

Report No: L091502202

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

Model Number: 1043-X-WF-30-20W-MV-ND

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 1043-X-WF-30-20W-MV-ND. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/8/15

Date of Tests: 9/8/15 - 9/10/15

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	11/10/15
Xitron Power Analysis System	2503AH	MT-EL01	10/20/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/05/16
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

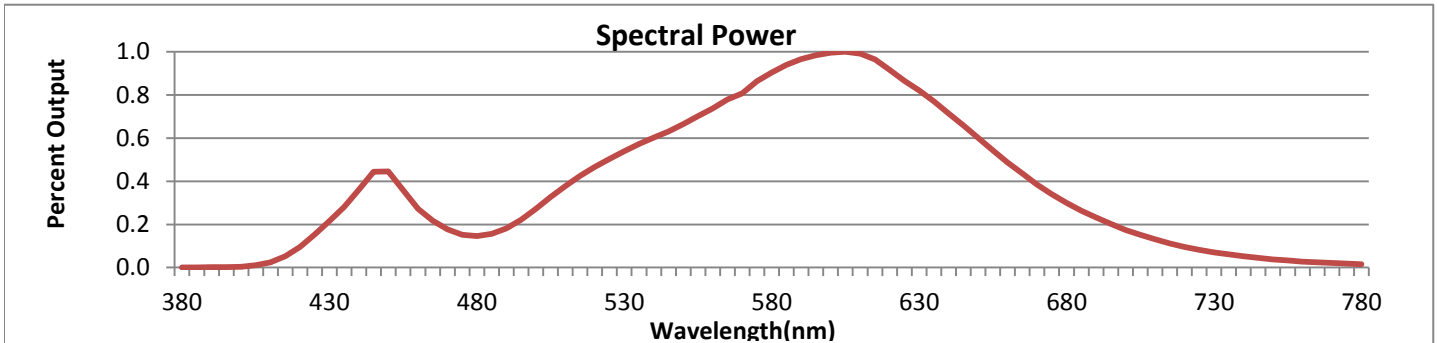
Test Summary

Manufacturer:	Vista Professional Outdoor Li ghting
Model Number:	1043-X-WF-30-20W-MV-ND
Driver Model Number:	ERP ESS030W-1750-14
Total Lumens:	1051.70
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.16
Input Power (W):	18.97
Input Power Factor:	0.99
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	55
Color Rendering Index (CRI):	81
Correlated Color Temperature (K):	3081
Chromaticity Coordinate x:	0.4319
Chromaticity Coordinate y:	0.4034
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	12:45
Total Operating Time (Hours):	13:45
Off State Power(W):	0.00



