



**PROFESSIONAL**  
OUTDOOR LIGHTING



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Report No: L081407407  
Date: 9/3/2014



NVLAP LAB CODE 200927-0

**Report No: L081407407**

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

**Model Number: 1059-XX-MF-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-MF-E-30 . Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 8/26/14

**Date of Tests:** 9/2/14 - 9/2/14

**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-MF-E-30
<b>Driver Model Number:</b>	THOMAS RESEARCH PRODUCTS LED50W-42-C1190
<b>Total Lumens:</b>	3744.26
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.42
<b>Input Power (W):</b>	49.50
<b>Input Power Factor:</b>	1.00
<b>Current ATHD @ 120V(%):</b>	4%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	76
<b>Color Rendering Index (CRI):</b>	82
<b>Correlated Color Temperature (K):</b>	3096
<b>Chromaticity Coordinate x:</b>	0.4322
<b>Chromaticity Coordinate y:</b>	0.4058
<b>Ambient Temperature (°F):</b>	77.0
<b>Stabilization Time (Hours):</b>	0:35
<b>Total Operating Time (Hours):</b>	1:15
<b>Off State Power(W):</b>	0.00

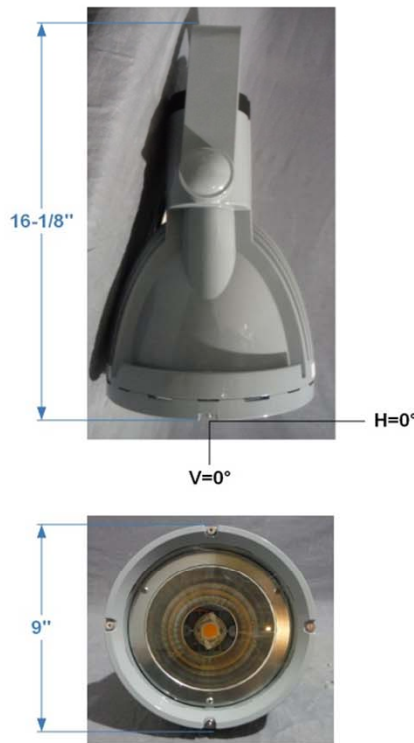
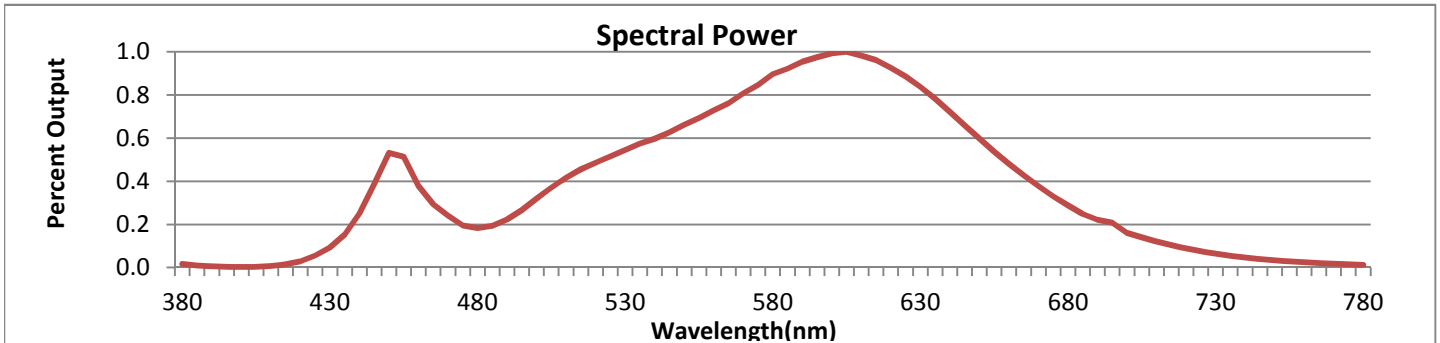


