



**PROFESSIONAL  
OUTDOOR LIGHTING**



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

Report No: L081407403

Date: 9/3/2014



NVLAP LAB CODE 200927-0

**Report No: L081407403**

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

**Model Number: 1059-XX-NS-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-NS-D-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-NS-D-30
<b>Driver Model Number:</b>	THOMAS RESEARCH PRODUCTS PLED96W-092-C1050-D
<b>Total Lumens:</b>	3558.74
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.41
<b>Input Power (W):</b>	48.10
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	12%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	74
<b>Color Rendering Index (CRI):</b>	83
<b>Correlated Color Temperature (K):</b>	3129
<b>Chromaticity Coordinate x:</b>	0.4293
<b>Chromaticity Coordinate y:</b>	0.4035
<b>Ambient Temperature (°F):</b>	77.0
<b>Stabilization Time (Hours):</b>	0:40
<b>Total Operating Time (Hours):</b>	1:20
<b>Off State Power(W):</b>	0.00

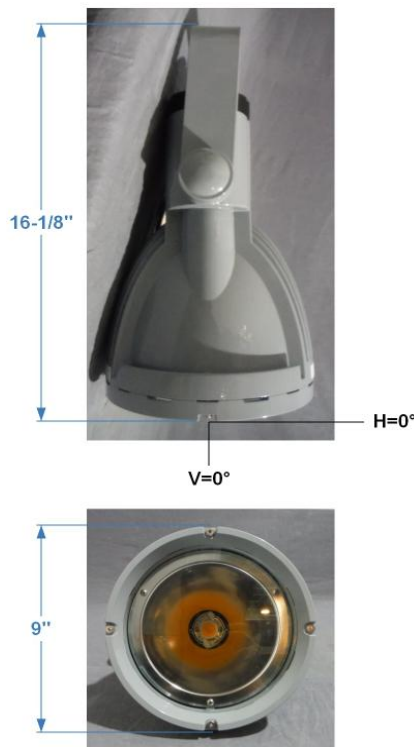
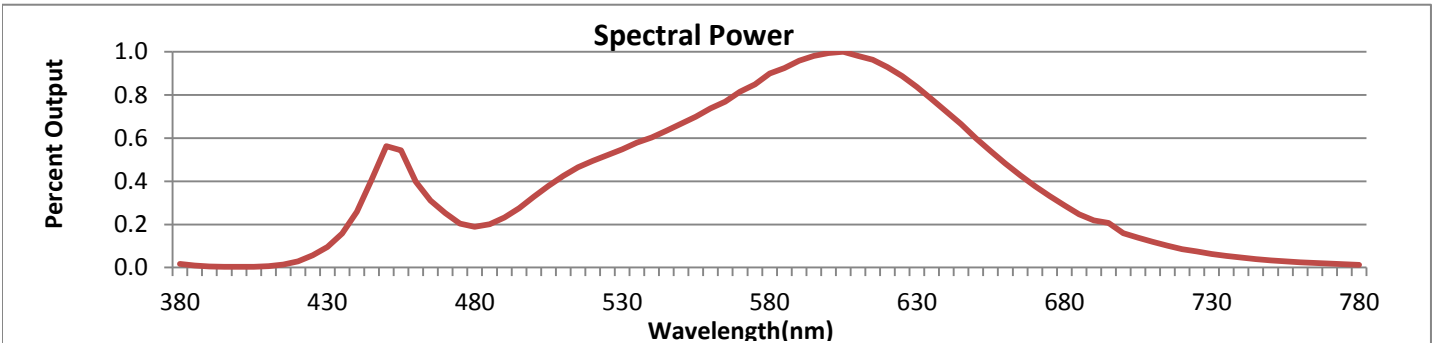


