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Report No: L061606305

Date: 8/1/2016



NVLAP LAB CODE 200927-0

Report No: L061606305

Report Prepared For: Beachside Lighting
 905 Kalaniana'ole Hwy # 29A Kailua, HI. 96734

Model Number: E8-3W-NFL

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 E8-3W-NFL . Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 7/25/16

Date of Tests: 7/25/16 - 7/29/16

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-S1	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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.

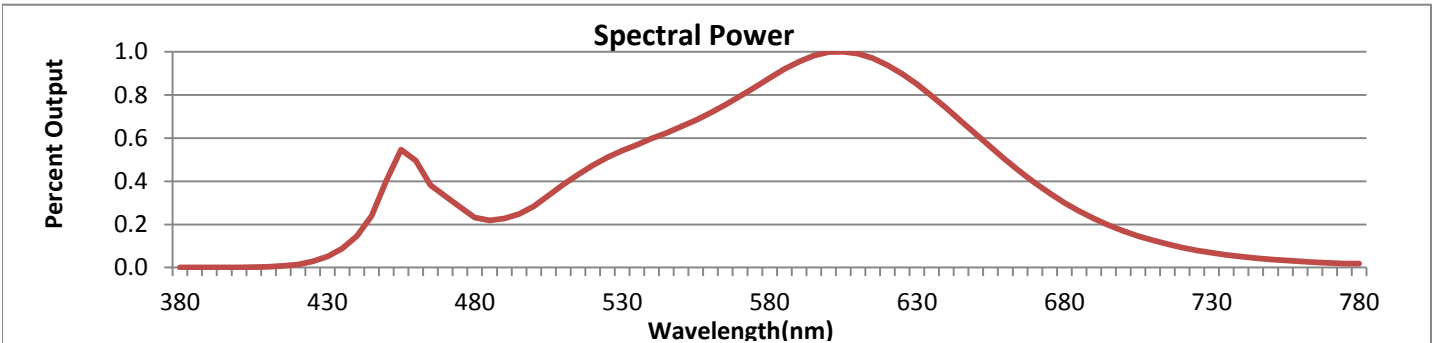
Test Summary

Manufacturer:	Beachside Lighting
Model Number:	E8-3W-NFL
Driver Model Number:	N/A
Total Lumens:	177.10
Input Voltage (VAC/60Hz):	12.00
Input Current (Amp):	0.33
Input Power (W):	2.88
Input Power Factor:	0.73
Current ATHD @ 12V(%):	81%
Current ATHD @ 277V(%):	N/A
Efficacy:	61
Color Rendering Index (CRI):	83
Correlated Color Temperature (K):	3049
Chromaticity Coordinate x:	0.4358
Chromaticity Coordinate y:	0.4078
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:40
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.



