



**PROFESSIONAL  
OUTDOOR LIGHTING**



8165 E Kaiser Blvd. Anaheim, CA 92808  
p. 714.282.2270  
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Report No: L081407408

Date: 9/9/2014



NVLAP LAB CODE 200927-0

**Report No: L081407408**

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

**Model Number: 1059-XX-WF-E-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-E-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**

<b>Manufacturer:</b>	U.S.T.E. dba Vista Professional Outdoor Lighting	
<b>Model Number:</b>	1059-XX-WF-E-30	
<b>Driver Model Number:</b>	THOMAS RESEARCH PRODUCTS LED50W-42-C1190	
<b>Total Lumens:</b>	3475.92	
<b>Input Voltage (VAC/60Hz):</b>	120.00	
<b>Input Current (Amp):</b>	0.41	
<b>Input Power (W):</b>	49.26	
<b>Input Power Factor:</b>	1.00	
<b>Current ATHD @ 120V(%):</b>	4%	
<b>Current ATHD @ 277V(%):</b>	13% (0.19A, 48.71W, 0.9PF)	
<b>Efficacy:</b>	71	
<b>Color Rendering Index (CRI):</b>	83	
<b>Correlated Color Temperature (K):</b>	3162	
<b>Chromaticity Coordinate x:</b>	0.4273	
<b>Chromaticity Coordinate y:</b>	0.4033	
<b>Ambient Temperature (°F):</b>	77.0	
<b>Stabilization Time (Hours):</b>	0:30	
<b>Total Operating Time (Hours):</b>	1:10	
<b>Off State Power(W):</b>	0.00	

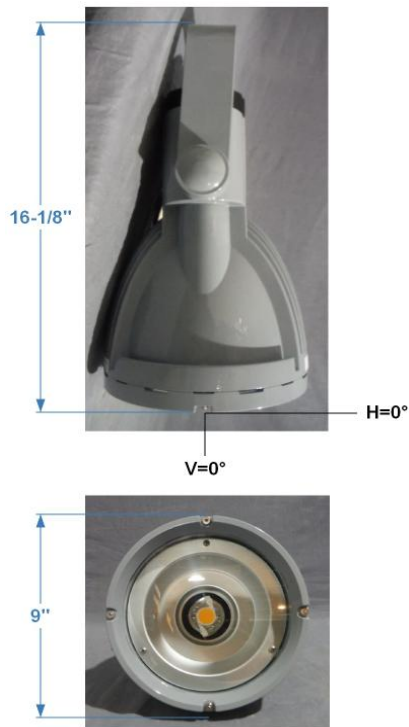
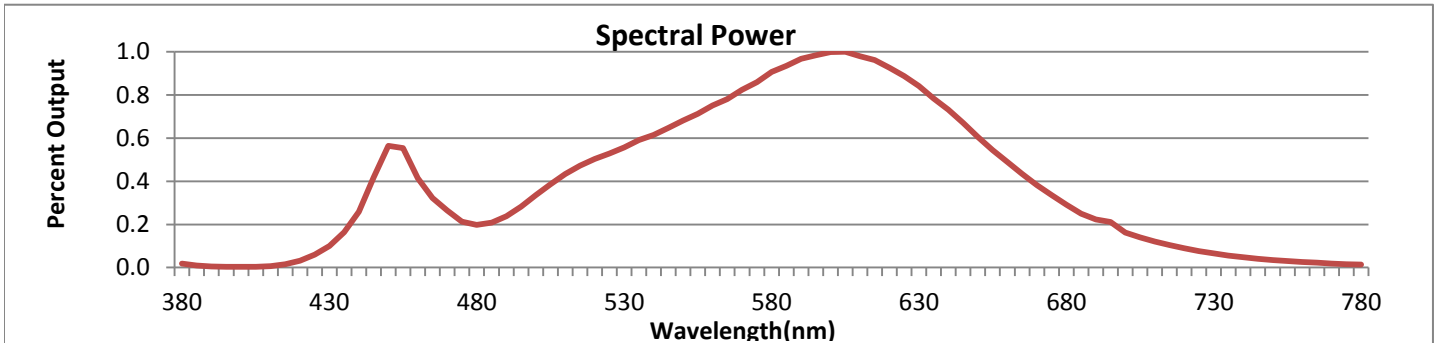


