

**Report No: L021703902****Issue Date: 2/17/2017****Report Prepared For:** Vista Professional Outdoor Lighting  
1625 Surveyor Ave. Simi Valley, CA 93063**Model Number: 1045-X-NS-620****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. Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 2/14/17

**Date of Tests:** 2/15/17 - 2/17/17

**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	11/28/17
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
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

**Test Summary**

<b>Manufacturer:</b>	Vista Professional Outdoor Lighting
<b>Model Number:</b>	1045-X-NS-620
<b>Driver Model Number:</b>	ERP ESS030W-0620-42
<b>Total Lumens:</b>	2324.78
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.21
<b>Input Power (W):</b>	25.29
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	12%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	92
<b>Color Rendering Index (CRI):</b>	85
<b>Correlated Color Temperature (K):</b>	3119
<b>Chromaticity Coordinate x:</b>	0.4289
<b>Chromaticity Coordinate y:</b>	0.4016
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	1:35
<b>Total Operating Time (Hours):</b>	3:05

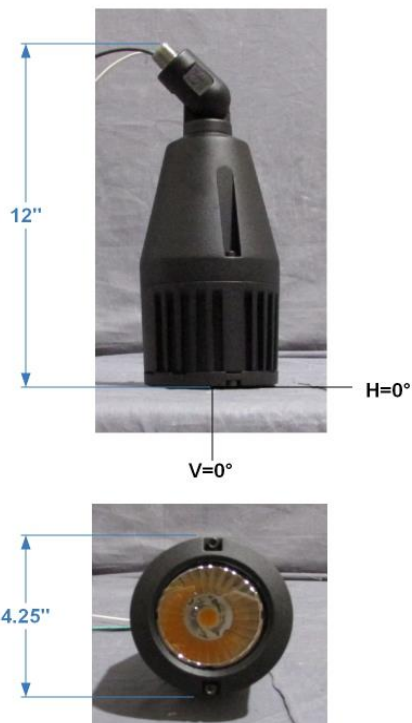
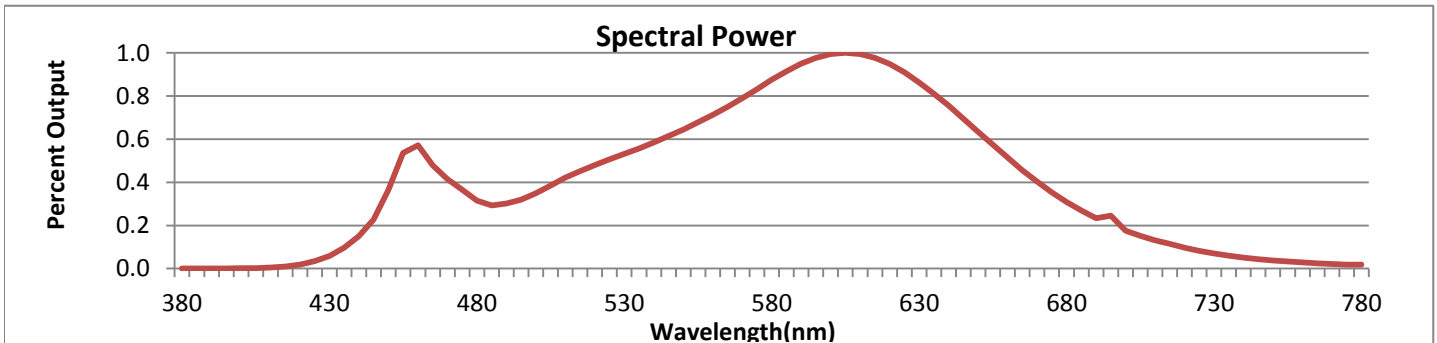


