

**Report No:** L121706546 **Issue Date:** 1/23/2018

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

**Model Number:** MPT2-HI-R-6-BK/25/DIM1-M-1000

**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:** 1/20/18 - 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**

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	MPT2-HI-R-6-BK/25/DIM1-M-1000
<b>Driver Model Number:</b>	IntuitiveSystems ISD-701-1000-15-D
<b>Total Lumens:</b>	770.02
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.12
<b>Input Power (W):</b>	14.45
<b>Input Power Factor:</b>	0.98
<b>Current ATHD @ 120V(%):</b>	6%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	53
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:40
<b>Total Operating Time (Hours):</b>	1:25

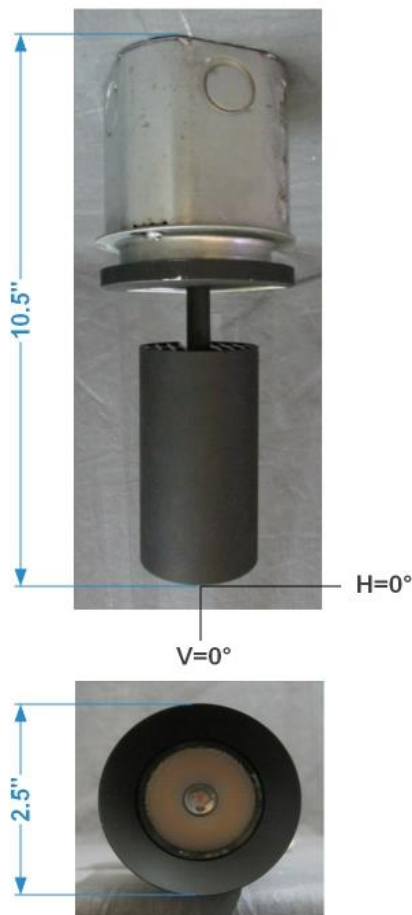


FIG. 1 LUMINAIRE

\*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 : L121706546.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L121706546  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 1/23/2018  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] MPT2-HI-R-6-BK/25/DIM1-M-1000  
[LUMINAIRE] LED Recessed Downlight, 25° Beam Spread, 0° Aiming Angle,  
[BALLASTCAT] IntuitiveSystems ISD-701-1000-15-D  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[INPUT] 120VAC, 14.45W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	770
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	14.45
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.46
Spacing Criterion (90-270)	0.46
Spacing Criterion (Diagonal)	0.48
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	11855	11855	11855
55	1624	1624	1624
65	735	735	735
75	0	0	0
85	0	0	0

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : L121706546.IES

CANDELA TABULATION

	<u>0</u>
0.0	2725
1.0	2711
2.0	2673
3.0	2617
4.0	2543
5.0	2453
6.0	2348
7.0	2233
8.0	2107
9.0	1973
10.0	1836
12.0	1554
14.0	1281
16.0	1030
18.0	806
20.0	618
22.5	434
25.0	307
27.5	222
30.0	163
35.0	93
40.0	54
45.0	27
50.0	9
55.0	3
60.0	2
65.0	1
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121706546.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	530.16	N.A.	68.90
0-30	680.78	N.A.	88.40
0-40	743.00	N.A.	96.50
0-60	769.04	N.A.	99.90
0-80	770.02	N.A.	100.00
0-90	770.02	N.A.	100.00
10-90	556.01	N.A.	72.20
20-40	212.84	N.A.	27.60
20-50	235.11	N.A.	30.50
40-70	27.02	N.A.	3.50
60-80	0.98	N.A.	0.10
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	770.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	214.01
10-20	316.15
20-30	150.62
30-40	62.22
40-50	22.27
50-60	3.76
60-70	0.98
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

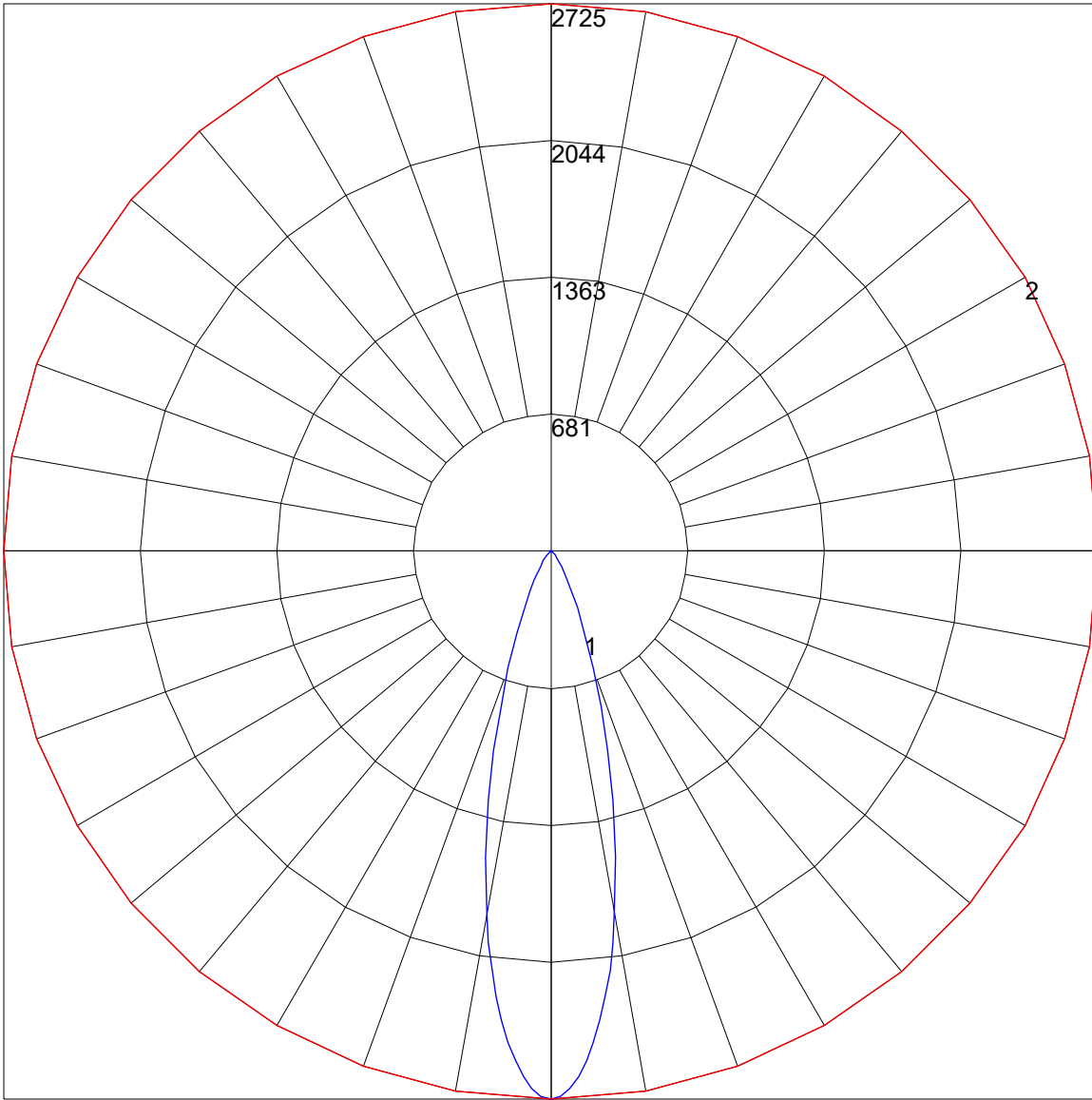
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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

POLAR GRAPH



Maximum Candela = 2725 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

