



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L021703904



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Issue Date: 2/17/2017

Report Prepared For: Vista Professional Outdoor Lighting
1625 Surveyor Ave. Simi Valley, CA 93063

Model Number: 1045-X-WF-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: 2/16/17 - 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

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

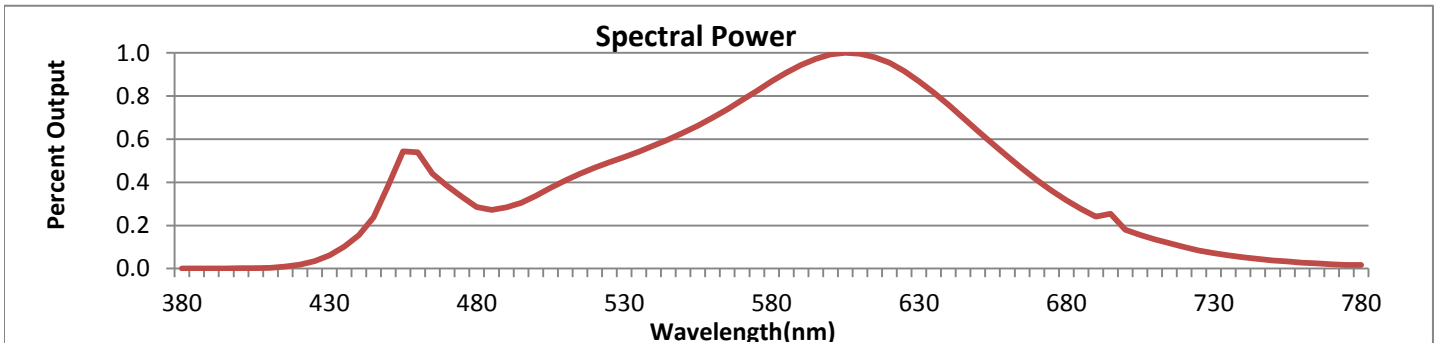
Test Summary

Manufacturer:	Vista Professional Outdoor Lighting
Model Number:	1045-X-WF-620
Driver Model Number:	ERP ESS030W-0620-42
Total Lumens:	2076.84
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.21
Input Power (W):	25.40
Input Power Factor:	0.99
Current ATHD @ 120V(%):	12%
Current ATHD @ 277V(%):	N/A
Efficacy:	82
Color Rendering Index (CRI):	85
Correlated Color Temperature (K):	3059
Chromaticity Coordinate x:	0.4320
Chromaticity Coordinate y:	0.4009
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:00
Total Operating Time (Hours):	2:25