FIG. 1 LUMINAIRE

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



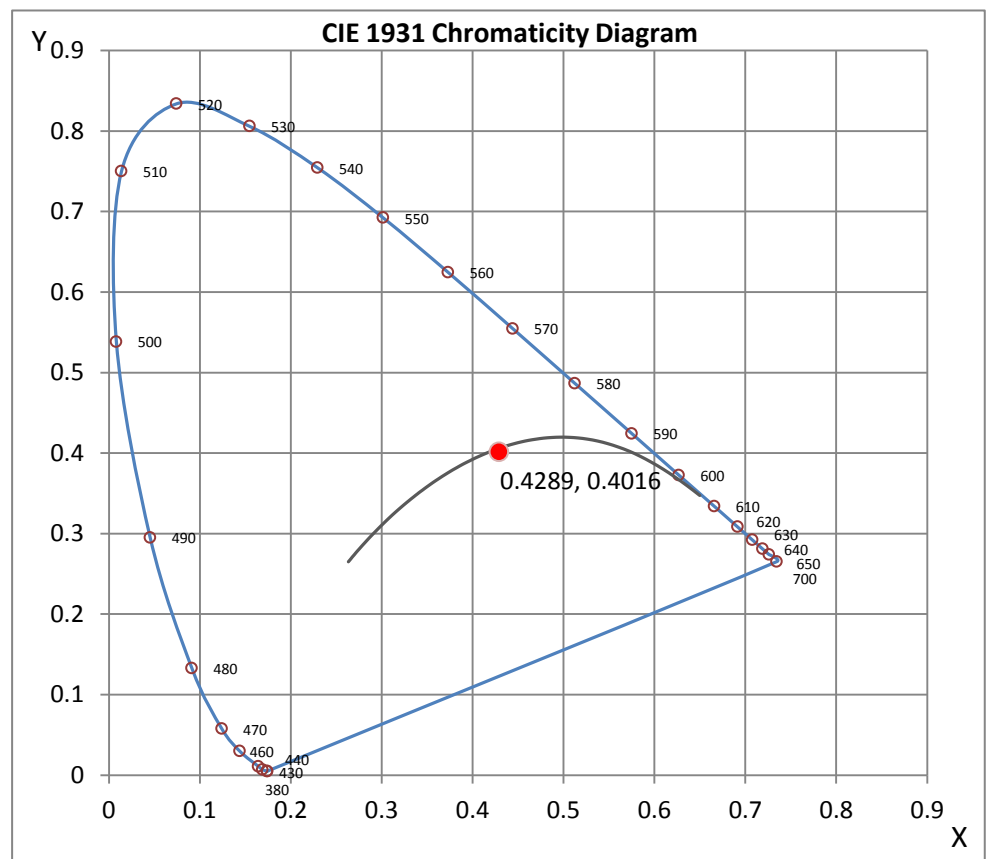
Wavelength	W/m <sup>2</sup> nm	440	0.1499	510	0.4214	580	0.8756	650	0.6342	720	0.0971
380	0.0008	450	0.3647	520	0.4800	590	0.9502	660	0.5150	730	0.0705
390	0.0009	460	0.5722	530	0.5318	600	0.9945	670	0.4040	740	0.0516
400	0.0014	470	0.4148	540	0.5853	610	0.9944	680	0.3096	750	0.0383
410	0.0042	480	0.3146	550	0.6452	620	0.9484	690	0.2336	760	0.0284
420	0.0183	490	0.3011	560	0.7126	630	0.8631	700	0.1752	770	0.0213
430	0.0590	500	0.3495	570	0.7902	640	0.7551	710	0.1311	780	0.0182

**CRI & CCT**

x	0.4289
y	0.4016
u'	0.2464
v'	0.5192
CRI	85.20
CCT	3119
Duv	0.00018

**R Values**

R1	84.79
R2	94.65
R3	95.03
R4	81.62
R5	84.40
R6	93.08
R7	83.69
R8	64.38
R9	21.56
R10	86.66
R11	80.62
R12	73.37
R13	87.53
R14	98.08



\*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  
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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 : L021703902.IES**

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L021703902  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUEDATE] 2/17/2017  
[MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING  
[LUMCAT] 1045-X-NS-620  
[LUMINAIRE] LED ACCENT LUMINAIRE  
[BALLASTCAT] ERP ESS030W-0620-42  
[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, 25.29W  
[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	13677
Maximum Candela Angle	-1H -1V
Horizontal Beam Angle (50%)	17.5
Vertical Beam Angle (50%)	17.5
Horizontal Field Angle (10%)	38.6
Vertical Field Angle (10%)	38.6
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	754
Beam Efficiency	N.A.
Field Lumens	1547
Field Efficiency	N.A.
Spill Lumens	778
Luminaire Lumens	2325
Total Efficiency	N.A.
Total Luminaire Watts	25.29
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L021703902.IES**

