



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

Report No: L121706540



**Report No:** L121706540

**Issue Date:** 1/18/2018

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

**Model Number:** 400-WD-R-25/DIM1-4-1000-WD with FLR-4-WH trim

**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.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 1/2/18

**Date of Tests:** 1/16/18 - 1/18/18

**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	1/9/19
BK PRECISION	1747	PS-DC04	1/10/19
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/19
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

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

**Test Summary**

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	400-WD-R-25/DIM1-4-1000-WD with FLR-4-WH trim
<b>Driver Model Number:</b>	Number Eight 400 Series DIM1-4-1000
<b>Total Lumens:</b>	658.35
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.12
<b>Input Power (W):</b>	14.49
<b>Input Power Factor:</b>	0.98
<b>Current ATHD @ 120V(%):</b>	6%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	45
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:35
<b>Total Operating Time (Hours):</b>	1:20

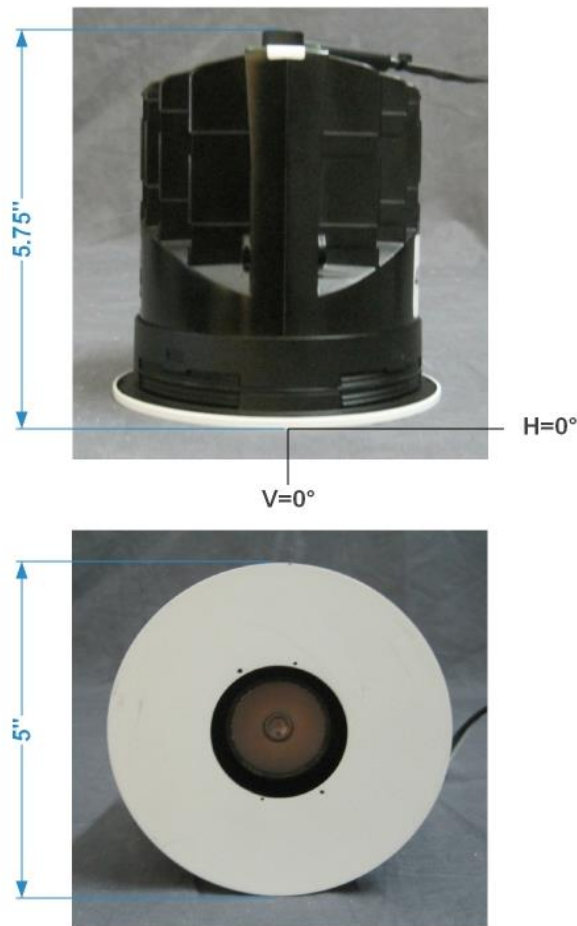


FIG. 1 LUMINAIRE

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

## 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 :                     Joseph Shin                    

Test Report Released by:



Jeff Ahn  
Engineering Manager

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 : L121706540.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L121706540  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 1/18/2018  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 400-WD-R-25/DIM1-4-1000-WD with FLR-4-WH trim  
[LUMINAIRE] LED Recessed Downlight, 25° Beam Spread, 0° Aiming Angle,  
[MORE] 2" Dia. Aperture Trim  
[BALLASTCAT] Number Eight 400 Series DIM1-4-1000  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[INPUT] 120VAC, 14.49W  
[TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	658
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	45
Total Luminaire Watts	14.49
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.48
Spacing Criterion (90-270)	0.48
Spacing Criterion (Diagonal)	0.48
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.17 ft (Diameter)
Luminous Width (90-270)	0.17 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	2010	2010	2010
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : L121706540.IES

CANDELA TABULATION

	<u>0</u>
0.0	2403
1.0	2431
2.0	2406
3.0	2362
4.0	2302
5.0	2226
6.0	2137
7.0	2038
8.0	1930
9.0	1816
10.0	1697
12.0	1445
14.0	1188
16.0	948
18.0	740
20.0	567
22.5	403
25.0	288
27.5	202
30.0	125
35.0	33
40.0	9
45.0	3
50.0	1
55.0	0
60.0	0
65.0	0
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	487.23	N.A.	74.00
0-30	624.83	N.A.	94.90
0-40	655.11	N.A.	99.50
0-60	658.35	N.A.	100.00
0-80	658.35	N.A.	100.00
0-90	658.35	N.A.	100.00
10-90	463.21	N.A.	70.40
20-40	167.87	N.A.	25.50
20-50	170.90	N.A.	26.00
40-70	3.25	N.A.	0.50
60-80	0.00	N.A.	0.00
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	658.35	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	195.14
10-20	292.09
20-30	137.60
30-40	30.27
40-50	3.03
50-60	0.22
60-70	0.00
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