FIG. 1 LUMINAIRE

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



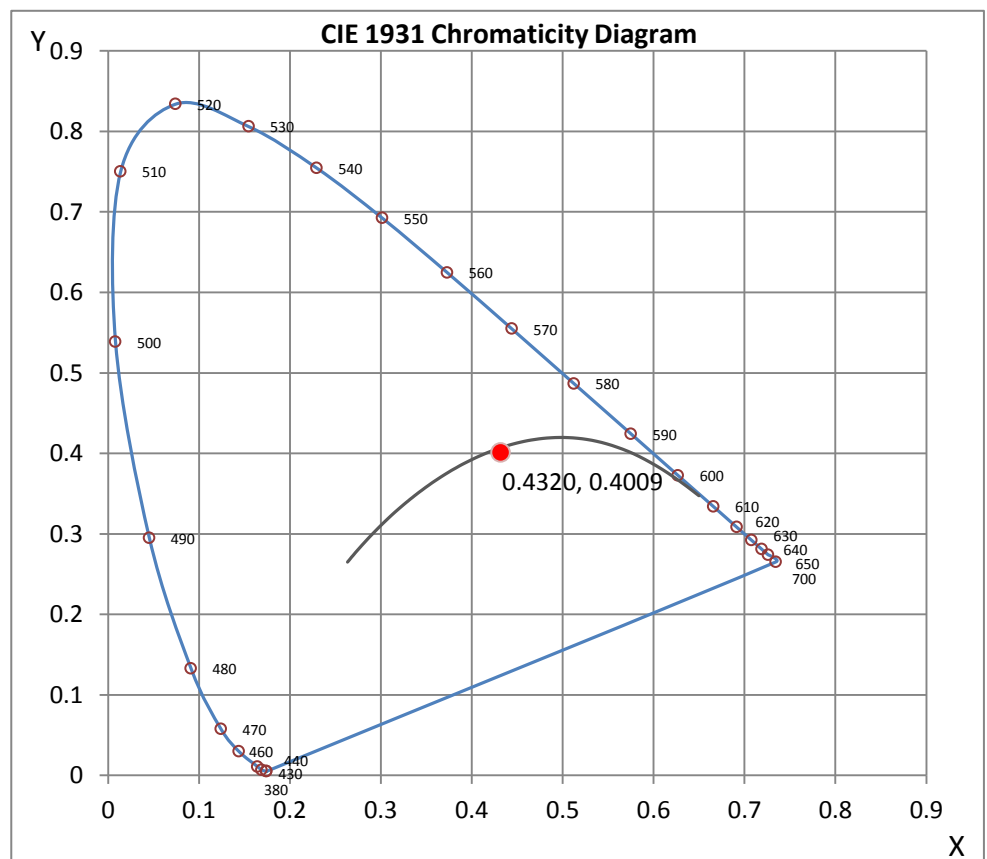
Wavelength	W/m ² nm	440	0.1553	510	0.4092	580	0.8685	650	0.6389	720	0.0994
380	0.0008	450	0.3863	520	0.4678	590	0.9447	660	0.5211	730	0.0715
390	0.0007	460	0.5388	530	0.5172	600	0.9926	670	0.4107	740	0.0519
400	0.0013	470	0.3835	540	0.5702	610	0.9968	680	0.3172	750	0.0380
410	0.0041	480	0.2857	550	0.6294	620	0.9544	690	0.2411	760	0.0279
420	0.0184	490	0.2833	560	0.6995	630	0.8682	700	0.1807	770	0.0204
430	0.0612	500	0.3370	570	0.7809	640	0.7596	710	0.1348	780	0.0176

CRI & CCT

x	0.4320
y	0.4009
u'	0.2487
v'	0.5194
CRI	85.20
CCT	3059
Duv	-0.00058

R Values

R1	84.74
R2	94.49
R3	95.09
R4	81.90
R5	84.50
R6	92.93
R7	83.62
R8	64.17
R9	21.56
R10	86.45
R11	80.97
R12	74.17
R13	87.40
R14	98.15



*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: 8*



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Photometric Test Report

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L021703904.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L021703904
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 2/17/2017
 [MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING
 [LUMCAT] 1045-X-WF-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, 25.40W
 [TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

NEMA Type	5 H x 5 V
Maximum Candela	2732
Maximum Candela Angle	-9H -1V
Horizontal Beam Angle (50%)	50.6
Vertical Beam Angle (50%)	47.6
Horizontal Field Angle (10%)	78.6
Vertical Field Angle (10%)	76.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1354
Beam Efficiency	N.A.
Field Lumens	1903
Field Efficiency	N.A.
Spill Lumens	174
Luminaire Lumens	2077
Total Efficiency	N.A.
Total Luminaire Watts	25.4
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L021703904.IES