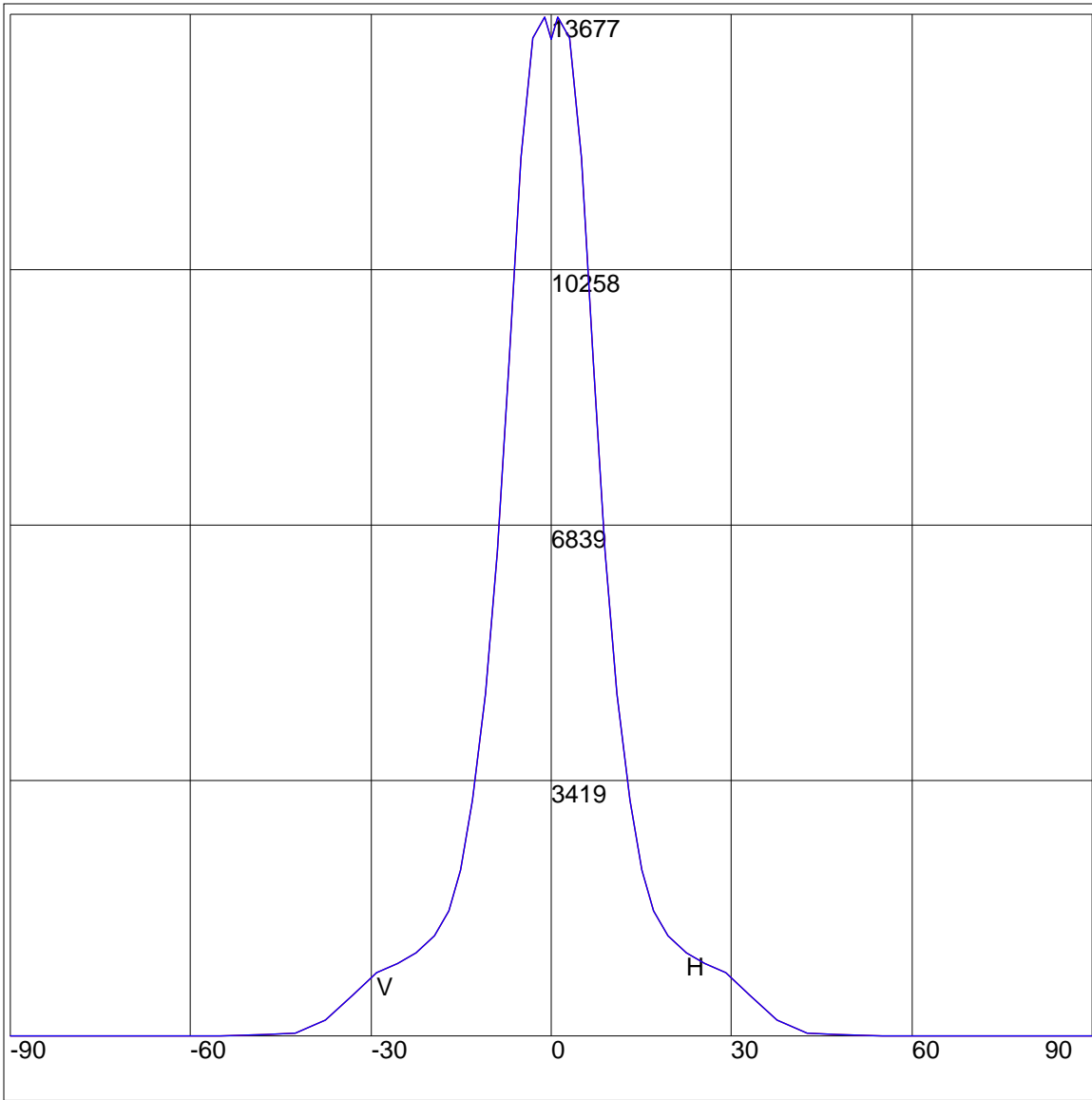
**AXIAL CANDELA**

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	0	75	0
65	2	65	2
55	9	55	9
47.5	22	47.5	22
42.5	46	42.5	46
37.5	211	37.5	211
33	551	33	551
29	862	29	862
25.5	971	25.5	971
22.5	1118	22.5	1118
19.5	1340	19.5	1340
17	1688	17	1688
15	2226	15	2226
13	3158	13	3158
11	4583	11	4583
9	6485	9	6485
7	9065	7	9065
5	11759	5	11759
3	13361	3	13361
1	13649	1	13649
0	13350	0	13350
-1	13649	-1	13649
-3	13361	-3	13361
-5	11759	-5	11759
-7	9065	-7	9065
-9	6485	-9	6485
-11	4583	-11	4583
-13	3158	-13	3158
-15	2226	-15	2226
-17	1688	-17	1688
-19.5	1340	-19.5	1340
-22.5	1118	-22.5	1118
-25.5	971	-25.5	971
-29	862	-29	862
-33	551	-33	551
-37.5	211	-37.5	211
-42.5	46	-42.5	46
-47.5	22	-47.5	22
-55	9	-55	9
-65	2	-65	2
-75	0	-75	0
-85	0	-85	0
-90	0	-90	0

