



8165 E Kaiser Blvd. Anaheim, CA 92808
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Report No: L061606302

Date: 8/1/2016



NVLAP LAB CODE 200927-0

Report No: L061606302

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

Model Number: E8-2W-A-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 E8-2W-A-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 - 8/1/16

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-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.

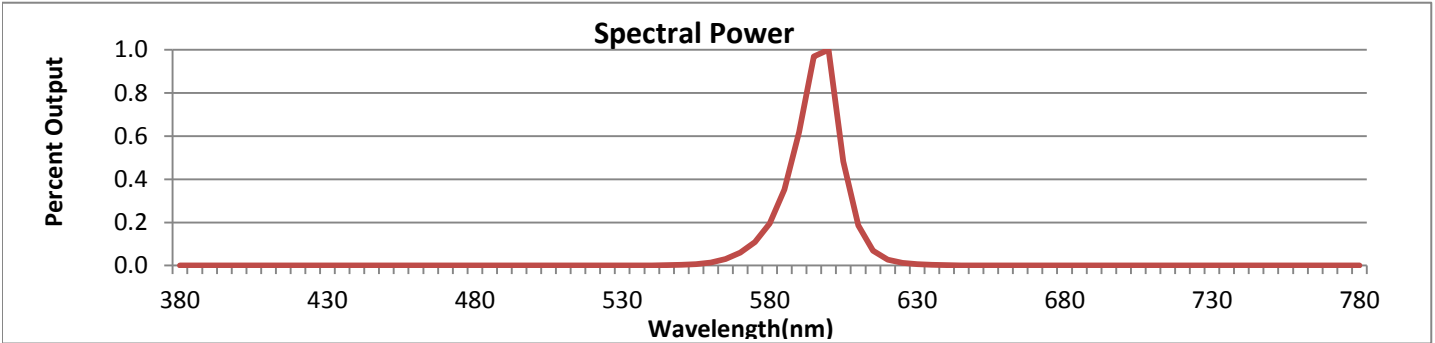
Test Summary

Manufacturer:	Beachside Lighting
Model Number:	E8-2W-A-NFL
Driver Model Number:	N/A
Total Lumens:	64.30
Input Voltage (VAC/60Hz):	12.00
Input Current (Amp):	0.26
Input Power (W):	2.23
Input Power Factor:	0.71
Current ATHD @ 12V(%):	89%
Current ATHD @ 277V(%):	N/A
Efficacy:	29
Color Rendering Index (CRI):	-23
Correlated Color Temperature (K):	1503
Chromaticity Coordinate x:	0.5952
Chromaticity Coordinate y:	0.4040
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:30
Off State Power(W):	0.00



