



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

Report No: L021703903



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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-MF-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-MF-620
Driver Model Number:	ERP ESS030W-0620-42
Total Lumens:	2230.34
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.22
Input Power (W):	25.86
Input Power Factor:	0.99
Current ATHD @ 120V(%):	13%
Current ATHD @ 277V(%):	N/A
Efficacy:	86
Color Rendering Index (CRI):	85
Correlated Color Temperature (K):	3083
Chromaticity Coordinate x:	0.4297
Chromaticity Coordinate y:	0.3988
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:15
Total Operating Time (Hours):	2:45

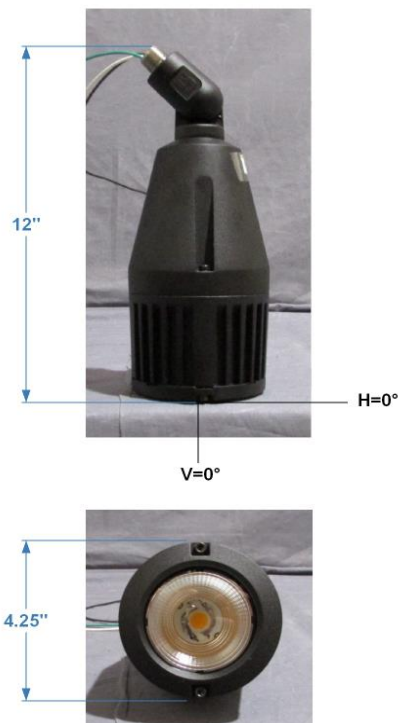
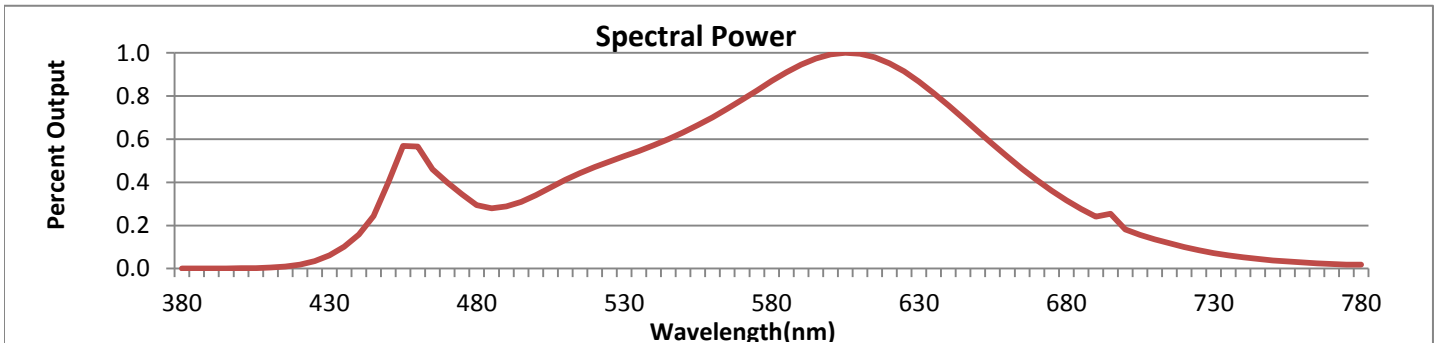


