



PROFESSIONAL
OUTDOOR LIGHTING



8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Report No: L081407405

Date: 9/9/2014



NVLAP LAB CODE 200927-0

Report No: L081407405

Report Prepared For: U.S.T.E. dba Vista Professional Outdoor Lighting
1625 Surveyor Ave. Simi Valley CA 93063

Model Number: 1059-XX-WF-D-30

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 1059-XX-WF-D-30 . Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/8/14

Date of Tests: 9/9/14 - 9/9/14

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	01/04/15
Xitron Power Analysis System	2503AH	MT-EL01	01/09/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/15
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.

Test Summary

Manufacturer:	U.S.T.E. dba Vista Professional Outdoor Lighting	
Model Number:	1059-XX-WF-D-30	
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-092-C1050-D	
Total Lumens:	3198.96	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.40	
Input Power (W):	47.88	
Input Power Factor:	0.99	
Current ATHD @ 120V(%):	12%	
Current ATHD @ 277V(%):	28% (0.2A, 48.07W, 0.87PF)	
Efficacy:	67	
Color Rendering Index (CRI):	83	
Correlated Color Temperature (K):	3168	
Chromaticity Coordinate x:	0.4271	
Chromaticity Coordinate y:	0.4035	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	0:30	
Total Operating Time (Hours):	1:10	
Off State Power(W):	0.00	

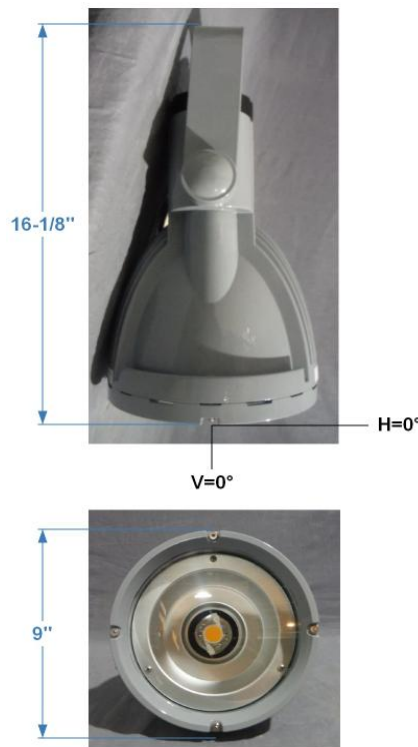
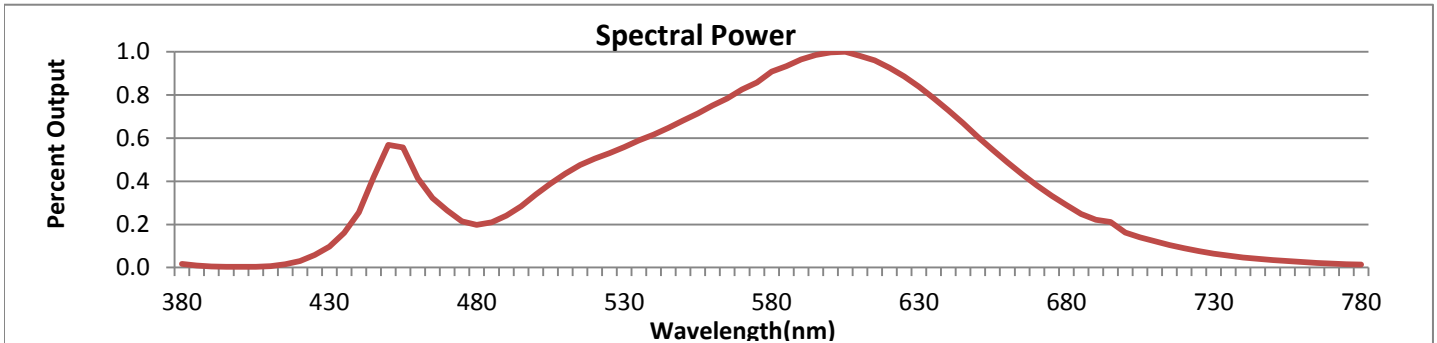