FIG. 1 LUMINAIRE

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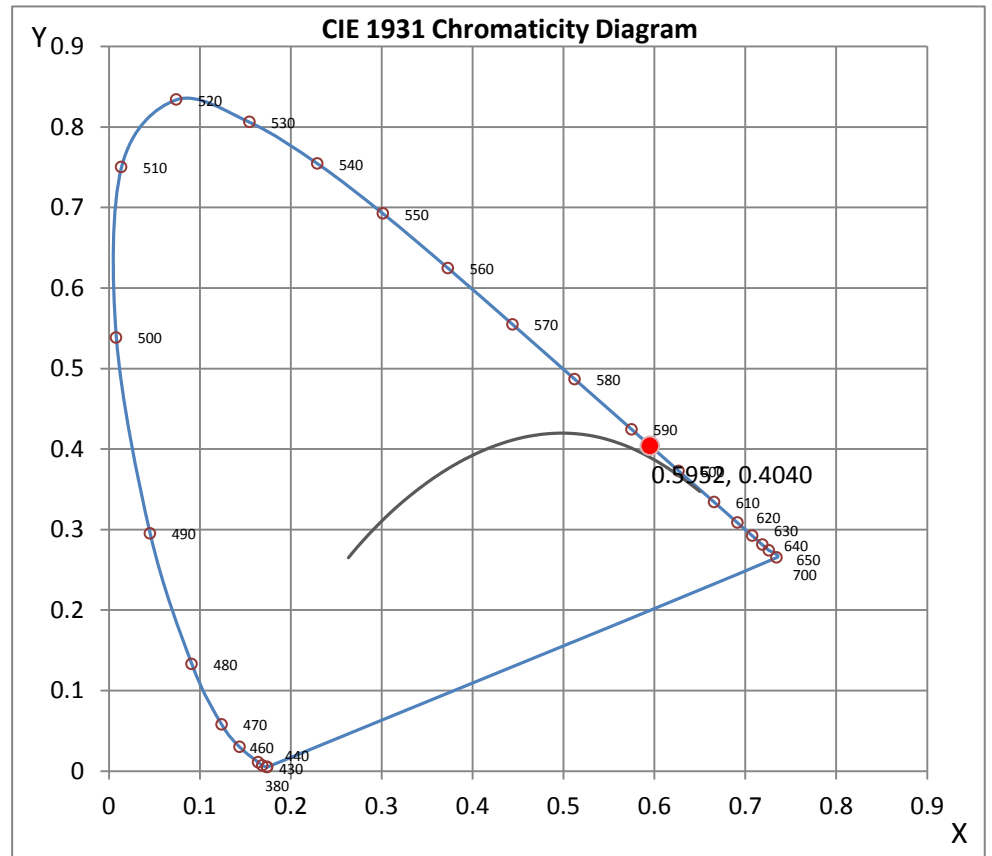
Wavelength	W/m ² nm	440	0.0000	510	0.0001	580	0.1952	650	0.0007	720	0.0002
380	0.0003	450	0.0001	520	0.0000	590	0.6188	660	0.0004	730	0.0000
390	0.0000	460	0.0001	530	0.0004	600	1.0000	670	0.0003	740	0.0000
400	0.0000	470	0.0001	540	0.0012	610	0.1866	680	0.0002	750	0.0001
410	0.0000	480	0.0000	550	0.0039	620	0.0276	690	0.0002	760	0.0002
420	0.0000	490	0.0001	560	0.0132	630	0.0059	700	0.0002	770	0.0000
430	0.0001	500	0.0001	570	0.0597	640	0.0018	710	0.0001	780	0.0002

CRI & CCT

x	0.5952
y	0.4040
u'	0.3576
v'	0.5461
CRI	-22.50
CCT	1503
Duv	0.00888

R Values

R1	-34.35
R2	53.60
R3	14.26
R4	-69.85
R5	-41.69
R6	44.85
R7	-9.45
R8	-137.00
R9	-387.53
R10	32.43
R11	-95.41
R12	-3.11
R13	-14.74
R14	44.22



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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:

Test Report Reviewed by:

Jeff Ahn
 Engineering Manager

Steve Kang
 Quality Assurance

**Attached are photometric data reports. Total number of pages: 9*

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



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Photometric Test Report

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L061606302.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L061606302
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 8/1/2016
[MANUFAC] BEACHSIDE LIGHTING
[LUMCAT] E8-2W-A-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, 2.23W
[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	587.24
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	14.4
Vertical Beam Angle (50%)	14.4
Horizontal Field Angle (10%)	31.5
Vertical Field Angle (10%)	31.5
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	22
Beam Efficiency	N.A.
Field Lumens	45
Field Efficiency	N.A.
Spill Lumens	19
Luminaire Lumens	64
Total Efficiency	N.A.
Total Luminaire Watts	2.23
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L061606302.IES