FIG. 1 LUMINAIRE

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



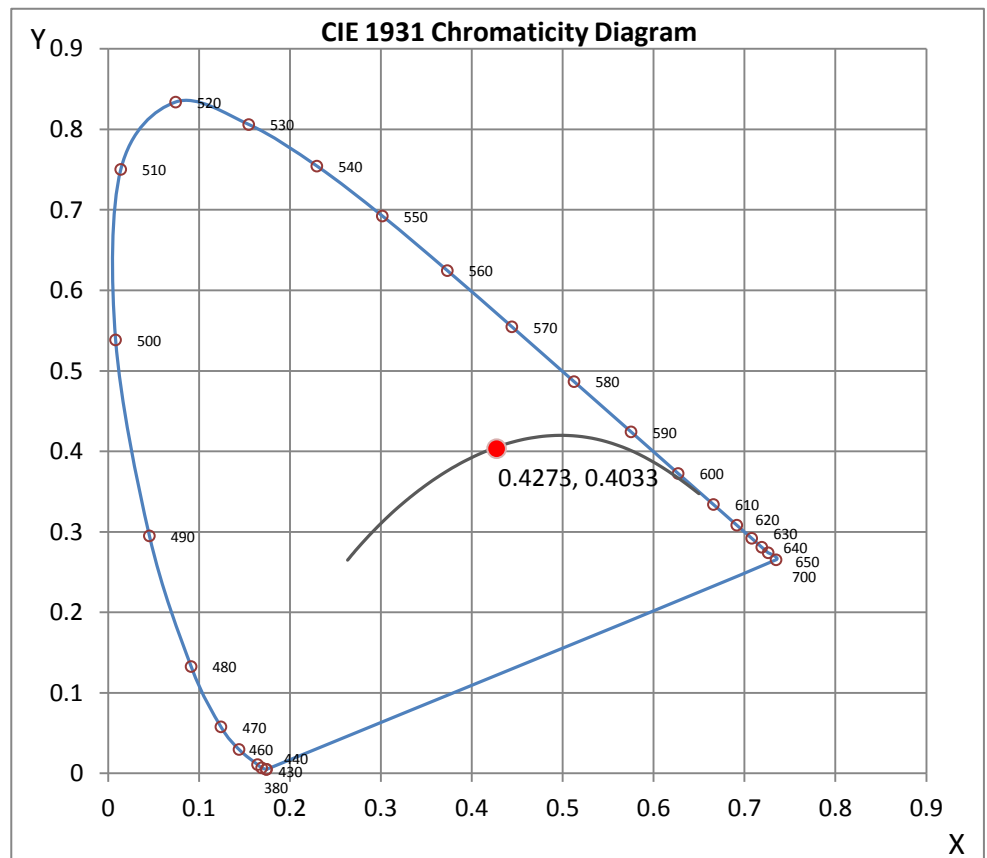
Wavelength	W/m <sup>2</sup> nm	440	0.0598	510	0.1001	580	0.2092	650	0.1399	720	0.0206
380	0.0041	450	0.1301	520	0.1162	590	0.2233	660	0.1131	730	0.0150
390	0.0012	460	0.0955	530	0.1284	600	0.2306	670	0.0883	740	0.0110
400	0.0007	470	0.0609	540	0.1419	610	0.2262	680	0.0672	750	0.0080
410	0.0016	480	0.0456	550	0.1574	620	0.2137	690	0.0513	760	0.0059
420	0.0072	490	0.0550	560	0.1733	630	0.1943	700	0.0375	770	0.0043
430	0.0230	500	0.0775	570	0.1900	640	0.1688	710	0.0279	780	0.0033

**CRI & CCT**

x	0.4273
y	0.4033
u'	0.2447
v'	0.5196
CRI	82.60
CCT	3162
Duv	0.00113

**R Values**

R1	80.69
R2	89.50
R3	96.44
R4	80.77
R5	80.20
R6	86.06
R7	84.96
R8	62.01
R9	10.77
R10	75.32
R11	79.14
R12	65.95
R13	83.19
R14	97.93



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**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*

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## Photometric Test Report

### IES FLOOD REPORT

PHOTOMETRIC FILENAME : L081407408.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081407408  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUE DATE] 9/9/2014  
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING  
[LUMCAT] 1059-XX-WF-E-30  
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE  
[MORE] CLEAR LENS  
[BALLASTCAT] THOMAS RESEARCH PRODUCTS LED50W-42-C1190  
[BALLAST] INPUT: 100-277VAC, 0.52A, 50/60HZ. OUTPUT: 14-42VDC, 1.19A  
[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, 49.26W  
[TEST PROCEDURE] IESNA:LM-79-08

