



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

Report No: L121706430



Report No: L121706430 **Issue Date:** 1/10/2018

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

Model Number: 804/J2-HI-40/DIM1-8-1400 with FR-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-40/DIM1-8-1400 with FR-P-1-WH trim (35° Aiming Angle)
Driver Model Number:	IntuitiveSystems ISD-701-1400-20-D
Total Lumens:	872.48
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.17
Input Power (W):	20.46
Input Power Factor:	0.99
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	43
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:20

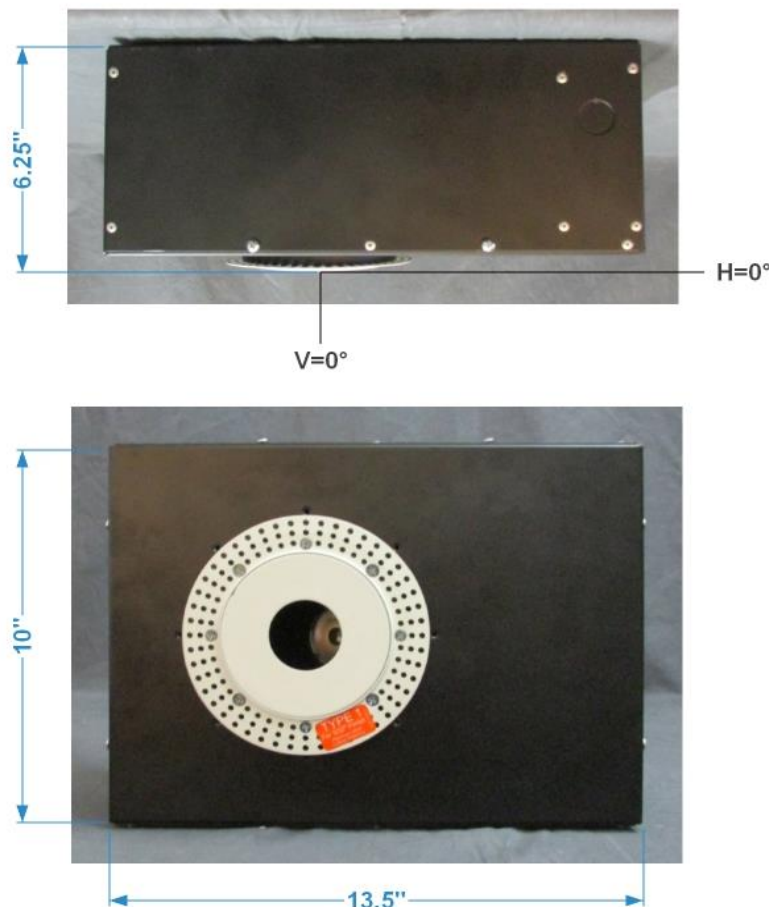


FIG. 1 LUMINAIRE

*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: 10*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706430.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L121706430
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 1/10/2018
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 804/J2-HI-40/DIM1-8-1400 with FR-P-1-WH trim (35° Aiming Angle)
 [LUMINAIRE] LED Recessed Downlight, 40° Beam Spread, 35° 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, 20.46W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	872
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	43
Total Luminaire Watts	20.46
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.20
Spacing Criterion (90-270)	0.70
Spacing Criterion (Diagonal)	1.46
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	0	0	1721
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	191	191	191	191	191	191	191	191	191	191
5	100	100	101	102	104	106	109	112	116	122
10	48	49	49	51	52	55	58	61	65	70
15	20	21	21	22	23	25	28	31	34	38
17	13	13	13	14	15	17	19	22	25	29
19	7	7	7	8	8	10	12	14	17	20
21	3	3	3	4	4	5	6	8	10	13
23	1	1	1	1	2	2	3	4	5	8
25	0	0	0	0	1	1	1	2	3	4
27	0	0	0	0	0	0	0	1	1	2
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	1	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. 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	191	191	191	191	191	191	191	191	191	191
5	127	133	139	145	152	160	169	177	187	196
10	76	84	92	101	112	123	136	151	165	183
15	43	49	56	65	75	86	101	120	139	160
17	33	39	45	53	63	75	90	106	126	147
19	25	30	36	43	52	63	76	93	111	135
21	17	22	28	34	42	52	65	81	101	122
23	10	14	19	26	34	43	54	69	86	109
25	6	9	13	19	26	34	45	59	74	96
27	3	5	8	12	19	26	36	49	63	83
29	1	2	4	7	13	19	28	39	53	71
31	0	1	2	4	7	12	20	31	44	61
33	0	0	1	2	4	8	14	23	35	49
34	0	0	0	1	3	6	12	20	31	44
35	0	0	0	1	2	4	8	16	27	40
36	0	0	0	0	1	3	7	13	22	35
37	0	0	0	0	1	2	5	10	19	30

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706430.IES

CANDELA TABULATION - (Cont.)

