



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

Report No: L121706420



Report No: L121706420 **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 (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: 1/5/18 - 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 (35° Aiming Angle)
Driver Model Number:	IntuitiveSystems ISD-701-1400-20-D
Total Lumens:	990.07
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.17
Input Power (W):	20.45
Input Power Factor:	0.99
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	48
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:40

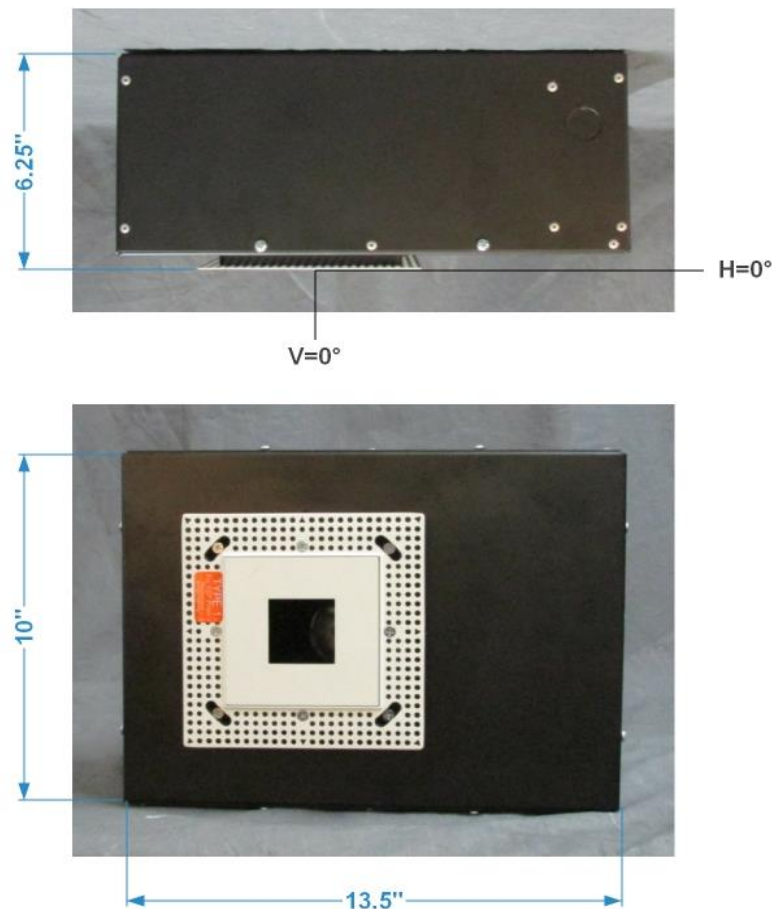


FIG. 1 LUMINAIRE

*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*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706420.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121706420
[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 (35° Aiming Angle)
[LUMINAIRE] LED Recessed Downlight, 15° Beam Spread, 35° Aiming Angle,
[MORE] 1.75" x 1.75" Aperture Trim
[BALLASTCAT] IntuitiveSystems ISD-701-1400-20-D
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 20.45W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	990
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	48
Total Luminaire Watts	20.45
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.14
Spacing Criterion (90-270)	0.62
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	1352
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	39	39	39	39	39	39	39	39	39	39
5	12	12	12	12	13	13	14	14	15	16
10	5	5	5	5	5	5	6	6	7	7
15	2	2	2	2	2	3	3	3	3	4
17	2	2	2	2	2	2	2	2	2	3
19	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	1	1	1	2	2	2
23	2	2	1	1	1	1	1	1	1	1
25	1	1	1	1	1	1	1	1	1	1
27	0	0	0	1	1	1	1	1	1	1
29	0	0	0	0	0	0	1	1	1	1
31	0	0	0	0	0	0	0	0	1	1
33	0	0	0	0	0	0	0	0	0	1
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	39	39	39	39	39	39	39	39	39	39
5	17	18	20	22	24	27	30	33	37	42
10	8	9	11	12	14	17	21	25	32	39
15	4	5	6	7	9	11	14	18	24	34
17	3	4	5	6	7	9	12	16	22	31
19	3	3	4	5	6	8	10	13	19	27
21	2	2	3	4	5	7	8	11	16	25
23	2	2	3	3	4	5	7	10	15	23
25	1	2	2	3	3	4	6	8	12	19
27	1	1	2	2	3	3	5	6	10	17
29	1	1	1	2	2	3	4	5	8	14
31	1	1	1	1	2	2	3	4	6	11
33	1	1	1	1	1	2	2	3	5	8
34	1	1	1	1	1	1	2	3	5	7
35	1	1	1	1	1	1	2	3	4	6
36	0	1	1	1	1	1	2	3	4	5
37	0	1	1	1	1	1	1	2	3	5

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CANDELA TABULATION - (Cont.)

