



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

Report No: L121706551



Report No: L121706551 **Issue Date:** 1/23/2018

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

Model Number: MPT2-WD-R-6-BK/15/DIM1-M-1000-WD

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.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 1/2/18

Date of Tests: 1/22/18 - 1/23/18

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

Manufacturer:	Number Eight Lighting Company
Model Number:	MPT2-WD-R-6-BK/15/DIM1-M-1000-WD
Driver Model Number:	IntuitiveSystems ISD-701-350-15-D
Total Lumens:	875.21
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.13
Input Power (W):	14.92
Input Power Factor:	0.97
Current ATHD @ 120V(%):	5%
Current ATHD @ 277V(%):	N/A
Efficacy:	59
Color Rendering Index (CRI):	98
Correlated Color Temperature (K):	3051
Chromaticity Coordinate x:	0.4317
Chromaticity Coordinate y:	0.3992
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:10
Total Operating Time (Hours):	1:45

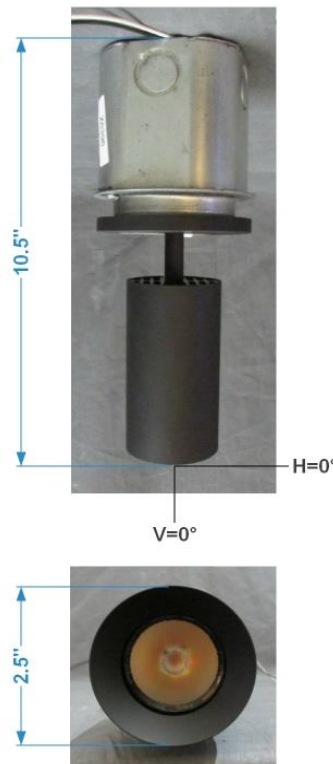
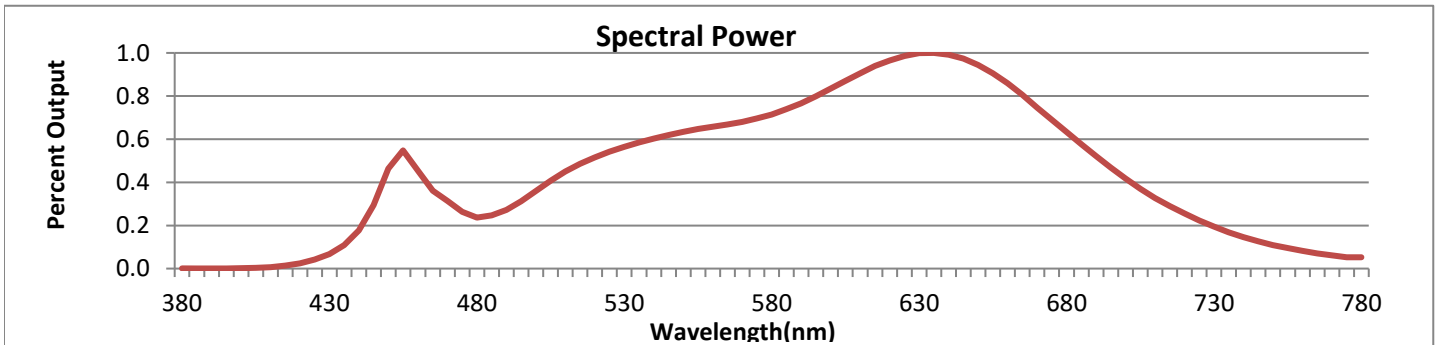