FIG. 1 LUMINAIRE

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



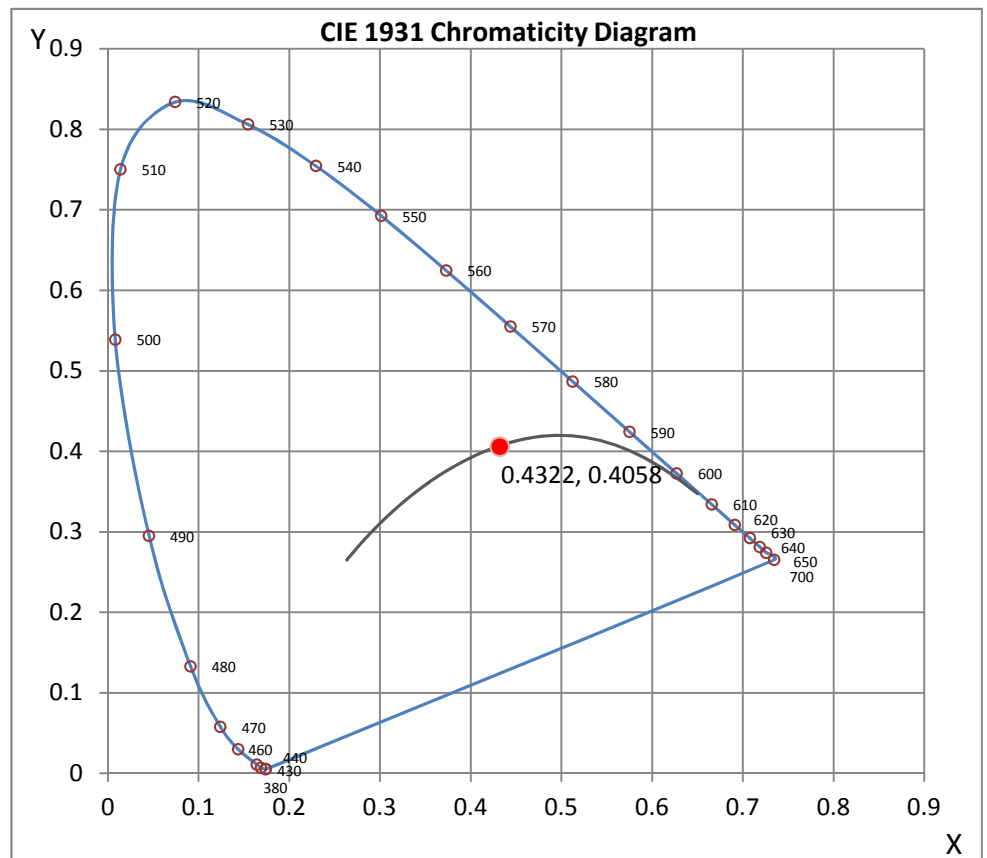
Wavelength	W/m <sup>2</sup> nm	440	0.0780	510	0.1287	580	0.2778	650	0.1855	720	0.0273
380	0.0053	450	0.1649	520	0.1507	590	0.2956	660	0.1492	730	0.0198
390	0.0016	460	0.1174	530	0.1687	600	0.3075	670	0.1170	740	0.0144
400	0.0009	470	0.0747	540	0.1849	610	0.3045	680	0.0894	750	0.0104
410	0.0022	480	0.0565	550	0.2050	620	0.2869	690	0.0686	760	0.0076
420	0.0090	490	0.0690	560	0.2260	630	0.2596	700	0.0500	770	0.0056
430	0.0287	500	0.0992	570	0.2505	640	0.2234	710	0.0374	780	0.0041

**CRI & CCT**

x	0.4322
y	0.4058
u'	0.2468
v'	0.5214
CRI	82.30
CCT	3096
Duv	0.00137

**R Values**

R1	80.37
R2	89.27
R3	96.53
R4	80.59
R5	79.85
R6	85.94
R7	84.66
R8	61.08
R9	9.04
R10	74.91
R11	79.04
R12	65.83
R13	82.89
R14	97.95



\*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.

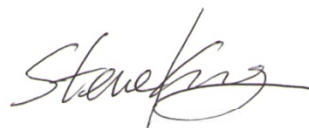
Report Prepared by : Wilson Khounlavong

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 : L081407407.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081407407  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUEDATE] 9/3/2014  
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING  
[LUMCAT] 1059-XX-MF-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  
[LAMPCAT] N/A  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[INPUT] 120VAC, 49.5W  
[TEST PROCEDURE] IESNA:LM-79-08

