

Report No: L121706437 **Issue Date:** 1/11/2018

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

Model Number: 803/K2-HI-15/DIM1-8-700 with FS-P-1-WH trim

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: 1/7/18 - 1/11/18

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:	803/K2-HI-15/DIM1-8-700 with FS-P-1-WH trim
Driver Model Number:	IntuitiveSystems ISD-701-1000-15-D
Total Lumens:	664.73
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.079
Input Power (W):	9.28
Input Power Factor:	0.98
Current ATHD @ 120V(%):	4%
Current ATHD @ 277V(%):	N/A
Efficacy:	72
Color Rendering Index (CRI):	94
Correlated Color Temperature (K):	2921
Chromaticity Coordinate x:	0.4465
Chromaticity Coordinate y:	0.4136
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:15

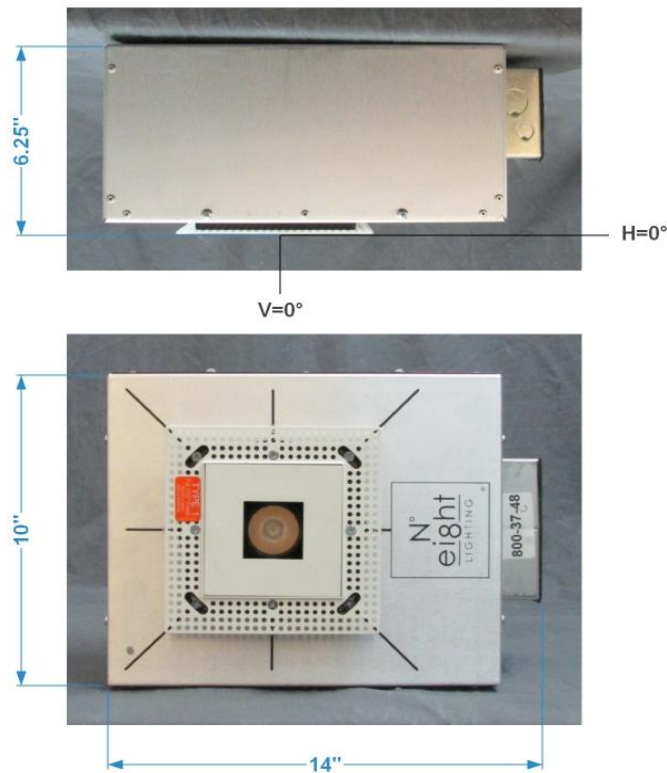
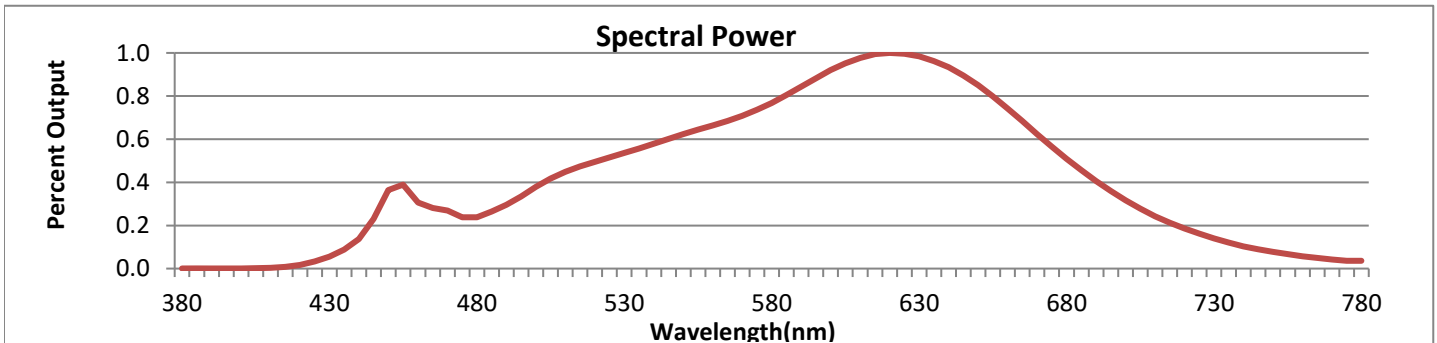