39	0	0	0	1	1	1	1	2	3	4
41	0	0	0	0	1	1	1	1	2	3
43	0	0	0	0	0	1	1	1	2	2
45	0	0	0	0	0	1	1	1	2	2
47	0	0	0	0	0	0	1	1	1	1
49	0	0	0	0	0	0	1	1	1	1
51	0	0	0	0	0	0	0	0	1	1
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	39	39	39	39	39	39	39	39	39	39
5	46	51	56	62	68	74	79	85	90	95
10	49	59	71	86	100	118	134	152	171	190
15	46	61	81	102	128	160	202	247	298	358
17	44	61	82	107	139	180	227	289	360	442
19	41	58	79	109	146	198	257	328	420	531
21	38	57	80	112	153	206	277	366	486	617
23	35	52	76	108	151	211	280	387	526	704
25	31	47	72	107	151	207	280	388	545	763
27	27	42	66	99	144	199	274	391	642	799
29	23	36	57	87	126	179	258	384	653	829
31	18	28	46	71	107	163	238	348	632	815
33	14	22	36	57	88	134	203	305	603	757
34	11	18	30	50	81	125	192	298	599	728
35	9	16	26	43	69	112	175	276	514	739
36	8	12	22	36	60	97	160	254	412	704
37	7	11	18	30	51	85	140	240	400	686
39	5	8	12	20	36	65	113	187	320	646
41	4	6	8	13	24	46	85	150	260	596
43	3	4	6	10	17	31	61	115	199	367
45	2	3	4	7	12	21	41	86	159	272
47	2	2	3	5	8	15	28	59	125	215
49	1	2	2	3	6	10	20	39	83	157
51	1	1	2	3	4	7	12	25	51	113
53	1	1	1	2	3	5	8	17	34	77
55	0	1	1	2	2	3	5	10	22	47
60	0	0	0	1	1	1	2	3	6	12
65	0	0	0	0	0	0	1	1	2	3
70	0	0	0	0	0	0	0	0	0	1
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	39	39	39	39	39	39	39
5	100	105	109	113	116	117	117
10	211	230	249	264	275	282	286
15	426	489	555	610	654	680	690
17	534	630	727	810	883	926	941
19	664	800	945	1068	1170	1233	1258
21	799	991	1183	1367	1522	1633	1669
23	921	1173	1470	1746	2001	2155	2220
25	1050	1376	1755	2168	2559	2758	2971
27	1116	1511	2052	2639	3135	3752	3935
29	1191	1670	2306	2857	4044	4774	5059
31	1167	1684	2472	3035	4734	5728	6125
33	1162	1706	2506	3075	5078	6396	6875
34	1129	1717	2550	3156	5170	6575	7101
35	1090	1624	2422	3089	5154	6533	7137
36	1010	1519	2342	3085	5172	6480	7007
37	992	1499	2246	2942	4976	6242	6719
39	852	1303	2017	2770	4355	5452	5874
41	742	1181	1775	2532	3028	4397	4758
43	690	980	1460	2086	2704	3393	3648
45	617	775	1186	1661	2203	2578	2681
47	381	633	940	1294	1681	1928	2009
49	279	472	736	995	1271	1435	1484
51	206	356	549	725	900	1014	1054
53	149	239	376	500	604	685	712
55	97	154	231	320	405	473	497
60	25	41	62	80	93	102	107
65	5	8	11	13	15	18	19
70	1	1	2	2	3	4	4
75	0	0	0	0	1	1	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 : L121706420.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	45.63	N.A.	4.60
0-30	234.33	N.A.	23.70
0-40	646.82	N.A.	65.30
0-60	985.36	N.A.	99.50
0-80	990.07	N.A.	100.00
0-90	990.07	N.A.	100.00
10-90	984.19	N.A.	99.40
20-40	601.19	N.A.	60.70
20-50	867.91	N.A.	87.70
40-70	343.11	N.A.	34.70
60-80	4.72	N.A.	0.50
70-80	0.15	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	990.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	5.89
10-20	39.74
20-30	188.71
30-40	412.48
40-50	266.72
50-60	71.83
60-70	4.56
70-80	0.15
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