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

### CHARACTERISTICS

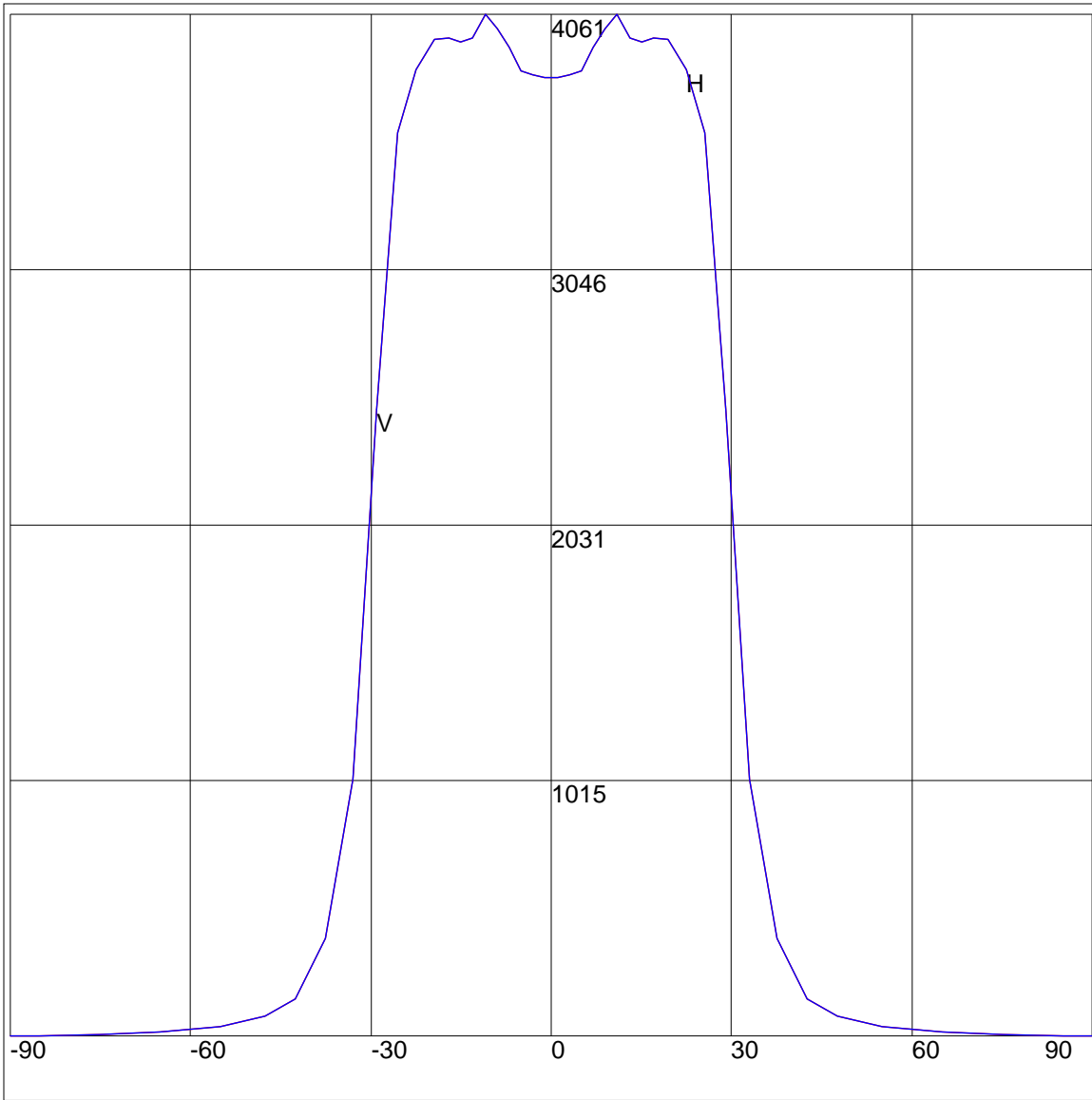
NEMA Type	5 H x 5 V
Maximum Candela	4061
Maximum Candela Angle	-11H -1V
Horizontal Beam Angle (50%)	60.5
Vertical Beam Angle (50%)	56.6
Horizontal Field Angle (10%)	74.7
Vertical Field Angle (10%)	73.4
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	3021
Beam Efficiency	N.A.
Field Lumens	3532
Field Efficiency	N.A.
Spill Lumens	213
Luminaire Lumens	3744
Total Efficiency	N.A.
Total Luminaire Watts	49.5
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L081407407.IES**

