

Report No: L121706402 **Issue Date:** 1/8/2018

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

Model Number: 803/J2-HI-15/DIM1-8-700 with FS-P-1-WH trim (35° Aiming Angle)

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: 1/3/18 - 1/8/18

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/J2-HI-15/DIM1-8-700 with FS-P-1-WH trim (35° Aiming Angle)
Driver Model Number:	IntuitiveSystems ISD-701-1000-15-D
Total Lumens:	590.66
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.081
Input Power (W):	9.49
Input Power Factor:	0.97
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	62
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:30

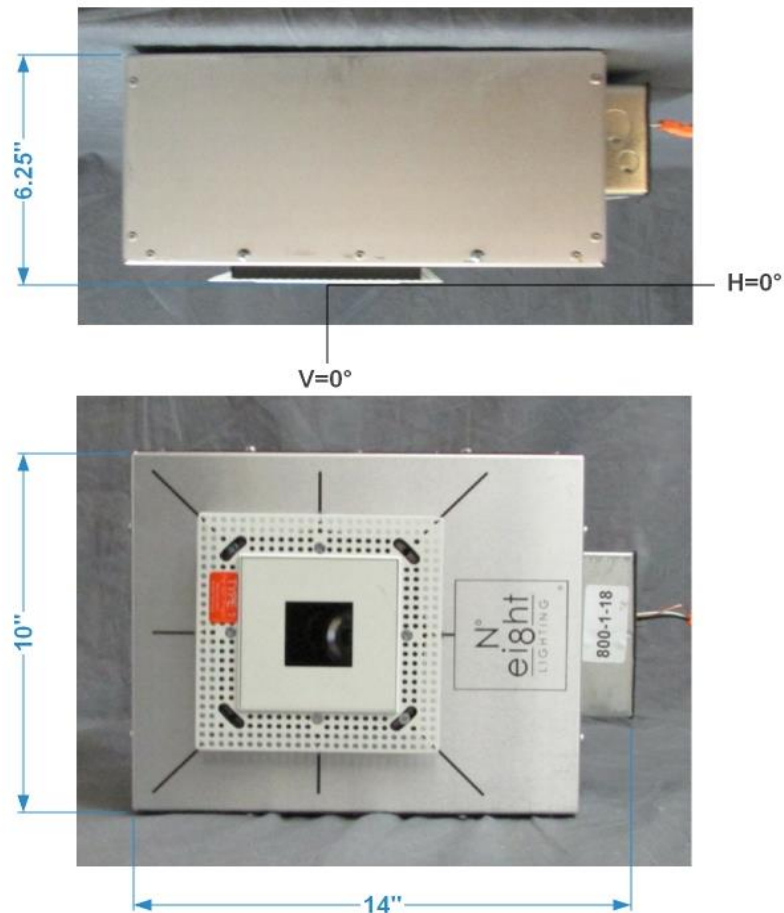


FIG. 1 LUMINAIRE

*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: 10*



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

Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706402.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121706402
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/8/2018
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 803/J2-HI-15/DIM1-8-700 with FS-P-1-WH trim (35° Aiming Angle)
[LUMINAIRE] LED Recessed Downlight, 15° Beam Spread, 35° 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, 9.49W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	591
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	9.49
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.14
Spacing Criterion (90-270)	0.64
Spacing Criterion (Diagonal)	1.52
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	0	0	676
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	24	24	24	24	24	24	24	24	24	24
5	7	7	7	8	8	8	8	9	9	10
10	3	3	3	3	3	3	3	4	4	5
15	1	1	1	1	1	1	2	2	2	2
17	1	1	1	1	1	1	1	1	2	2
19	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1
25	0	0	0	0	1	1	0	0	1	1
27	0	0	0	0	1	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

Vert. Angles Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0	24	24	24	24	24	24	24	24	24	24
5	11	12	13	14	15	17	19	21	24	26
10	5	6	7	8	9	11	13	16	20	25
15	3	3	4	5	6	7	9	12	16	22
17	2	2	3	4	4	6	7	10	14	20
19	2	2	2	3	4	5	6	9	12	18
21	1	2	2	2	3	4	5	7	11	17
23	1	1	1	2	2	3	4	6	9	14
25	1	1	1	2	2	3	3	5	8	13
27	1	1	1	1	2	2	3	4	7	11
29	1	1	1	1	1	2	2	3	5	9
31	0	1	1	1	1	1	2	2	4	7
33	0	0	0	1	1	1	1	2	3	5
34	0	0	1	0	1	1	1	2	3	4
35	0	0	0	0	1	1	1	1	2	4
36	0	0	0	0	0	1	1	1	2	3
37	0	0	0	0	0	1	1	1	2	3

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CANDELA TABULATION - (Cont.)

