



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

Report No: L081910667



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Issue Date: 9/12/2019

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

Model Number: 202-S-WD-3018-40-NFL/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: 9/10/19 - 9/12/19

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:	202-S-WD-3018-40-NFL/DIM1-2-SO/FLS-2-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Photometric & Electrical Test Results

Total Lumens:	698.23
Efficacy:	46.43
Input Voltage (VAC/60Hz):	119.96
Input Current (Amp):	0.1260
Input Power (W):	15.04
Input Power Factor:	0.9953
Current ATHD (%):	5.1%

Test Condition

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

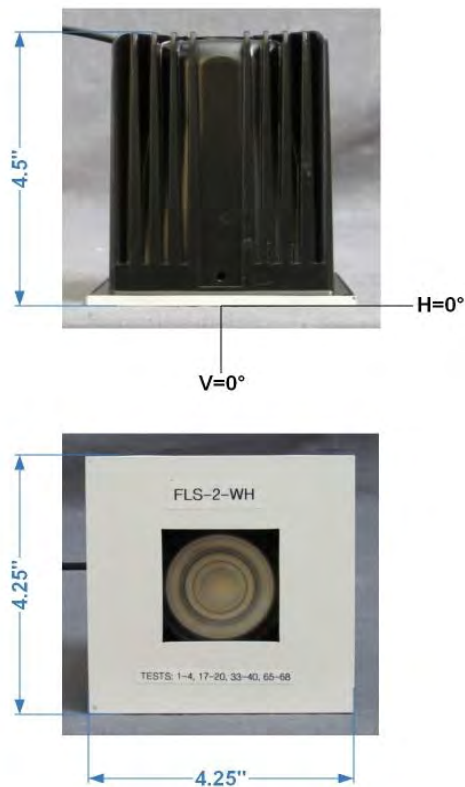


FIG. 1 LUMINAIRE



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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: 9*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L081910667.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081910667
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUE DATE] 9/12/2019
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 202-S-WD-3018-40-NFL/DIM1-2-SO/FLS-2-WH
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000-1800K 90+ CRI, 40° 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, 15.04W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	698
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	46
Total Luminaire Watts	15.04
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.68
Spacing Criterion (90-270)	0.70
Spacing Criterion (Diagonal)	0.68
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	13856	16222	13518
55	833	1667	833
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L081910667.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	1314	1314	1314	1314	1314	1314	1314	1314	1314	1314
1.0	1319	1319	1319	1319	1319	1318	1319	1318	1318	1318
3.0	1310	1311	1311	1311	1310	1311	1310	1311	1310	1310
5.0	1284	1283	1284	1283	1283	1283	1283	1283	1283	1283
7.0	1242	1242	1241	1242	1240	1241	1242	1241	1241	1241
9.0	1184	1183	1183	1182	1183	1183	1184	1184	1185	1186
11.0	1110	1110	1109	1108	1110	1111	1112	1113	1113	1114
13.0	1026	1026	1025	1025	1025	1027	1027	1028	1030	1031
15.0	936	936	936	936	936	937	938	938	940	942
17.0	838	838	837	838	839	840	840	841	843	844
19.5	712	712	712	713	714	715	716	718	720	723
22.5	562	562	562	564	566	567	569	572	577	580
25.5	425	425	426	428	429	432	434	439	444	448
29.0	303	300	297	301	305	313	318	321	322	321
33.0	152	153	154	158	164	172	181	190	196	198
37.5	71	71	70	70	72	75	80	89	98	102
42.5	31	31	31	31	31	31	31	32	34	35
47.5	10	11	11	11	12	12	12	13	13	13
55.0	1	1	1	1	1	1	1	2	2	2
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	1314	1314	1314	1314	1314	1314	1314	1314	1314
1.0	1319	1318	1318	1319	1319	1319	1319	1319	1319
3.0	1310	1310	1310	1311	1310	1311	1310	1311	1311
5.0	1283	1284	1285	1285	1285	1286	1286	1286	1286
7.0	1242	1242	1243	1243	1244	1244	1245	1244	1245
9.0	1186	1185	1186	1186	1187	1188	1188	1189	1189
11.0	1116	1117	1116	1117	1117	1118	1119	1120	1122
13.0	1032	1034	1035	1037	1038	1040	1041	1042	1042
15.0	943	945	948	952	953	956	958	959	963
17.0	846	849	854	859	863	866	869	871	872
19.5	726	731	736	742	745	748	749	751	751
22.5	585	587	590	595	598	602	605	606	604
25.5	451	454	455	457	460	461	456	457	454
29.0	320	318	314	309	304	298	293	290	290
33.0	196	189	181	171	162	156	152	149	148
37.5	98	90	81	74	71	69	69	69	68
42.5	34	32	31	30	30	30	30	30	30
47.5	13	13	13	12	12	11	11	10	10
55.0	2	1	1	1	1	1	1	1	1
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 : L081910667.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	364.27	N.A.	52.20
0-30	576.16	N.A.	82.50
0-40	665.70	N.A.	95.30
0-60	697.65	N.A.	99.90
0-80	698.23	N.A.	100.00
0-90	698.23	N.A.	100.00
10-90	601.06	N.A.	86.10
20-40	301.43	N.A.	43.20
20-50	329.20	N.A.	47.10
40-70	32.53	N.A.	4.70
60-80	0.58	N.A.	0.10
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	698.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.17
10-20	267.10
20-30	211.89
30-40	89.55
40-50	27.77
50-60	4.18
60-70	0.58
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