39	0	0	0	0	0	1	2	6	12	22
41	0	0	0	0	0	0	1	3	7	15
43	0	0	0	0	0	0	0	2	4	9
45	0	0	0	0	0	0	0	0	2	5
47	0	0	0	0	0	0	0	0	1	3
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	191	191	191	191	191	191	191	191	191	191
5	206	218	228	240	252	264	276	290	301	312
10	202	226	251	279	309	339	370	405	439	468
15	186	215	251	299	347	402	459	522	590	657
17	176	210	249	297	352	414	484	566	648	735
19	165	200	241	294	355	424	505	605	706	811
21	152	187	228	283	354	436	530	637	756	878
23	140	177	220	277	348	430	531	662	788	930
25	124	160	203	263	337	424	533	664	826	985
27	112	146	188	240	319	406	518	670	835	1011
29	97	132	173	225	296	388	502	648	834	1021
31	83	114	152	201	278	370	484	636	820	1017
33	72	100	137	184	246	333	443	611	788	999
34	66	93	128	174	234	318	426	567	766	982
35	58	83	116	161	226	308	417	556	740	960
36	53	78	111	154	209	285	390	530	711	934
37	49	71	102	144	197	268	370	506	678	902
39	37	58	84	121	173	242	335	457	609	823
41	29	48	72	105	148	207	286	406	536	720
43	20	35	56	84	126	178	249	352	482	641
45	12	25	43	70	103	149	215	300	425	554
47	7	16	32	54	84	124	178	255	351	477
49	3	9	20	40	65	103	150	214	297	400
51	1	5	13	27	48	78	121	175	247	336
53	0	2	7	16	32	58	94	140	202	277
55	0	0	3	8	19	38	70	109	160	229
60	0	0	0	0	2	8	19	37	67	108
65	0	0	0	0	0	0	1	5	12	23
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	191	191	191	191	191	191	191
5	320	328	334	339	342	344	345
10	496	527	552	570	584	594	597
15	728	799	857	905	942	962	972
17	823	905	982	1041	1088	1117	1127
19	915	1020	1106	1180	1238	1276	1288
21	1010	1132	1235	1319	1379	1413	1424
23	1072	1212	1336	1424	1491	1529	1540
25	1156	1300	1427	1521	1590	1635	1650
27	1185	1344	1488	1592	1673	1722	1740
29	1212	1398	1538	1651	1738	1796	1813
31	1220	1431	1580	1704	1795	1846	1861
33	1211	1422	1582	1718	1821	1877	1890
34	1199	1416	1579	1718	1825	1886	1900
35	1183	1416	1581	1724	1830	1884	1900
36	1160	1389	1558	1704	1815	1876	1892
37	1132	1355	1541	1685	1805	1868	1887
39	1055	1325	1503	1648	1756	1828	1854
41	950	1199	1420	1572	1684	1763	1791
43	852	1075	1317	1477	1595	1671	1700
45	733	952	1159	1331	1455	1536	1561
47	617	799	1005	1169	1302	1375	1398
49	539	676	843	1007	1137	1209	1235
51	448	575	700	806	901	982	1011
53	367	468	578	695	771	820	836
55	305	392	484	575	642	683	700
60	160	214	271	327	375	406	418
65	39	62	90	119	147	166	172
70	1	4	8	13	18	22	23
75	0	0	0	0	0	0	1
80	0	0	0	0	0	1	1
85	0	0	0	0	0	0	1
90	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706430.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	94.08	N.A.	10.80
0-30	267.50	N.A.	30.70
0-40	509.59	N.A.	58.40
0-60	846.11	N.A.	97.00
0-80	872.46	N.A.	100.00
0-90	872.48	N.A.	100.00
10-90	851.81	N.A.	97.60
20-40	415.51	N.A.	47.60
20-50	632.33	N.A.	72.50
40-70	362.28	N.A.	41.50
60-80	26.36	N.A.	3.00
70-80	0.59	N.A.	0.10
80-90	0.02	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	872.48	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

