



PROFESSIONAL
OUTDOOR LIGHTING



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Report No: L081407411

Date: 9/9/2014



NVLAP LAB CODE 200927-0

Report No: L081407411

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

Model Number: 1059-XX-WF-F-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-F-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-F-30	
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D	
Total Lumens:	3932.52	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.50	
Input Power (W):	59.38	
Input Power Factor:	0.99	
Current ATHD @ 120V(%):	9%	
Current ATHD @ 277V(%):	24% (0.24A, 59.35W, 0.91PF)	
Efficacy:	66	
Color Rendering Index (CRI):	82	
Correlated Color Temperature (K):	3186	
Chromaticity Coordinate x:	0.4257	
Chromaticity Coordinate y:	0.4024	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	0:45	
Total Operating Time (Hours):	1:25	
Off State Power(W):	0.00	

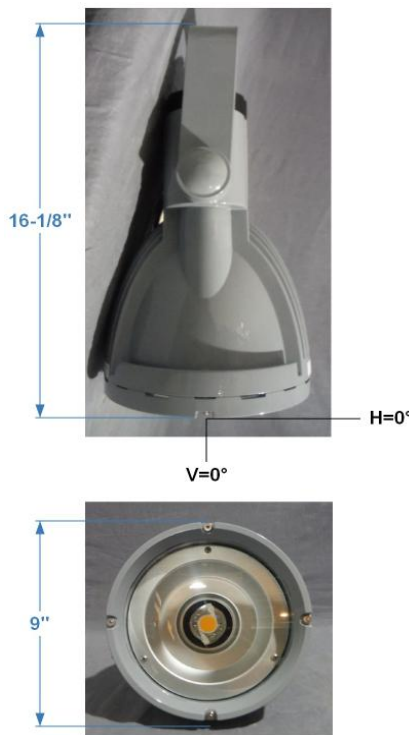
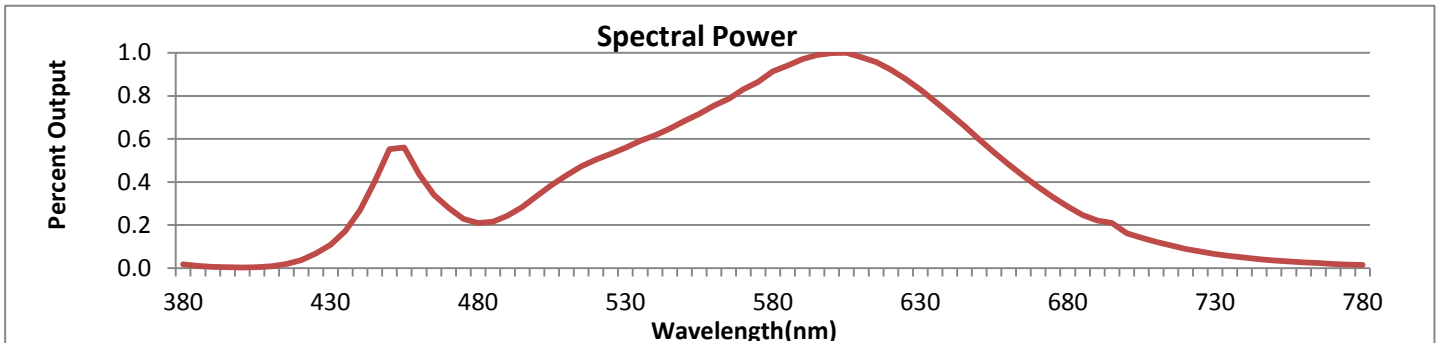