FIG. 1 LUMINAIRE

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



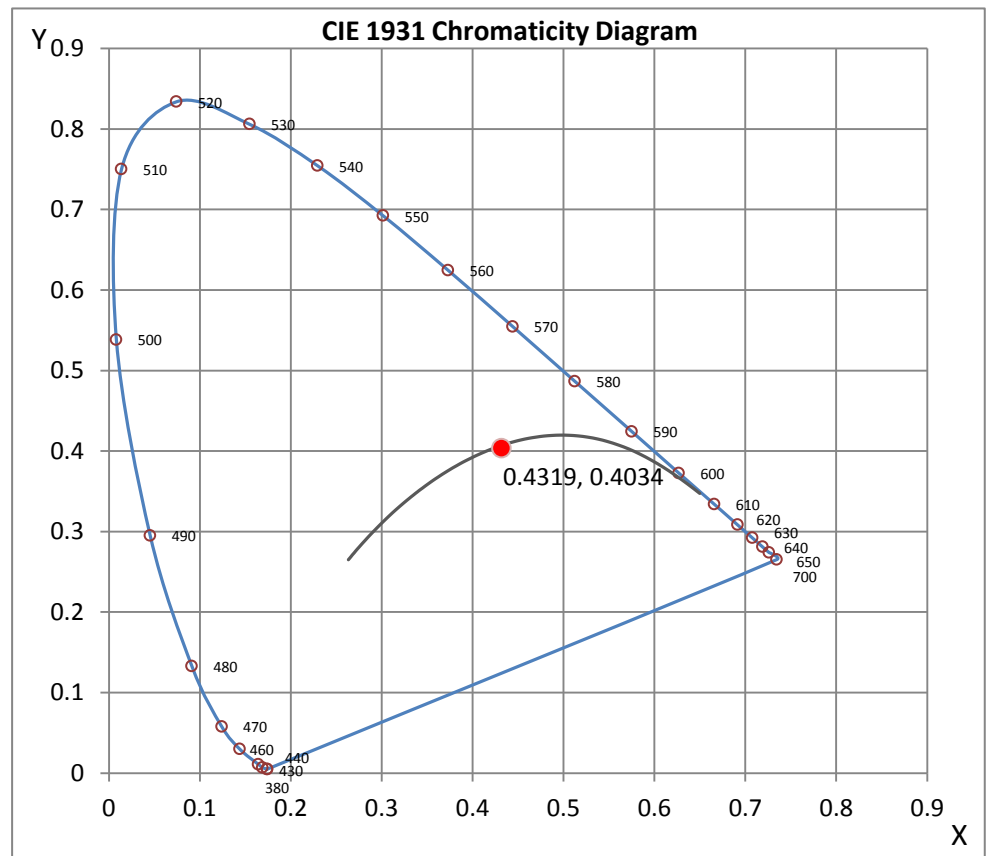
Wavelength	W/m ² nm	440	0.3614	510	0.3777	580	0.9048	650	0.6013	720	0.0956
380	0.0011	450	0.4459	520	0.4664	590	0.9672	660	0.4879	730	0.0710
390	0.0013	460	0.2728	530	0.5392	600	0.9962	670	0.3846	740	0.0521
400	0.0042	470	0.1769	540	0.6026	610	0.9916	680	0.3003	750	0.0382
410	0.0242	480	0.1462	550	0.6647	620	0.9164	690	0.2313	760	0.0277
420	0.0958	490	0.1819	560	0.7374	630	0.8217	700	0.1748	770	0.0207
430	0.2154	500	0.2726	570	0.8073	640	0.7149	710	0.1311	780	0.0153

CRI & CCT

x	0.4319
y	0.4034
u'	0.2476
v'	0.5204
CRI	80.60
CCT	3081
Duv	0.00045

R Values

R1	78.81
R2	86.83
R3	93.74
R4	79.82
R5	77.99
R6	82.32
R7	84.40
R8	60.66
R9	6.55
R10	69.04
R11	77.78
R12	65.01
R13	80.18
R14	95.99



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



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Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L091502202.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L091502202
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 9/10/2015
[MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1043-X-WF-30-20W-MV-ND
[LUMINAIRE] LED ACCENT, WF DISTRIBUTION
[MORE] SIZE: 2.75"DIA. X 8"H.
[BALLASTCAT] ERP ESS030W-1750-14
[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, 18.97W
[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	1600
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	45.2
Vertical Beam Angle (50%)	45.2
Horizontal Field Angle (10%)	77.3
Vertical Field Angle (10%)	77.3
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	583
Beam Efficiency	N.A.
Field Lumens	967
Field Efficiency	N.A.
Spill Lumens	85
Luminaire Lumens	1052
Total Efficiency	N.A.
Total Luminaire Watts	18.97
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L091502202.IES