FIG. 1 LUMINAIRE

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



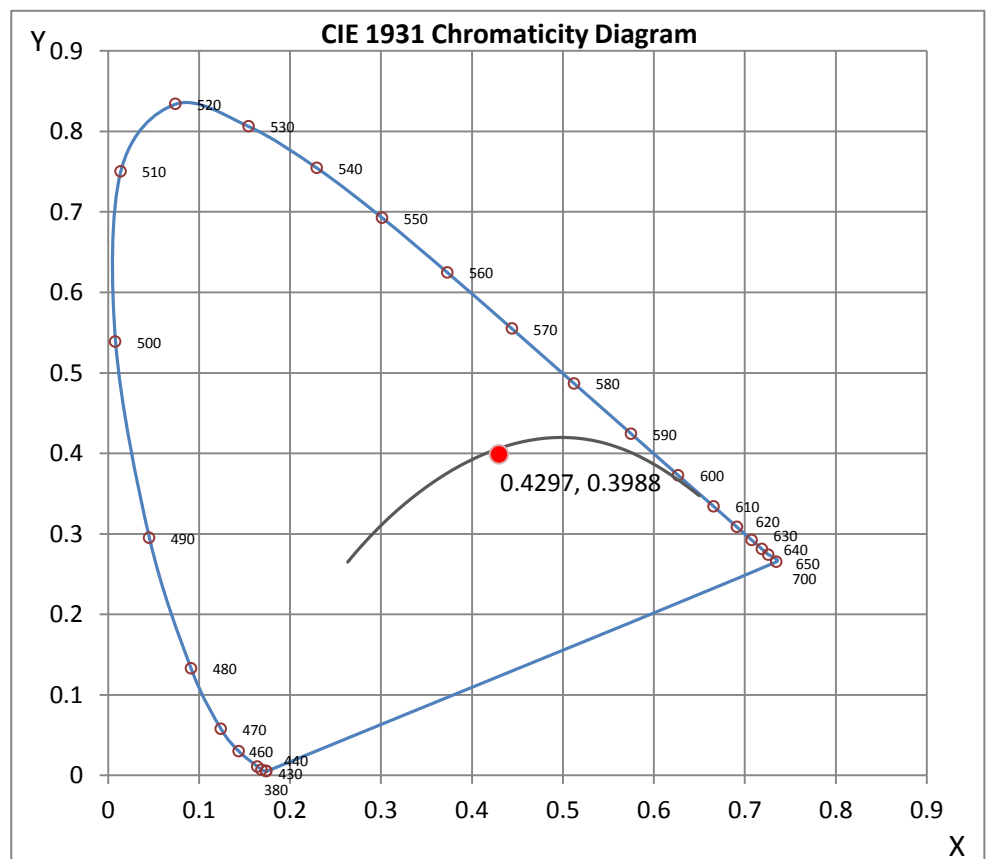
Wavelength	W/m ² nm	440	0.1584	510	0.4116	580	0.8699	650	0.6378	720	0.0996
380	0.0007	450	0.4000	520	0.4703	590	0.9463	660	0.5199	730	0.0720
390	0.0009	460	0.5651	530	0.5209	600	0.9931	670	0.4102	740	0.0521
400	0.0013	470	0.3999	540	0.5723	610	0.9958	680	0.3173	750	0.0382
410	0.0042	480	0.2944	550	0.6314	620	0.9523	690	0.2410	760	0.0280
420	0.0184	490	0.2885	560	0.7015	630	0.8664	700	0.1809	770	0.0206
430	0.0616	500	0.3398	570	0.7828	640	0.7580	710	0.1349	780	0.0176

CRI & CCT

x	0.4297
y	0.3988
u'	0.2482
v'	0.5182
CRI	85.30
CCT	3083
Duv	-0.00109

R Values

R1	85.04
R2	94.84
R3	94.78
R4	81.94
R5	84.81
R6	93.17
R7	83.47
R8	64.41
R9	22.33
R10	87.16
R11	81.02
R12	74.33
R13	87.78
R14	98.01



*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 : L021703903.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L021703903
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 2/17/2017
[MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1045-X-MF-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, 25.86W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

NEMA Type	4 H x 4 V
Maximum Candela	5529
Maximum Candela Angle	-1H -1V
Horizontal Beam Angle (50%)	29.9
Vertical Beam Angle (50%)	29.9
Horizontal Field Angle (10%)	69.2
Vertical Field Angle (10%)	69.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	860
Beam Efficiency	N.A.
Field Lumens	2010
Field Efficiency	N.A.
Spill Lumens	221
Luminaire Lumens	2230
Total Efficiency	N.A.
Total Luminaire Watts	25.86
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L021703903.IES

