



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

Report No: L121706454



**Report No:** L121706454

**Issue Date:** 1/15/2018

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

**Model Number:** 804/K2-HI-40/DIM1-8-1400 with FR-P-1-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:** 1/9/18 - 1/15/18

**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>	804/K2-HI-40/DIM1-8-1400 with FR-P-1-WH trim
<b>Driver Model Number:</b>	IntuitiveSystems ISD-701-1400-20-D
<b>Total Lumens:</b>	1037.69
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.17
<b>Input Power (W):</b>	20.34
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	7%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	51
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:45
<b>Total Operating Time (Hours):</b>	1:20

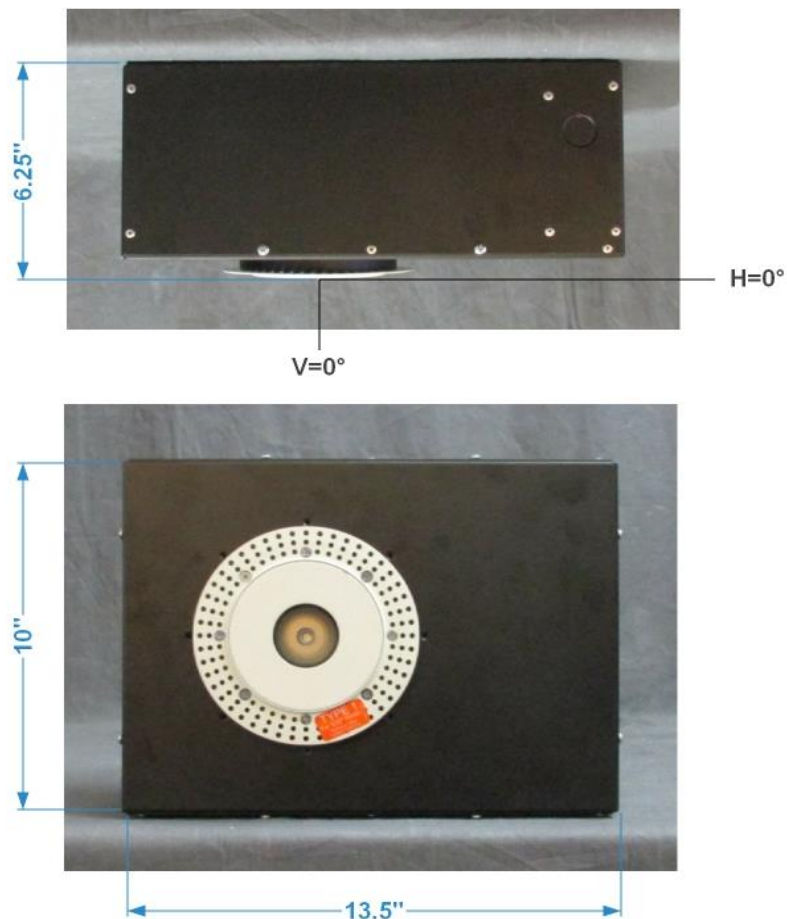


FIG. 1 LUMINAIRE

\*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 : L121706454.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L121706454  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUE DATE] 1/15/2018  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 804/K2-HI-40/DIM1-8-1400 with FR-P-1-WH trim  
[LUMINAIRE] LED Recessed Downlight, 40° Beam Spread, 0° Aiming Angle,  
[MORE] 1.75" Dia. Aperture Trim  
[BALLASTCAT] IntuitiveSystems ISD-701-1400-20-D  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[INPUT] 120VAC, 20.34W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1038
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	51
Total Luminaire Watts	20.34
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.68
Spacing Criterion (90-270)	0.68
Spacing Criterion (Diagonal)	0.68
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.15 ft (Diameter)
Luminous Width (90-270)	0.15 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	49915	49915	49915
55	11671	11671	11671
65	0	0	0
75	0	0	0
85	0	0	0

CANDELA TABULATION

	<u>0</u>
0.0	1862
1.0	1885
2.0	1879
3.0	1869
4.0	1854
5.0	1832
6.0	1804
7.0	1770
8.0	1730
9.0	1685
10.0	1637
12.0	1531
14.0	1412
16.0	1273
18.0	1116
20.0	964
22.5	782
25.0	627
27.5	503
30.0	397
35.0	226
40.0	116
45.0	58
50.0	28
55.0	11
60.0	3
65.0	0
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121706454.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	534.49	N.A.	51.50
0-30	826.85	N.A.	79.70
0-40	975.65	N.A.	94.00
0-60	1036.97	N.A.	99.90
0-80	1037.69	N.A.	100.00
0-90	1037.69	N.A.	100.00
10-90	869.14	N.A.	83.80
20-40	441.16	N.A.	42.50
20-50	490.76	N.A.	47.30
40-70	62.04	N.A.	6.00
60-80	0.73	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	1037.69	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	168.56
10-20	365.94
20-30	292.36
30-40	148.80
40-50	49.60
50-60	11.72
60-70	0.73
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

