



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

Report No: L081910666



**Report No:** L081910666

**Issue Date:** 9/12/2019

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

**Model Number:** 202-S-WD-3018-25-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

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	202-S-WD-3018-25-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>	579.10
<b>Efficacy:</b>	38.52
<b>Input Voltage (VAC/60Hz):</b>	119.96
<b>Input Current (Amp):</b>	0.1261
<b>Input Power (W):</b>	15.03
<b>Input Power Factor:</b>	0.9940
<b>Current ATHD (%):</b>	5.1%

### Test Condition

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

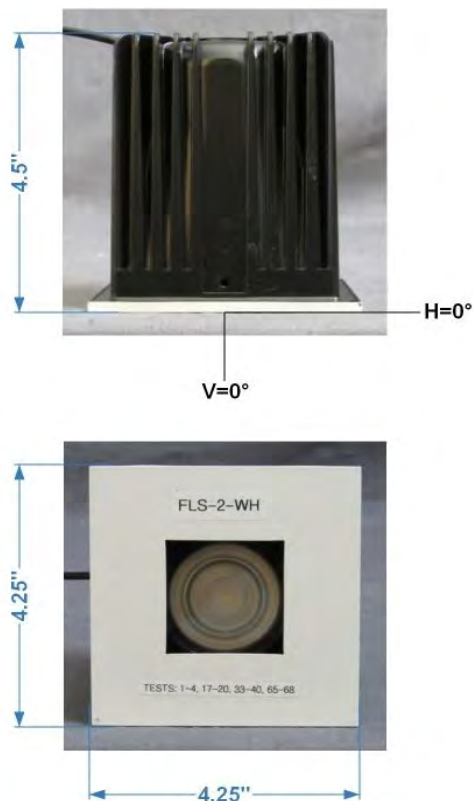


FIG. 1 LUMINAIRE

## 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 : L081910666.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910666  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 9/12/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 202-S-WD-3018-25-NFL/DIM1-2-SO/FLS-2-WH  
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000-1800K 90+ CRI, 25° 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, 15.03W  
[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	579
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	39
Total Luminaire Watts	15.03
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.60
Spacing Criterion (Diagonal)	0.60
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	9463	12167	11491
55	833	1667	1667
65	0	0	0
75	0	0	0
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910666.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>	1396	1396	1396	1396	1396	1396	1396	1396	1396	1396
<b>1.0</b>	1400	1401	1401	1401	1401	1400	1400	1400	1401	1400
<b>3.0</b>	1383	1385	1384	1384	1384	1383	1384	1383	1384	1384
<b>5.0</b>	1338	1338	1339	1338	1339	1340	1340	1340	1340	1340
<b>7.0</b>	1268	1268	1269	1268	1269	1269	1270	1271	1273	1272
<b>9.0</b>	1174	1174	1174	1176	1177	1179	1180	1182	1184	1185
<b>11.0</b>	1060	1061	1062	1063	1065	1068	1071	1073	1077	1079
<b>13.0</b>	944	945	945	947	948	951	952	954	956	959
<b>15.0</b>	825	826	827	829	830	831	832	833	834	836
<b>17.0</b>	706	706	708	710	712	712	713	714	716	718
<b>19.5</b>	564	565	566	569	570	571	573	575	579	582
<b>22.5</b>	413	413	415	417	418	421	423	428	433	437
<b>25.5</b>	288	288	290	291	293	296	300	305	311	315
<b>29.0</b>	179	179	180	182	184	187	192	197	202	205
<b>33.0</b>	96	97	97	98	101	104	108	113	116	119
<b>37.5</b>	45	45	45	46	47	49	52	56	59	61
<b>42.5</b>	20	20	20	20	20	21	22	23	24	26
<b>47.5</b>	8	8	8	8	8	9	9	10	10	10
<b>55.0</b>	1	1	2	2	2	2	2	2	2	2
<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>	1396	1396	1396	1396	1396	1396	1396	1396	1396
<b>1.0</b>	1400	1400	1400	1400	1400	1401	1399	1399	1400
<b>3.0</b>	1385	1385	1385	1385	1385	1384	1385	1384	1384
<b>5.0</b>	1341	1342	1340	1341	1342	1341	1340	1341	1342
<b>7.0</b>	1274	1273	1274	1274	1275	1275	1275	1276	1276
<b>9.0</b>	1186	1186	1187	1187	1187	1188	1189	1189	1190
<b>11.0</b>	1081	1080	1080	1080	1080	1081	1081	1081	1080
<b>13.0</b>	962	964	964	965	967	968	970	970	970
<b>15.0</b>	841	845	849	852	855	857	858	859	861
<b>17.0</b>	723	728	734	738	742	746	747	749	750
<b>19.5</b>	587	591	596	601	607	611	612	613	614
<b>22.5</b>	440	444	447	451	455	459	461	462	463
<b>25.5</b>	318	320	322	324	327	330	331	332	332
<b>29.0</b>	207	208	209	209	210	211	213	214	214
<b>33.0</b>	120	120	120	119	118	118	119	119	119
<b>37.5</b>	61	60	58	57	56	55	56	56	57
<b>42.5</b>	25	24	24	24	24	24	24	24	24
<b>47.5</b>	10	10	10	10	10	10	10	10	10
<b>55.0</b>	2	2	2	2	2	2	2	2	2
<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 : L081910666.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	340.87	N.A.	58.90
0-30	496.08	N.A.	85.70
0-40	554.80	N.A.	95.80
0-60	578.19	N.A.	99.80
0-80	579.10	N.A.	100.00
0-90	579.10	N.A.	100.00
10-90	478.86	N.A.	82.70
20-40	213.93	N.A.	36.90
20-50	233.69	N.A.	40.40
40-70	24.29	N.A.	4.20
60-80	0.91	N.A.	0.20
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	579.10	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	100.24
10-20	240.63
20-30	155.21
30-40	58.73
40-50	19.76
50-60	3.62
60-70	0.91
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