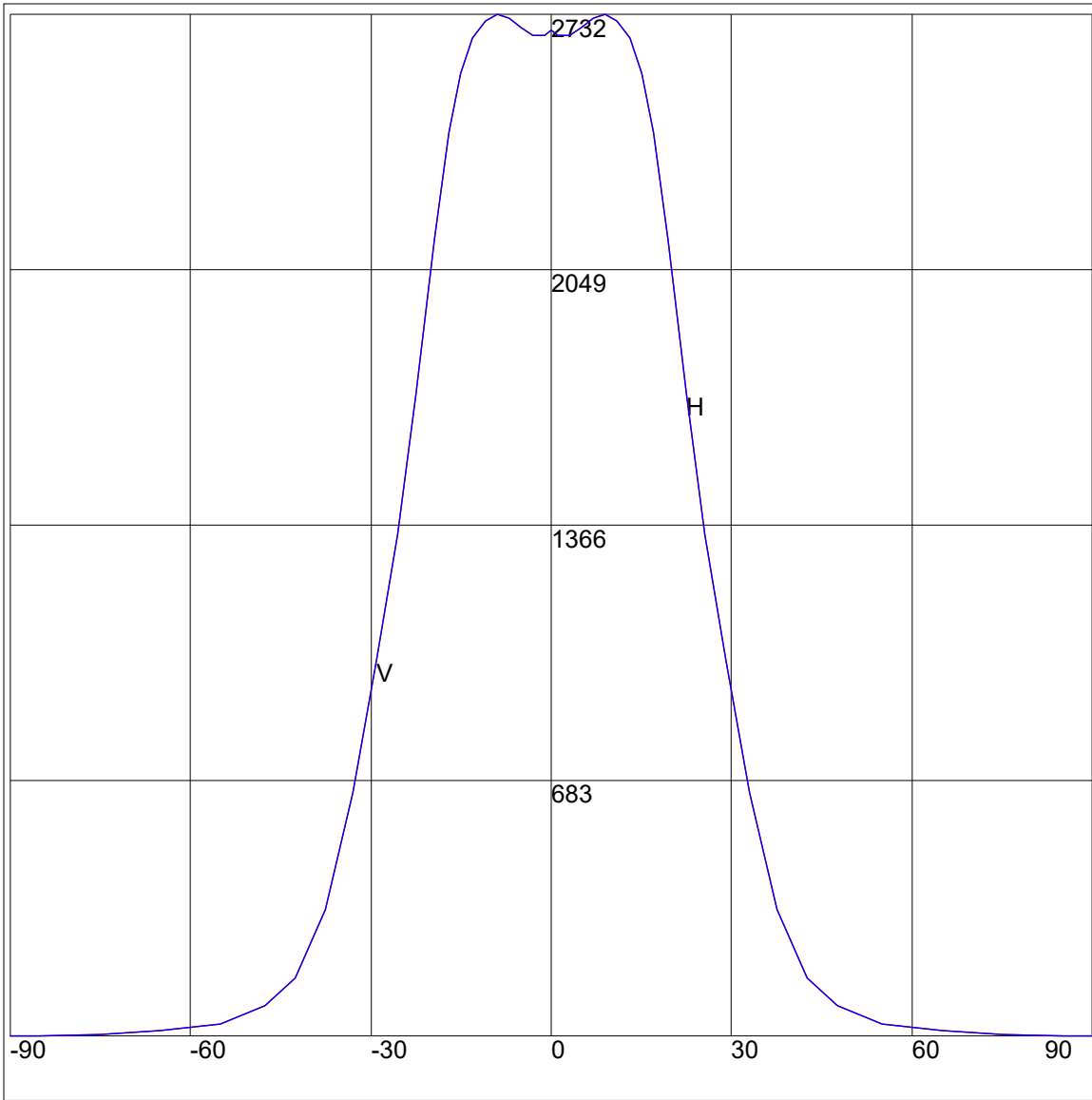
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	4	75	4
65	15	65	15
55	33	55	33
47.5	82	47.5	82
42.5	156	42.5	156
37.5	340	37.5	340
33	654	33	654
29	1008	29	1008
25.5	1342	25.5	1342
22.5	1717	22.5	1717
19.5	2132	19.5	2132
17	2417	17	2417
15	2574	15	2574
13	2669	13	2669
11	2716	11	2716
9	2732	9	2732
7	2721	7	2721
5	2696	5	2696
3	2675	3	2675
1	2677	1	2677
0	2690	0	2690
-1	2677	-1	2677
-3	2675	-3	2675
-5	2696	-5	2696
-7	2721	-7	2721
-9	2732	-9	2732
-11	2716	-11	2716
-13	2669	-13	2669
-15	2574	-15	2574
-17	2417	-17	2417
-19.5	2132	-19.5	2132
-22.5	1717	-22.5	1717
-25.5	1342	-25.5	1342
-29	1008	-29	1008
-33	654	-33	654
-37.5	340	-37.5	340
-42.5	156	-42.5	156
-47.5	82	-47.5	82
-55	33	-55	33
-65	15	-65	15
-75	4	-75	4
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

