



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

Report No: L081910677



**Report No:** L081910677

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

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

**Model Number:** 202-R-BV-WD-3018-15-NFL/DIM1-2-SO/FLR-2-BV-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:** 9/9/19 - 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-R-BV-WD-3018-15-NFL/DIM1-2-SO/FLR-2-BV-WH
<b>Driver Model Number:</b>	INTUITIVE SYSTEMS ISD-701-350-15-D

### Test Summary

<b>Total Lumens:</b>	637.09
<b>Efficacy:</b>	43.44
<b>Color Redering Index:</b>	96.5
<b>Correlated Color Temperature:</b>	3018
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.1231
<b>Input Power (W):</b>	14.67
<b>Input Power Factor:</b>	0.9923
<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>	2:00

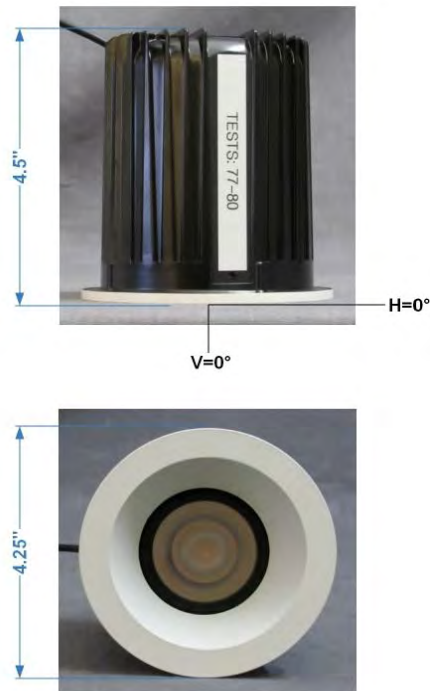
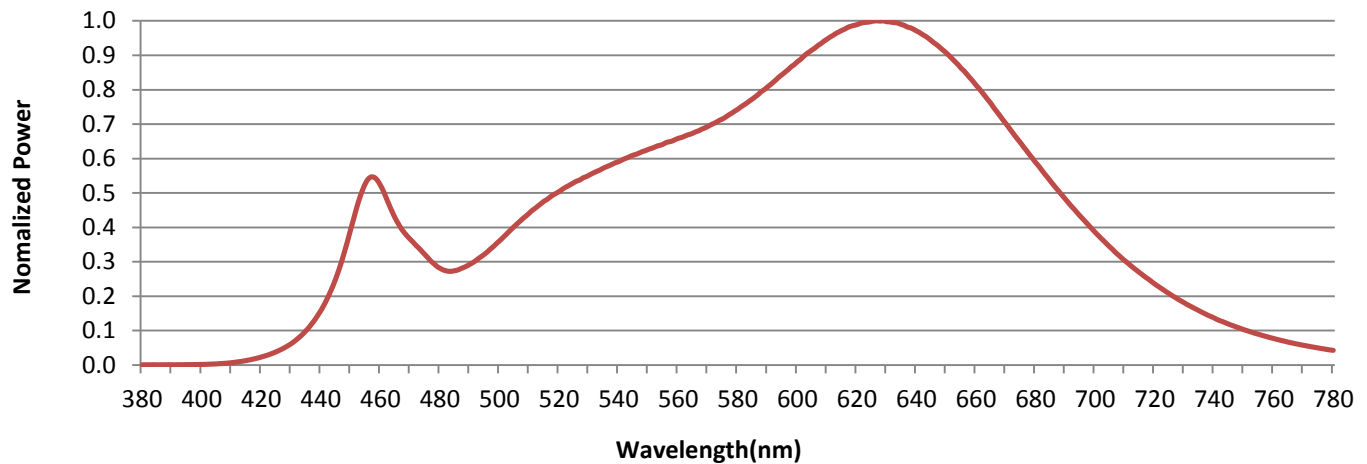


