



8165 E Kaiser Blvd. Anaheim, CA 92808
 p. 714.282.2270
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Test #: L01144801

Date: 1/22/2014



NVLAP LAB CODE 200927-0

Test Report: L01144801

Model Number: E2-2W-A-SP

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

Test: Electrical and Photometric tests as required by the IESNA test standards.

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. Fixture catalog number is E2-2W-A-SP. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 1/6/14

Date of Tests: 1/17/14 - 1/22/14

Seasoning of Sample SSL: 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	01/04/15
Xitron Power Analysis System	2503AH	MT-EL01	01/09/15
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/15
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.

LM-79 Test Summary

Manufacturer:	Beachside Lighting
Model Number:	E2-2W-A-SP
LAMPCAT:	N/A
Driver Model Number:	N/A
Total Lumens:	55.90
Input Voltage (VAC/60Hz):	12.00
Input Current (Amp):	0.22
Input Power (W):	1.36
Input Power Factor:	0.51
Total Harmonic Distortion @ 120V(%):	159%
Total Harmonic Distortion @ 277V(%):	N/A
Efficacy:	41
Color Rendering Index (CRI):	-22
Correlated Color Temperature (K):	1539
Chromaticity Coordinate x:	0.5914
Chromaticity Coordinate y:	0.4074
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:50
Off State Power(W):	0.00

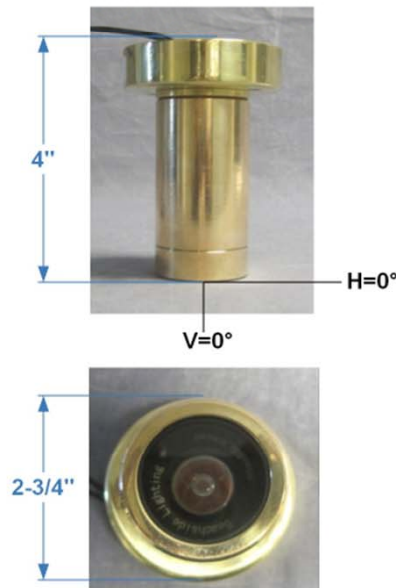
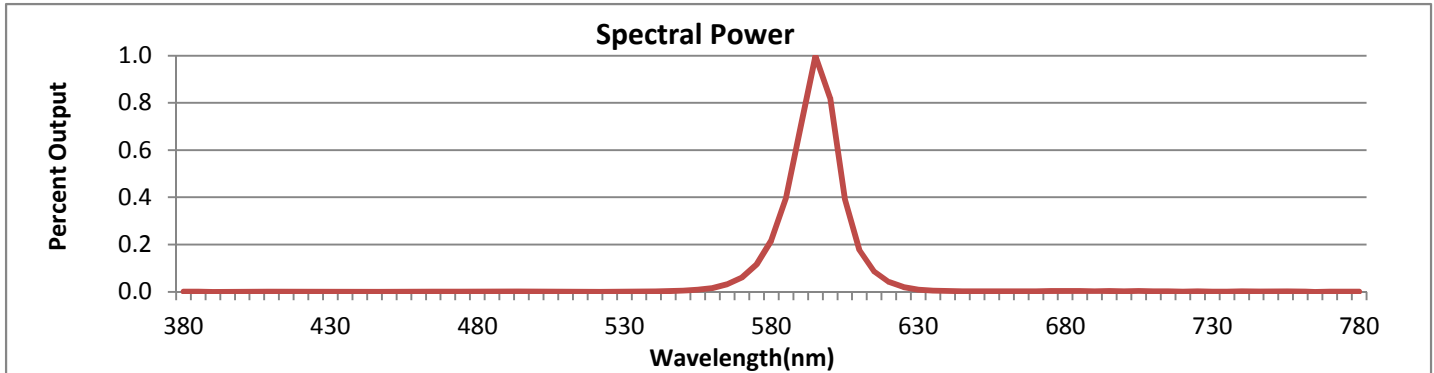


