



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

Report No: L081910620



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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-3018-60-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: 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-3018-60-NFL/DIM1-2-SO/FLS-2-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-701-350-15-D

Photometric & Electrical Test Results

Total Lumens:	653.54
Efficacy:	44.68
Input Voltage (VAC/60Hz):	120.01
Input Current (Amp):	0.1228
Input Power (W):	14.63
Input Power Factor:	0.9923
Current ATHD (%):	7.1%

Test Condition

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

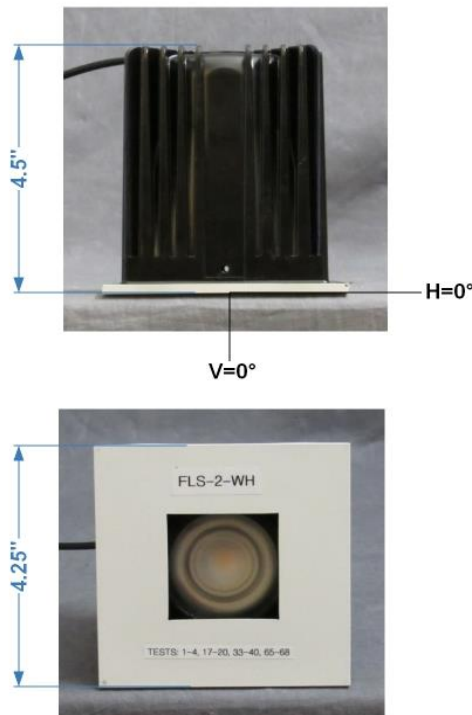


FIG. 1 LUMINAIRE

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 : L081910620.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081910620
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 8/23/2019
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 201-S-WD-3018-60-NFL/DIM1-2-SO/FLS-2-WH
[LUMINAIRE] LED Recessed Fixed Position Downlight, 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] 120.01VAC, 14.63W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	654
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	45
Total Luminaire Watts	14.63
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.86
Spacing Criterion (90-270)	0.84
Spacing Criterion (Diagonal)	0.86
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	34810	44949	32444
55	9166	11666	8333
65	0	0	0
75	0	0	0
85	0	0	0

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PHOTOMETRIC FILENAME : L081910620.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	793	793	793	793	793	793	793	793	793	793
1.0	795	796	796	796	796	795	795	795	796	795
3.0	793	794	793	793	794	793	794	793	793	794
5.0	786	786	786	785	786	786	786	786	786	786
7.0	774	773	773	773	773	773	773	773	773	774
9.0	755	755	755	755	755	755	756	756	756	756
11.0	730	729	730	730	731	731	732	733	732	733
13.0	699	700	700	700	701	701	702	703	703	703
15.0	666	667	666	667	668	668	669	670	669	669
17.0	630	630	630	630	631	631	631	631	631	630
19.5	581	581	582	582	582	582	582	581	580	579
22.5	515	515	516	516	517	516	516	516	515	514
25.5	442	442	444	445	446	446	446	447	447	446
29.0	343	343	347	350	355	359	361	364	365	365
33.0	228	229	234	239	246	253	262	269	274	275
37.5	126	127	130	135	142	150	159	169	176	179
42.5	65	66	66	67	69	73	79	85	90	92
47.5	38	38	38	38	38	38	38	40	41	41
55.0	11	11	12	13	13	13	14	14	14	14
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	793	793	793	793	793	793	793	793	793
1.0	795	796	796	796	795	795	796	795	796
3.0	793	793	793	793	793	794	794	793	794
5.0	786	786	786	786	786	786	786	786	786
7.0	773	774	774	774	773	773	773	773	772
9.0	756	756	756	756	756	755	755	755	754
11.0	733	732	733	732	731	731	731	729	730
13.0	702	703	702	701	701	700	699	699	699
15.0	668	668	668	667	667	666	666	665	665
17.0	630	630	630	630	629	629	629	628	628
19.5	578	579	580	580	580	579	579	578	578
22.5	514	513	514	513	513	512	511	511	511
25.5	445	444	443	443	441	439	437	436	436
29.0	364	362	359	353	348	342	339	336	335
33.0	273	267	258	248	238	230	225	221	220
37.5	175	166	156	145	136	128	123	120	119
42.5	90	84	76	70	66	63	62	62	61
47.5	40	39	37	36	36	35	35	35	35
55.0	14	13	13	13	12	12	11	11	10
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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	248.55	N.A.	38.00
0-30	447.02	N.A.	68.40
0-40	571.07	N.A.	87.40
0-60	647.55	N.A.	99.10
0-80	653.54	N.A.	100.00
0-90	653.54	N.A.	100.00
10-90	593.42	N.A.	90.80
20-40	322.52	N.A.	49.30
20-50	382.85	N.A.	58.60
40-70	82.47	N.A.	12.60
60-80	5.99	N.A.	0.90
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	653.54	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	60.12
10-20	188.43
20-30	198.47
30-40	124.05
40-50	60.33
50-60	16.15
60-70	5.99
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