FIG. 1 LUMINAIRE

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



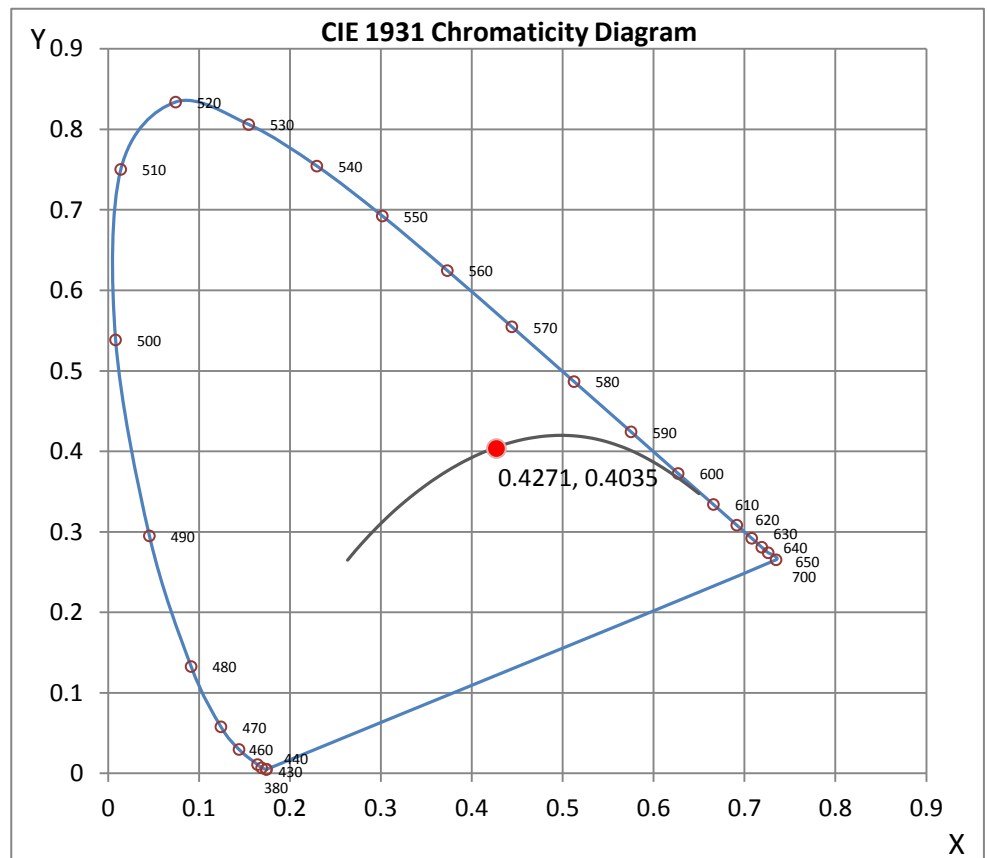
Wavelength	W/m ² nm	440	0.0535	510	0.0911	580	0.1901	650	0.1269	720	0.0186
380	0.0036	450	0.1192	520	0.1058	590	0.2020	660	0.1024	730	0.0135
390	0.0011	460	0.0868	530	0.1169	600	0.2087	670	0.0798	740	0.0098
400	0.0006	470	0.0555	540	0.1289	610	0.2053	680	0.0608	750	0.0072
410	0.0014	480	0.0415	550	0.1428	620	0.1941	690	0.0464	760	0.0053
420	0.0063	490	0.0503	560	0.1574	630	0.1757	700	0.0338	770	0.0039
430	0.0203	500	0.0708	570	0.1729	640	0.1526	710	0.0254	780	0.0028

CRI & CCT

x	0.4271
y	0.4035
u'	0.2445
v'	0.5197
CRI	82.60
CCT	3168
Duv	0.00124

R Values

R1	80.70
R2	89.51
R3	96.49
R4	80.80
R5	80.22
R6	86.08
R7	85.01
R8	62.04
R9	10.79
R10	75.38
R11	79.20
R12	65.84
R13	83.20
R14	97.96



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



8165 E Kaiser Blvd. Anaheim, CA 92808
 p. 714.282.2270
 f. 714.676.5558

Report No: L081407405

Date: 9/9/2014



NVLAP LAB CODE 200927-0

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 : Wilson Khounlavong

Test Report Released by:

Test Report Reviewed by:

Jeff Ahn
 Engineering Manager

Steve Kang
 Quality Assurance

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

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



8165 E. Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L081407405.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407405
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/9/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-WF-D-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-092-C1050-D
[BALLAST] INPUT: 90-305VAC, 1.3A, 50/60HZ. OUTPUT: 31-92VDC, 1.05A
[LAMPPOSITION] 0,0
[LAMP CAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 47.88W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

