



**PROFESSIONAL
OUTDOOR LIGHTING**



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Report No: L081407414
Date: 9/10/2014



NVLAP LAB CODE 200927-0

Report No: L081407414

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

Model Number: 1059-XX-WF-G-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-G-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-G-30	
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D	
Total Lumens:	4565.98	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.62	
Input Power (W):	73.82	
Input Power Factor:	1.00	
Current ATHD @ 120V(%):	6%	
Current ATHD @ 277V(%):	13% (0.29A, 73.26W, 0.93PF)	
Efficacy:	62	
Color Rendering Index (CRI):	82	
Correlated Color Temperature (K):	3202	
Chromaticity Coordinate x:	0.4242	
Chromaticity Coordinate y:	0.4010	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	0:35	
Total Operating Time (Hours):	1:15	
Off State Power(W):	0.00	

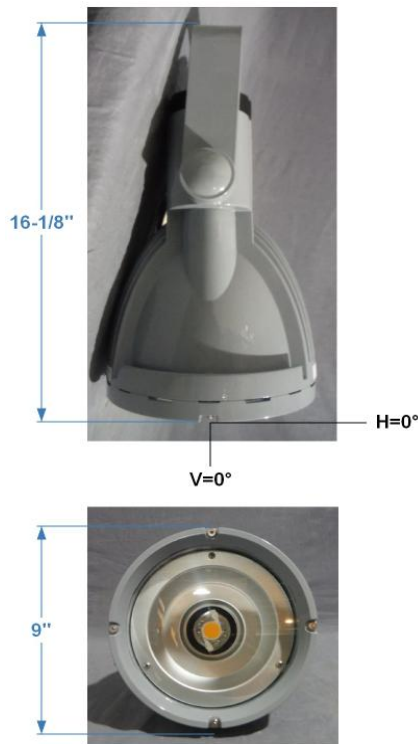
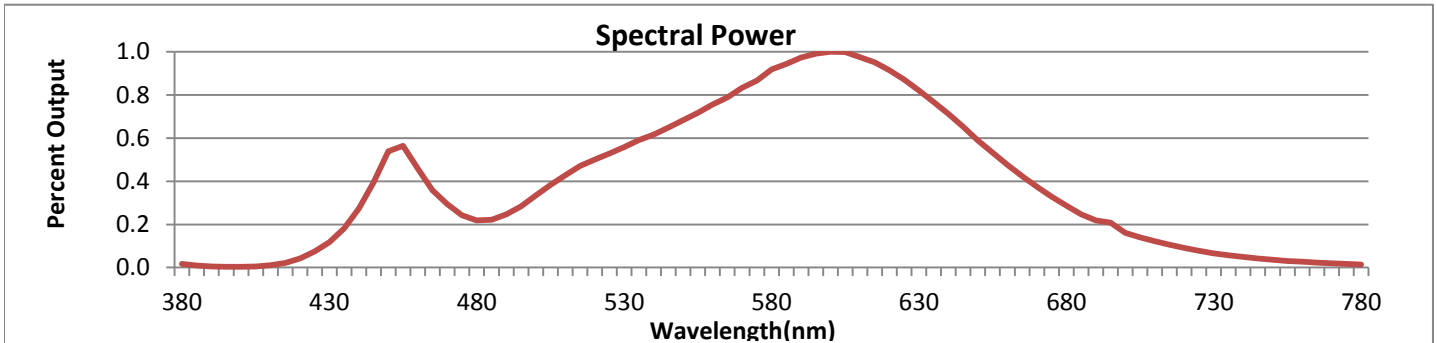