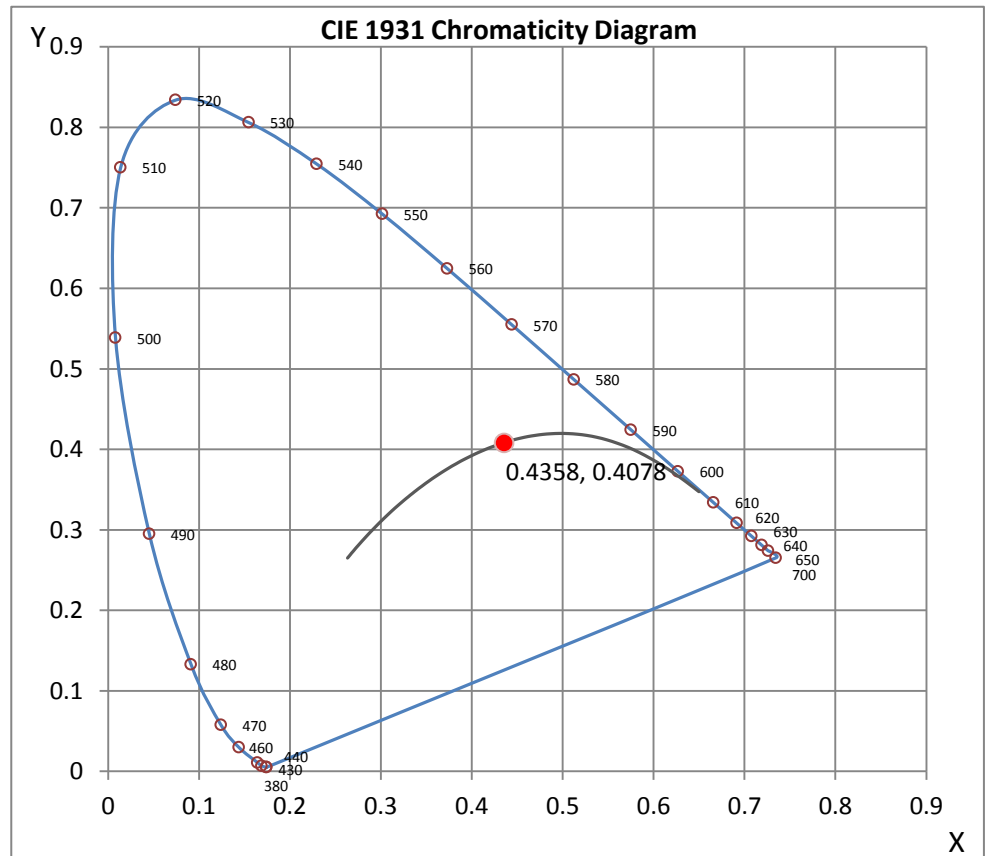
Wavelength	W/m ² nm	440	0.1455	510	0.3847	580	0.8790	650	0.6189	720	0.0928
380	0.0006	450	0.4024	520	0.4744	590	0.9542	660	0.5004	730	0.0681
390	0.0007	460	0.4964	530	0.5426	600	0.9989	670	0.3918	740	0.0504
400	0.0012	470	0.3311	540	0.5980	610	0.9915	680	0.3004	750	0.0376
410	0.0035	480	0.2323	550	0.6531	620	0.9387	690	0.2273	760	0.0280
420	0.0145	490	0.2272	560	0.7177	630	0.8502	700	0.1697	770	0.0209
430	0.0517	500	0.2846	570	0.7942	640	0.7391	710	0.1259	780	0.0182

CRI & CCT

x	0.4358
y	0.4078
u'	0.2482
v'	0.5227
CRI	82.90
CCT	3049
Duv	0.00164

R Values

R1	81.43
R2	90.96
R3	97.13
R4	79.81
R5	80.37
R6	87.97
R7	84.29
R8	61.52
R9	12.13
R10	77.87
R11	77.68
R12	65.06
R13	83.73
R14	98.61



*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 : Keyur Patel

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 FLOOD REPORT
PHOTOMETRIC FILENAME : L061606305.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L061606305
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 8/1/2016
[MANUFAC] BEACHSIDE LIGHTING
[LUMCAT] E8-3W-NFL
[LUMINAIRE] SMALL DIRECTIONAL ON KNUCKLE
[BALLASTCAT] N/A
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12VAC, 2.88W
[TEST PROCEDURE] IESNA:LM-79-08

Note: Candela values converted from Type-C to Type-B

CHARACTERISTICS

NEMA Type	3 H x 3 V
Maximum Candela	1214
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	17.3
Vertical Beam Angle (50%)	17.3
Horizontal Field Angle (10%)	37.3
Vertical Field Angle (10%)	37.3
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	63
Beam Efficiency	N.A.
Field Lumens	135
Field Efficiency	N.A.
Spill Lumens	42
Luminaire Lumens	177
Total Efficiency	N.A.
Total Luminaire Watts	2.88
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L061606305.IES