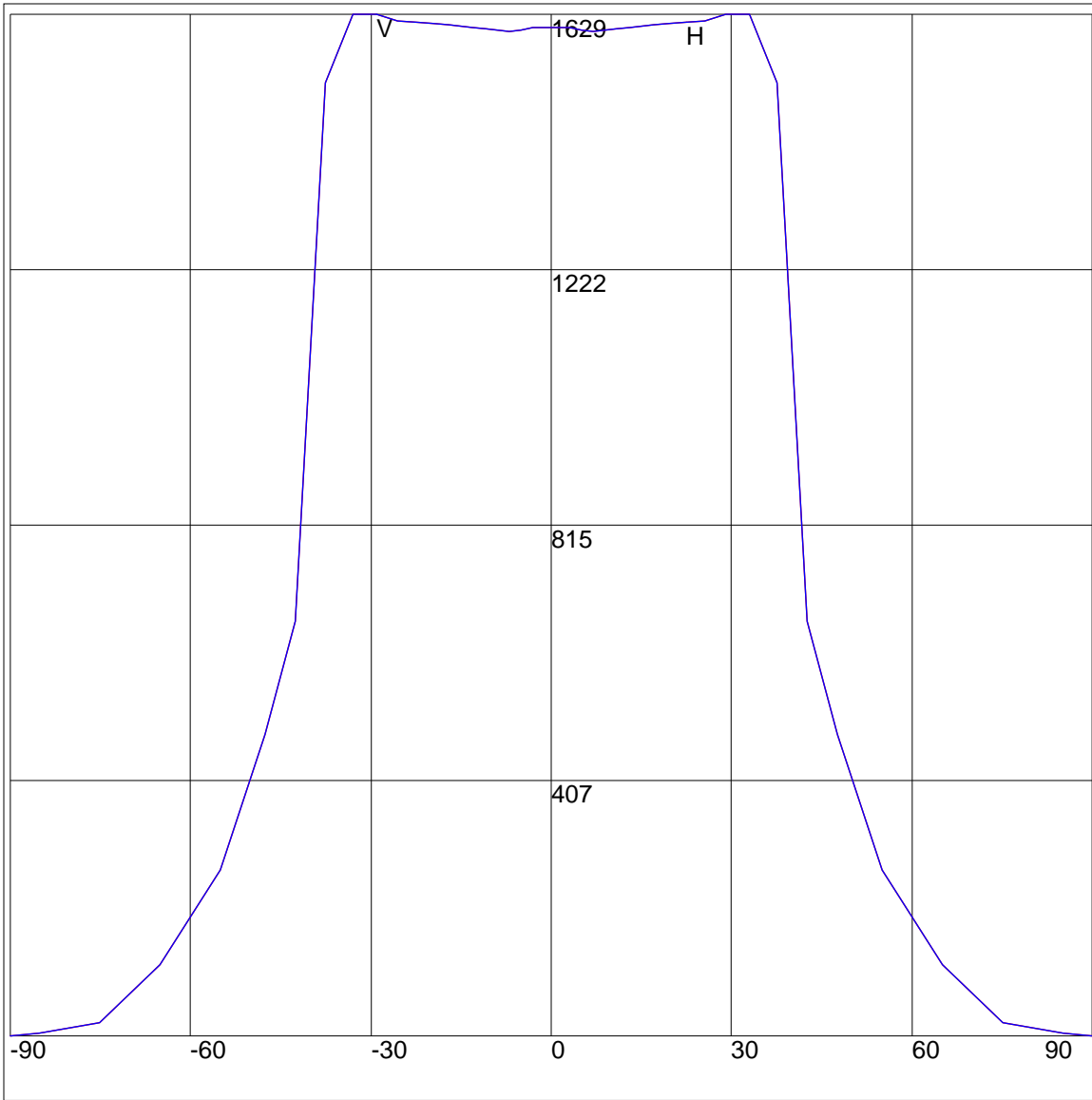
NEMA Type	6 H x 6 V
Maximum Candela	1629
Maximum Candela Angle	-33H -1V
Horizontal Beam Angle (50%)	83.2
Vertical Beam Angle (50%)	54.2
Horizontal Field Angle (10%)	123.6
Vertical Field Angle (10%)	111.7
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	2456
Beam Efficiency	N.A.
Field Lumens	3074
Field Efficiency	N.A.
Spill Lumens	125
Luminaire Lumens	3199
Total Efficiency	N.A.
Total Luminaire Watts	47.88
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407405.IES