FIG. 1 LUMINAIRE

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



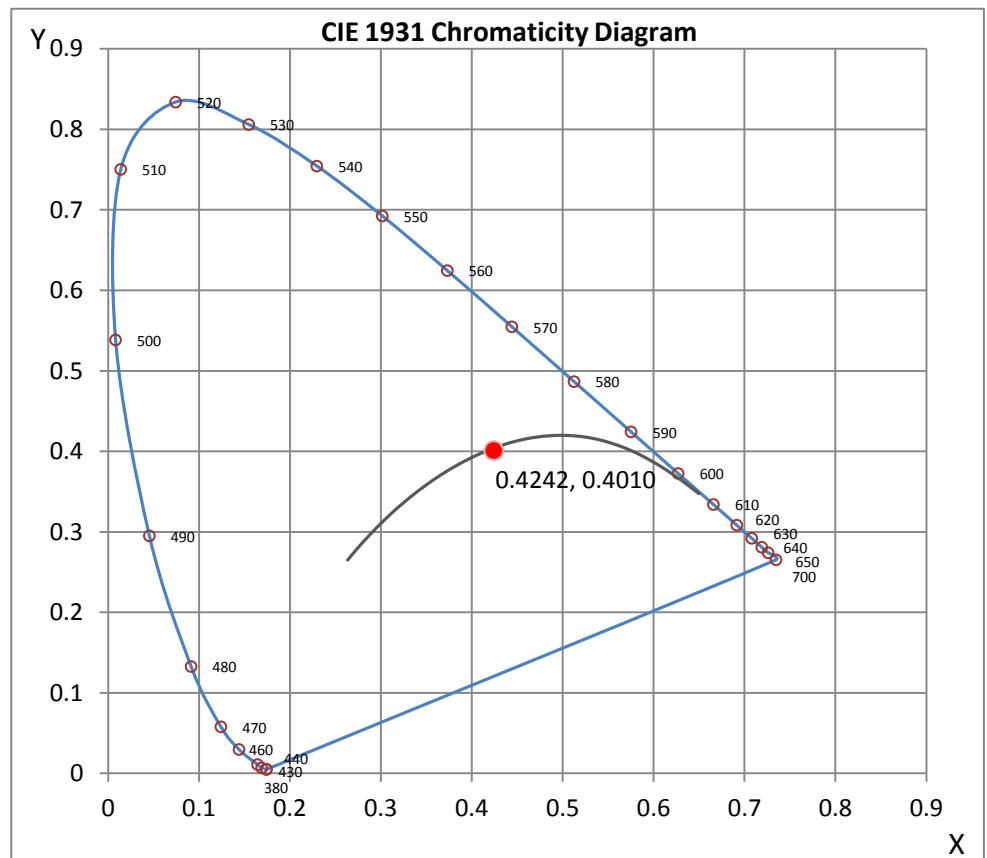
Wavelength	W/m ² nm	440	0.0843	510	0.1322	580	0.2837	650	0.1818	720	0.0279
380	0.0054	450	0.1663	520	0.1547	590	0.3005	660	0.1473	730	0.0203
390	0.0016	460	0.1415	530	0.1723	600	0.3086	670	0.1153	740	0.0151
400	0.0012	470	0.0907	540	0.1903	610	0.3012	680	0.0885	750	0.0112
410	0.0032	480	0.0674	550	0.2108	620	0.2821	690	0.0675	760	0.0083
420	0.0129	490	0.0761	560	0.2332	630	0.2533	700	0.0497	770	0.0061
430	0.0363	500	0.1030	570	0.2569	640	0.2198	710	0.0377	780	0.0045

CRI & CCT

x	0.4242
y	0.4010
u'	0.2437
v'	0.5183
CRI	82.10
CCT	3202
Duv	0.00070

R Values

R1	80.07
R2	89.53
R3	96.45
R4	79.73
R5	79.64
R6	86.01
R7	84.27
R8	60.75
R9	7.92
R10	75.30
R11	77.75
R12	66.32
R13	82.77
R14	98.07



*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 : L081407414.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L081407414
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 9/10/2014
 [MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
 [LUMCAT] 1059-XX-WF-G-30
 [LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
 [MORE] CLEAR LENS
 [BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D
 [BALLAST] INPUT: 100-277VAC, 1.3A, 50/60HZ. OUTPUT: 18-54VDC, 1.75A
 [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, 73.82W
 [TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

