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Report No: L101605113

Date: 12/1/2016



NVLAP LAB CODE 200927-0

Report No: L101605113

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

Model Number: 803/J2-HI-40-XX/DIM1-8-1000/FS-P-1-WH

Test: Electrical and Photometric tests

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. Catalog number is 803/J2-HI-40-XX/DIM1-8-1000/FS-P-1-WH . Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 10/31/16

Date of Tests: 12/1/16 - 12/1/16

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-GB	2/10/17
Xitron Power Analyzer	2802	MT-EL02-2	12/22/16
BK PRECISION	1747	PS-DC04	12/8/16
Fluke Digital Thermometer	52k/J	MT-TP02-GB	12/8/16
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-40-XX/DIM1-8-1000/FS-P-1-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-601-1050-15-D
Total Lumens:	799.00
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.13
Input Power (W):	14.98
Input Power Factor:	0.98
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	53
Color Rendering Index (CRI):	93
Correlated Color Temperature (K):	2920
Chromaticity Coordinate x:	0.4433
Chromaticity Coordinate y:	0.4072
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:25
Off State Power(W):	0.00

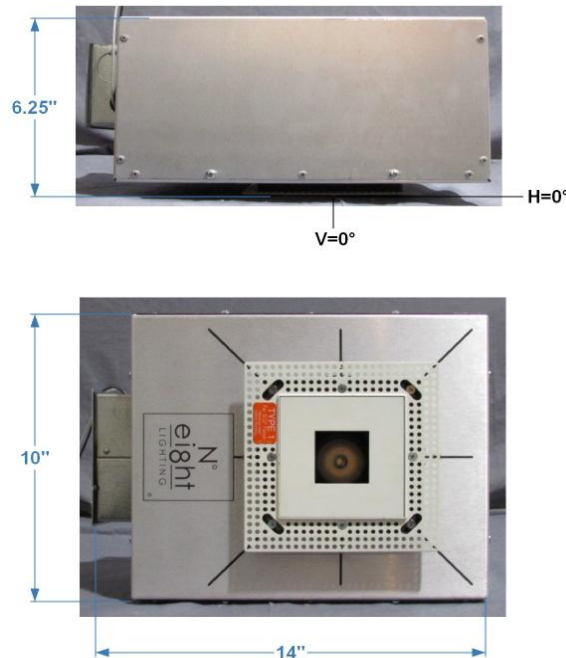
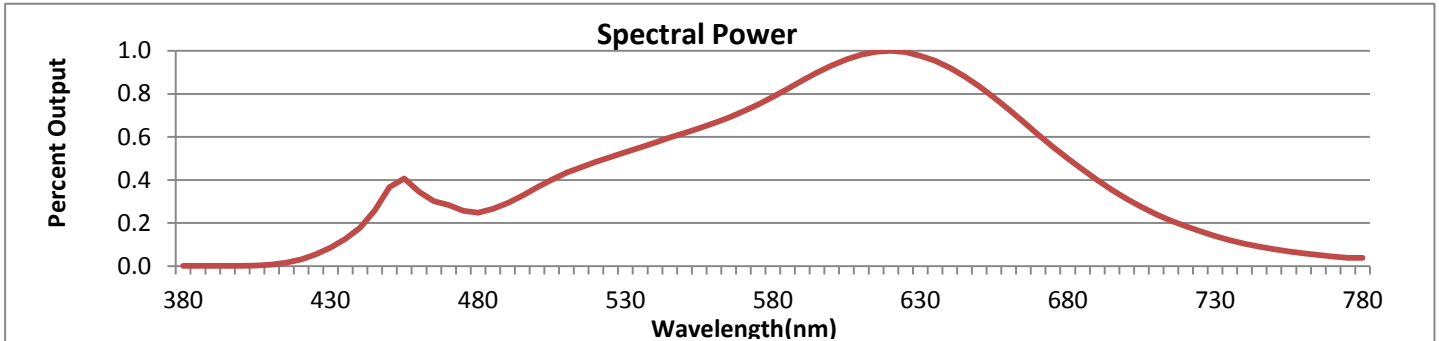