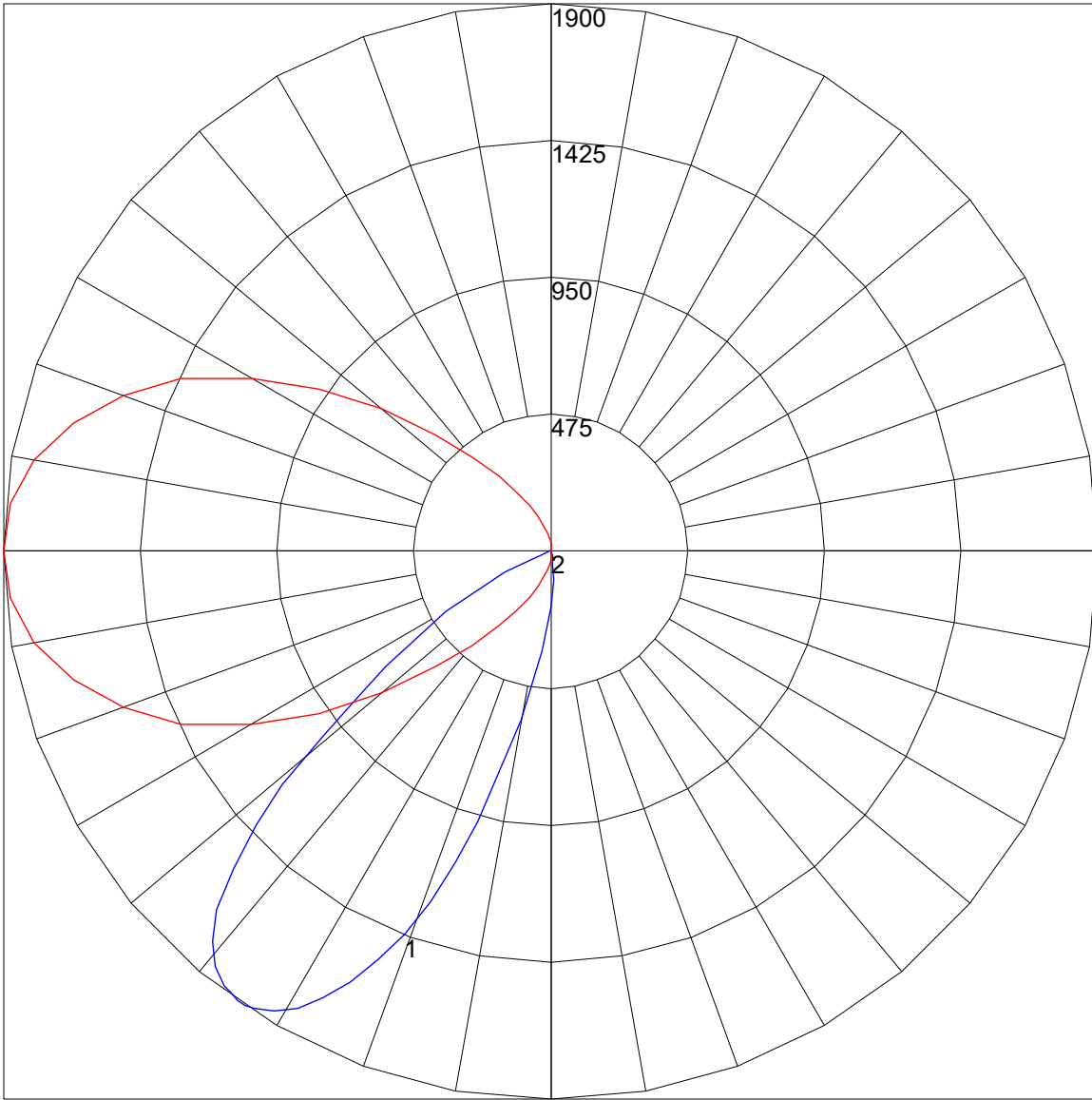
Zone	Lumens
0-10	20.67
10-20	73.41
20-30	173.42
30-40	242.09
40-50	216.82
50-60	119.69
60-70	25.77
70-80	0.59
80-90	0.02
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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	91	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	75	63	55	49	73	62	54	49	60	53	48	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	52	44	38	63	51	43	38	50	43	38	49	42	38	47	42	38	36
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	29

POLAR GRAPH



Maximum Candela = 1900 Located At Horizontal Angle = 180, Vertical Angle = 34
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (34) (Through Max. Cd.)