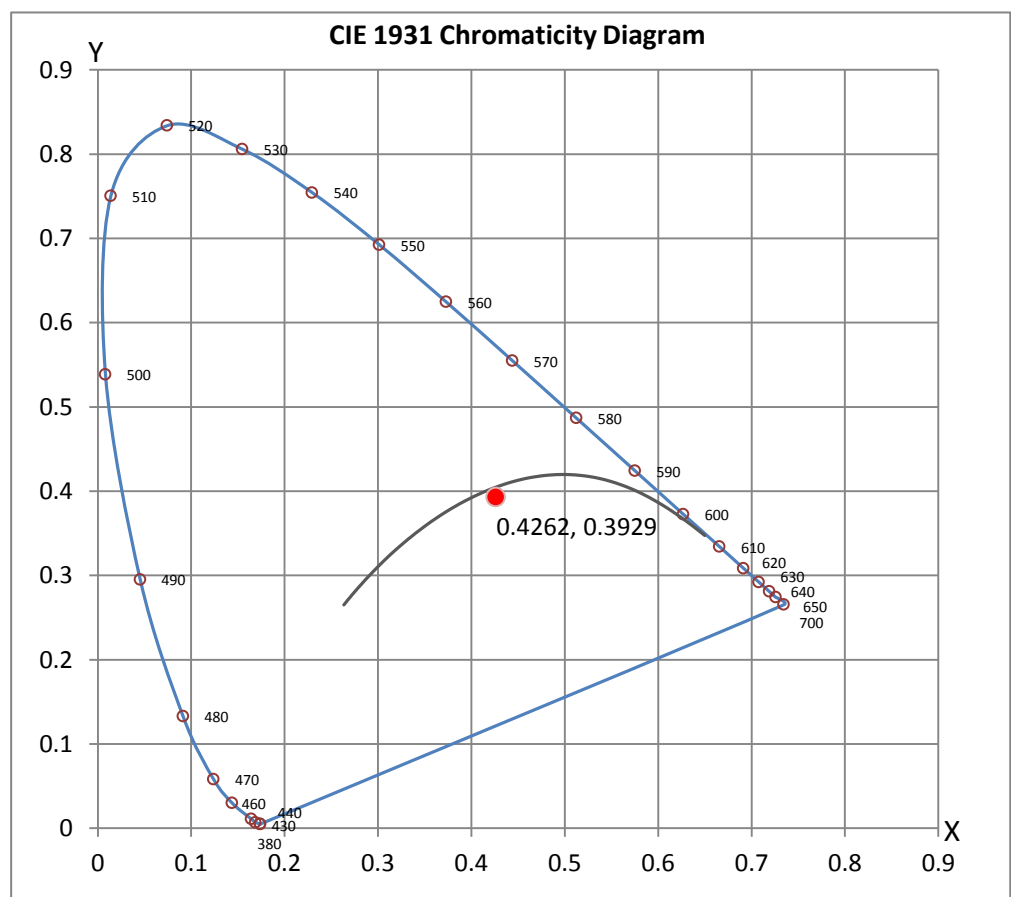


CRI & CCT

x	0.4262
y	0.3929
u'	0.2484
v'	0.5153
CRI	96.20
CCT	3097
Duv	-0.00300

R Values

R1	98.40
R2	98.79
R3	98.62
R4	96.73
R5	97.65
R6	95.85
R7	93.58
R8	90.38
R9	81.37
R10	99.00
R11	97.58
R12	82.74
R13	99.48
R14	99.00
R15	96.59





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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: 10*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L081910617.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081910617
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 8/23/2019
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 201-S-WD-3018-15-NFL/DIM1-2-SO/FLS-2-WH
[LUMINAIRE] LED Recessed Fixed Position Downlight, 3000-1800K 90+ CRI, 15° Beam Spread,
[MORE] NFL Lens, 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] 119.96VAC, 14.60W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	581
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	40
Total Luminaire Watts	14.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.48
Spacing Criterion (90-270)	0.44
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	8449	12842	7435
55	2500	3333	2500
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910617.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	2145	2145	2145	2145	2145	2145	2145	2145	2145	2145
1.0	2156	2155	2155	2154	2155	2154	2155	2152	2151	2151
3.0	2105	2105	2105	2105	2102	2101	2101	2100	2099	2098
5.0	1981	1982	1982	1982	1978	1977	1974	1973	1970	1968
7.0	1811	1810	1808	1808	1803	1799	1794	1790	1785	1781
9.0	1603	1603	1599	1599	1594	1586	1578	1572	1565	1559
11.0	1382	1381	1379	1376	1367	1358	1349	1341	1332	1325
13.0	1159	1157	1153	1149	1141	1131	1120	1111	1101	1093
15.0	950	949	944	939	929	917	907	897	888	879
17.0	762	760	756	750	740	729	718	709	700	691
19.5	563	562	556	551	542	532	522	513	505	498
22.5	375	374	370	365	359	351	343	337	331	326
25.5	240	239	236	233	229	224	219	216	212	209
29.0	138	138	137	135	133	131	130	129	127	126
33.0	73	73	73	73	73	73	74	74	74	74
37.5	35	35	35	36	37	39	40	42	44	44
42.5	16	16	16	16	17	18	20	22	25	25
47.5	9	9	9	9	9	9	9	10	12	13
55.0	3	3	3	3	3	3	3	4	4	4
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	2145	2145	2145	2145	2145	2145	2145	2145	2145
1.0	2151	2150	2150	2149	2148	2147	2145	2145	2145
3.0	2095	2093	2090	2087	2087	2084	2084	2085	2084
5.0	1965	1959	1954	1951	1949	1946	1944	1944	1943
7.0	1775	1770	1765	1760	1757	1754	1751	1750	1750
9.0	1553	1546	1541	1535	1531	1528	1525	1524	1522
11.0	1318	1309	1303	1298	1295	1292	1290	1288	1286
13.0	1086	1077	1070	1065	1063	1060	1059	1057	1057
15.0	871	864	858	853	852	850	849	848	848
17.0	684	677	671	669	668	667	667	666	666
19.5	493	486	482	481	480	480	480	480	479
22.5	322	317	314	313	312	312	312	312	311
25.5	207	203	200	199	197	197	197	197	197
29.0	124	121	119	118	116	115	114	114	113
33.0	73	71	69	67	65	63	62	62	62
37.5	43	41	39	36	34	32	31	31	30
42.5	24	22	19	17	16	15	14	14	14
47.5	12	10	9	9	8	8	8	8	8
55.0	4	4	3	3	3	3	3	3	3
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 : L081910617.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	406.53	N.A.	70.00
0-30	522.52	N.A.	90.00
0-40	559.84	N.A.	96.40
0-60	579.11	N.A.	99.70
0-80	580.66	N.A.	100.00
0-90	580.66	N.A.	100.00
10-90	437.39	N.A.	75.30
20-40	153.31	N.A.	26.40
20-50	168.51	N.A.	29.00
40-70	20.82	N.A.	3.60
60-80	1.55	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	580.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	143.27
10-20	263.26
20-30	115.99
30-40	37.32
40-50	15.20
50-60	4.07
60-70	1.55
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