FIG. 1 LUMINAIRE

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



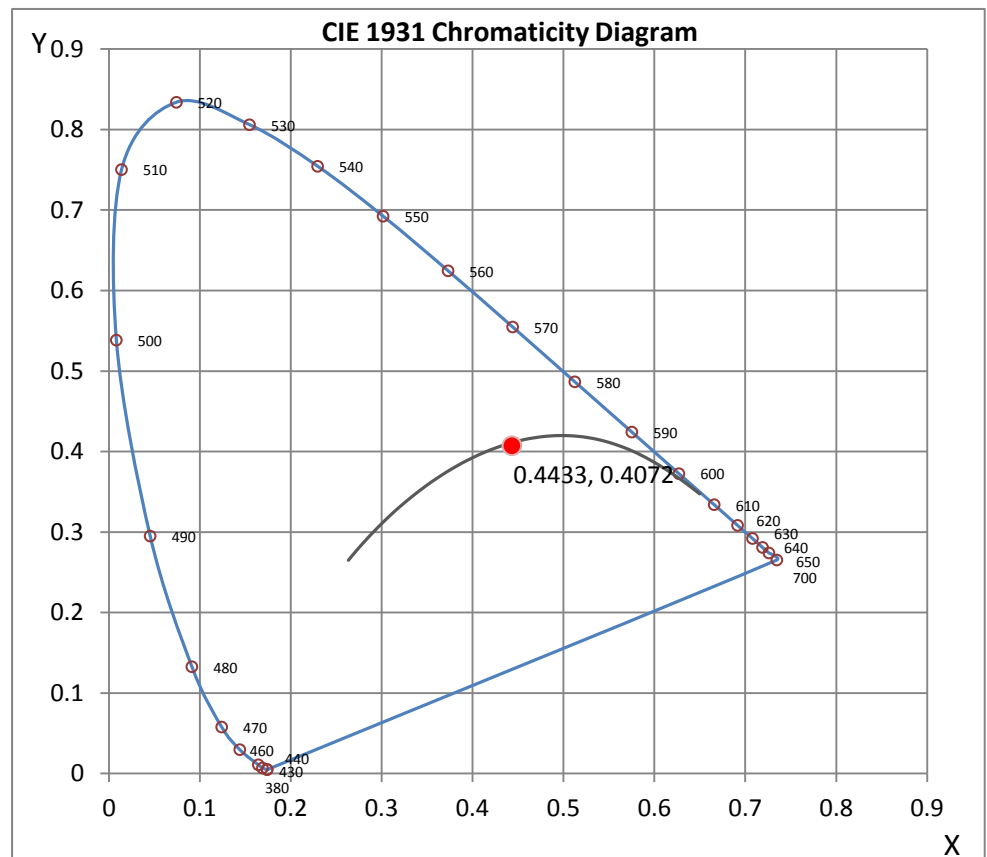
Wavelength	W/m ² nm	440	0.1782	510	0.4332	580	0.7864	650	0.8348	720	0.1854
380	0.0009	450	0.3666	520	0.4837	590	0.8622	660	0.7288	730	0.1400
390	0.0009	460	0.3451	530	0.5287	600	0.9321	670	0.6113	740	0.1042
400	0.0016	470	0.2840	540	0.5743	610	0.9827	680	0.5004	750	0.0789
410	0.0069	480	0.2473	550	0.6189	620	1.0000	690	0.3992	760	0.0593
420	0.0312	490	0.2932	560	0.6641	630	0.9770	700	0.3123	770	0.0445
430	0.0865	500	0.3651	570	0.7189	640	0.9221	710	0.2403	780	0.0382

CRI & CCT

x	0.4433
y	0.4072
u'	0.2533
v'	0.5236
CRI	92.90
CCT	2920
Duv	0.00041

R Values

R1	92.89
R2	96.95
R3	99.04
R4	92.67
R5	92.78
R6	96.61
R7	91.37
R8	80.58
R9	57.29
R10	92.06
R11	93.76
R12	84.70
R13	94.08
R14	99.24



*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 : Dennis Malonzo

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 : L101605113.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L101605113
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 12/1/2016
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 803/J2-HI-40-XX/DIM1-8-1000/FS-P-1-WH
 [LUMINAIRE] LED Recessed Adjustable 40° Beam Spread, 0°Aiming Angle, 1.75" x 1.75" Aperture Trim
 [BALLASTCAT] INTUITIVE SYSTEMS ISD-601-1050-15-D
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC, 14.98
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	799
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	14.98
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.68
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	25550	28118	25415
55	833	2500	833
65	1131	1131	1131
75	1847	1847	1847
85	5484	5484	5484