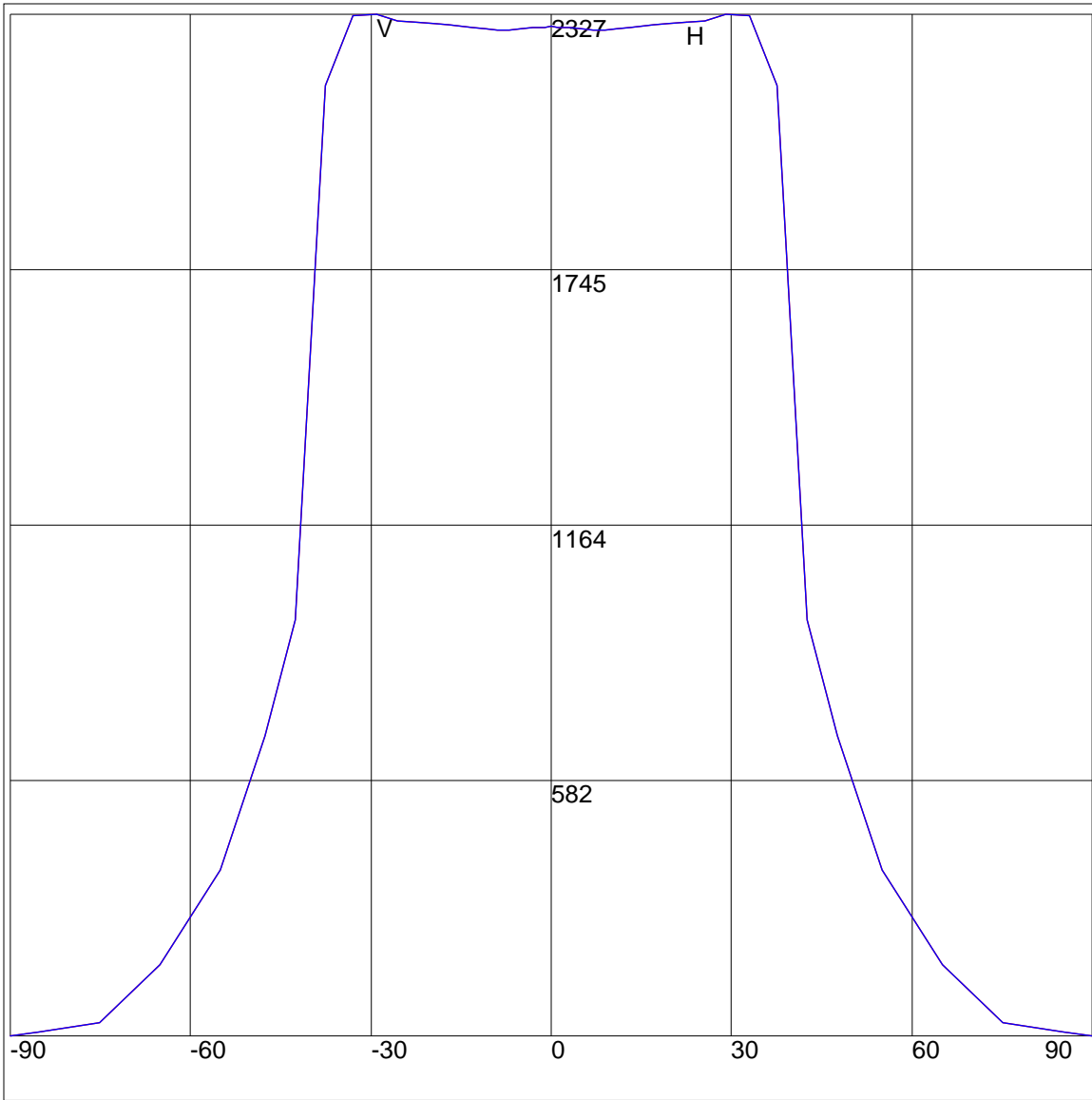
NEMA Type	6 H x 6 V
Maximum Candela	2327
Maximum Candela Angle	-29H -7V
Horizontal Beam Angle (50%)	82.8
Vertical Beam Angle (50%)	62.9
Horizontal Field Angle (10%)	123.1
Vertical Field Angle (10%)	115.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	3506
Beam Efficiency	N.A.
Field Lumens	4387
Field Efficiency	N.A.
Spill Lumens	179
Luminaire Lumens	4566
Total Efficiency	N.A.
Total Luminaire Watts	73.82
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407414.IES