FIG. 1 LUMINAIRE

## Colorimetry Test Results

**Spectral Power Distribution**



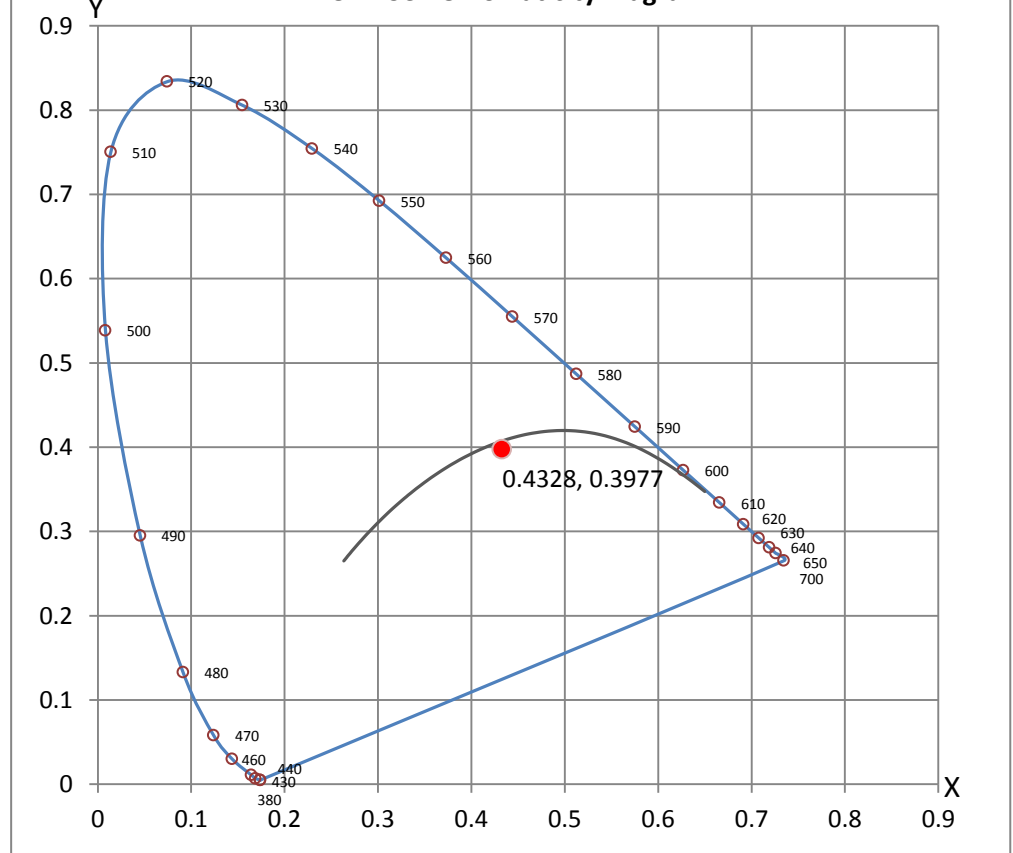
### CRI & CCT

x	0.4328
y	0.3977
u'	0.2507
v'	0.5182
CRI	96.50
CCT	3018
Duv	-0.00200

### R Values

R1	98.11
R2	99.38
R3	98.69
R4	97.03
R5	97.52
R6	96.80
R7	94.26
R8	90.31
R9	80.12
R10	97.68
R11	97.75
R12	83.23
R13	99.15
R14	98.46
R15	95.86

**CIE 1931 Chromaticity Diagram**





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

Report No: L081910677



## 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*



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

## Photometric Test Report

### IES INDOOR REPORT

PHOTOMETRIC FILENAME : L081910677.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081910677  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 9/12/2019  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 202-R-BV-WD-3018-15-NFL/DIM1-2-SO/FLR-2-BV-WH  
[LUMINAIRE] LED Recessed Adjustable Downlight, 0° Aiming Angle, 3000-1800K 90+ CRI, 15° Beam Spread,  
[MORE] NFL Lens, Standard Output 1% Dimming Driver, Round Flanged Bevel Trim, 2.25" 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, 14.67W  
[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	637
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	43
Total Luminaire Watts	14.67
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.50
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.50
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.27 ft (Diameter)
Luminous Width (90-270)	0.27 ft (Diameter)
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2125	2125	2125
55	655	655	655
65	889	889	889
75	726	726	726
85	0	0	0

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : L081910677.IES

CANDELA TABULATION

	<u>0</u>
0.0	2116
1.0	2117
3.0	2075
5.0	1974
7.0	1826
9.0	1641
11.0	1436
13.0	1219
15.0	1009
17.0	812
19.5	599
22.5	400
25.5	259
29.0	153
33.0	79
37.5	31
42.5	11
47.5	5
55.0	2
65.0	2
75.0	1
85.0	0
90.0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910677.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	439.34	N.A.	69.00
0-30	578.51	N.A.	90.80
0-40	620.37	N.A.	97.40
0-60	633.11	N.A.	99.40
0-80	636.55	N.A.	99.90
0-90	637.09	N.A.	100.00
10-90	491.59	N.A.	77.20
20-40	181.03	N.A.	28.40
20-50	191.53	N.A.	30.10
40-70	14.64	N.A.	2.30
60-80	3.44	N.A.	0.50
70-80	1.54	N.A.	0.20
80-90	0.54	N.A.	0.10
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	637.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	145.51
10-20	293.83
20-30	139.17
30-40	41.86
40-50	10.50
50-60	2.24
60-70	1.90
70-80	1.54
80-90	0.54
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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L081910677.IES**