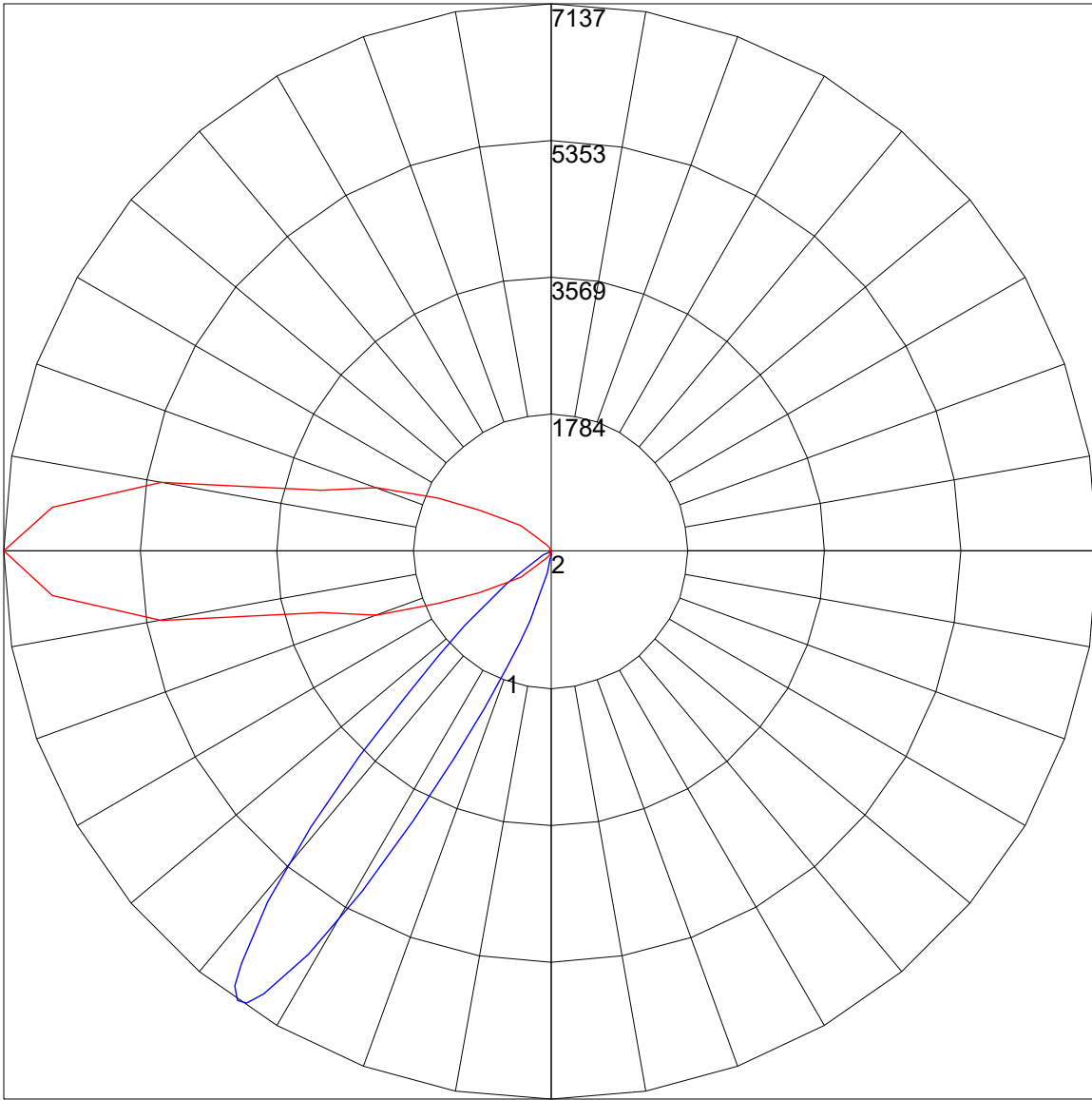
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706420.IES

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	101	102	100	97	98	96	94	95	93	92	90
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60
5	82	70	62	56	80	69	62	56	67	61	56	65	60	55	64	59	55	53
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

POLAR GRAPH



Maximum Candela = 7137 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.)