



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

Report No: L121706419



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Issue Date: 1/10/2018

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

Model Number: 804/J2-HI-15/DIM1-8-1400 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: 1/6/18 - 1/10/18

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:	804/J2-HI-15/DIM1-8-1400 with FS-P-1-WH trim
Driver Model Number:	IntuitiveSystems ISD-701-1400-20-D
Total Lumens:	1037.86
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.17
Input Power (W):	20.51
Input Power Factor:	0.99
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	51
Color Rendering Index (CRI):	92
Correlated Color Temperature (K):	2919
Chromaticity Coordinate x:	0.4435
Chromaticity Coordinate y:	0.4074
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:15

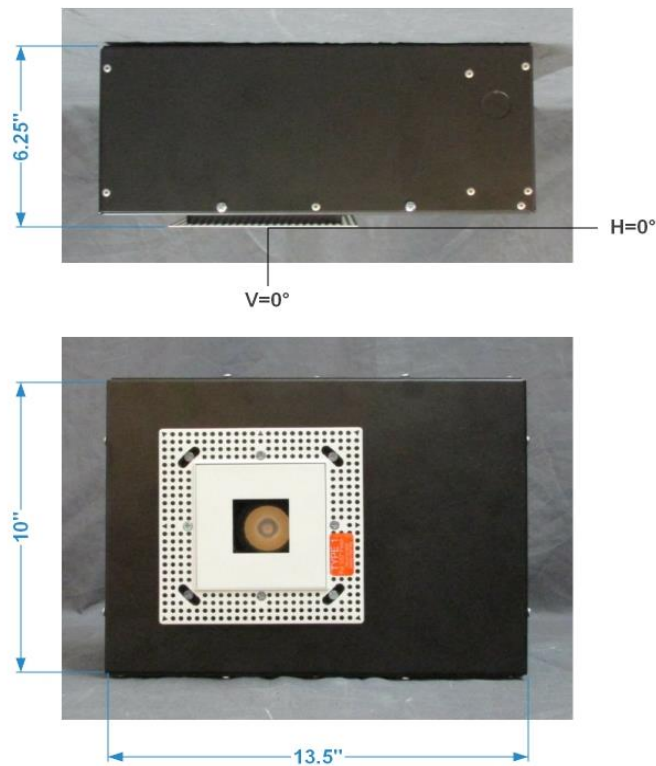
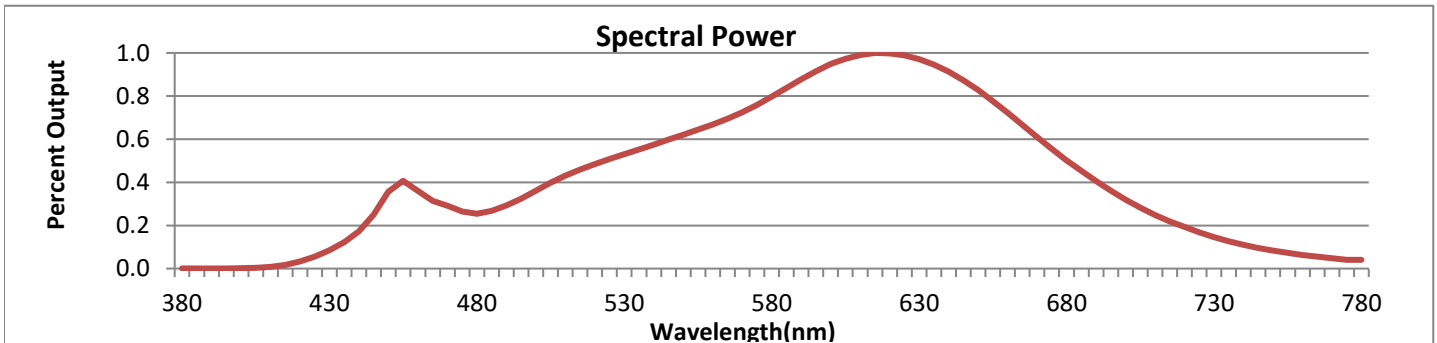