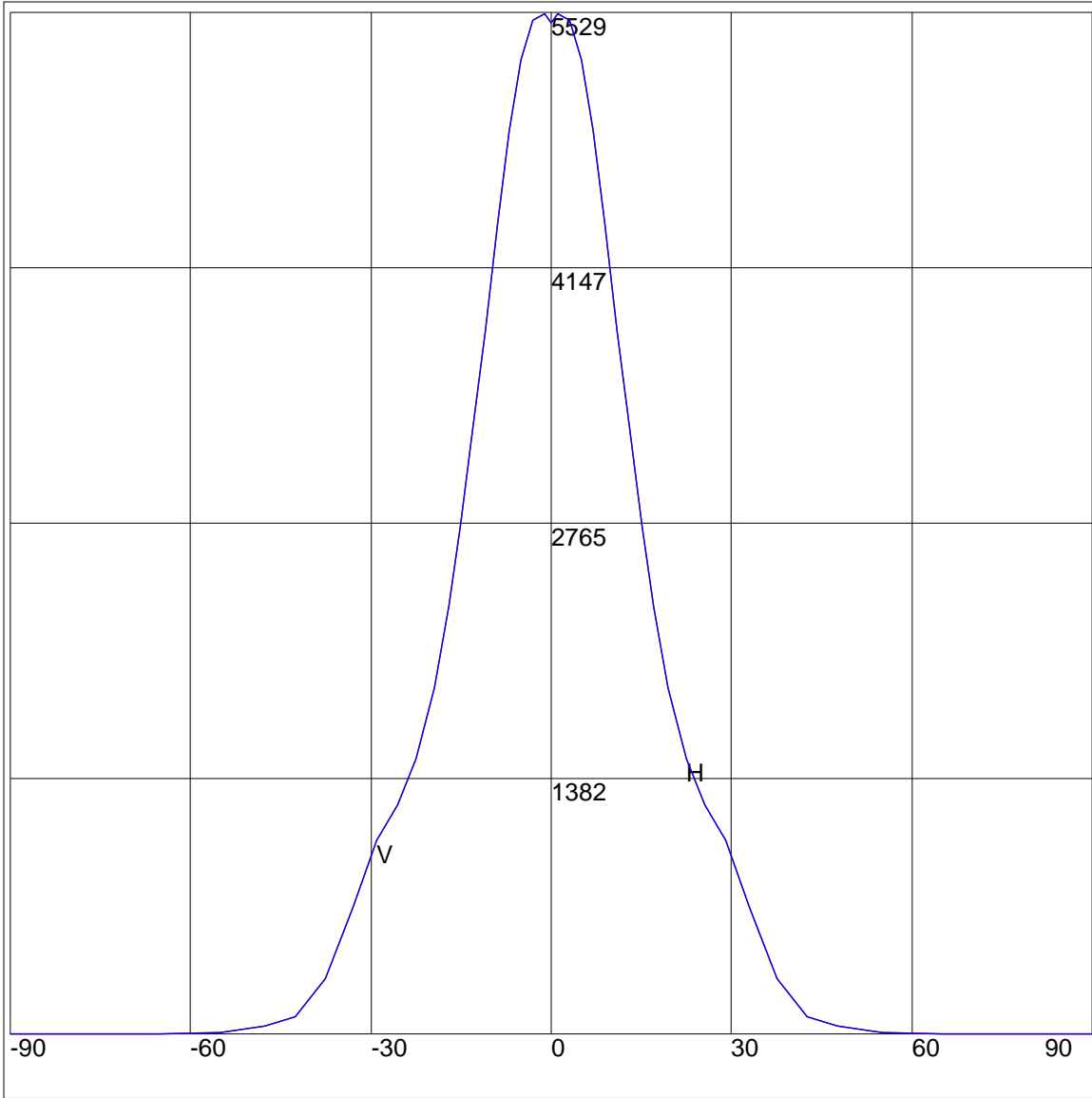
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	2	75	2
65	5	65	5
55	13	55	13
47.5	48	47.5	48
42.5	99	42.5	99
37.5	304	37.5	304
33	689	33	689
29	1052	29	1052
25.5	1240	25.5	1240
22.5	1489	22.5	1489
19.5	1876	19.5	1876
17	2318	17	2318
15	2758	15	2758
13	3264	13	3264
11	3815	11	3815
9	4379	9	4379
7	4888	7	4888
5	5270	5	5270
3	5488	3	5488
1	5522	1	5522
0	5470	0	5470
-1	5522	-1	5522
-3	5488	-3	5488
-5	5270	-5	5270
-7	4888	-7	4888
-9	4379	-9	4379
-11	3815	-11	3815
-13	3264	-13	3264
-15	2758	-15	2758
-17	2318	-17	2318
-19.5	1876	-19.5	1876
-22.5	1489	-22.5	1489
-25.5	1240	-25.5	1240
-29	1052	-29	1052
-33	689	-33	689
-37.5	304	-37.5	304
-42.5	99	-42.5	99
-47.5	48	-47.5	48
-55	13	-55	13
-65	5	-65	5
-75	2	-75	2
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