FIG. 1 LUMINAIRE

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



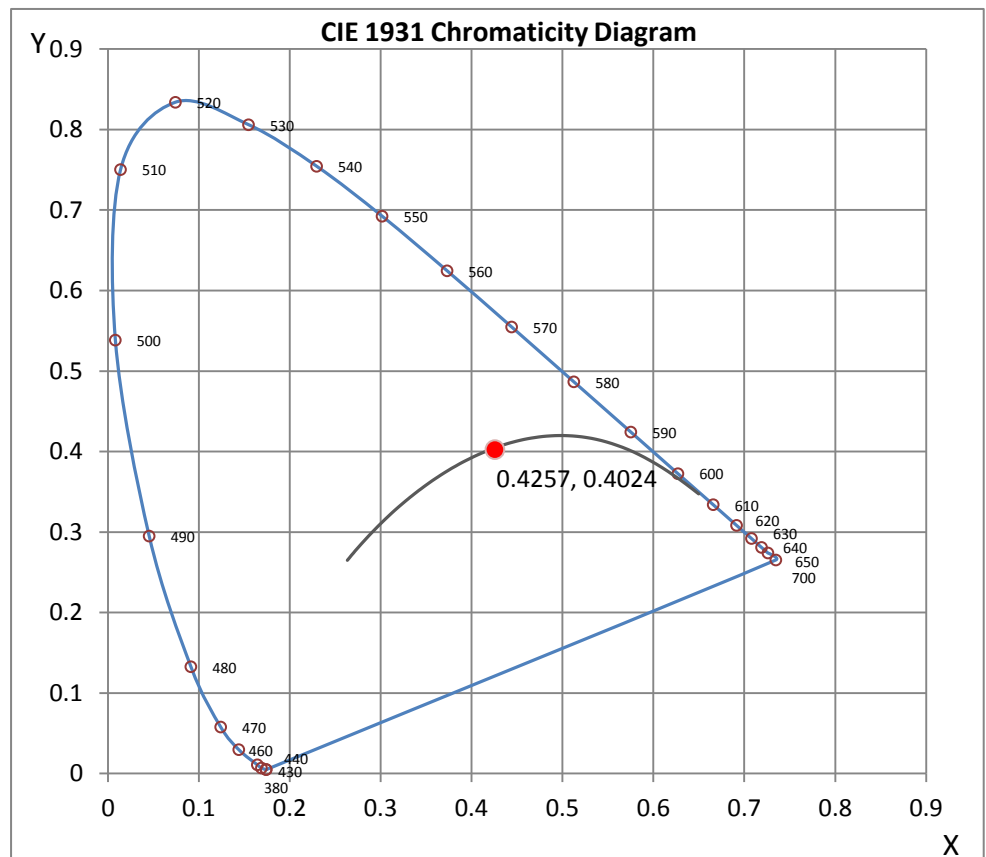
Wavelength	W/m ² nm	440	0.0695	510	0.1117	580	0.2367	650	0.1545	720	0.0231
380	0.0046	450	0.1430	520	0.1302	590	0.2514	660	0.1248	730	0.0169
390	0.0014	460	0.1127	530	0.1445	600	0.2587	670	0.0975	740	0.0125
400	0.0009	470	0.0723	540	0.1598	610	0.2534	680	0.0742	750	0.0092
410	0.0023	480	0.0541	550	0.1769	620	0.2384	690	0.0571	760	0.0068
420	0.0095	490	0.0632	560	0.1953	630	0.2148	700	0.0418	770	0.0049
430	0.0282	500	0.0870	570	0.2150	640	0.1860	710	0.0315	780	0.0037

CRI & CCT

x	0.4257
y	0.4024
u'	0.2440
v'	0.5190
CRI	82.30
CCT	3186
Duv	0.00102

R Values

R1	80.29
R2	89.46
R3	96.47
R4	80.19
R5	79.83
R6	85.97
R7	84.61
R8	61.26
R9	8.98
R10	75.20
R11	78.37
R12	66.01
R13	82.89
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 : Wilson Khounlavong

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 : L081407411.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407411
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/9/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-WF-F-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D
[BALLAST] INPUT: 90-305VAC, 1.3A, 50/60HZ. OUTPUT: 23-69VDC, 1.4A
[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, 59.38W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