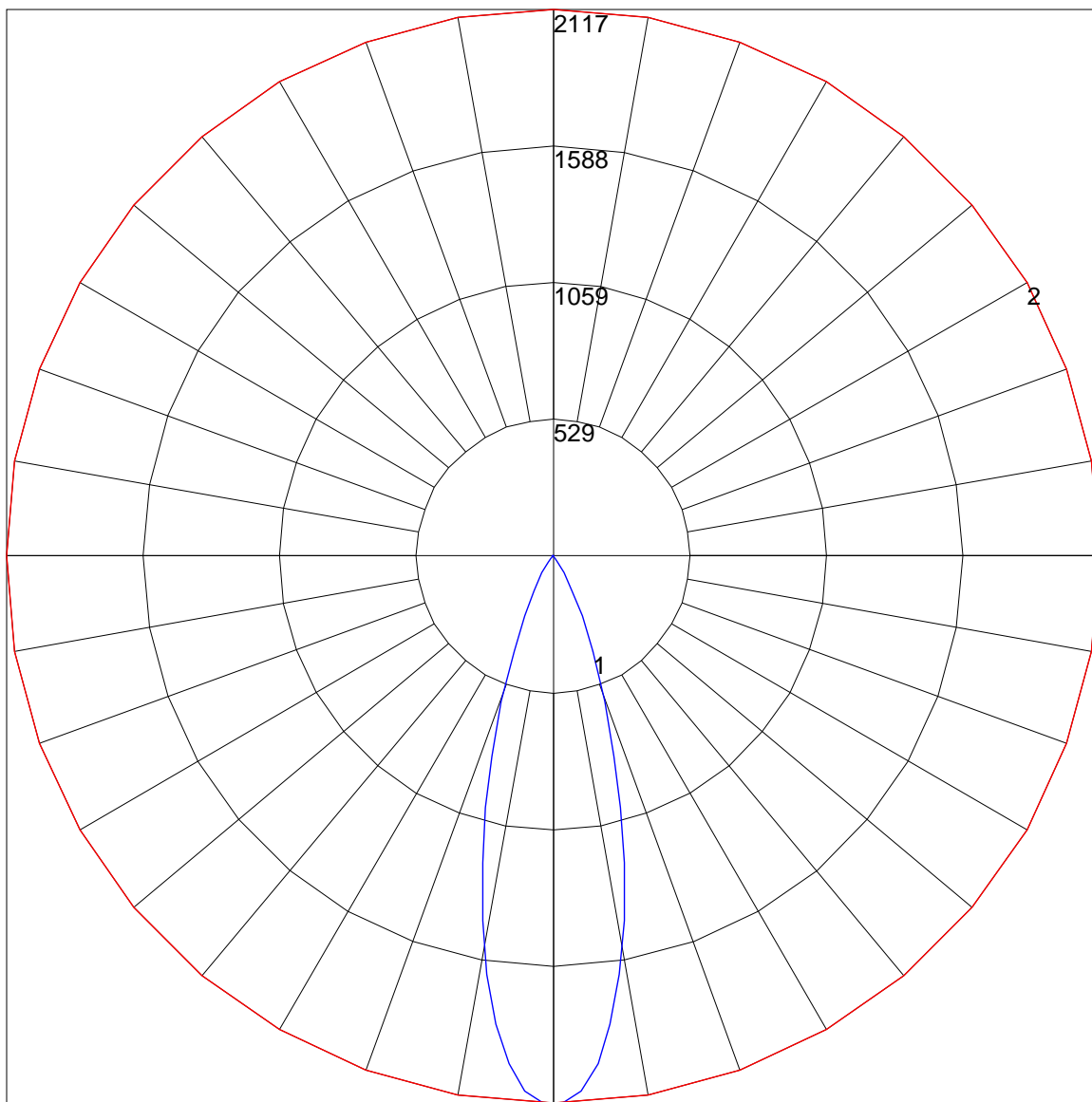
**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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



POLAR GRAPH



Maximum Candela = 2117 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.)