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605113.IES

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>
0.0	1508	1508	1508	1508	1508	1508	1508	1508	1508	1508
1.0	1506	1506	1506	1506	1506	1506	1506	1506	1506	1506
3.0	1488	1488	1488	1489	1488	1488	1488	1488	1488	1488
5.0	1457	1457	1457	1456	1456	1455	1456	1456	1456	1456
7.0	1410	1410	1409	1409	1408	1407	1407	1408	1408	1409
9.0	1345	1344	1343	1342	1341	1341	1341	1341	1341	1342
11.0	1261	1261	1261	1260	1259	1259	1259	1260	1259	1260
13.0	1169	1168	1167	1168	1167	1167	1167	1167	1168	1168
15.0	1067	1067	1067	1067	1067	1066	1067	1068	1068	1068
17.0	950	950	951	951	952	952	953	955	955	956
19.5	791	791	792	793	795	797	798	799	800	800
23.0	601	602	604	606	608	611	614	616	618	617
26.0	445	445	447	450	453	456	460	464	466	466
29.0	309	309	312	315	318	321	325	329	331	331
33.0	187	187	188	190	191	193	196	200	203	204
38.0	108	108	108	108	108	108	109	109	109	110
43.0	53	53	53	53	54	54	55	55	54	54
48.0	15	16	16	18	19	21	22	23	23	23
55.0	1	1	1	1	2	2	2	3	3	3
65.0	1	1	1	1	1	1	1	1	1	1
75.0	1	1	1	1	1	1	1	1	1	1
85.0	1	1	1	1	1	1	1	1	1	1
90.0	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>
0.0	1508	1508	1508	1508	1508	1508	1508	1508	1508
1.0	1506	1506	1506	1506	1506	1506	1506	1506	1506
3.0	1488	1488	1488	1488	1489	1489	1488	1488	1488
5.0	1456	1457	1457	1457	1457	1457	1458	1457	1458
7.0	1409	1409	1409	1409	1410	1410	1410	1410	1410
9.0	1342	1342	1342	1342	1342	1342	1343	1343	1343
11.0	1261	1260	1259	1259	1259	1259	1259	1259	1259
13.0	1169	1169	1167	1167	1167	1166	1165	1165	1166
15.0	1069	1068	1068	1067	1067	1067	1067	1067	1066
17.0	956	956	955	954	953	952	950	950	949
19.5	800	799	799	796	795	792	791	790	789
23.0	617	615	612	608	604	600	598	598	597
26.0	465	460	457	452	447	444	442	440	440
29.0	330	327	324	319	314	310	306	304	304
33.0	203	201	198	195	192	189	187	186	184
38.0	110	110	110	110	108	107	106	106	105
43.0	55	55	55	55	54	53	52	52	52
48.0	23	23	22	21	19	18	17	16	16
55.0	3	3	2	2	2	2	1	1	1
65.0	1	1	1	1	1	1	1	1	1
75.0	1	1	1	1	1	1	1	1	1
85.0	1	1	1	1	1	1	1	1	1
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605113.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	410.50	N.A.	51.40
0-30	639.10	N.A.	80.00
0-40	745.04	N.A.	93.30
0-60	794.79	N.A.	99.50
0-80	797.22	N.A.	99.80
0-90	798.57	N.A.	100.00
10-90	688.31	N.A.	86.20
20-40	334.53	N.A.	41.90
20-50	377.78	N.A.	47.30
40-70	51.15	N.A.	6.40
60-80	2.43	N.A.	0.30
70-80	1.03	N.A.	0.10
80-90	1.35	N.A.	0.20
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	798.57	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	110.26
10-20	300.25
20-30	228.59
30-40	105.94
40-50	43.24
50-60	6.51
60-70	1.40
70-80	1.03
80-90	1.35
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