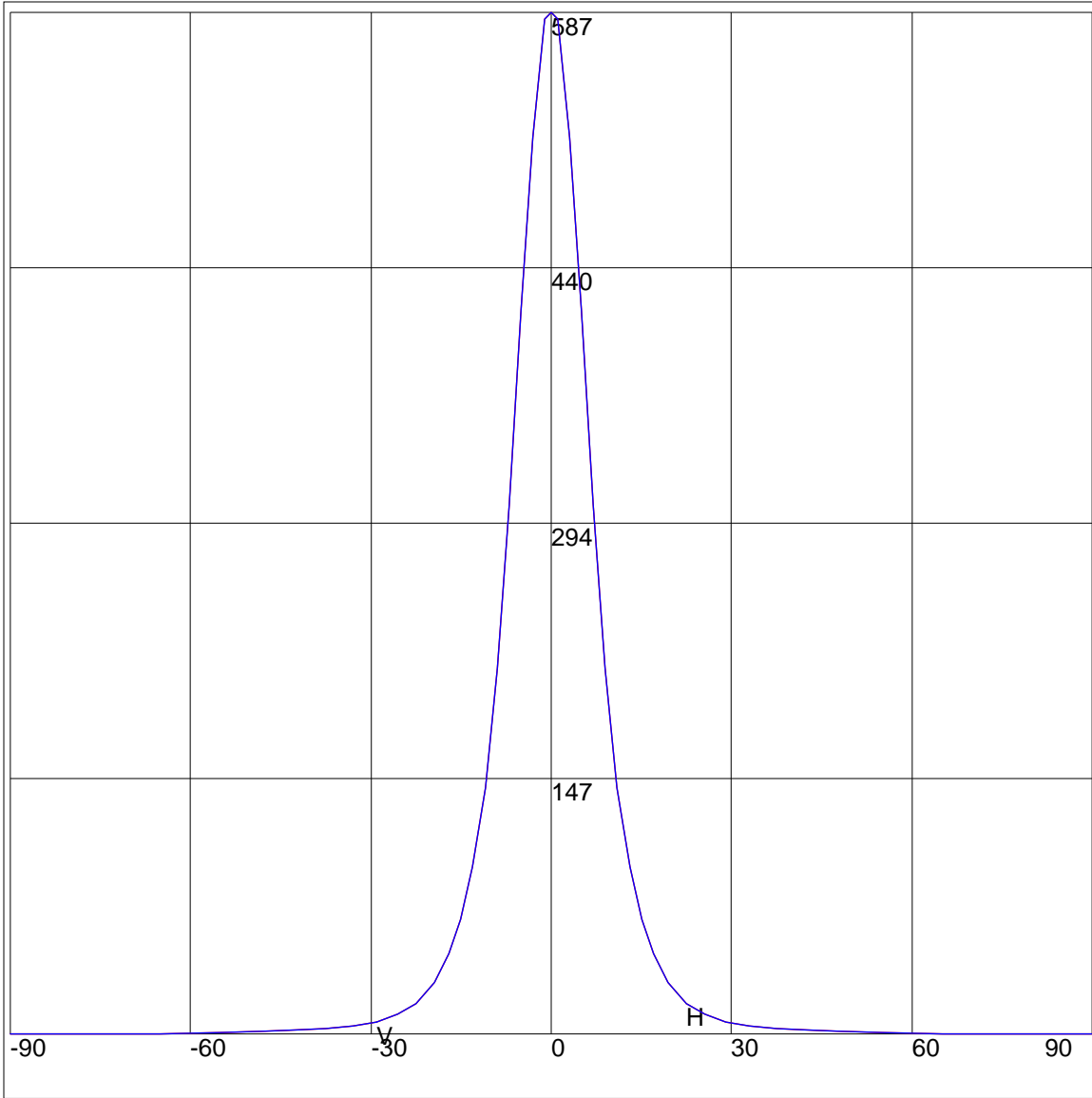
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	.12	85	.12
75	.32	75	.32
65	.7	65	.7
55	1.27	55	1.27
47.5	1.75	47.5	1.75
42.5	2.29	42.5	2.29
37.5	3.22	37.5	3.22
33	4.77	33	4.77
29	7.37	29	7.37
25.5	11.4	25.5	11.4
22.5	17.65	22.5	17.65
19.5	30	19.5	30
17	46.46	17	46.46
15	66.39	15	66.39
13	96.31	13	96.31
11	141.89	11	141.89
9	210.7	9	210.7
7	304.12	7	304.12
5	415.73	5	415.73
3	515.25	3	515.25
1	583.14	1	583.14
0	587.24	0	587.24
-1	583.14	-1	583.14
-3	515.25	-3	515.25
-5	415.73	-5	415.73
-7	304.12	-7	304.12
-9	210.7	-9	210.7
-11	141.89	-11	141.89
-13	96.31	-13	96.31
-15	66.39	-15	66.39
-17	46.46	-17	46.46
-19.5	30	-19.5	30
-22.5	17.65	-22.5	17.65
-25.5	11.4	-25.5	11.4
-29	7.37	-29	7.37
-33	4.77	-33	4.77
-37.5	3.22	-37.5	3.22
-42.5	2.29	-42.5	2.29
-47.5	1.75	-47.5	1.75
-55	1.27	-55	1.27
-65	.7	-65	.7
-75	.32	-75	.32
-85	.12	-85	.12
-90	0	-90	0