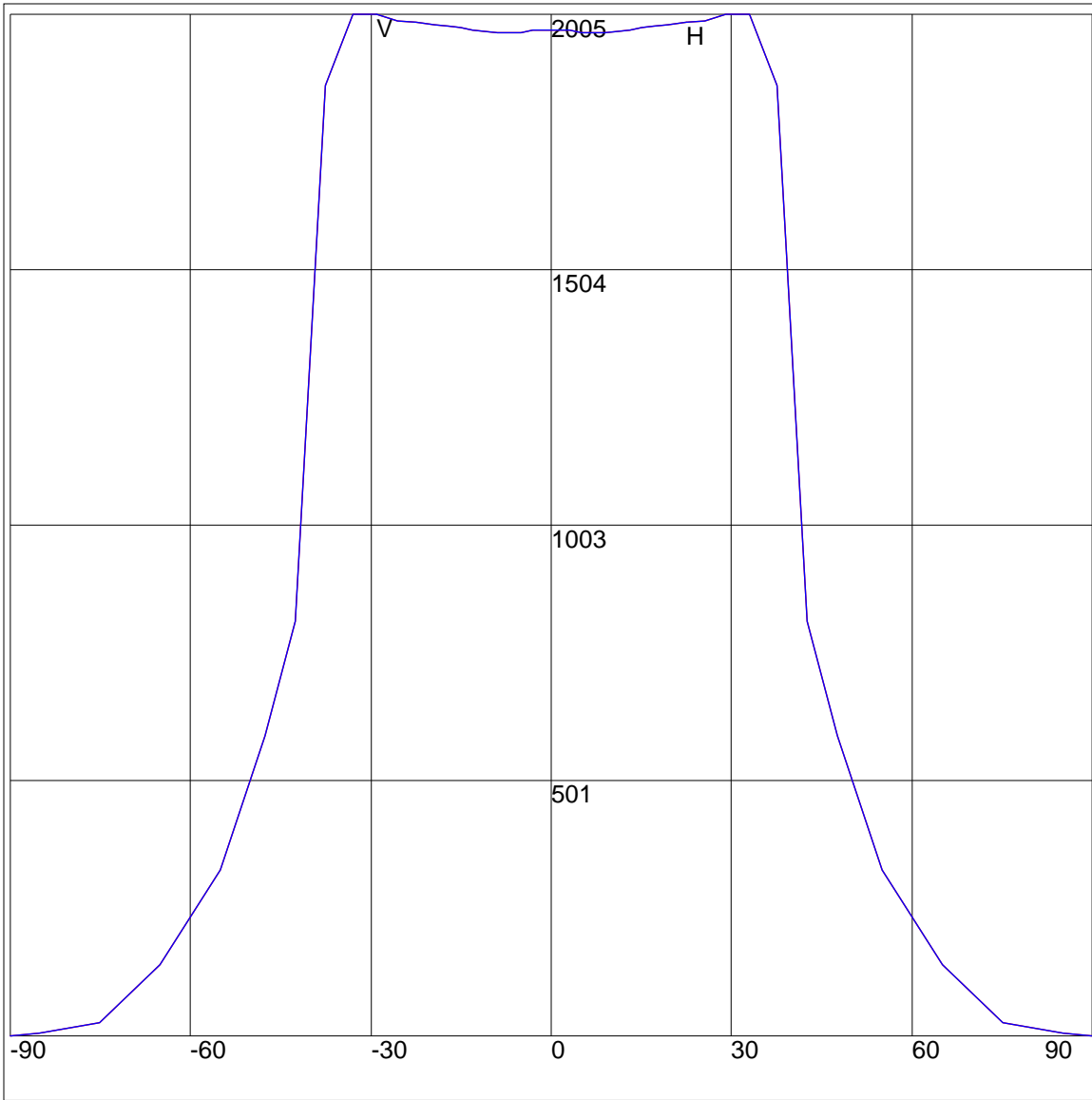
NEMA Type	6 H x 6 V
Maximum Candela	2005
Maximum Candela Angle	-29H -11V
Horizontal Beam Angle (50%)	82.1
Vertical Beam Angle (50%)	62.9
Horizontal Field Angle (10%)	122.6
Vertical Field Angle (10%)	115.3
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	3019
Beam Efficiency	N.A.
Field Lumens	3779
Field Efficiency	N.A.
Spill Lumens	154
Luminaire Lumens	3933
Total Efficiency	N.A.
Total Luminaire Watts	59.38
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407411.IES

