



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

Report No: L081910619



**Report No:** L081910619

**Issue Date: 8/23/2019**

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

**Model Number:** 201-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:** 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

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	201-S-WD-3018-40-NFL/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>	685.97
<b>Efficacy:</b>	46.96
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.1225
<b>Input Power (W):</b>	14.61
<b>Input Power Factor:</b>	0.9936
<b>Current ATHD (%):</b>	7.1%

### Test Condition

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

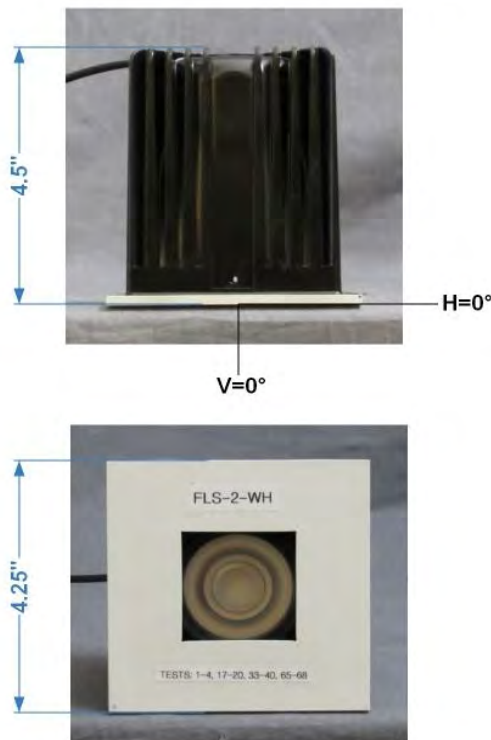


FIG. 1 LUMINAIRE

## 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 : L081910619.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910619  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 8/23/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 201-S-WD-3018-40-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] 120.0VAC, 14.61W  
[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	686
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	47
Total Luminaire Watts	14.61
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.64
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.66
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	23657	16898
55	2500	4166	3333
65	0	0	0
75	0	0	0
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910619.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>	1343	1343	1343	1343	1343	1343	1343	1343	1343	1343
<b>1.0</b>	1346	1346	1347	1347	1346	1347	1346	1347	1346	1347
<b>3.0</b>	1335	1335	1335	1335	1336	1336	1337	1336	1336	1337
<b>5.0</b>	1305	1304	1304	1304	1304	1304	1304	1304	1304	1305
<b>7.0</b>	1253	1253	1252	1254	1254	1254	1253	1255	1254	1254
<b>9.0</b>	1188	1188	1187	1186	1186	1187	1187	1188	1189	1189
<b>11.0</b>	1104	1104	1105	1106	1105	1106	1107	1108	1109	1110
<b>13.0</b>	1008	1010	1009	1009	1011	1012	1013	1015	1017	1018
<b>15.0</b>	908	908	908	908	910	910	912	915	917	919
<b>17.0</b>	803	803	804	804	805	806	807	811	813	814
<b>19.5</b>	675	674	674	675	676	676	678	681	683	685
<b>22.5</b>	526	525	526	527	528	529	530	535	536	538
<b>25.5</b>	393	393	393	395	396	397	399	404	406	409
<b>29.0</b>	267	267	268	269	270	272	274	279	281	284
<b>33.0</b>	155	156	158	161	164	167	170	174	176	178
<b>37.5</b>	70	70	73	75	80	85	91	96	100	102
<b>42.5</b>	28	28	28	29	30	33	37	42	48	51
<b>47.5</b>	13	13	13	13	14	14	14	16	17	19
<b>55.0</b>	3	3	3	4	4	4	4	5	5	5
<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>	1343	1343	1343	1343	1343	1343	1343	1343	1343
<b>1.0</b>	1346	1346	1346	1346	1346	1346	1345	1346	1346
<b>3.0</b>	1335	1336	1336	1336	1336	1335	1335	1334	1335
<b>5.0</b>	1304	1303	1304	1304	1305	1305	1305	1305	1306
<b>7.0</b>	1255	1255	1256	1257	1257	1256	1256	1258	1258
<b>9.0</b>	1190	1190	1192	1193	1193	1193	1193	1194	1195
<b>11.0</b>	1110	1112	1113	1114	1116	1115	1115	1116	1118
<b>13.0</b>	1018	1019	1023	1024	1025	1025	1025	1026	1026
<b>15.0</b>	920	922	924	926	929	929	930	931	930
<b>17.0</b>	817	819	822	825	829	830	831	833	832
<b>19.5</b>	688	691	695	700	704	705	708	709	709
<b>22.5</b>	542	546	551	555	559	561	564	565	566
<b>25.5</b>	411	416	420	424	427	429	431	433	433
<b>29.0</b>	287	289	292	295	298	299	301	302	302
<b>33.0</b>	180	182	183	184	184	183	182	181	181
<b>37.5</b>	103	102	99	95	91	88	86	85	85
<b>42.5</b>	50	45	40	37	35	34	33	34	34
<b>47.5</b>	18	16	15	15	15	15	15	16	16
<b>55.0</b>	5	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 : L081910619.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	359.08	N.A.	52.30
0-30	556.46	N.A.	81.10
0-40	645.58	N.A.	94.10
0-60	684.00	N.A.	99.70
0-80	685.97	N.A.	100.00
0-90	685.97	N.A.	100.00
10-90	587.58	N.A.	85.70
20-40	286.50	N.A.	41.80
20-50	318.75	N.A.	46.50
40-70	40.39	N.A.	5.90
60-80	1.96	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	685.97	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	98.39
10-20	260.69
20-30	197.38
30-40	89.12
40-50	32.25
50-60	6.18
60-70	1.96
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