FIG1. LUMINAIRE

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



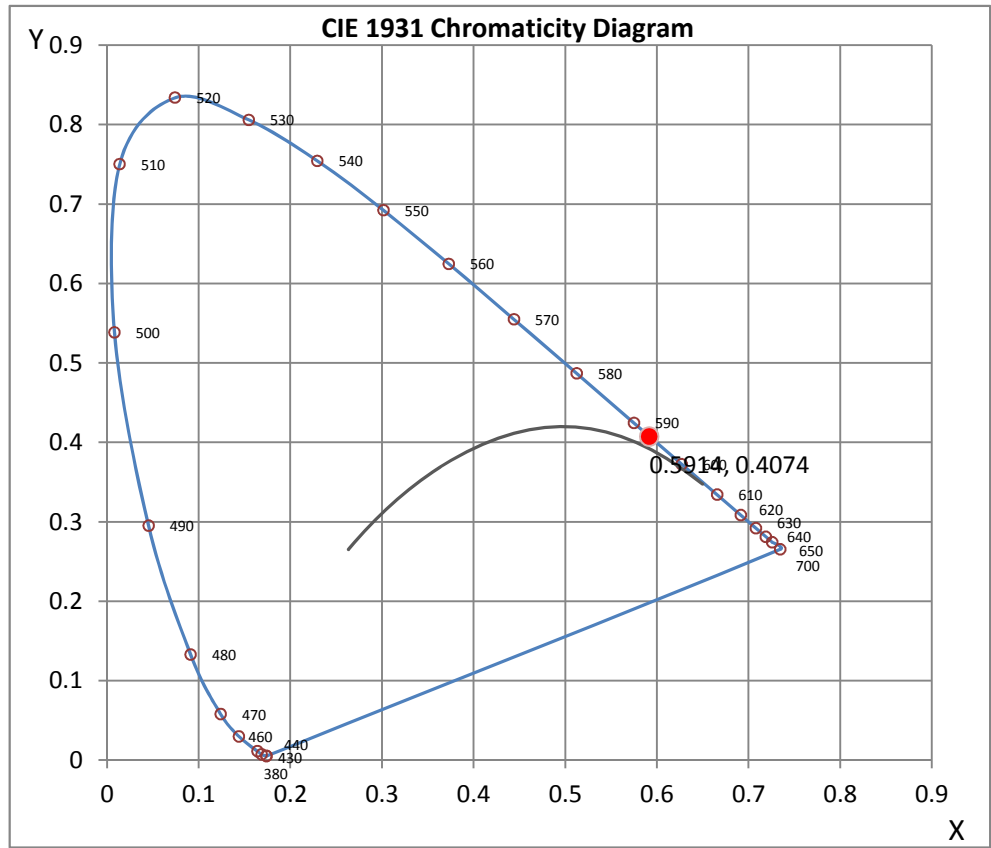
Wavelength	W/m ² nm	440	0.0006	510	0.0004	580	0.3434	650	0.0035	720	0.0017
380	0.0017	450	0.0000	520	0.0005	590	1.1075	660	0.0032	730	0.0011
390	0.0000	460	0.0003	530	0.0000	600	1.2968	670	0.0038	740	0.0025
400	0.0005	470	0.0006	540	0.0018	610	0.2792	680	0.0052	750	0.0030
410	0.0000	480	0.0005	550	0.0069	620	0.0657	690	0.0040	760	0.0014
420	0.0001	490	0.0008	560	0.0255	630	0.0150	700	0.0040	770	0.0022
430	0.0006	500	0.0004	570	0.0952	640	0.0047	710	0.0040	780	0.0017

CRI & CCT

x	0.5914
y	0.4074
u'	0.3528
v'	0.5467
CRI	-22.42
CCT	1539
Duv	0.00812

R Values

R1	-35.61
R2	52.89
R3	15.08
R4	-70.63
R5	-41.69
R6	43.58
R7	-8.13
R8	-134.81
R9	-385.79
R10	31.40
R11	-97.38
R12	-3.42
R13	-16.14
R14	44.56



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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:

Jeff Ahn
 Engineering Manager

Test Report Reviewed by:

Steve Kang
 Quality Assurance

**Attached are photometric data reports. Total number of pages: 8*

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Photometric Test Report

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L01144801.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L01144801
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 01/22/2014
 [MANUFAC] BEACHSIDE LIGHTING
 [LUMCAT] E2-2W-A-SP
 [LUMINAIRE] 2-3/4"DIA. X 4"H. IN GROUND LED SPOT LIGHT
 [MORE] CLEAR LENS
 [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, 1.36W
 [_TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