AXIAL CANDELA

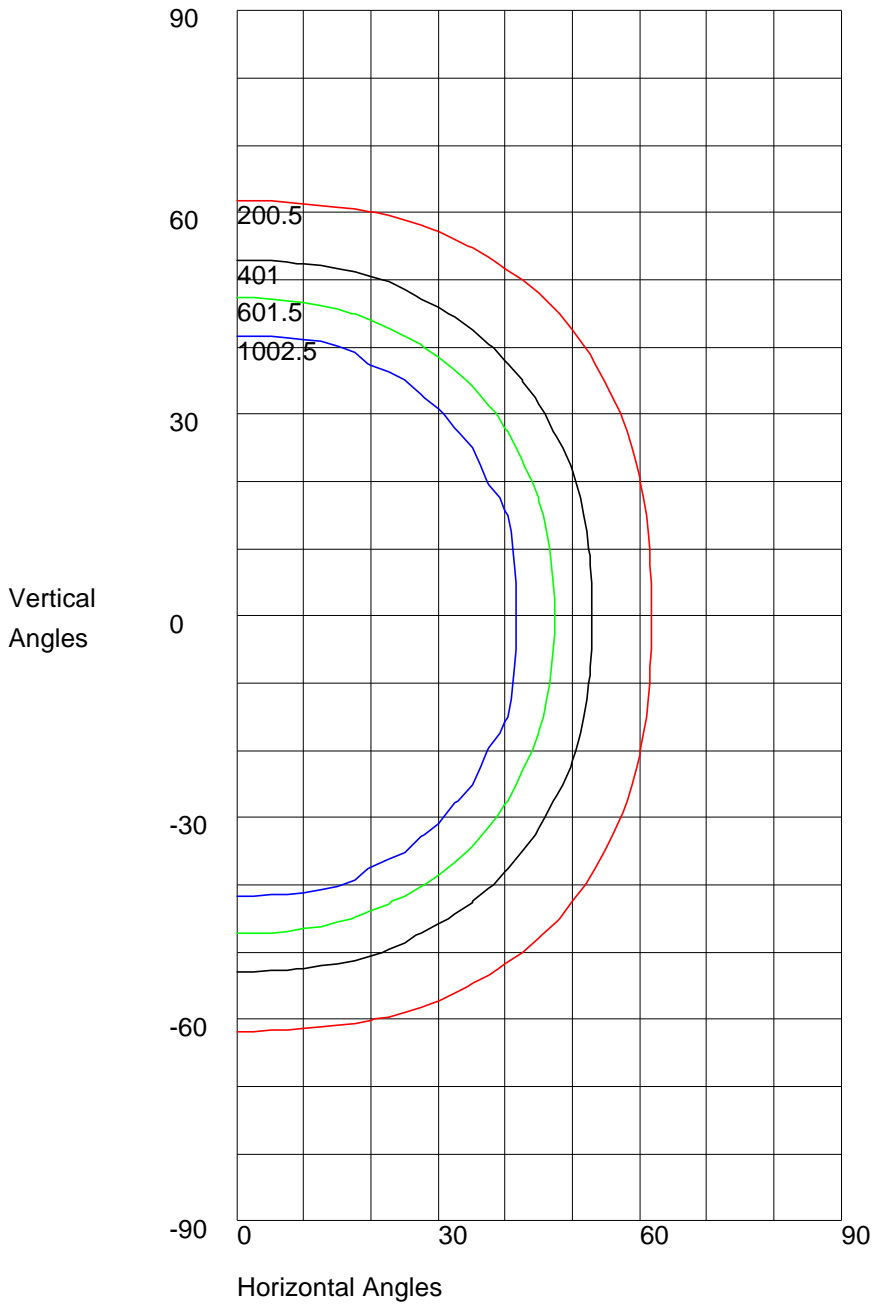
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	7	85	7
75	26	75	26
65	140	65	140
55	327	55	327
47.5	591	47.5	591
42.5	814	42.5	814
37.5	1866	37.5	1866
33	2004	33	2004
29	2005	29	2005
25.5	1991	25.5	1991
22.5	1989	22.5	1989
19.5	1985	19.5	1985
17	1982	17	1982
15	1978	15	1978
13	1975	13	1975
11	1972	11	1972
9	1970	9	1970
7	1968	7	1968
5	1970	5	1970
3	1973	3	1973
1	1974	1	1974
0	1975	0	1975
-1	1974	-1	1974
-3	1973	-3	1973
-5	1970	-5	1970
-7	1968	-7	1968
-9	1970	-9	1970
-11	1972	-11	1972
-13	1975	-13	1975
-15	1978	-15	1978
-17	1982	-17	1982
-19.5	1985	-19.5	1985
-22.5	1989	-22.5	1989
-25.5	1991	-25.5	1991
-29	2005	-29	2005
-33	2004	-33	2004
-37.5	1866	-37.5	1866
-42.5	814	-42.5	814
-47.5	591	-47.5	591
-55	327	-55	327
-65	140	-65	140
-75	26	-75	26
-85	7	-85	7
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 2005 Located At Horizontal Angle = -29, Vertical Angle = -11
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2005 Located At Horizontal Angle =-29, Vertical Angle =-11
50% Maximum Candela = 1002.5
10% Maximum Candela = 200.5