ZONAL LUMEN SUMMARY

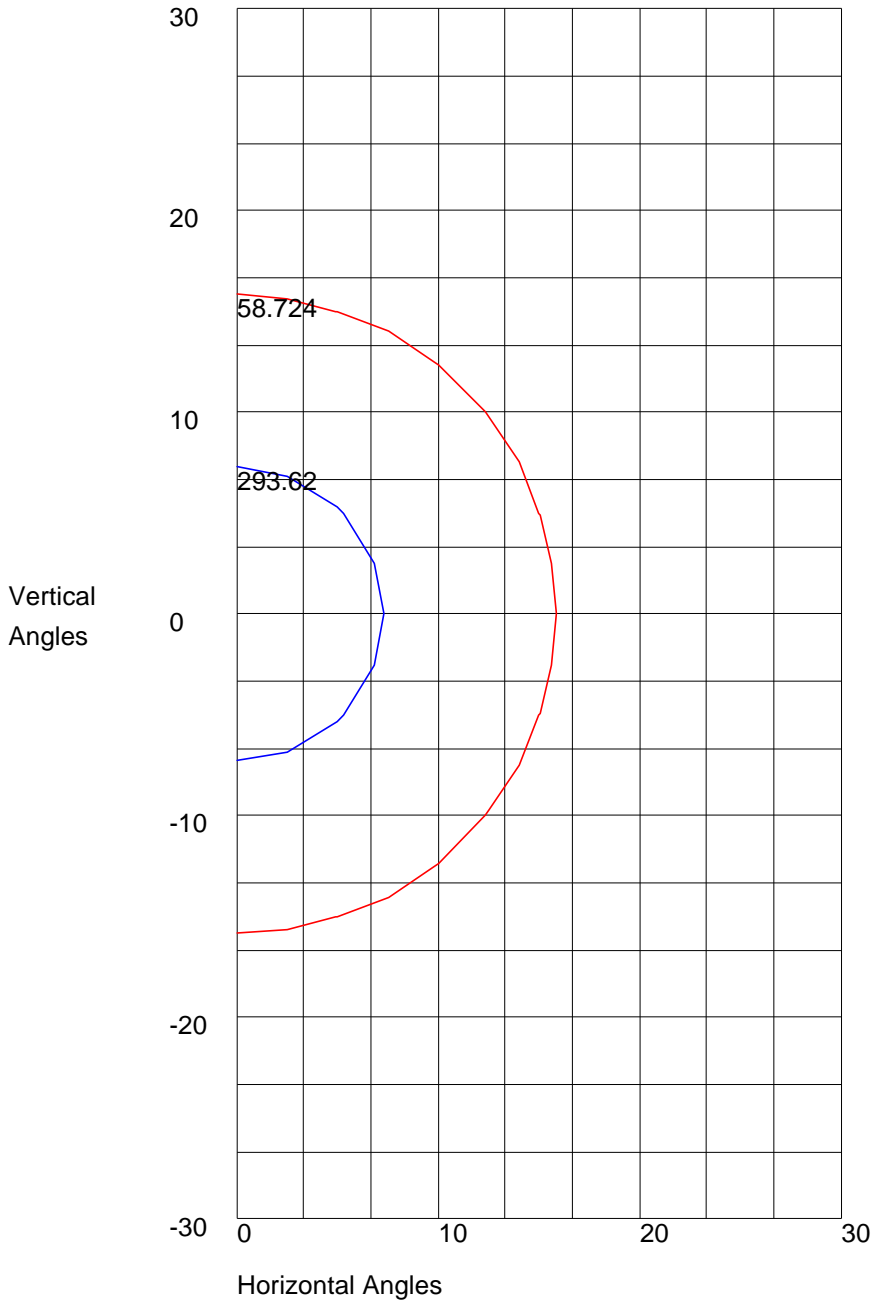
Zone	%
0-20	79.3
0-30	89.2
0-40	93.1
0-60	97.3
0-80	99.6
0-90	100
10-90	56.6
20-40	13.8
20-50	16.5
40-70	5.7
60-80	2.3
70-80	0.8
80-90	0.4
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 587.24 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 587.24 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 293.62
10% Maximum Candela = 58.724

SAMPLE Illuminance cone diagram

Mounting Height = 4ft