FIG. 1 LUMINAIRE

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



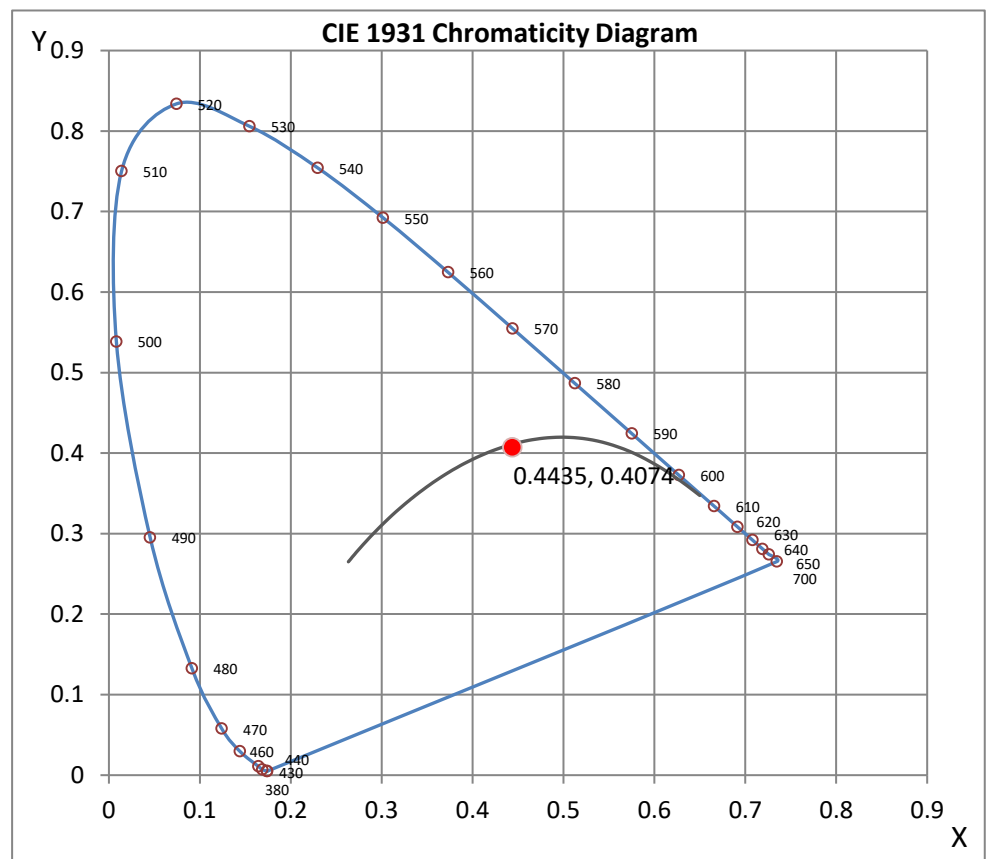
Wavelength	W/m ² nm	440	0.1724	510	0.4310	580	0.7975	650	0.8286	720	0.1928
380	0.0007	450	0.3570	520	0.4837	590	0.8770	660	0.7239	730	0.1466
390	0.0010	460	0.3599	530	0.5303	600	0.9486	670	0.6097	740	0.1104
400	0.0017	470	0.2921	540	0.5751	610	0.9905	680	0.5026	750	0.0838
410	0.0080	480	0.2536	550	0.6211	620	0.9984	690	0.4049	760	0.0629
420	0.0325	490	0.2921	560	0.6682	630	0.9712	700	0.3198	770	0.0474
430	0.0844	500	0.3616	570	0.7248	640	0.9135	710	0.2482	780	0.0411

CRI & CCT

x	0.4435
y	0.4074
u'	0.2534
v'	0.5237
CRI	92.20
CCT	2919
Duv	0.00046

R Values

R1	92.13
R2	96.74
R3	98.79
R4	91.71
R5	92.02
R6	96.38
R7	90.67
R8	79.02
R9	54.03
R10	91.62
R11	92.67
R12	83.94
R13	93.47
R14	99.49



*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*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706419.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121706419
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/10/2018
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 804/J2-HI-15/DIM1-8-1400 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-701-1400-20-D
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 20.51W
[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	20.51
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	1352	1352	1352
55	0	0	0
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	7423
1.0	7339
2.0	7100
3.0	6727
4.0	6245
5.0	5690
6.0	5103
7.0	4511
8.0	3947
9.0	3426
10.0	2959
12.0	2207
14.0	1655
16.0	1251
18.0	938
20.0	691
22.5	451
25.0	287
27.5	178
30.0	107
35.0	31
40.0	7
45.0	2
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
PHOTOMETRIC FILENAME : L121706419.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	864.25	N.A.	83.30
0-30	1008.71	N.A.	97.20
0-40	1035.37	N.A.	99.80
0-60	1037.86	N.A.	100.00
0-80	1037.86	N.A.	100.00
0-90	1037.86	N.A.	100.00
10-90	587.77	N.A.	56.60
20-40	171.11	N.A.	16.50
20-50	173.39	N.A.	16.70
40-70	2.49	N.A.	0.20
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	1037.86	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	450.08
10-20	414.17
20-30	144.45
30-40	26.66
40-50	2.27
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