AXIAL CANDELA

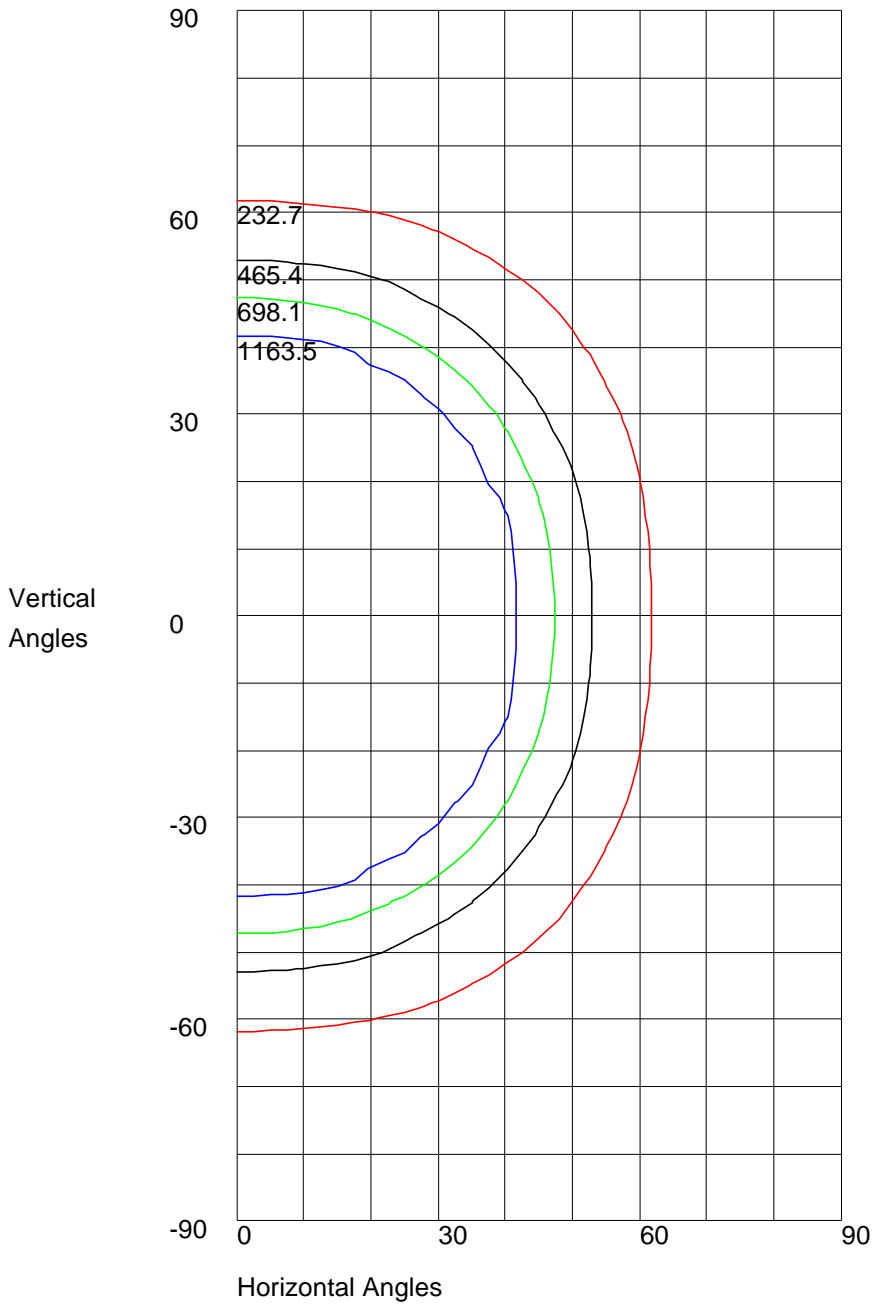
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	9	85	9
75	30	75	30
65	162	65	162
55	379	55	379
47.5	685	47.5	685
42.5	947	42.5	947
37.5	2166	37.5	2166
33	2325	33	2325
29	2327	29	2327
25.5	2311	25.5	2311
22.5	2309	22.5	2309
19.5	2307	19.5	2307
17	2303	17	2303
15	2300	15	2300
13	2296	13	2296
11	2294	11	2294
9	2292	9	2292
7	2290	7	2290
5	2293	5	2293
3	2297	3	2297
1	2298	1	2298
0	2300	0	2300
-1	2298	-1	2298
-3	2297	-3	2297
-5	2293	-5	2293
-7	2290	-7	2290
-9	2292	-9	2292
-11	2294	-11	2294
-13	2296	-13	2296
-15	2300	-15	2300
-17	2303	-17	2303
-19.5	2307	-19.5	2307
-22.5	2309	-22.5	2309
-25.5	2311	-25.5	2311
-29	2327	-29	2327
-33	2325	-33	2325
-37.5	2166	-37.5	2166
-42.5	947	-42.5	947
-47.5	685	-47.5	685
-55	379	-55	379
-65	162	-65	162
-75	30	-75	30
-85	9	-85	9
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 2327 Located At Horizontal Angle =-29, Vertical Angle =-7
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2327 Located At Horizontal Angle =-29, Vertical Angle =-7
50% Maximum Candela = 1163.5
10% Maximum Candela = 232.7