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Report No: L101605126

Date: 12/8/2016



NVLAP LAB CODE 200927-0

Report No: L101605126

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

Model Number: 803/K2-HI-25-XX/DIM1-8-1000/FS-P-1-WH

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. Catalog number is 803/K2-HI-25-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: 12/5/16 - 12/8/16

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/K2-HI-25-XX/DIM1-8-1000/FS-P-1-WH
Driver Model Number:	INTUITIVE SYSTEMS ISD-601-1050-15-D
Total Lumens:	864.61
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.13
Input Power (W):	15.05
Input Power Factor:	0.98
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	57
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:30
Off State Power(W):	0.00

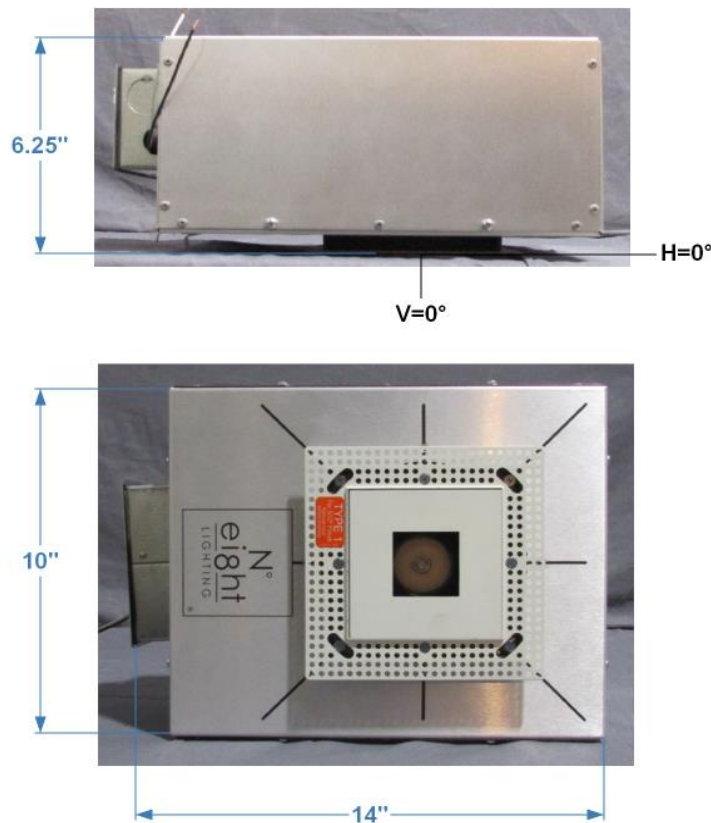


FIG.1 LUMINAIRE

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

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.

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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: 9*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605126.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L101605126
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUE DATE] 12/08/2016
 [MANUFAC] Number Eight Lighting Company
 [LUMCAT] 803/K2-HI-25-XX/DIM1-8-1000/FS-P-1-WH
 [LUMINAIRE] LED Recessed Fixed Position Downlight, 90+ CRI,
 [MORE] 25° Beam Spread, 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, 15.05W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	865
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	15.05
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
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	10139	20278	9463
55	3333	4166	2500
65	2262	3393	2262
75	1847	1847	1847
85	5484	5484	5484

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605126.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	3352	3352	3352	3352	3352	3352	3352	3352	3352	3352
1.0	3343	3342	3343	3343	3343	3343	3343	3343	3342	3342
3.0	3252	3252	3252	3252	3252	3252	3252	3252	3252	3251
5.0	3065	3064	3064	3064	3064	3064	3064	3064	3064	3064
7.0	2779	2779	2778	2779	2778	2778	2778	2778	2778	2779
9.0	2437	2436	2436	2437	2437	2438	2439	2439	2439	2440
11.0	2050	2050	2051	2051	2053	2053	2055	2056	2056	2055
13.0	1670	1671	1671	1671	1672	1673	1673	1675	1675	1674
15.0	1330	1329	1329	1330	1330	1331	1332	1333	1333	1333
17.0	1032	1032	1032	1033	1033	1034	1035	1035	1035	1034
19.5	723	723	723	723	721	721	722	722	722	722
22.5	447	448	448	448	448	448	448	448	448	448
25.5	279	279	279	279	280	280	280	281	281	280
29.0	172	172	172	172	171	172	172	173	172	172
33.0	99	99	100	102	103	104	105	105	106	106
37.5	49	50	51	53	56	60	63	65	66	67
42.5	21	22	22	24	26	28	31	35	38	40
47.5	9	9	9	10	11	12	14	16	19	20
55.0	4	4	4	4	4	4	5	5	5	5
65.0	2	2	2	2	2	2	3	3	3	3
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	3352	3352	3352	3352	3352	3352	3352	3352	3352
1.0	3342	3341	3341	3340	3340	3339	3339	3338	3338
3.0	3251	3250	3249	3249	3249	3248	3247	3247	3246
5.0	3063	3064	3063	3062	3061	3061	3060	3060	3059
7.0	2779	2778	2778	2777	2777	2776	2775	2774	2775
9.0	2439	2437	2436	2435	2434	2432	2431	2430	2429
11.0	2055	2054	2052	2051	2048	2046	2045	2044	2044
13.0	1675	1673	1672	1670	1667	1665	1663	1662	1662
15.0	1332	1330	1328	1326	1323	1322	1320	1318	1318
17.0	1033	1031	1029	1026	1024	1022	1020	1020	1019
19.5	721	718	716	714	713	712	711	710	710
22.5	446	445	442	441	441	440	439	438	438
25.5	279	278	277	276	274	274	274	273	273
29.0	171	171	170	169	169	168	168	167	166
33.0	106	105	105	104	103	102	101	101	101
37.5	66	65	63	61	59	57	54	53	52
42.5	39	36	32	29	26	23	22	21	20
47.5	19	16	14	11	10	9	8	8	8
55.0	5	5	4	4	4	4	4	4	3
65.0	3	3	3	2	2	2	2	2	2
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 : L101605126.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	619.36	N.A.	71.60
0-30	775.65	N.A.	89.70
0-40	829.63	N.A.	96.00
0-60	858.34	N.A.	99.30
0-80	863.26	N.A.	99.80
0-90	864.61	N.A.	100.00
10-90	641.38	N.A.	74.20
20-40	210.27	N.A.	24.30
20-50	233.62	N.A.	27.00
40-70	31.88	N.A.	3.70
60-80	4.92	N.A.	0.60
70-80	1.74	N.A.	0.20
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	864.61	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.23
10-20	396.13
20-30	156.29
30-40	53.98
40-50	23.35
50-60	5.36
60-70	3.17
70-80	1.74
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