**ZONAL LUMEN SUMMARY**

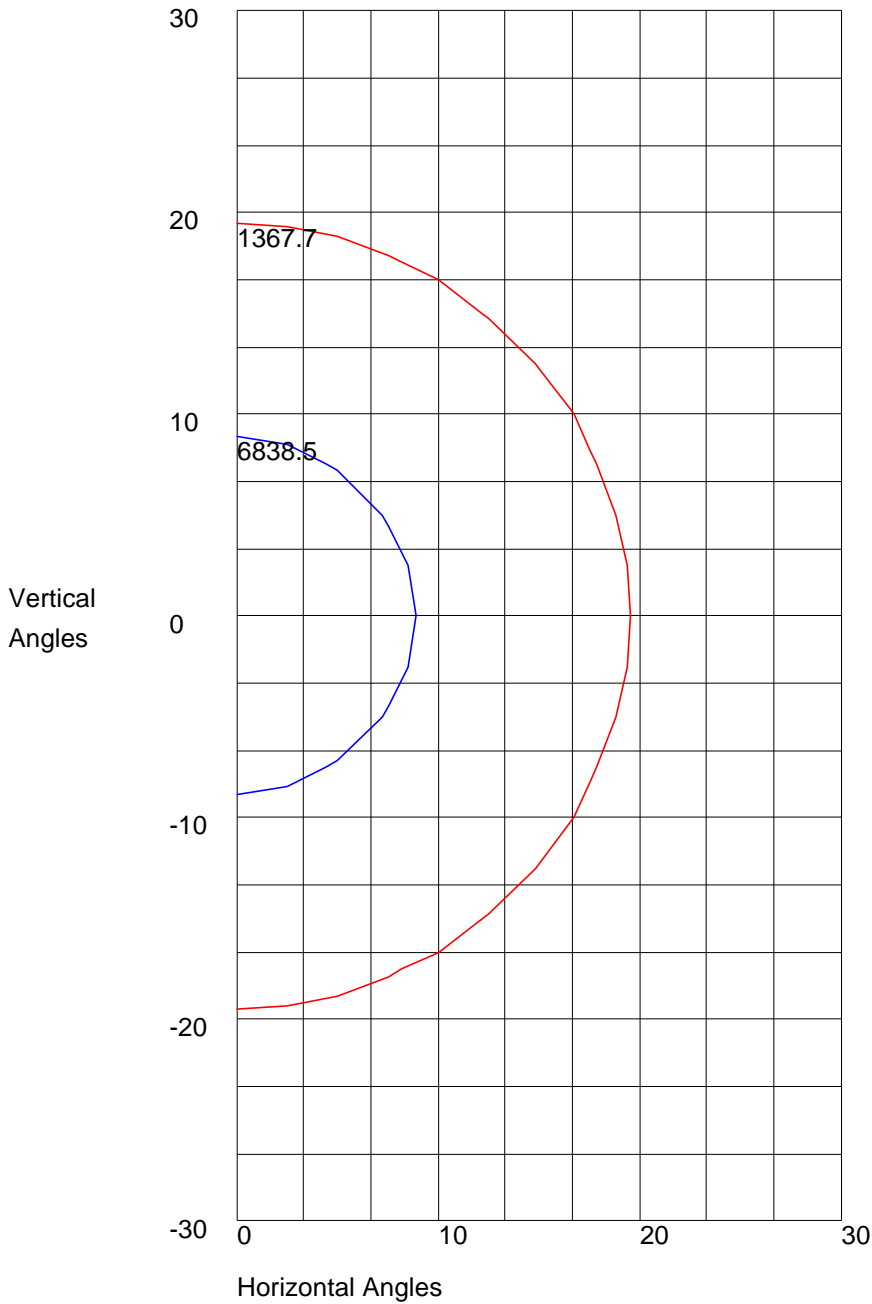
Zone	%
0-20	67.8
0-30	87.8
0-40	98.4
0-60	99.9
0-80	100
0-90	100
10-90	61.6
20-40	30.6
20-50	31.7
40-70	1.6
60-80	0.1
70-80	0
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 13677 Located At Horizontal Angle =-1, Vertical Angle =-1  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 13677 Located At Horizontal Angle =-1, Vertical Angle =-1  
50% Maximum Candela = 6838.5  
10% Maximum Candela = 1367.7