FIG. 1 LUMINAIRE

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



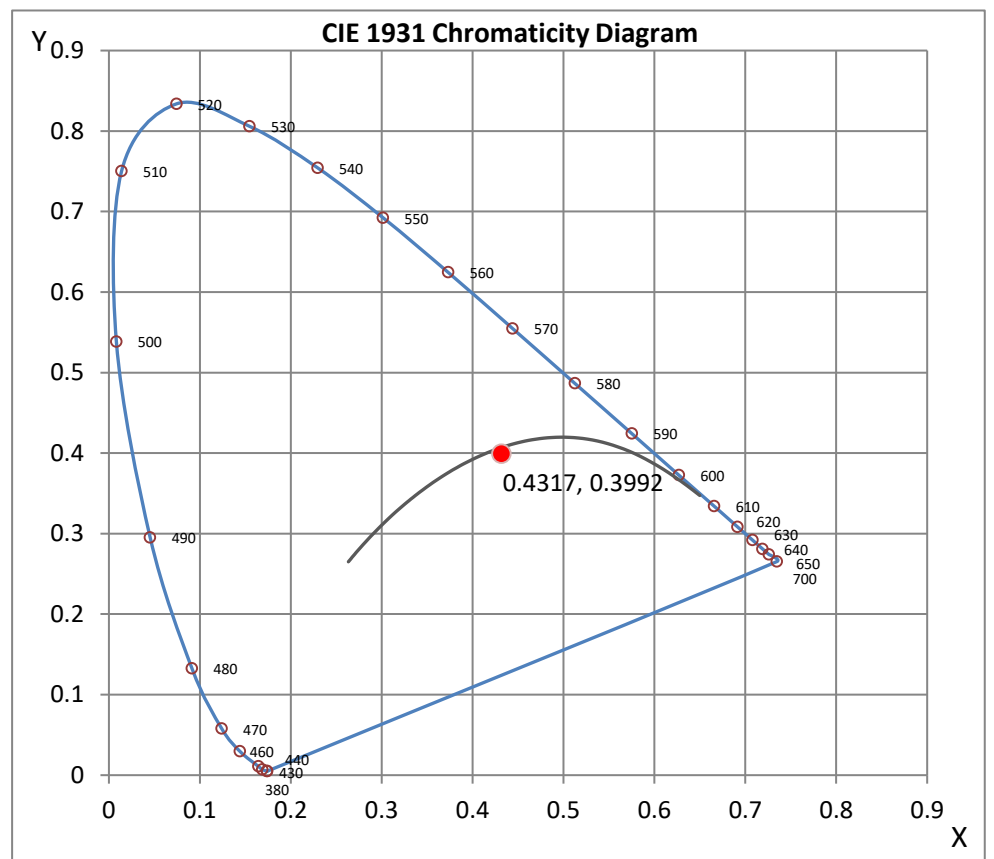
Wavelength	W/m ² nm	440	0.1766	510	0.4496	580	0.7144	650	0.9449	720	0.2550
380	0.0009	450	0.4641	520	0.5154	590	0.7664	660	0.8601	730	0.1945
390	0.0009	460	0.4538	530	0.5640	600	0.8345	670	0.7476	740	0.1459
400	0.0016	470	0.3139	540	0.6025	610	0.9060	680	0.6336	750	0.1095
410	0.0064	480	0.2360	550	0.6340	620	0.9658	690	0.5206	760	0.0817
420	0.0242	490	0.2727	560	0.6573	630	0.9985	700	0.4171	770	0.0607
430	0.0677	500	0.3591	570	0.6806	640	0.9924	710	0.3266	780	0.0522

CRI & CCT

x	0.4317
y	0.3992
u'	0.2493
v'	0.5187
CRI	97.80
CCT	3051
Duv	-0.00123

R Values

R1	99.35
R2	98.94
R3	95.72
R4	98.60
R5	98.53
R6	97.16
R7	97.86
R8	96.04
R9	90.23
R10	95.49
R11	97.03
R12	82.49
R13	99.84
R14	96.54



*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: 10*



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

Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706551.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121706551
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/23/2018
[MANUFAC] Number Eight Lighting Company
[LUMCAT] MPT2-WD-R-6-BK/15/DIM1-M-1000-WD
[LUMINAIRE] LED Recessed Downlight, 15° Beam Spread, 0° Aiming Angle,
[BALLASTCAT] IntuitiveSystems ISD-701-350-15-D
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 14.92W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	875
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	59
Total Luminaire Watts	14.92
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.40
Spacing Criterion (90-270)	0.40
Spacing Criterion (Diagonal)	0.42
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 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	5708	5708	5708
55	1083	1083	1083
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706551.IES

CANDELA TABULATION

	<u>0</u>
0.0	3928
1.0	3912
2.0	3866
3.0	3777
4.0	3653
5.0	3494
6.0	3299
7.0	3076
8.0	2828
9.0	2569
10.0	2309
12.0	1817
14.0	1400
16.0	1071
18.0	818
20.0	624
22.5	446
25.0	322
27.5	236
30.0	174
35.0	91
40.0	41
45.0	13
50.0	4
55.0	2
60.0	1
65.0	0
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706551.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	642.08	N.A.	73.40
0-30	798.49	N.A.	91.20
0-40	859.53	N.A.	98.20
0-60	874.96	N.A.	100.00
0-80	875.21	N.A.	100.00
0-90	875.21	N.A.	100.00
10-90	580.99	N.A.	66.40
20-40	217.46	N.A.	24.80
20-50	230.89	N.A.	26.40
40-70	15.67	N.A.	1.80
60-80	0.24	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	875.21	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	294.22
10-20	347.86
20-30	156.41
30-40	61.05
40-50	13.43
50-60	2.00
60-70	0.24
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