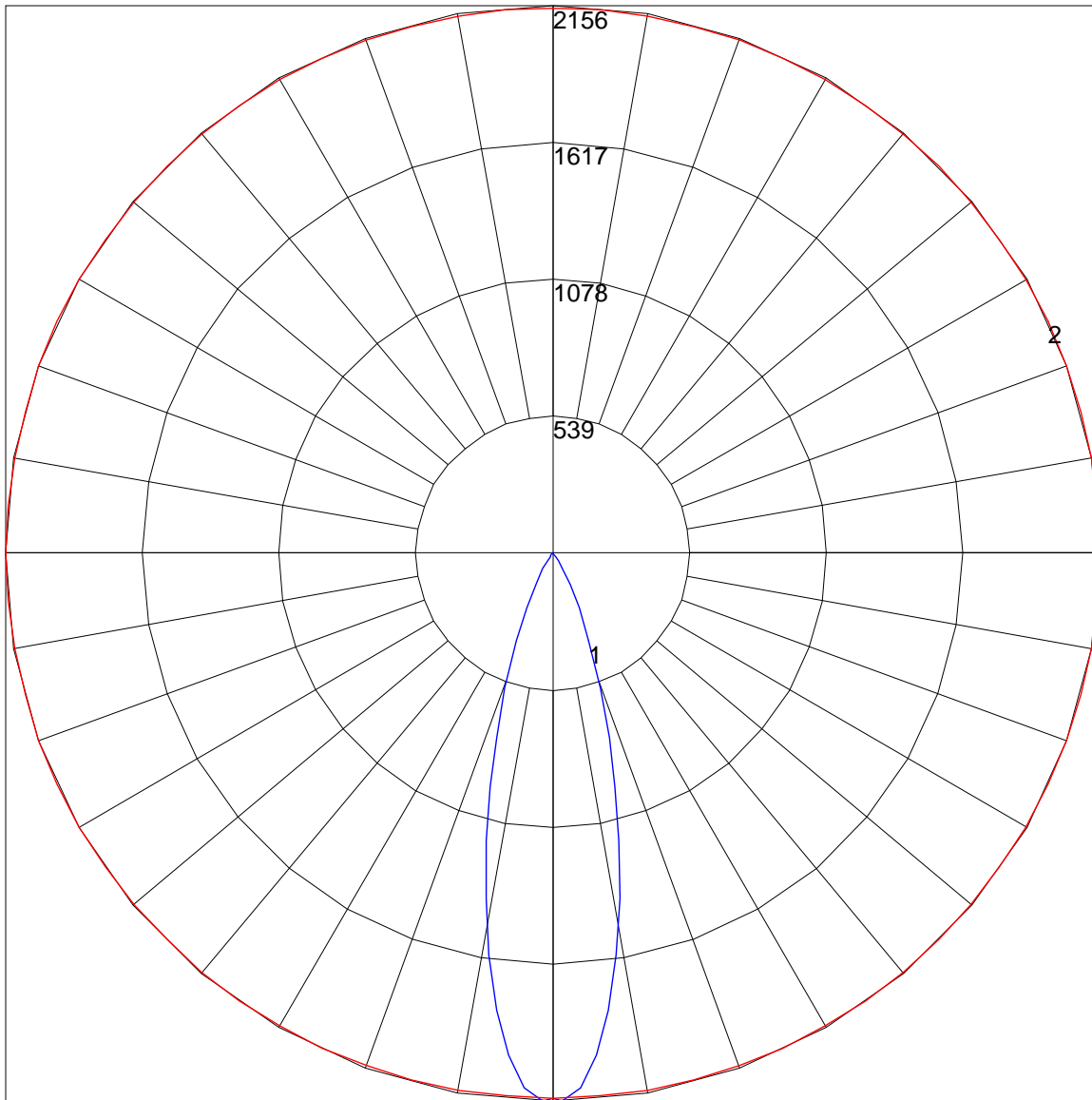
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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

POLAR GRAPH



Maximum Candela = 2156 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

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