39	0	0	0	0	0	0	1	1	1	2
41	0	0	0	0	0	0	1	1	1	1
43	0	0	0	0	0	0	0	1	1	1
45	0	0	0	0	0	0	0	1	1	1
47	0	0	0	0	0	0	0	0	1	1
49	0	0	0	0	0	0	0	0	0	1
51	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0	24	24	24	24	24	24	24	24	24	24
5	29	32	35	38	41	44	47	50	53	55
10	30	37	44	51	59	69	78	89	100	110
15	29	38	48	60	77	96	117	144	172	203
17	27	37	49	63	82	105	131	163	204	247
19	27	37	50	66	87	113	144	185	235	294
21	24	34	48	66	92	120	155	202	265	343
23	22	33	47	65	89	119	158	216	299	397
25	20	31	44	63	86	117	158	219	312	430
27	17	26	39	57	84	115	158	224	321	454
29	14	22	34	51	74	104	150	215	326	471
31	11	17	27	42	62	94	141	208	306	452
33	8	13	21	33	53	81	122	184	292	440
34	7	11	18	29	47	73	112	172	272	429
35	6	9	15	26	41	66	103	163	262	405
36	5	8	13	21	35	58	94	152	259	396
37	4	6	11	18	30	50	86	139	232	366
39	3	4	7	12	21	38	67	120	203	335
41	2	3	5	8	14	29	53	95	159	283
43	2	2	4	6	10	19	36	69	122	222
45	1	2	2	4	7	13	26	52	101	183
47	1	1	2	3	5	9	17	37	79	138
49	1	1	1	2	3	6	11	24	52	101
51	0	1	1	1	2	4	7	15	35	75
53	0	1	1	1	1	2	5	10	21	46
55	0	0	1	1	1	2	3	6	13	29
60	0	0	0	0	0	1	1	2	4	7
65	0	0	0	0	0	0	0	1	1	2
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

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CANDELA TABULATION - (Cont.)

Vert. Angles	Horizontal Angles						
	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0	24	24	24	24	24	24	24
5	58	60	62	63	64	65	65
10	122	133	143	151	159	163	164
15	238	279	314	346	374	391	395
17	298	352	407	459	501	530	538
19	361	438	522	598	663	707	719
21	435	561	676	784	877	936	957
23	509	668	833	996	1141	1246	1282
25	579	783	1008	1252	1478	1660	1724
27	629	898	1199	1545	1871	2175	2282
29	741	948	1323	1790	2311	2659	2959
31	733	956	1427	2068	2631	3398	3653
33	729	996	1479	2176	2679	3874	4177
34	732	952	1426	2158	2747	3912	4306
35	740	967	1459	2201	2751	3978	4322
36	712	908	1372	2085	2686	3894	4233
37	683	845	1274	2061	2646	3754	4074
39	516	825	1174	1772	2492	3155	3546
41	438	744	1025	1505	2149	2624	2888
43	389	596	866	1240	1682	2068	2259
45	322	505	742	1008	1350	1611	1719
47	244	399	590	807	1050	1220	1289
49	172	320	466	625	787	907	946
51	132	231	348	458	561	628	646
53	92	146	231	312	380	434	451
55	61	100	146	195	252	302	323
60	15	24	37	46	53	57	59
65	3	4	5	7	8	9	10
70	0	1	1	1	1	2	2
75	0	0	0	0	0	0	1
80	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706402.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	26.22	N.A.	4.40
0-30	134.90	N.A.	22.80
0-40	379.54	N.A.	64.30
0-60	588.06	N.A.	99.60
0-80	590.66	N.A.	100.00
0-90	590.66	N.A.	100.00
10-90	587.18	N.A.	99.40
20-40	353.32	N.A.	59.80
20-50	516.88	N.A.	87.50
40-70	211.05	N.A.	35.70
60-80	2.59	N.A.	0.40
70-80	0.06	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	590.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	3.48
10-20	22.74
20-30	108.68
30-40	244.65
40-50	163.56
50-60	44.96
60-70	2.54
70-80	0.06
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