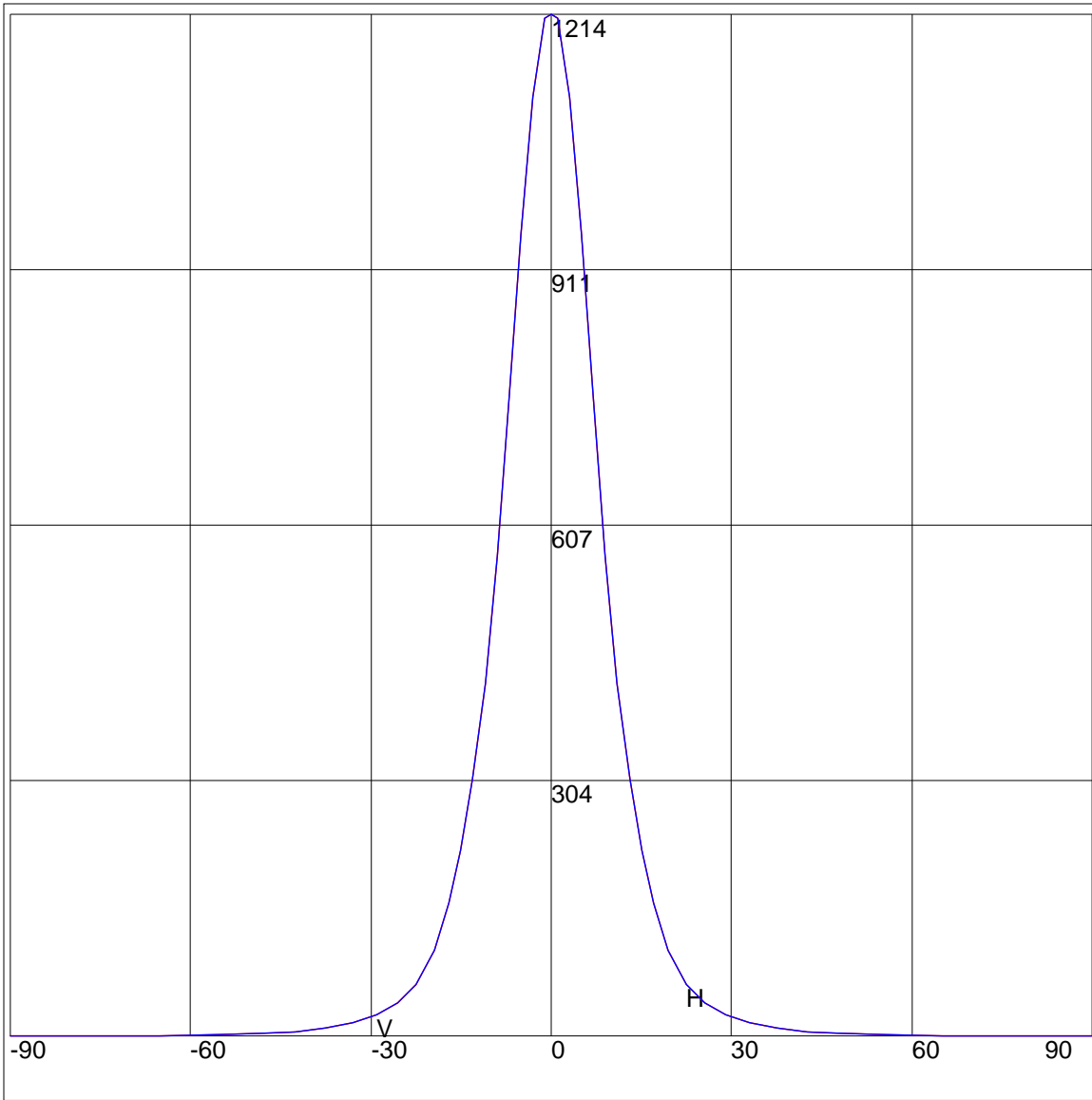
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	0	75	0
65	1	65	1
55	2	55	2
47.5	4	47.5	4
42.5	6	42.5	6
37.5	10	37.5	10
33	16	33	16
29	26	29	26
25.5	40	25.5	40
22.5	62	22.5	62
19.5	103	19.5	103
17	158	17	158
15	221	15	221
13	306	13	306
11	419	11	419
9	572	9	572
7	760	7	760
5	953	5	953
3	1116	3	1116
1	1209	1	1209
0	1214	0	1214
-1	1209	-1	1209
-3	1116	-3	1116
-5	953	-5	953
-7	760	-7	760
-9	572	-9	572
-11	419	-11	419
-13	306	-13	306
-15	221	-15	221
-17	158	-17	158
-19.5	103	-19.5	103
-22.5	62	-22.5	62
-25.5	40	-25.5	40
-29	26	-29	26
-33	16	-33	16
-37.5	10	-37.5	10
-42.5	6	-42.5	6
-47.5	4	-47.5	4
-55	2	-55	2
-65	1	-65	1
-75	0	-75	0
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