AXIAL CANDELA

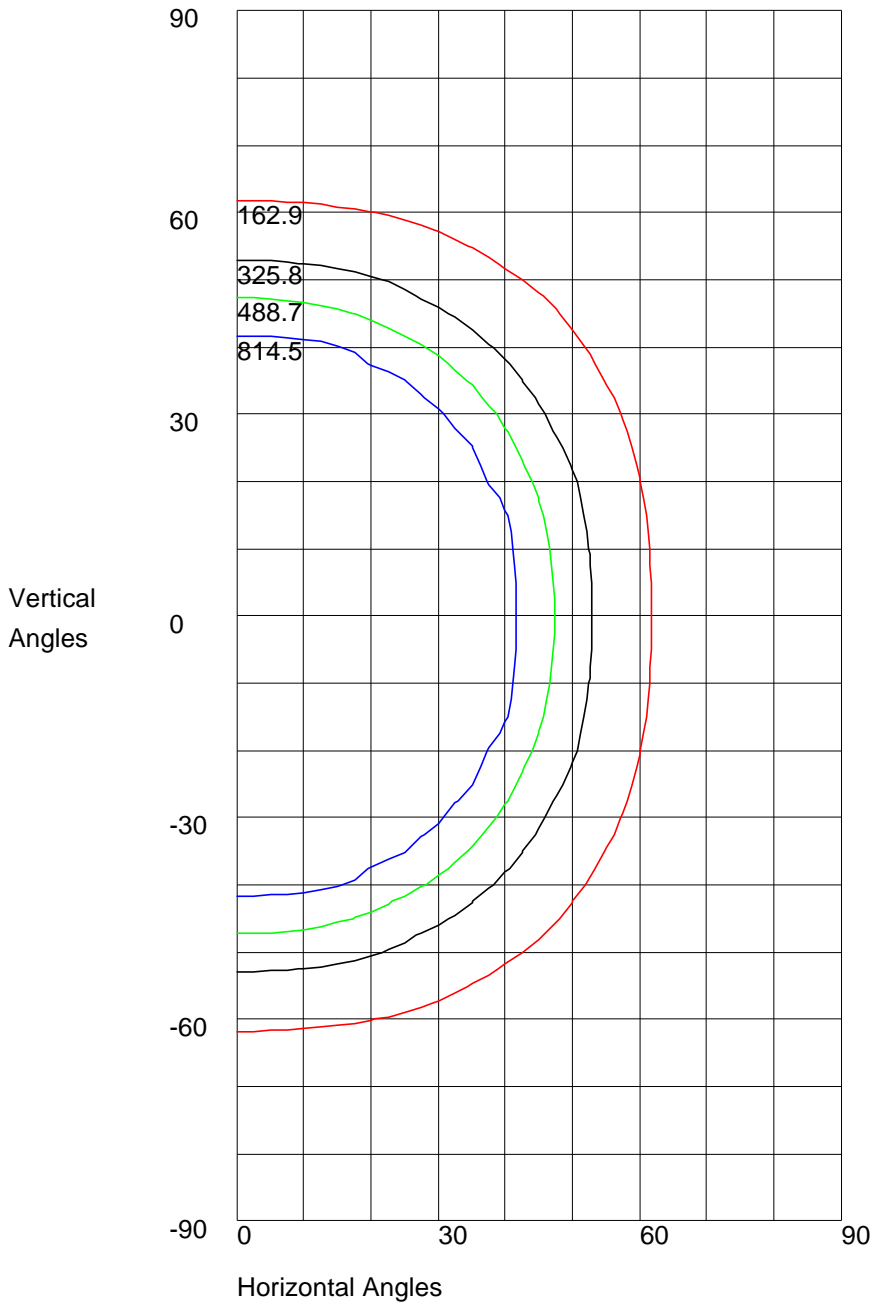
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	6	85	6
75	21	75	21
65	114	65	114
55	266	55	266
47.5	481	47.5	481
42.5	662	42.5	662
37.5	1519	37.5	1519
33	1629	33	1629
29	1629	29	1629
25.5	1618	25.5	1618
22.5	1617	22.5	1617
19.5	1615	19.5	1615
17	1613	17	1613
15	1610	15	1610
13	1607	13	1607
11	1606	11	1606
9	1604	9	1604
7	1602	7	1602
5	1604	5	1604
3	1607	3	1607
1	1608	1	1608
0	1609	0	1609
-1	1608	-1	1608
-3	1607	-3	1607
-5	1604	-5	1604
-7	1602	-7	1602
-9	1604	-9	1604
-11	1606	-11	1606
-13	1607	-13	1607
-15	1610	-15	1610
-17	1613	-17	1613
-19.5	1615	-19.5	1615
-22.5	1617	-22.5	1617
-25.5	1618	-25.5	1618
-29	1629	-29	1629
-33	1629	-33	1629
-37.5	1519	-37.5	1519
-42.5	662	-42.5	662
-47.5	481	-47.5	481
-55	266	-55	266
-65	114	-65	114
-75	21	-75	21
-85	6	-85	6
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 1629 Located At Horizontal Angle =-33, Vertical Angle =-1
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1629 Located At Horizontal Angle =-33, Vertical Angle =-1
50% Maximum Candela = 814.5
10% Maximum Candela = 162.9