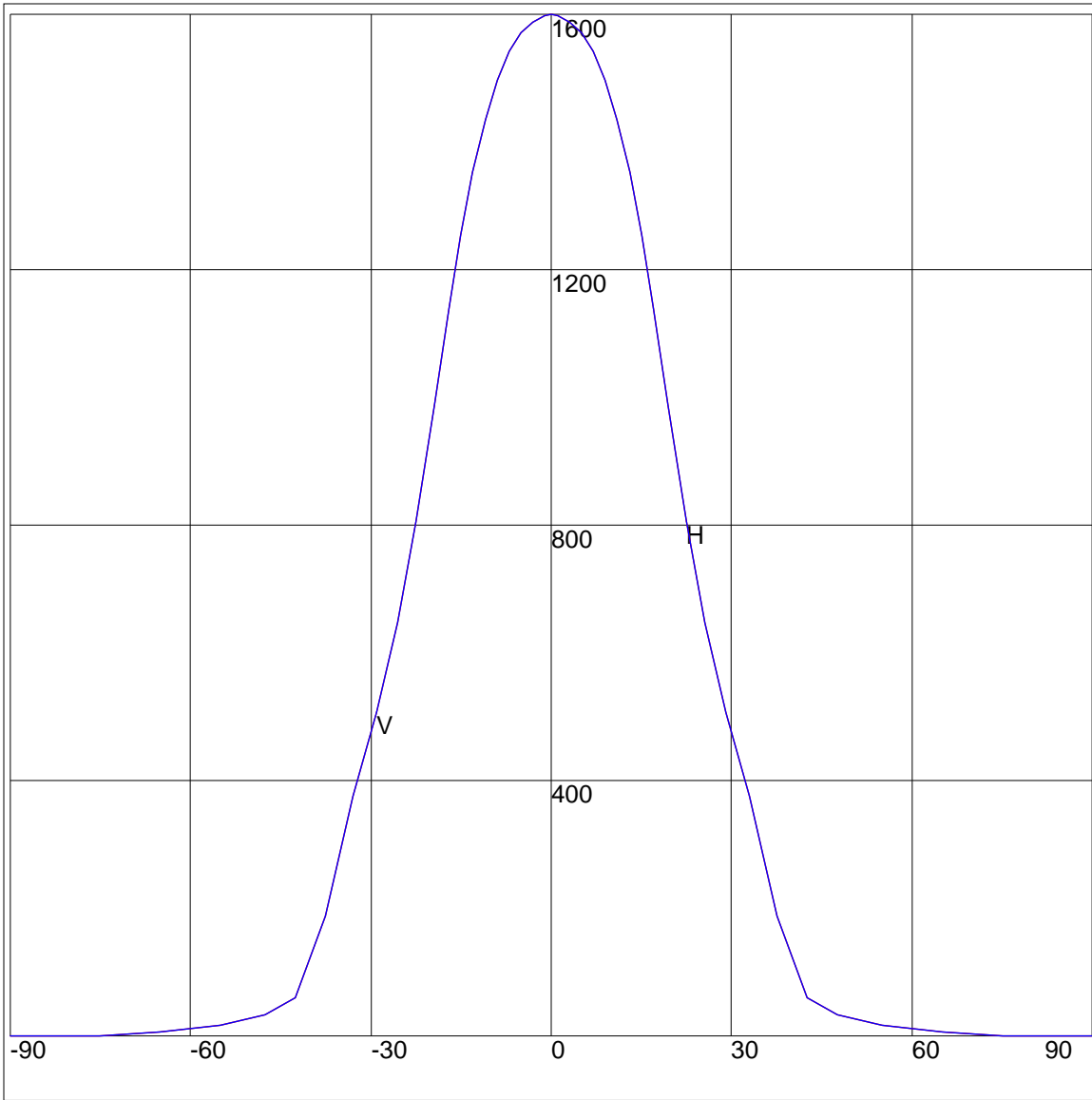
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	1	75	1
65	7	65	7
55	18	55	18
47.5	33	47.5	33
42.5	61	42.5	61
37.5	189	37.5	189
33	375	33	375
29	507	29	507
25.5	647	25.5	647
22.5	806	22.5	806
19.5	988	19.5	988
17	1139	17	1139
15	1253	15	1253
13	1352	13	1352
11	1435	11	1435
9	1498	9	1498
7	1543	7	1543
5	1571	5	1571
3	1588	3	1588
1	1597	1	1597
0	1600	0	1600
-1	1597	-1	1597
-3	1588	-3	1588
-5	1571	-5	1571
-7	1543	-7	1543
-9	1498	-9	1498
-11	1435	-11	1435
-13	1352	-13	1352
-15	1253	-15	1253
-17	1139	-17	1139
-19.5	988	-19.5	988
-22.5	806	-22.5	806
-25.5	647	-25.5	647
-29	507	-29	507
-33	375	-33	375
-37.5	189	-37.5	189
-42.5	61	-42.5	61
-47.5	33	-47.5	33
-55	18	-55	18
-65	7	-65	7
-75	1	-75	1
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