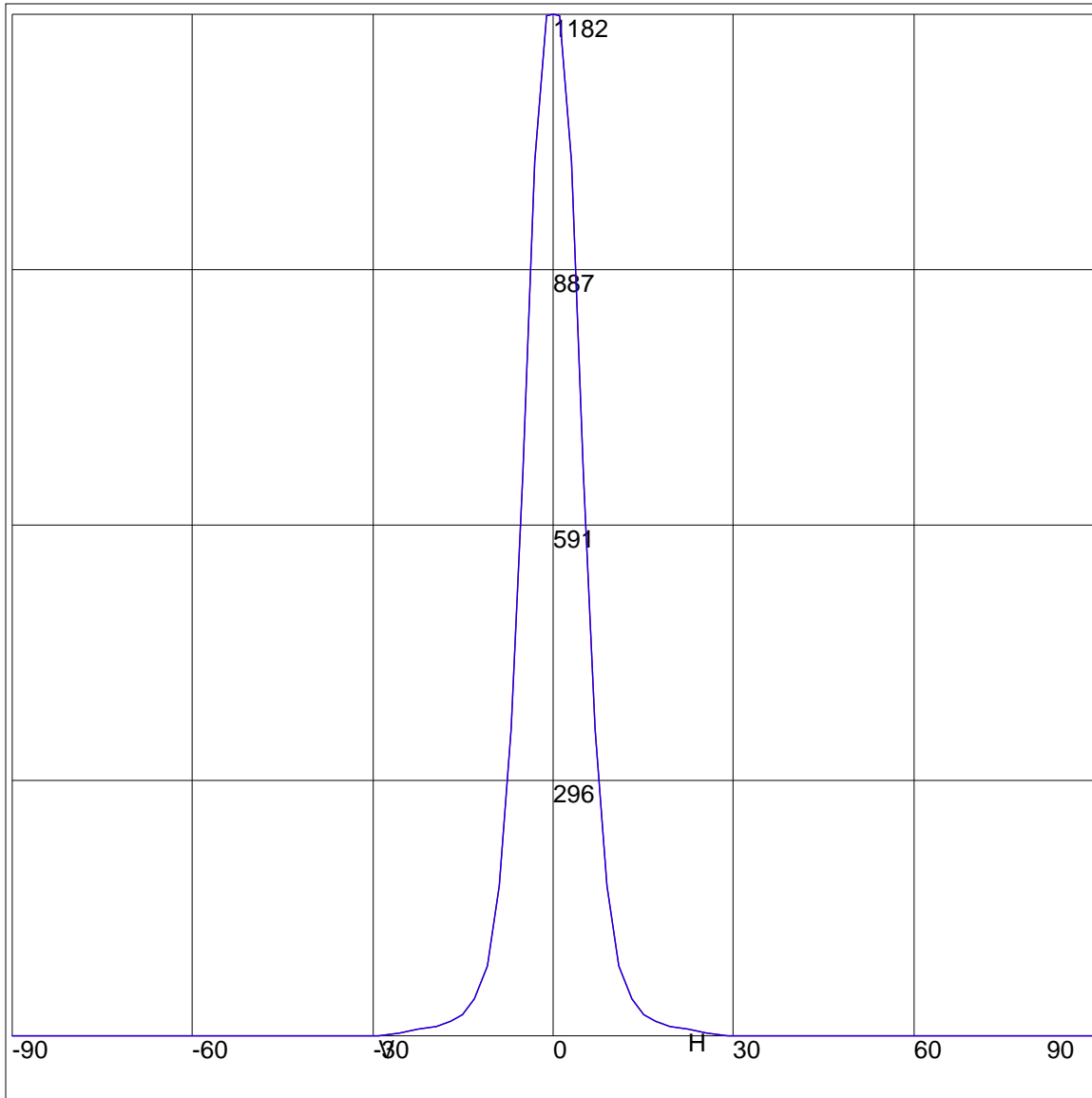
NEMA Type	2 H x 2 V
Maximum Candela	1182
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	10.8
Vertical Beam Angle (50%)	10.8
Horizontal Field Angle (10%)	20.4
Vertical Field Angle (10%)	20.4
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	23
Beam Efficiency	N.A.
Field Lumens	45
Field Efficiency	N.A.
Spill Lumens	11
Luminaire Lumens	56
Total Efficiency	N.A.
Total Luminaire Watts	1.36
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L01144801.IES