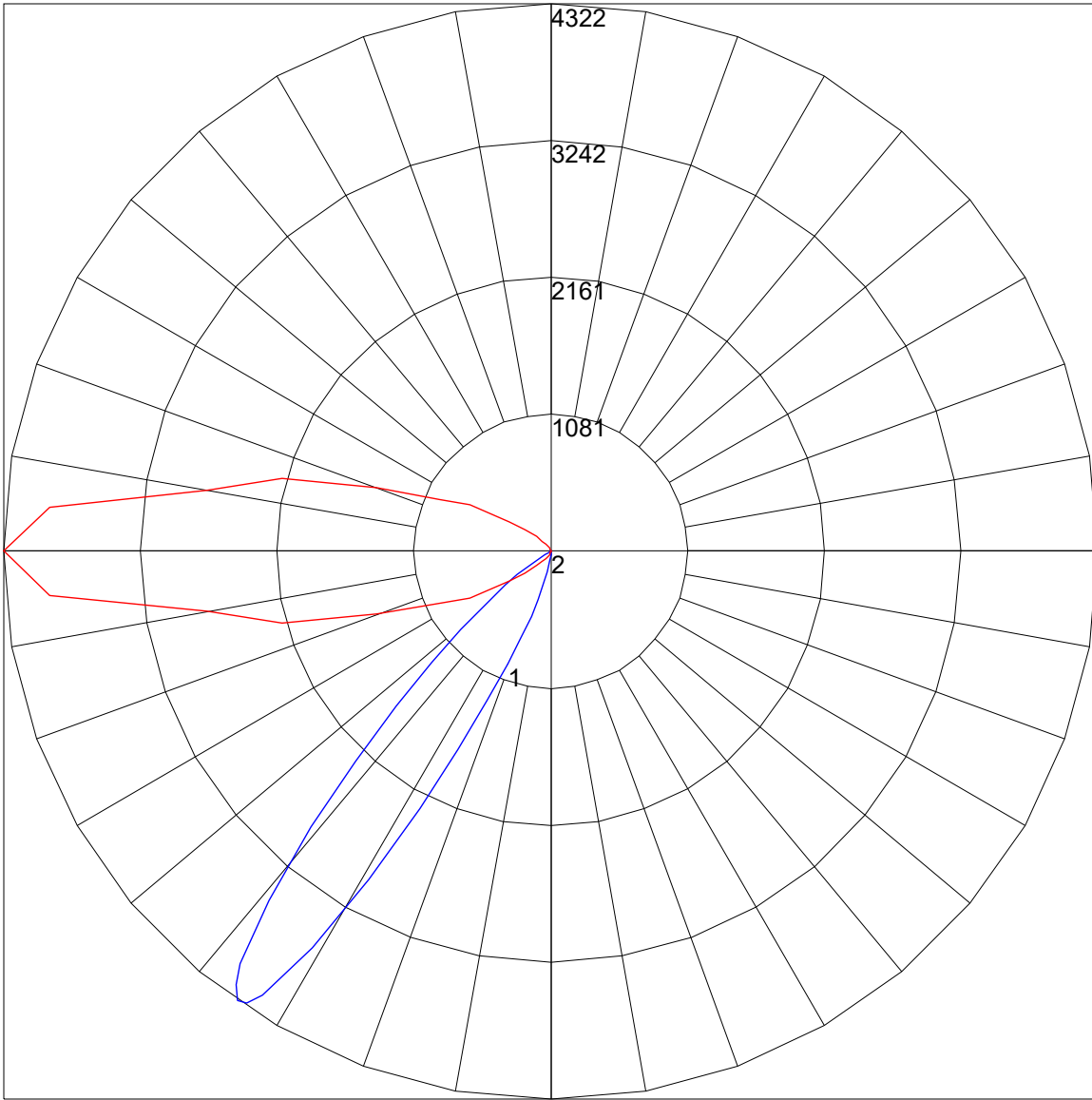
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	87	80	75	93	86	79	74	83	77	73	80	76	72	78	74	71	69
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	46
7	69	56	48	43	67	56	48	42	54	47	42	53	47	42	52	46	42	40
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	59	46	38	33	58	45	38	33	44	37	33	43	37	32	42	37	32	30
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

POLAR GRAPH



Maximum Candela = 4322 Located At Horizontal Angle = 180, Vertical Angle = 35
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)