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

### CHARACTERISTICS

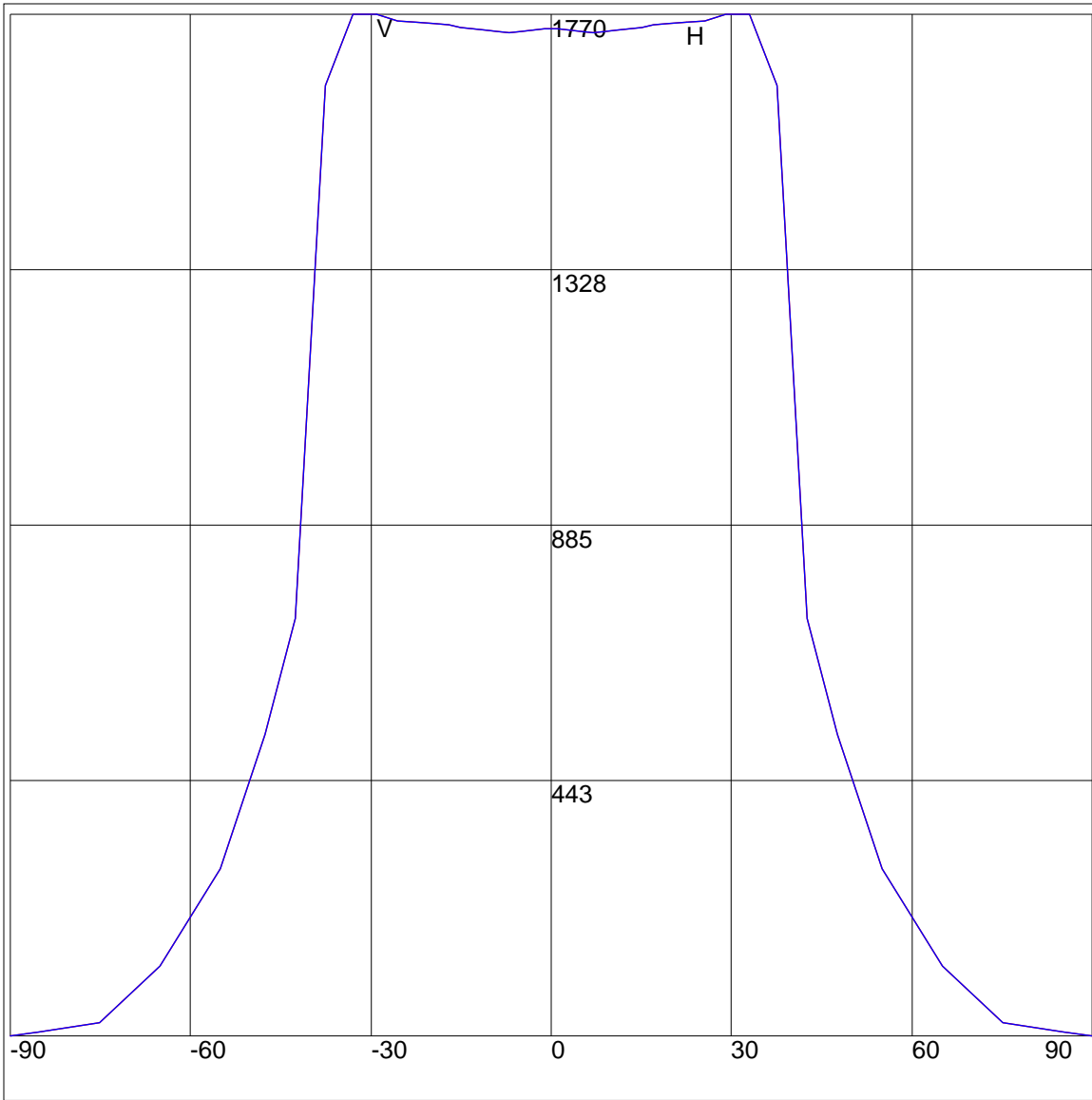
NEMA Type	6 H x 6 V
Maximum Candela	1770
Maximum Candela Angle	-33H -1V
Horizontal Beam Angle (50%)	83.2
Vertical Beam Angle (50%)	54.3
Horizontal Field Angle (10%)	123.5
Vertical Field Angle (10%)	111.7
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	2667
Beam Efficiency	N.A.
Field Lumens	3340
Field Efficiency	N.A.
Spill Lumens	136
Luminaire Lumens	3476
Total Efficiency	N.A.
Total Luminaire Watts	49.26
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L081407408.IES**