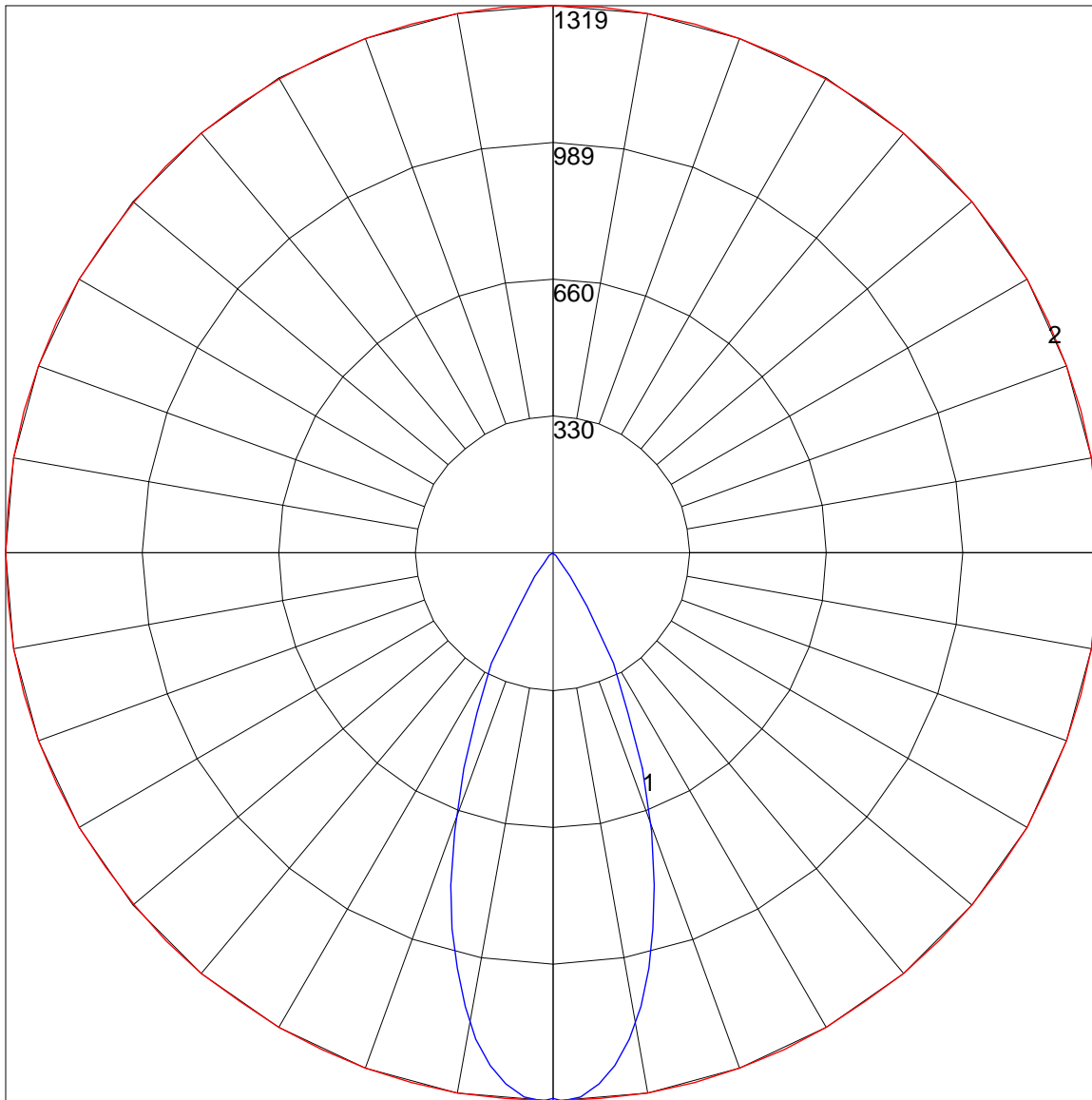
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	112	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	98	94	90	102	97	93	90	94	91	88	92	89	87	90	88	86	84
4	100	93	88	84	98	92	87	84	90	86	83	88	84	82	86	83	81	79
5	95	88	82	79	94	87	82	78	85	81	78	83	80	77	82	79	76	75
6	91	83	78	74	90	82	77	74	81	76	73	80	76	73	78	75	72	71
7	87	79	73	70	86	78	73	69	77	72	69	76	72	69	75	71	68	67
8	84	75	70	66	82	74	69	66	73	69	65	72	68	65	71	68	65	64
9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	65	62	61
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	65	62	59	58

POLAR GRAPH



Maximum Candela = 1319 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