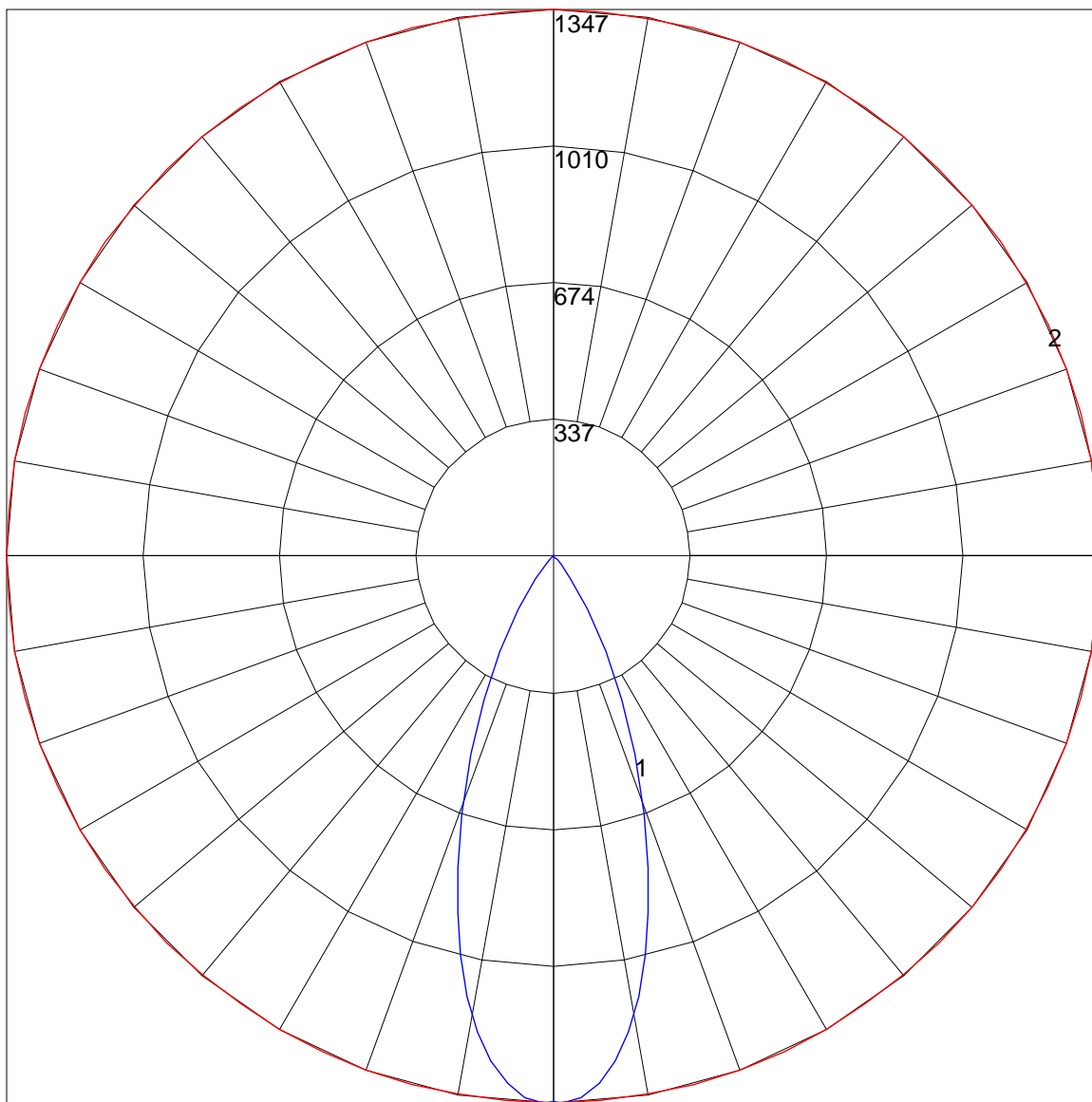
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	112	109	107	105	105	104	102	102	100	99	98	97	96	94
2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	90	89
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84
4	99	93	87	84	98	91	87	83	89	85	82	87	84	81	86	83	80	79
5	95	87	82	78	93	86	82	78	85	80	77	83	79	76	82	78	76	74
6	91	83	77	73	89	82	77	73	81	76	73	79	75	72	78	74	72	70
7	87	79	73	69	86	78	73	69	77	72	69	76	71	68	74	71	68	67
8	83	75	69	65	82	74	69	65	73	68	65	72	68	65	71	67	65	63
9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	64	61	60
10	77	68	63	59	76	67	62	59	67	62	59	66	62	59	65	61	58	57

POLAR GRAPH



Maximum Candela = 1347 Located At Horizontal Angle = 10, Vertical Angle = 1  
# 1 - Vertical Plane Through Horizontal Angles (10 - 190) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)



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