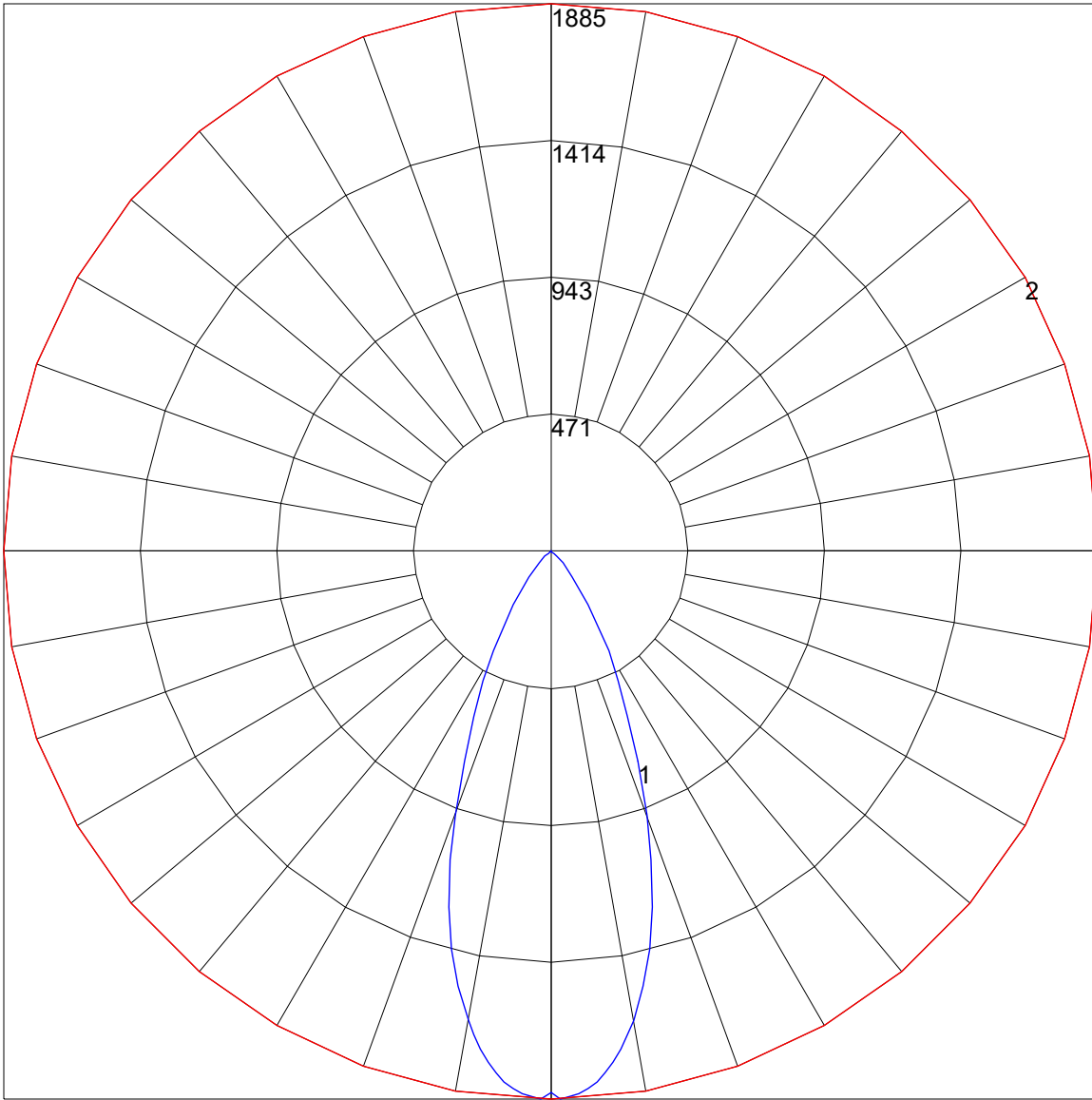
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	0
1	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94	0
2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89	0
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84	0
4	99	93	88	84	98	91	87	83	89	85	82	87	84	81	86	83	80	79	0
5	95	87	82	78	93	87	82	78	85	80	77	83	79	77	82	78	76	74	0
6	91	83	77	73	89	82	77	73	81	76	73	79	75	72	78	74	72	70	0
7	87	79	73	69	86	78	73	69	77	72	69	76	71	68	74	71	68	67	0
8	83	75	69	66	82	74	69	65	73	68	65	72	68	65	71	67	65	63	0
9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	64	61	60	0
10	77	68	63	59	76	68	62	59	67	62	59	66	62	59	65	61	59	57	0

POLAR GRAPH



Maximum Candela = 1885 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