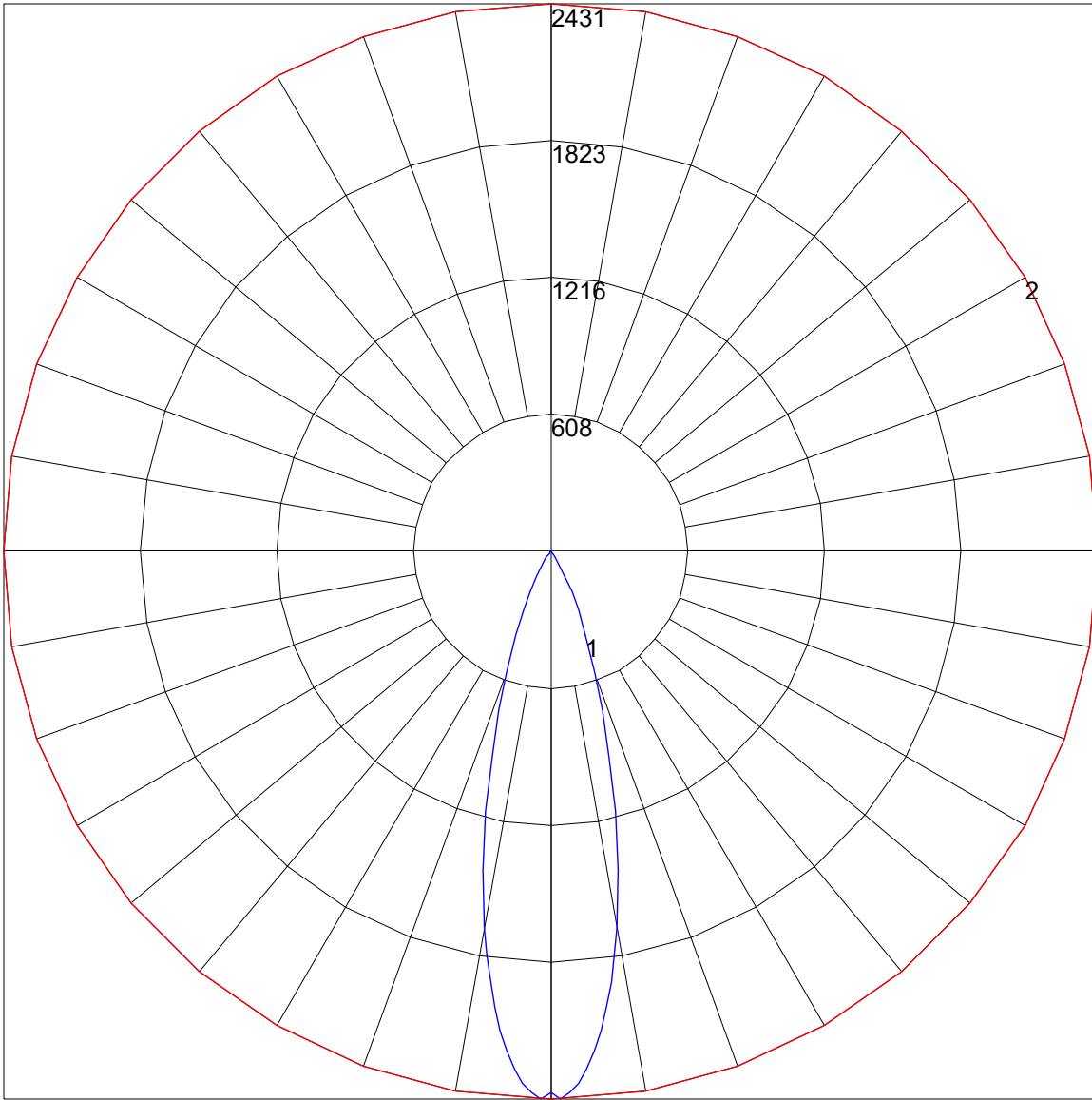
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	100	102	100	98	100	98	96	97	95	94	93
3	107	102	99	96	105	101	98	95	99	96	93	96	94	92	94	92	91	89
4	104	98	94	91	102	97	93	90	95	92	89	93	90	88	91	89	87	86
5	100	94	90	87	99	93	89	86	92	88	86	90	87	85	89	86	84	83
6	97	91	86	83	96	90	86	83	89	85	82	87	84	82	86	83	81	80
7	94	87	83	80	93	87	83	80	86	82	79	85	81	79	84	81	79	78
8	91	84	80	77	90	84	80	77	83	79	77	82	79	76	81	78	76	75
9	89	82	77	74	88	81	77	74	80	77	74	80	76	74	79	76	74	73
10	86	79	75	72	85	79	75	72	78	74	72	77	74	72	77	74	71	70

POLAR GRAPH



Maximum Candela = 2431 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