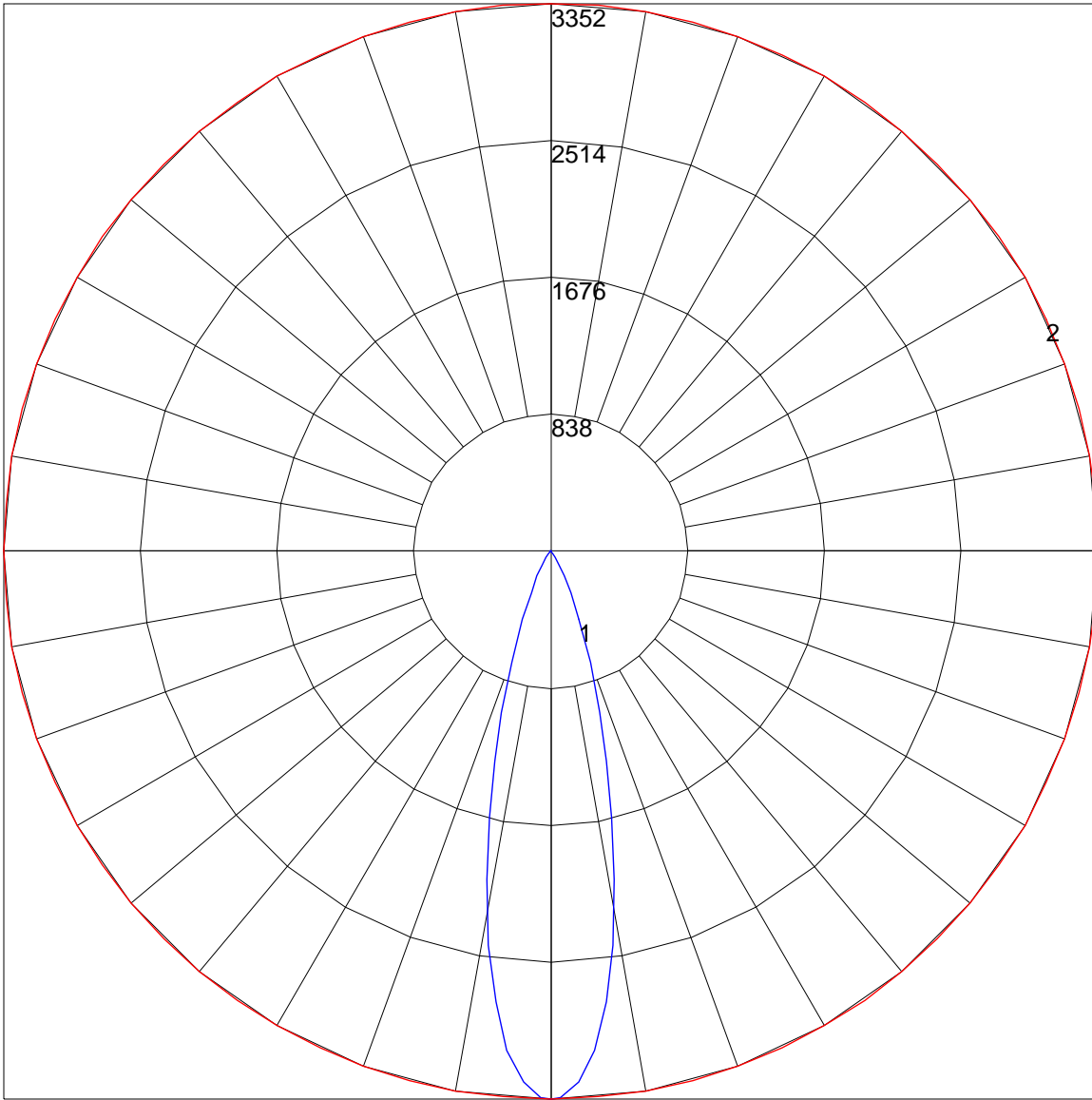
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L101605126.IES

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	87
4	102	96	92	89	101	95	91	88	93	90	87	91	88	86	90	87	85	84
5	99	92	87	84	97	91	87	84	90	86	83	88	85	82	87	84	82	80
6	95	88	84	80	94	88	83	80	86	82	80	85	82	79	84	81	79	77
7	92	85	80	77	91	84	80	77	83	79	76	82	79	76	81	78	76	74
8	89	82	77	74	88	81	77	74	80	76	73	79	76	73	78	75	73	72
9	86	79	74	71	85	78	74	71	78	74	71	77	73	71	76	73	70	69
10	84	76	72	69	83	76	71	69	75	71	68	74	71	68	74	70	68	67

POLAR GRAPH



Maximum Candela = 3352 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.