**AXIAL CANDELA**

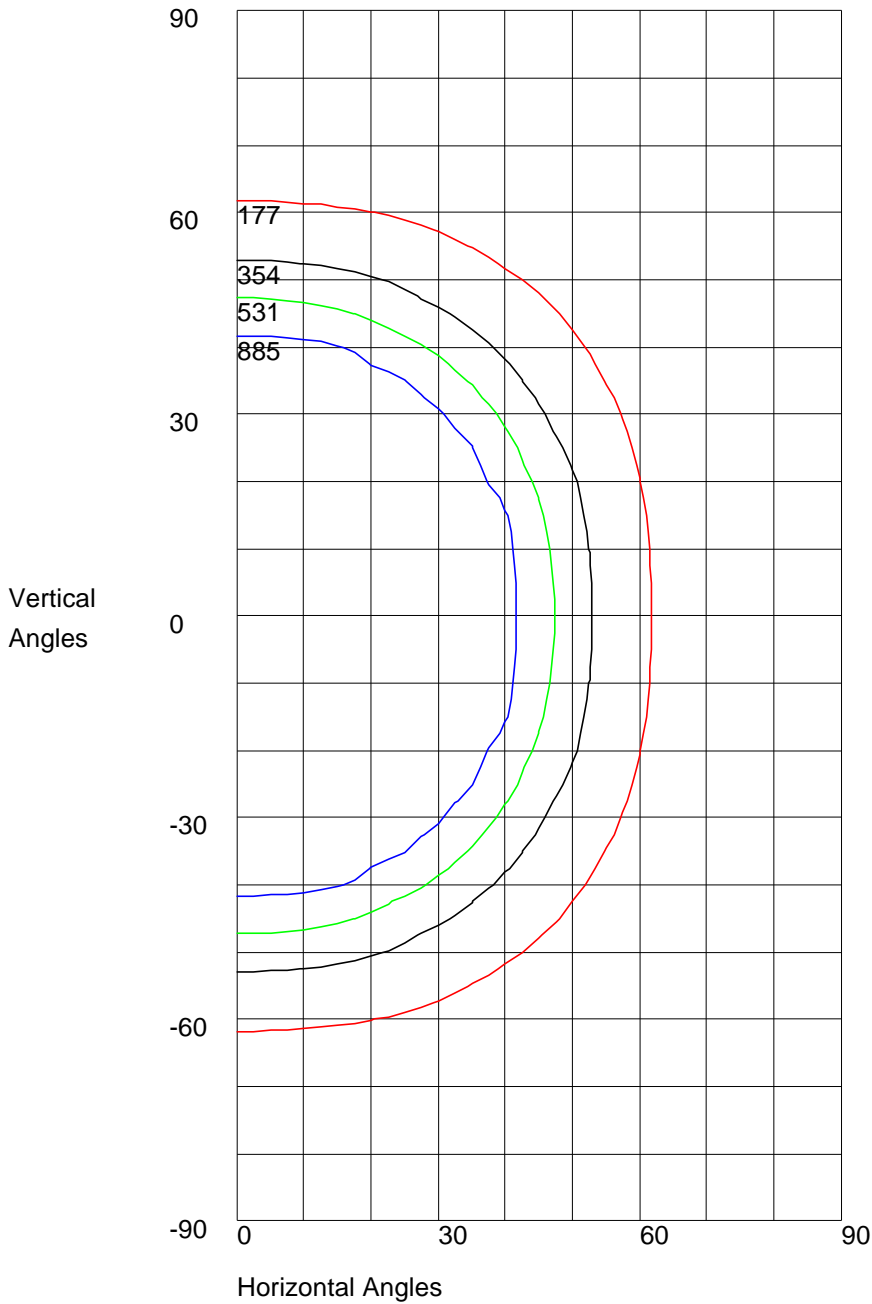
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	7	85	7
75	23	75	23
65	123	65	123
55	290	55	290
47.5	523	47.5	523
42.5	723	42.5	723
37.5	1647	37.5	1647
33	1770	33	1770
29	1770	29	1770
25.5	1758	25.5	1758
22.5	1756	22.5	1756
19.5	1754	19.5	1754
17	1751	17	1751
15	1748	15	1748
13	1744	13	1744
11	1742	11	1742
9	1740	9	1740
7	1739	7	1739
5	1740	5	1740
3	1743	3	1743
1	1744	1	1744
0	1744	0	1744
-1	1744	-1	1744
-3	1743	-3	1743
-5	1740	-5	1740
-7	1739	-7	1739
-9	1740	-9	1740
-11	1742	-11	1742
-13	1744	-13	1744
-15	1748	-15	1748
-17	1751	-17	1751
-19.5	1754	-19.5	1754
-22.5	1756	-22.5	1756
-25.5	1758	-25.5	1758
-29	1770	-29	1770
-33	1770	-33	1770
-37.5	1647	-37.5	1647
-42.5	723	-42.5	723
-47.5	523	-47.5	523
-55	290	-55	290
-65	123	-65	123
-75	23	-75	23
-85	7	-85	7
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 1770 Located At Horizontal Angle =-33, Vertical Angle =-1  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1770 Located At Horizontal Angle = -33, Vertical Angle = -1  
50% Maximum Candela = 885  
10% Maximum Candela = 177