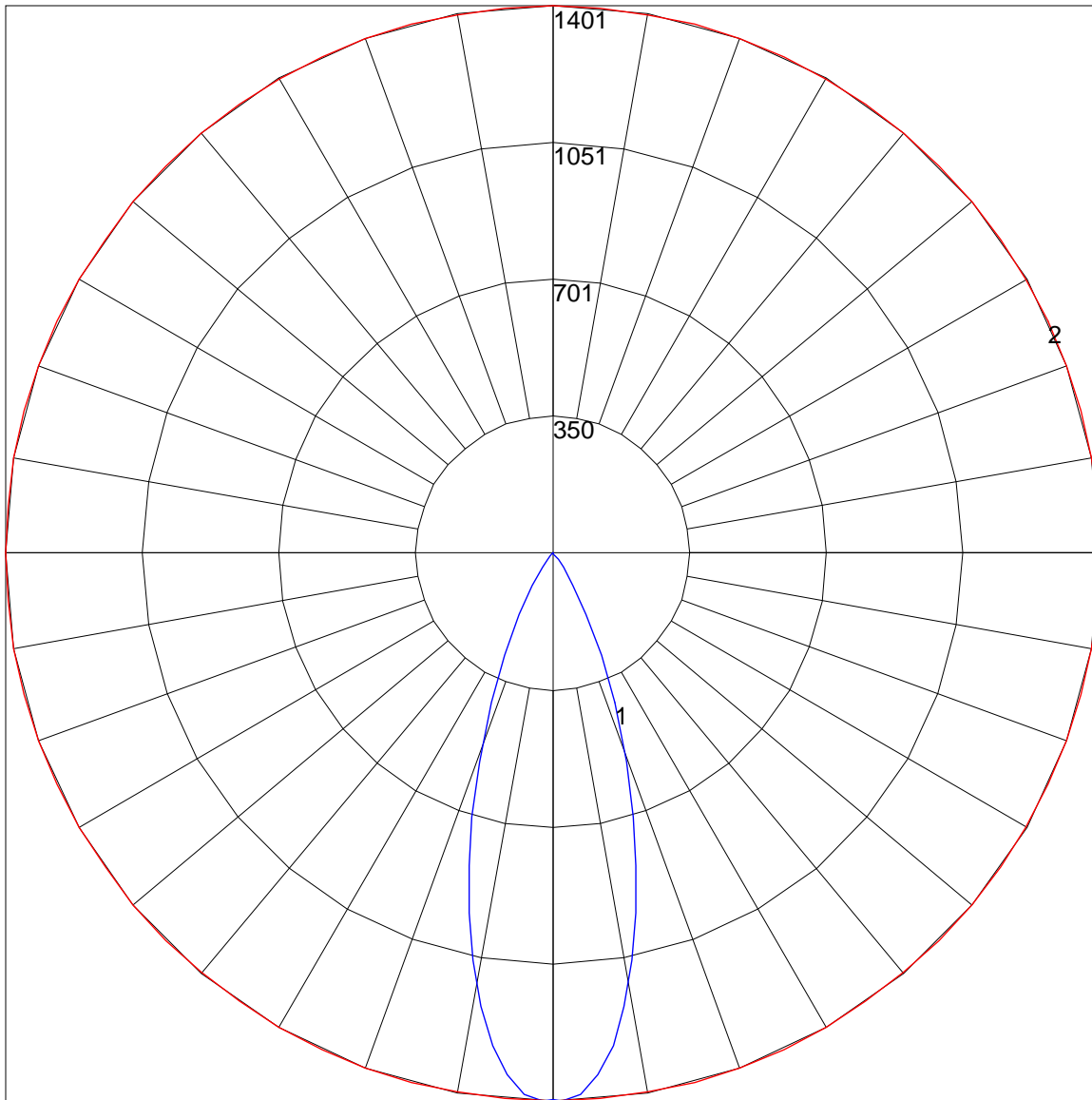
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	109	105	102	99	107	104	100	98	100	98	95	97	95	93	95	93	92	90
3	105	99	95	92	103	98	94	91	95	92	89	93	90	88	91	89	87	85
4	101	94	89	86	99	93	89	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	81	95	88	84	80	87	83	79	85	82	79	84	81	78	77
6	93	85	80	76	91	84	79	76	83	79	75	81	78	75	80	77	74	73
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	74	71	70
8	85	77	72	69	84	77	72	68	76	71	68	75	71	68	74	70	68	66
9	82	74	69	65	81	73	69	65	73	68	65	72	68	65	71	67	65	64
10	79	71	66	63	78	70	66	62	70	65	62	69	65	62	68	65	62	61

POLAR GRAPH



Maximum Candela = 1401 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.)



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