FIG. 1 LUMINAIRE

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



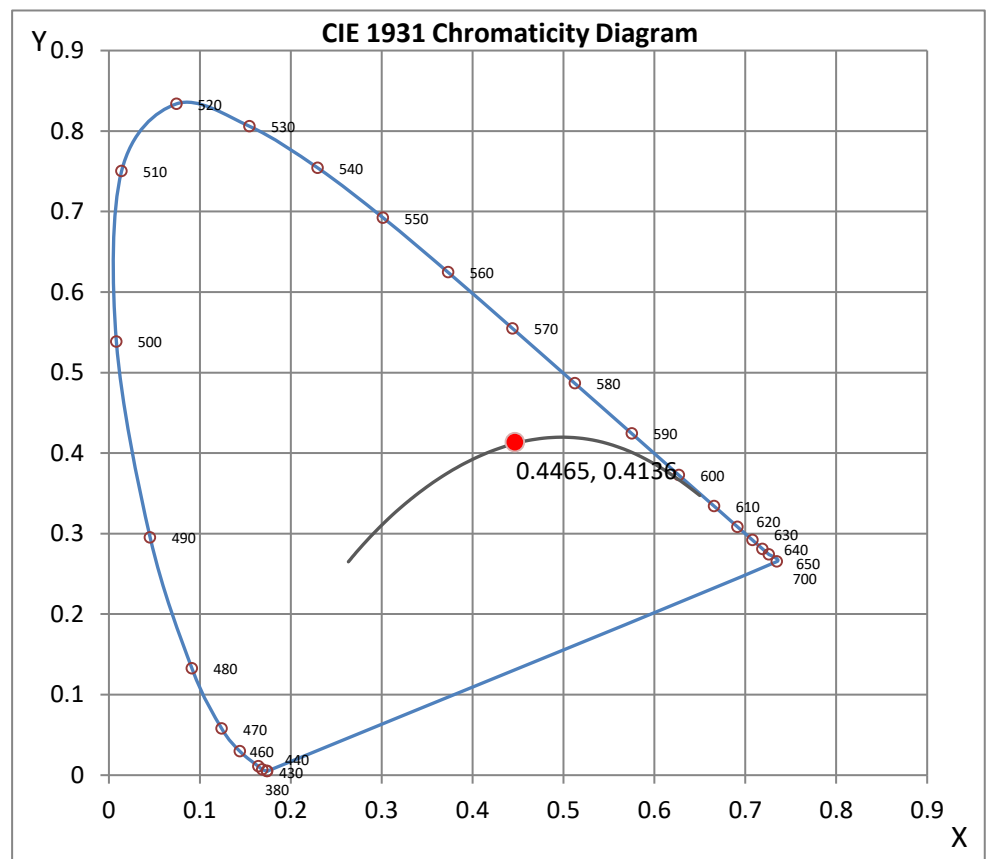
Wavelength	W/m ² nm	440	0.1373	510	0.4485	580	0.7680	650	0.8506	720	0.1862
380	0.0008	450	0.3641	520	0.4948	590	0.8430	660	0.7425	730	0.1396
390	0.0008	460	0.3066	530	0.5358	600	0.9202	670	0.6236	740	0.1032
400	0.0012	470	0.2687	540	0.5789	610	0.9767	680	0.5101	750	0.0772
410	0.0037	480	0.2376	550	0.6235	620	1.0000	690	0.4059	760	0.0575
420	0.0170	490	0.2963	560	0.6634	630	0.9846	700	0.3171	770	0.0423
430	0.0554	500	0.3788	570	0.7080	640	0.9339	710	0.2426	780	0.0365

CRI & CCT

x	0.4465
y	0.4136
u'	0.2526
v'	0.5265
CRI	93.80
CCT	2921
Duv	0.00249

R Values

R1	93.85
R2	96.92
R3	99.31
R4	94.06
R5	93.50
R6	97.06
R7	92.85
R8	82.83
R9	61.18
R10	92.12
R11	95.68
R12	83.03
R13	94.74
R14	98.81



*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 : L121706437.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L121706437
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 1/11/2018
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 803/K2-HI-15/DIM1-8-700 with FS-P-1-WH trim
 [LUMINAIRE] LED Recessed Downlight, 15° Beam Spread, 0° Aiming Angle,
 [MORE] 1.75" x 1.75" Aperture Trim
 [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, 9.28W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	665
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	9.28
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.30
Spacing Criterion (90-270)	0.30
Spacing Criterion (Diagonal)	0.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.15 ft
Luminous Width (90-270)	0.15 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3380	3380	3380
55	833	833	833
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
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CANDELA TABULATION

	<u>0</u>
0.0	4534
1.0	4549
2.0	4404
3.0	4176
4.0	3880
5.0	3534
6.0	3158
7.0	2778
8.0	2418
9.0	2090
10.0	1802
12.0	1341
14.0	1009
16.0	767
18.0	582
20.0	436
22.5	295
25.0	196
27.5	134
30.0	93
35.0	41
40.0	15
45.0	5
50.0	2
55.0	1
60.0	0
65.0	0
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706437.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	531.26	N.A.	79.90
0-30	629.65	N.A.	94.70
0-40	658.73	N.A.	99.10
0-60	664.73	N.A.	100.00
0-80	664.73	N.A.	100.00
0-90	664.73	N.A.	100.00
10-90	387.20	N.A.	58.20
20-40	127.47	N.A.	19.20
20-50	132.58	N.A.	19.90
40-70	6.00	N.A.	0.90
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	664.73	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	277.53
10-20	253.73
20-30	98.39
30-40	29.08
40-50	5.12
50-60	0.88
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