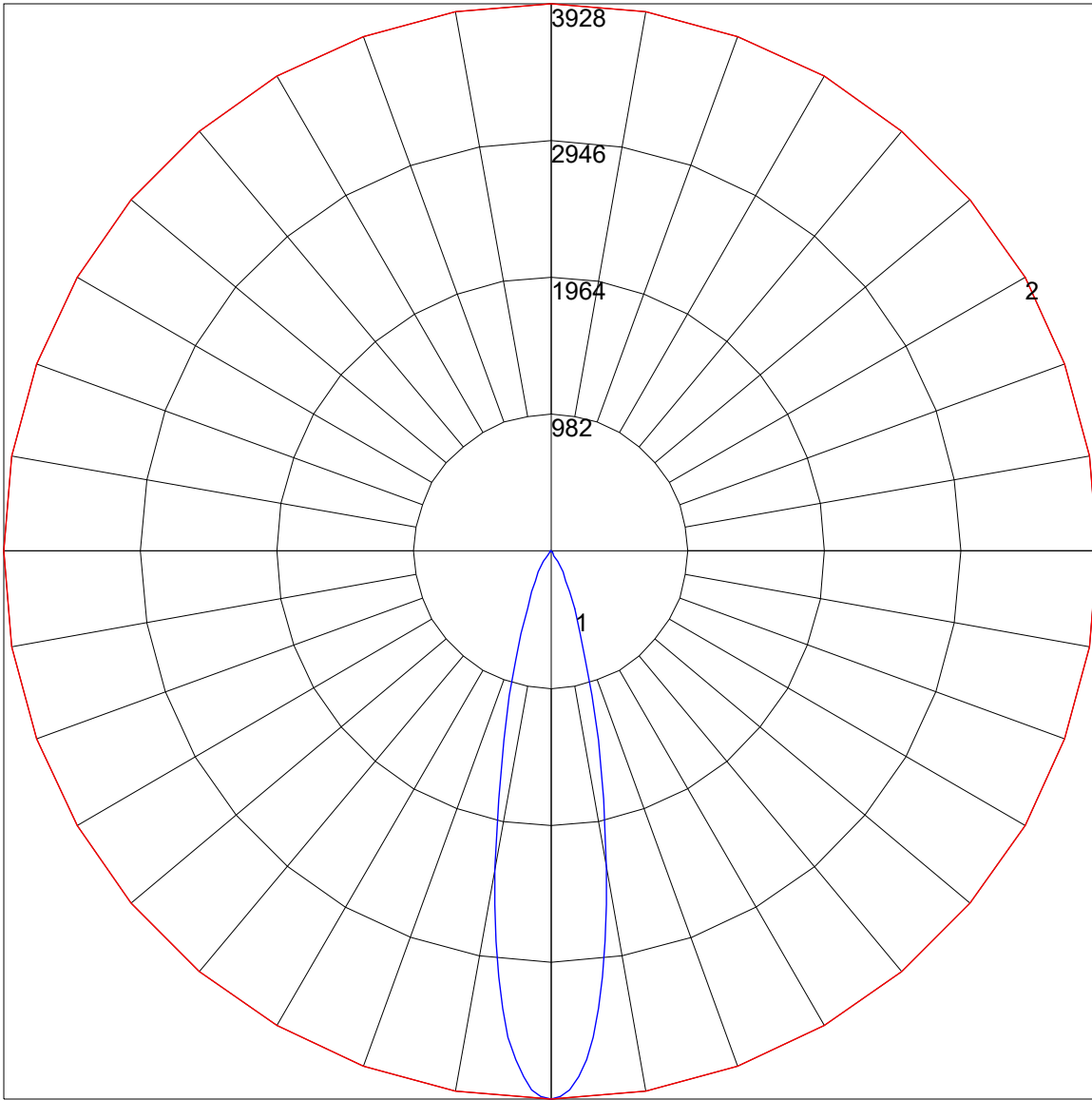
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706551.IES

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	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	101	109	105	103	100	102	100	98	99	98	96	97	95	94	93
3	107	102	99	96	105	101	98	95	98	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	75	88	81	77	74	81	77	74	80	76	74	79	76	74	73
10	86	79	75	72	85	79	75	72	78	75	72	78	74	72	77	74	72	71

POLAR GRAPH



Maximum Candela = 3928 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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