**AXIAL CANDELA**

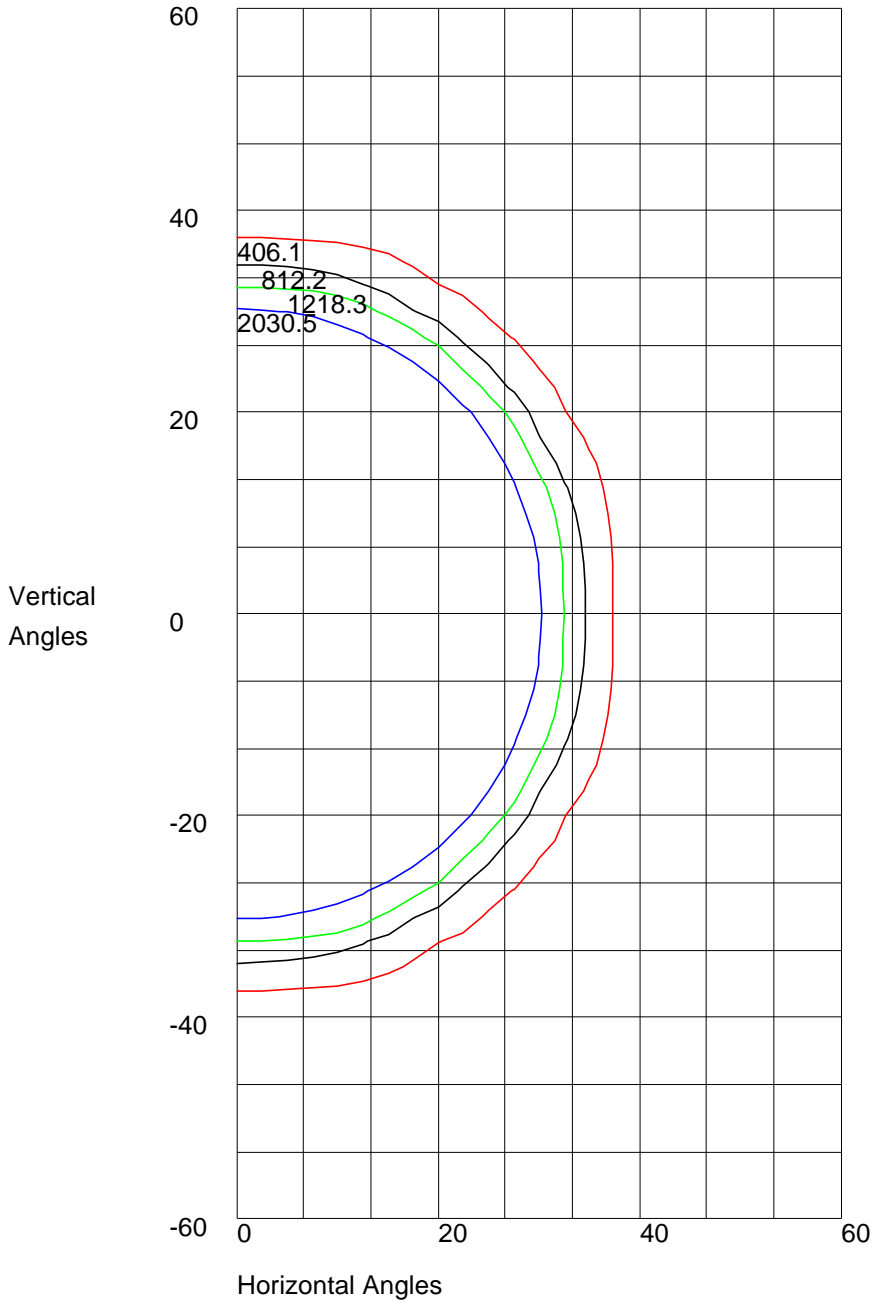
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	5	85	5
75	7	75	7
65	17	65	17
55	40	55	40
47.5	81	47.5	81
42.5	149	42.5	149
37.5	388	37.5	388
33	1021	33	1021
29	2492	29	2492
25.5	3590	25.5	3590
22.5	3840	22.5	3840
19.5	3963	19.5	3963
17	3967	17	3967
15	3949	15	3949
13	3967	13	3967
11	4061	11	4061
9	4004	9	4004
7	3930	7	3930
5	3834	5	3834
3	3818	3	3818
1	3808	1	3808
0	3809	0	3809
-1	3808	-1	3808
-3	3818	-3	3818
-5	3834	-5	3834
-7	3930	-7	3930
-9	4004	-9	4004
-11	4061	-11	4061
-13	3967	-13	3967
-15	3949	-15	3949
-17	3967	-17	3967
-19.5	3963	-19.5	3963
-22.5	3840	-22.5	3840
-25.5	3590	-25.5	3590
-29	2492	-29	2492
-33	1021	-33	1021
-37.5	388	-37.5	388
-42.5	149	-42.5	149
-47.5	81	-47.5	81
-55	40	-55	40
-65	17	-65	17
-75	7	-75	7
-85	5	-85	5
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 4061 Located At Horizontal Angle =-11, Vertical Angle =-1  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 4061 Located At Horizontal Angle =-11, Vertical Angle =-1  
50% Maximum Candela = 2030.5  
10% Maximum Candela = 406.1