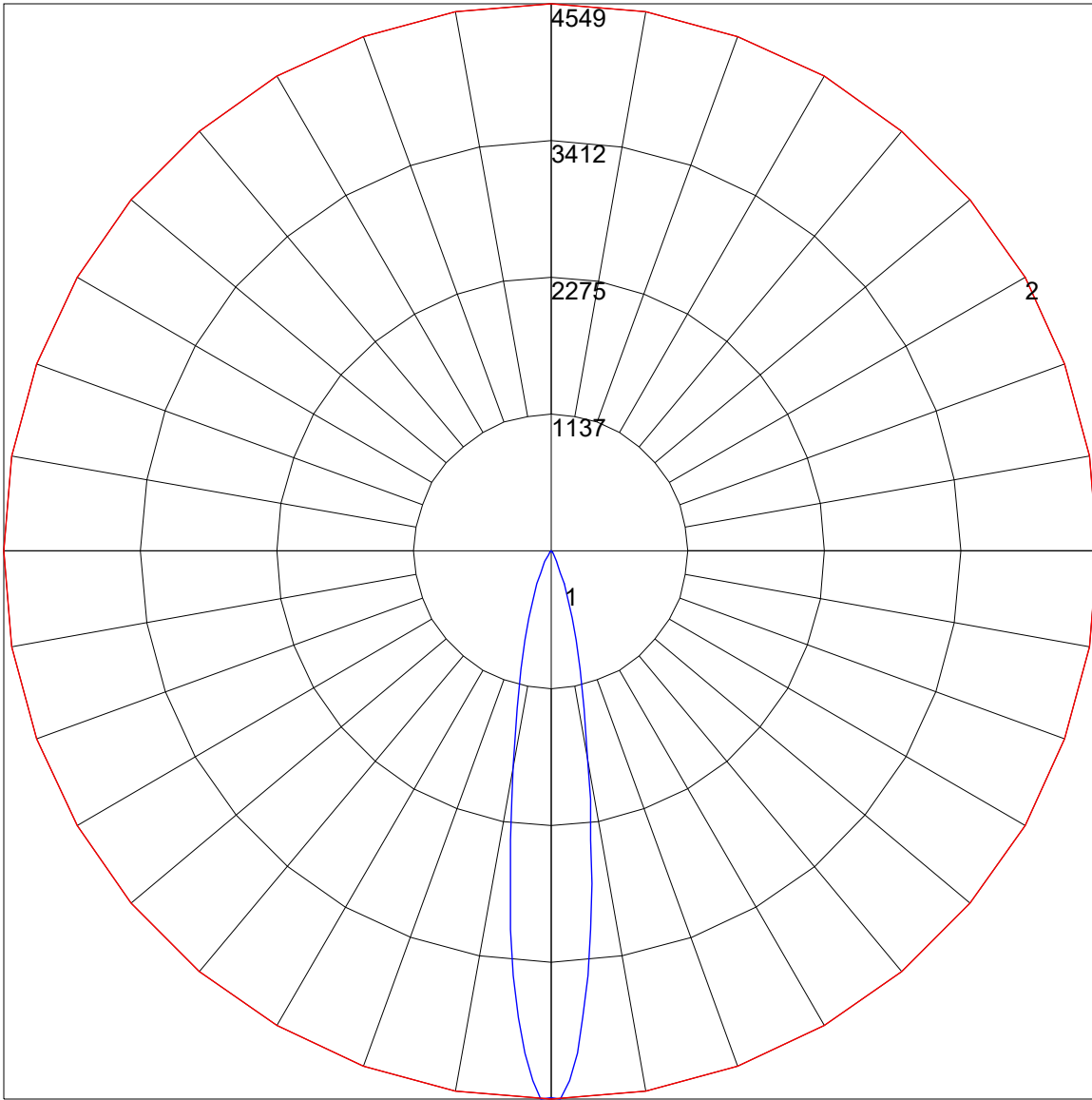
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	0
1	115	113	111	110	113	111	109	108	107	106	105	103	102	101	100	99	99	97	0
2	112	108	105	103	109	106	104	102	103	101	99	100	99	97	98	96	95	94	0
3	108	104	100	97	106	102	99	97	100	97	95	98	96	94	96	94	92	91	0
4	105	100	96	93	103	99	95	93	97	94	92	95	93	91	93	91	90	88	0
5	102	96	92	90	101	96	92	89	94	91	88	92	90	88	91	89	87	86	0
6	99	93	89	86	98	93	89	86	91	88	86	90	87	85	89	86	85	84	0
7	97	90	86	84	96	90	86	83	89	86	83	88	85	83	87	84	82	81	0
8	94	88	84	81	93	87	84	81	87	83	81	86	83	81	85	82	80	79	0
9	92	86	82	79	91	85	81	79	84	81	79	84	81	78	83	80	78	77	0
10	90	83	80	77	89	83	79	77	82	79	77	82	79	77	81	78	76	76	0

POLAR GRAPH



Maximum Candela = 4549 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