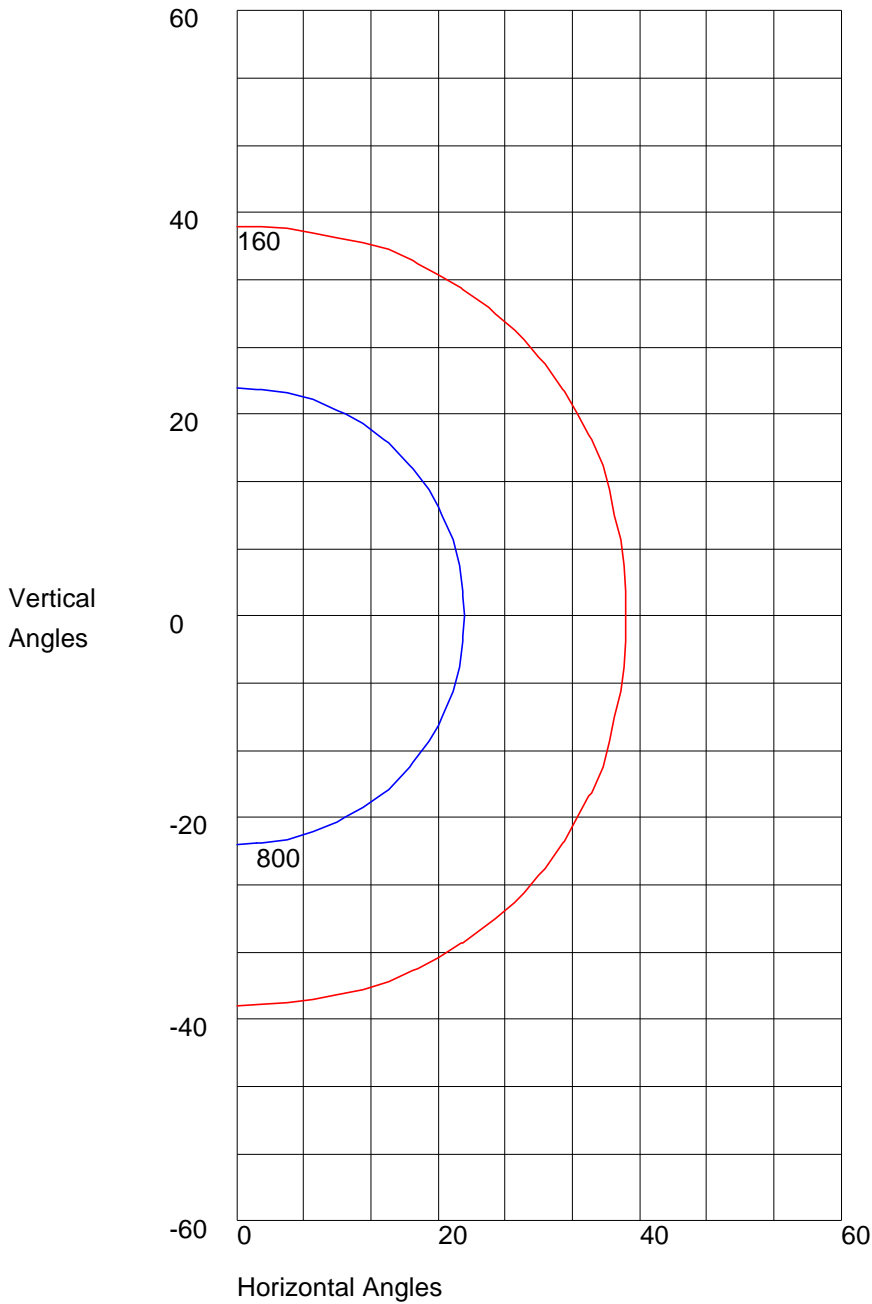
Zone	%
0-20	44.9
0-30	73.8
0-40	91
0-60	98.4
0-80	99.9
0-90	100
10-90	88.6
20-40	46.1
20-50	52
40-70	8.6
60-80	1.5
70-80	0.4
80-90	0.1
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY



Maximum Candela = 1600 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1600 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 800
10% Maximum Candela = 160