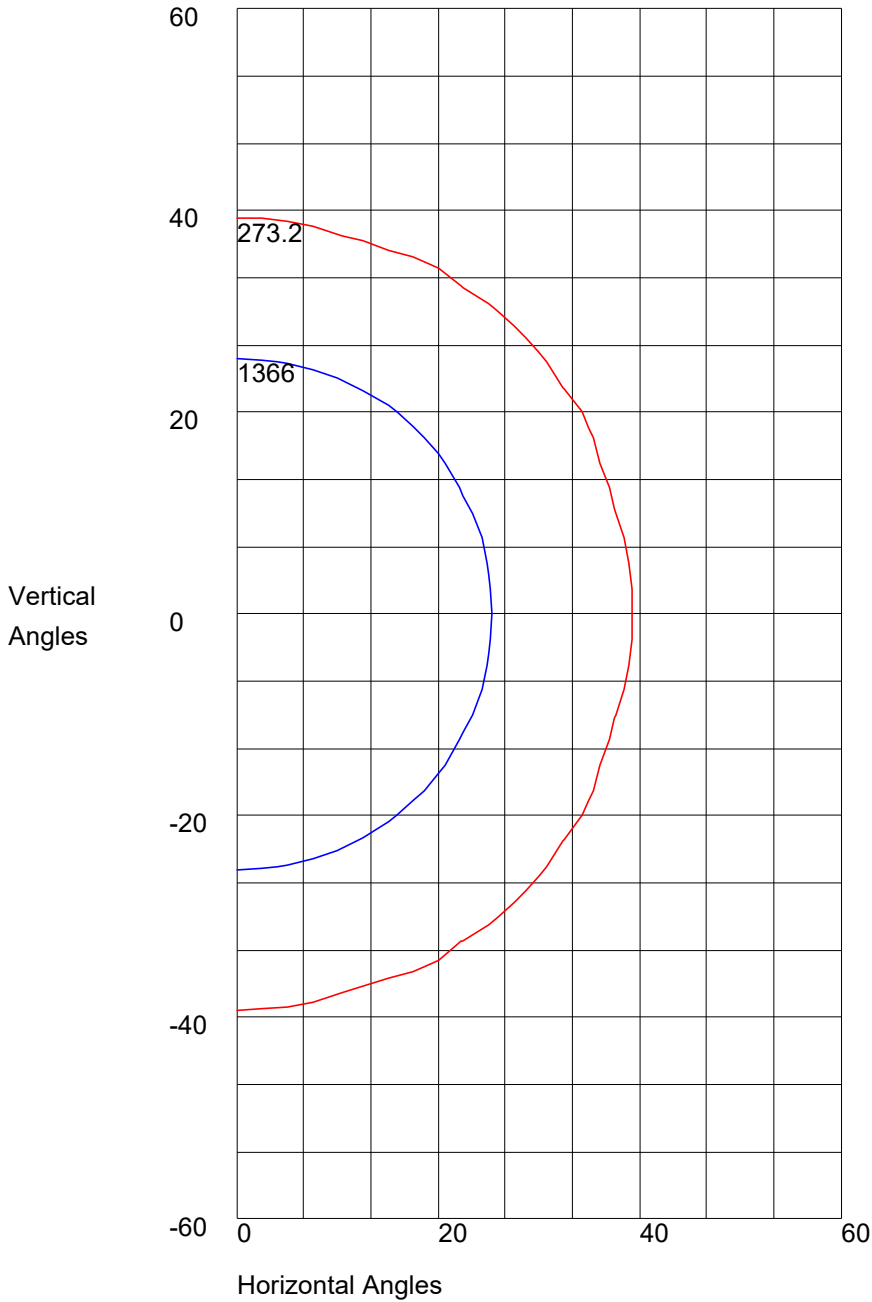
Zone	%
0-20	46.4
0-30	77.7
0-40	93.1
0-60	99
0-80	100
0-90	100
10-90	87.5
20-40	46.7
20-50	51.1
40-70	6.6
60-80	1
70-80	0.2
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 2732 Located At Horizontal Angle =-9, Vertical Angle =-1
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2732 Located At Horizontal Angle =-9, Vertical Angle =-1
50% Maximum Candela = 1366
10% Maximum Candela = 273.2