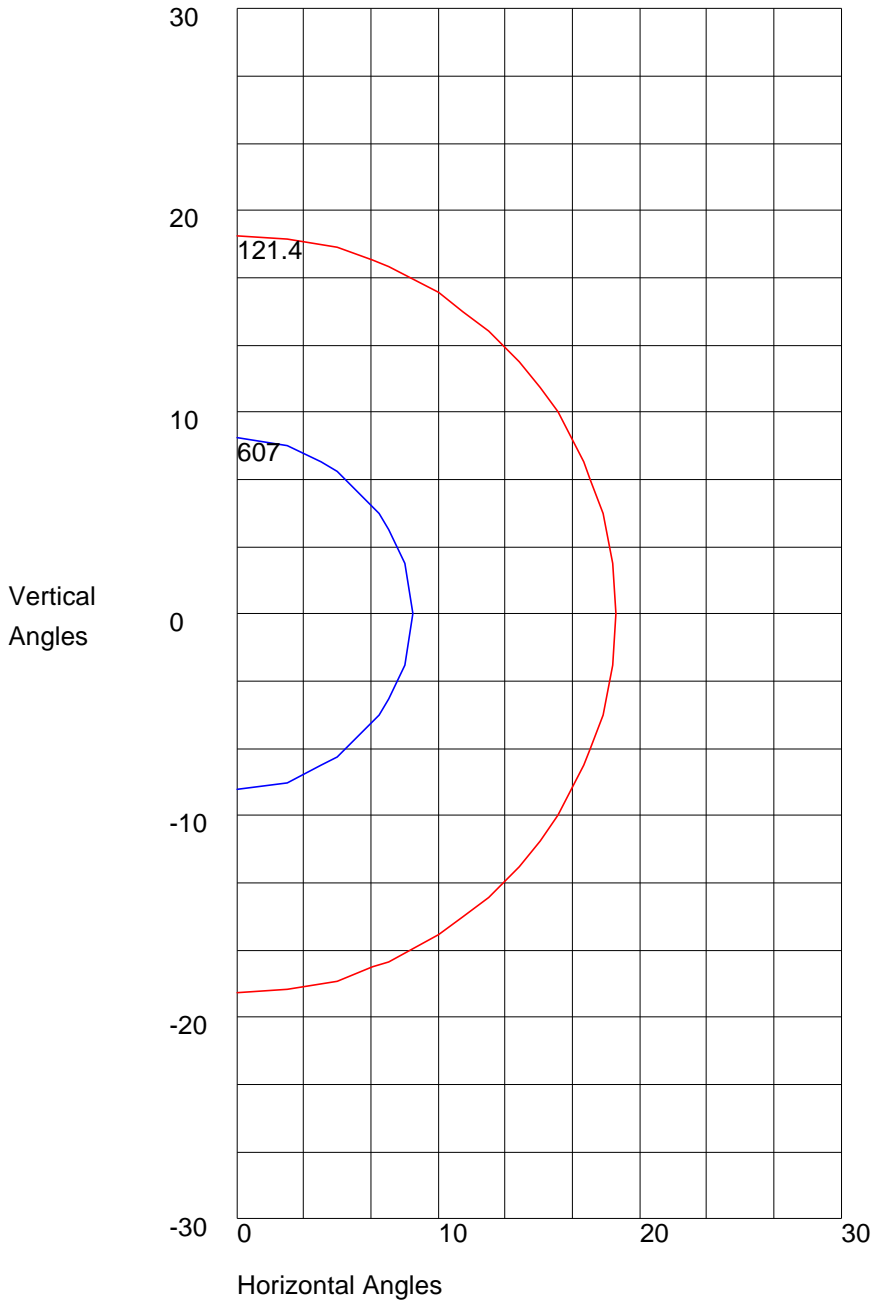
Zone	%
0-20	77.8
0-30	90.4
0-40	95.1
0-60	98.9
0-80	100
0-90	100
10-90	62.9
20-40	17.4
20-50	20.1
40-70	4.6
60-80	1.1
70-80	0.3
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 1214 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1214 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 607
10% Maximum Candela = 121.4

SAMPLE Illuminance cone diagram

Mounting Height = 4ft