AXIAL CANDELA

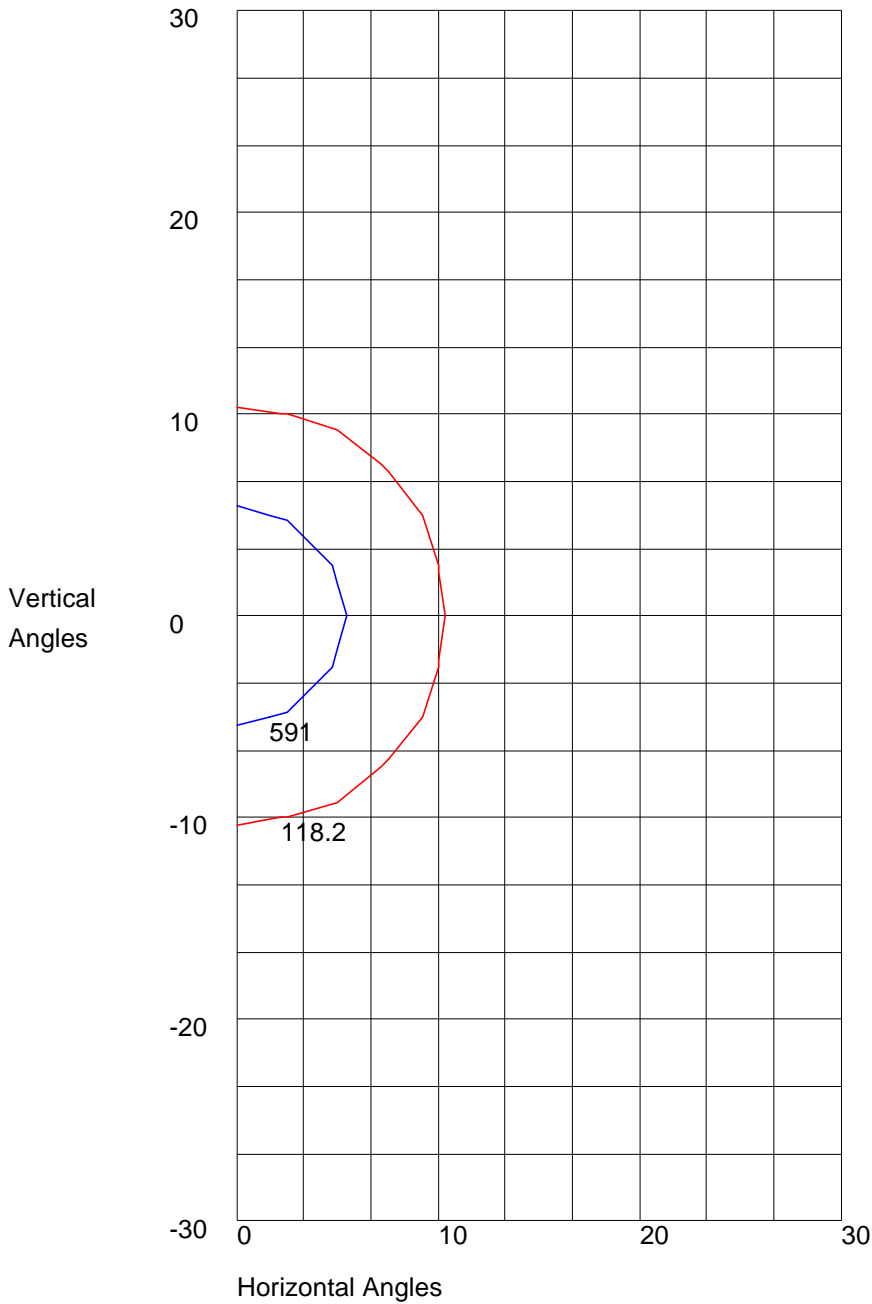
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	0	75	0
65	0	65	0
55	0	55	0
47.5	0	47.5	0
42.5	0	42.5	0
37.5	0	37.5	0
33	0	33	0
29	1	29	1
25.5	3	25.5	3
22.5	8	22.5	8
19.5	12	19.5	12
17	18	17	18
15	25	15	25
13	43	13	43
11	82	11	82
9	174	9	174
7	355	7	355
5	650	5	650
3	1011	3	1011
1	1181	1	1181
0	1182	0	1182
-1	1181	-1	1181
-3	1011	-3	1011
-5	650	-5	650
-7	355	-7	355
-9	174	-9	174
-11	82	-11	82
-13	43	-13	43
-15	25	-15	25
-17	18	-17	18
-19.5	12	-19.5	12
-22.5	8	-22.5	8
-25.5	3	-25.5	3
-29	1	-29	1
-33	0	-33	0
-37.5	0	-37.5	0
-42.5	0	-42.5	0
-47.5	0	-47.5	0
-55	0	-55	0
-65	0	-65	0
-75	0	-75	0
-85	0	-85	0
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 1182 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1182 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 591
10% Maximum Candela = 118.2