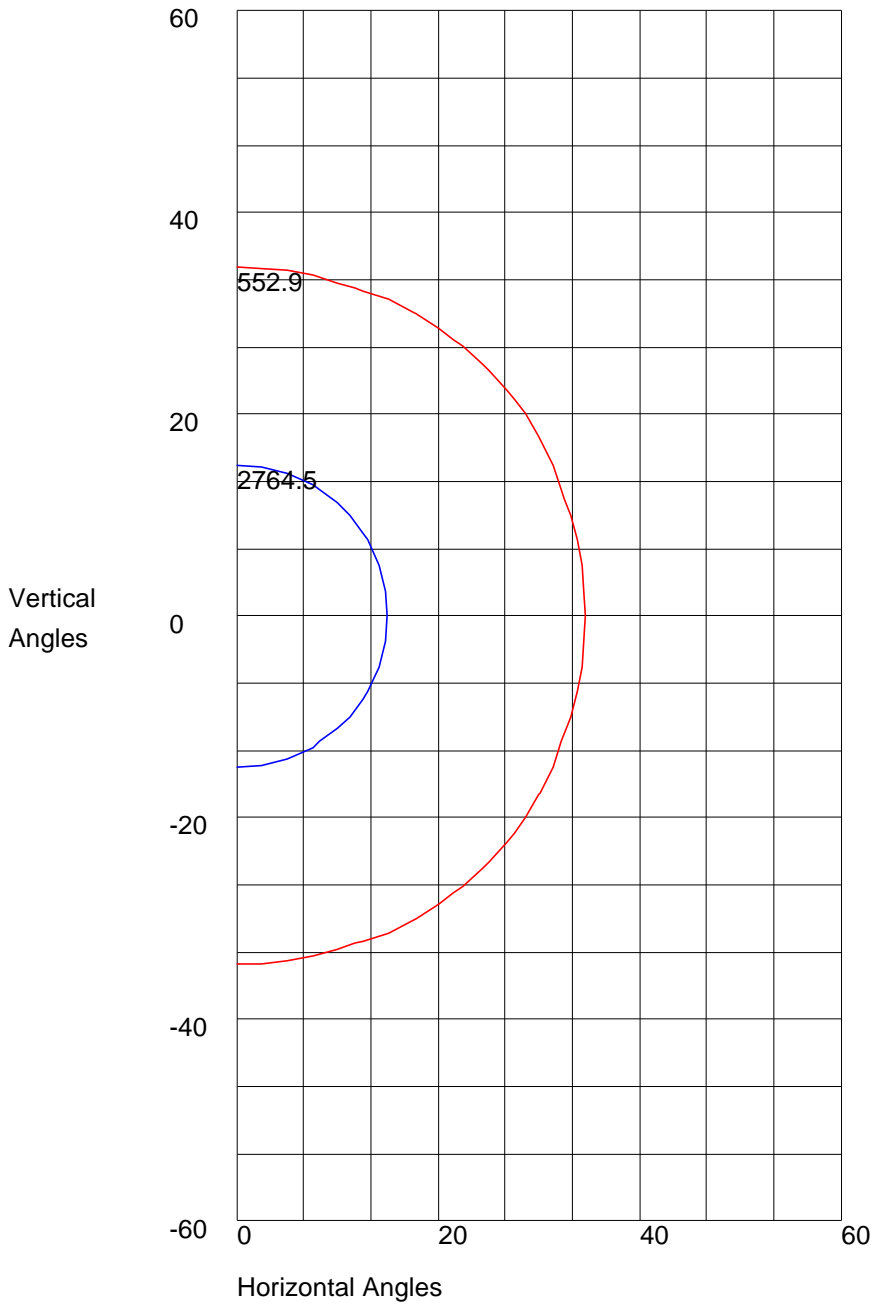
Zone	%
0-20	55.3
0-30	82.2
0-40	96.5
0-60	99.6
0-80	100
0-90	100
10-90	79.1
20-40	41.3
20-50	43.8
40-70	3.3
60-80	0.3
70-80	0.1
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 5529 Located At Horizontal Angle =-1, Vertical Angle =-1
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 5529 Located At Horizontal Angle =-1, Vertical Angle =-1
50% Maximum Candela = 2764.5
10% Maximum Candela = 552.9