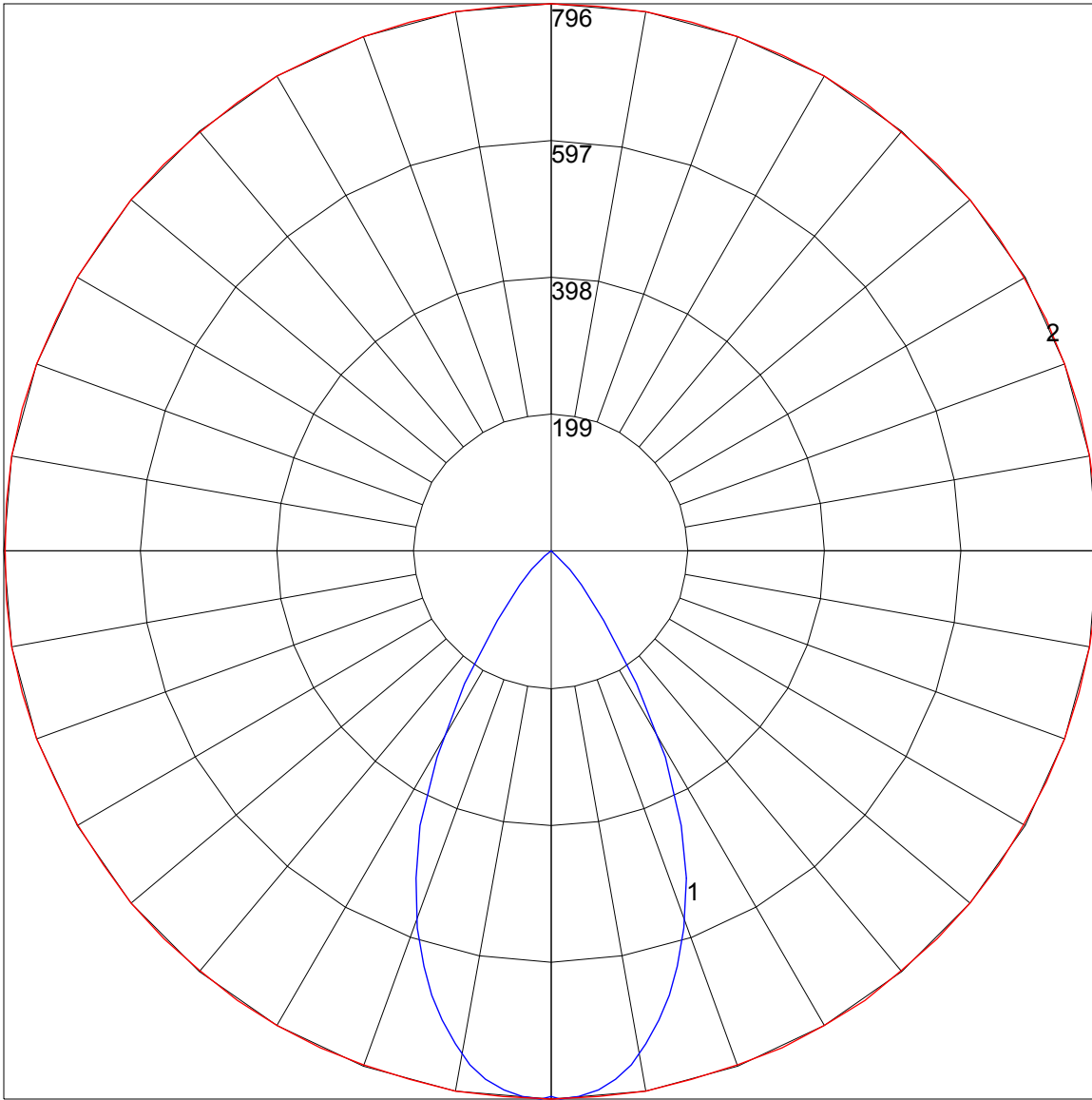
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	0
1	113	110	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93	0
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86	0
3	102	95	90	86	100	94	89	85	91	87	84	89	85	82	86	84	81	80	0
4	96	89	83	78	95	87	82	78	85	81	77	83	79	76	81	78	75	74	0
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68	0
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64	0
7	82	73	66	62	81	72	66	62	71	65	62	69	65	61	68	64	61	59	0
8	78	68	62	58	77	68	62	58	67	61	57	65	61	57	64	60	57	56	0
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	53	52	0
10	71	61	55	51	70	60	55	51	59	54	51	59	54	50	58	53	50	49	0

POLAR GRAPH



Maximum Candela = 796 Located At Horizontal Angle = 5, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (5 - 185) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

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