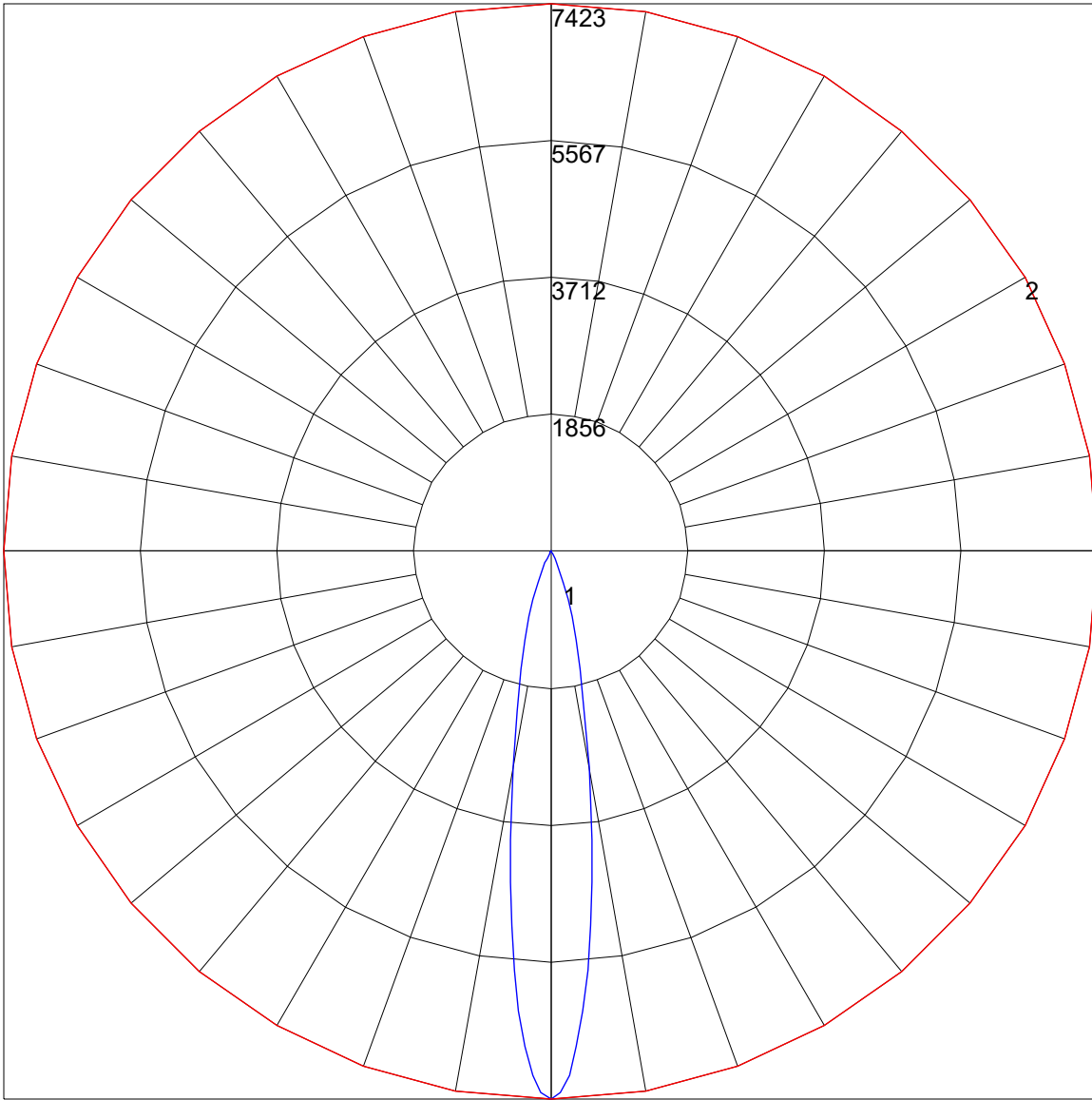
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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

POLAR GRAPH



Maximum Candela = 7423 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