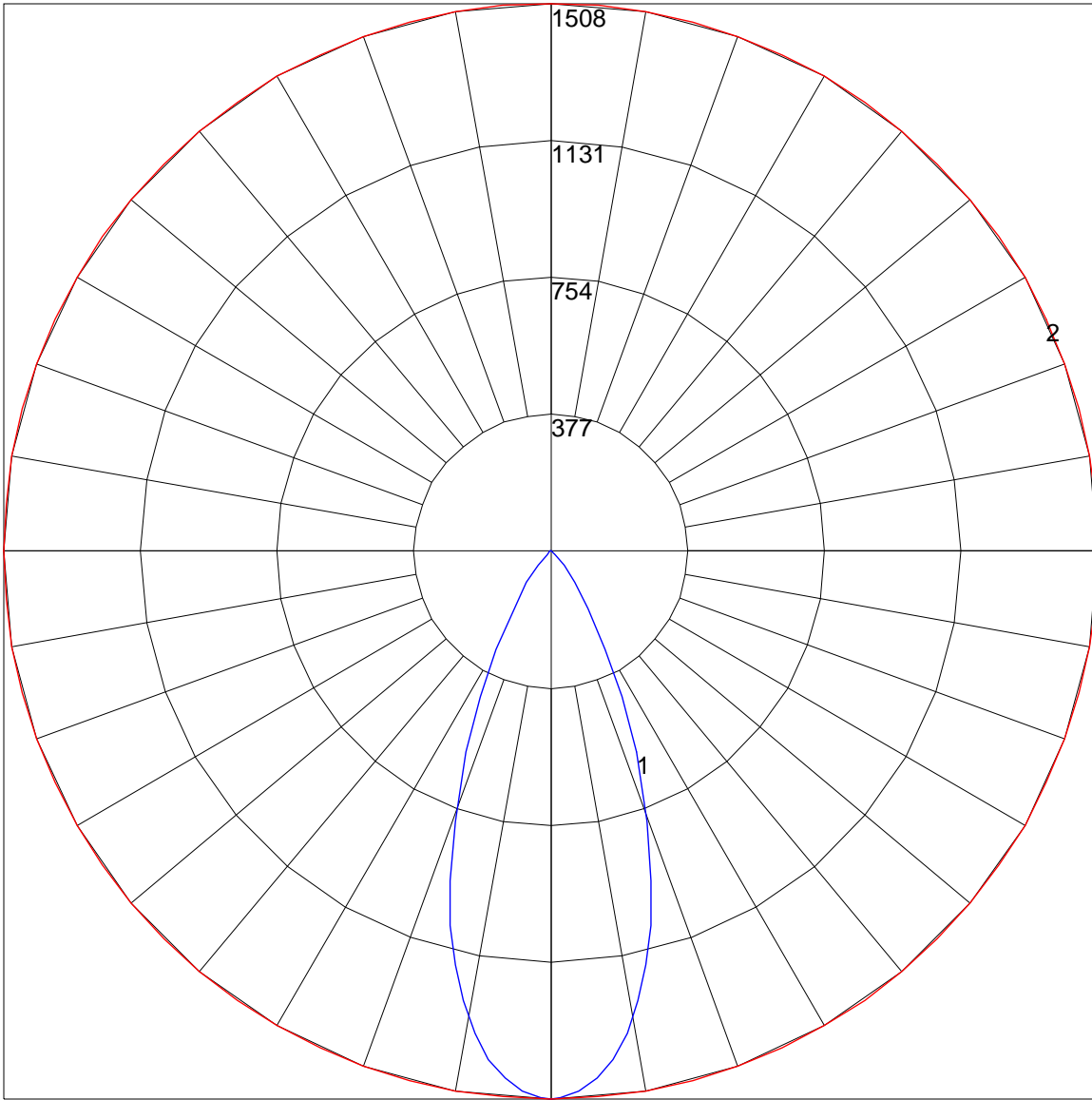
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	102	99	96	99	96	94	96	94	92	94	92	90	89
3	104	98	93	90	102	96	92	89	94	90	87	91	89	86	89	87	85	83
4	99	92	87	83	97	91	86	83	89	85	82	87	83	81	85	82	80	78
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74
6	90	82	77	73	89	81	76	73	80	75	72	79	75	72	77	74	71	70
7	86	78	72	69	85	77	72	68	76	71	68	75	71	68	74	70	67	66
8	83	74	69	65	82	74	68	65	72	68	64	71	67	64	71	67	64	63
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	64	61	59
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57

POLAR GRAPH



Maximum Candela = 1508 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.)

SAMPLE Illuminance cone diagram

Mounting Height = 12 ft.