FIG. 1 LUMINAIRE

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



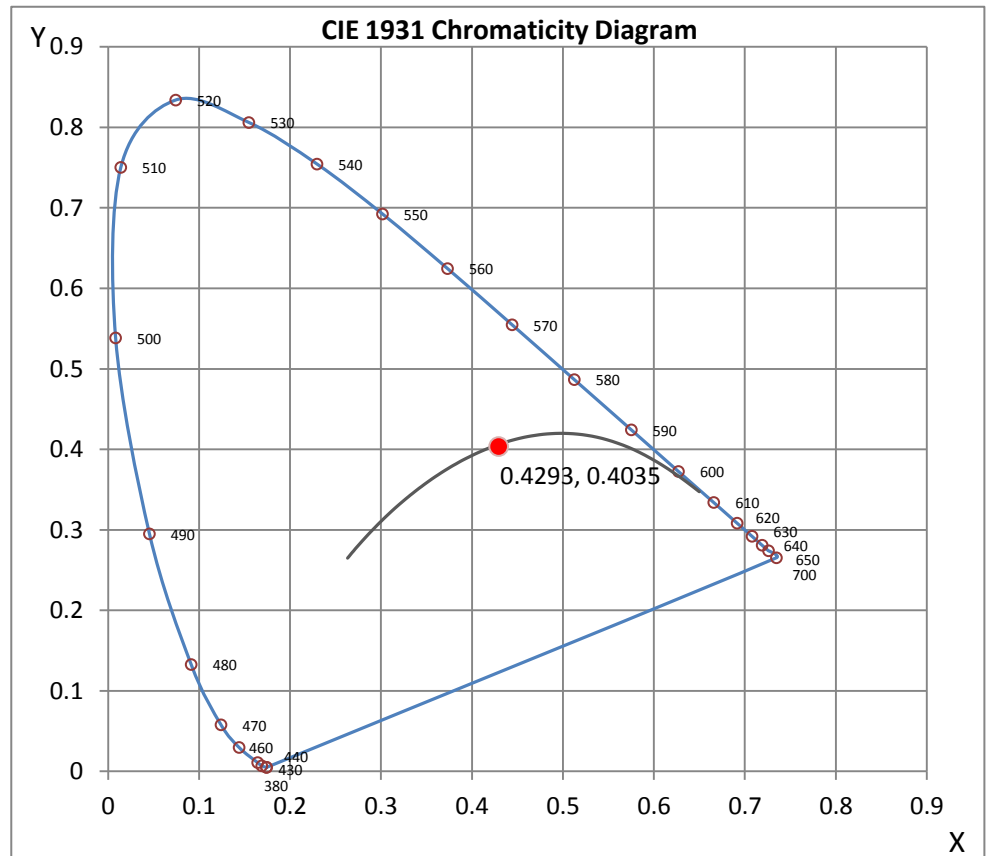
Wavelength	W/m <sup>2</sup> nm	440	0.0704	510	0.1155	580	0.2443	650	0.1630	720	0.0233
380	0.0045	450	0.1530	520	0.1344	590	0.2604	660	0.1311	730	0.0172
390	0.0014	460	0.1083	530	0.1489	600	0.2703	670	0.1027	740	0.0125
400	0.0008	470	0.0687	540	0.1639	610	0.2667	680	0.0783	750	0.0091
410	0.0019	480	0.0515	550	0.1813	620	0.2526	690	0.0594	760	0.0066
420	0.0080	490	0.0629	560	0.2005	630	0.2275	700	0.0434	770	0.0048
430	0.0259	500	0.0893	570	0.2213	640	0.1966	710	0.0325	780	0.0035

**CRI & CCT**

x	0.4293
y	0.4035
u'	0.2459
v'	0.5200
CRI	82.60
CCT	3129
Duv	0.00089

**R Values**

R1	80.75
R2	89.59
R3	96.53
R4	80.83
R5	80.29
R6	86.31
R7	84.69
R8	61.58
R9	10.23
R10	75.61
R11	79.35
R12	66.39
R13	83.28
R14	98.01



\*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: L081407403

Date: 9/3/2014



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 : L081407403.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081407403  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUE DATE] 9/3/2014  
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING  
[LUMCAT] 1059-XX-NS-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, 48.1W  
[TEST PROCEDURE] IESNA:LM-79-08

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

### CHARACTERISTICS

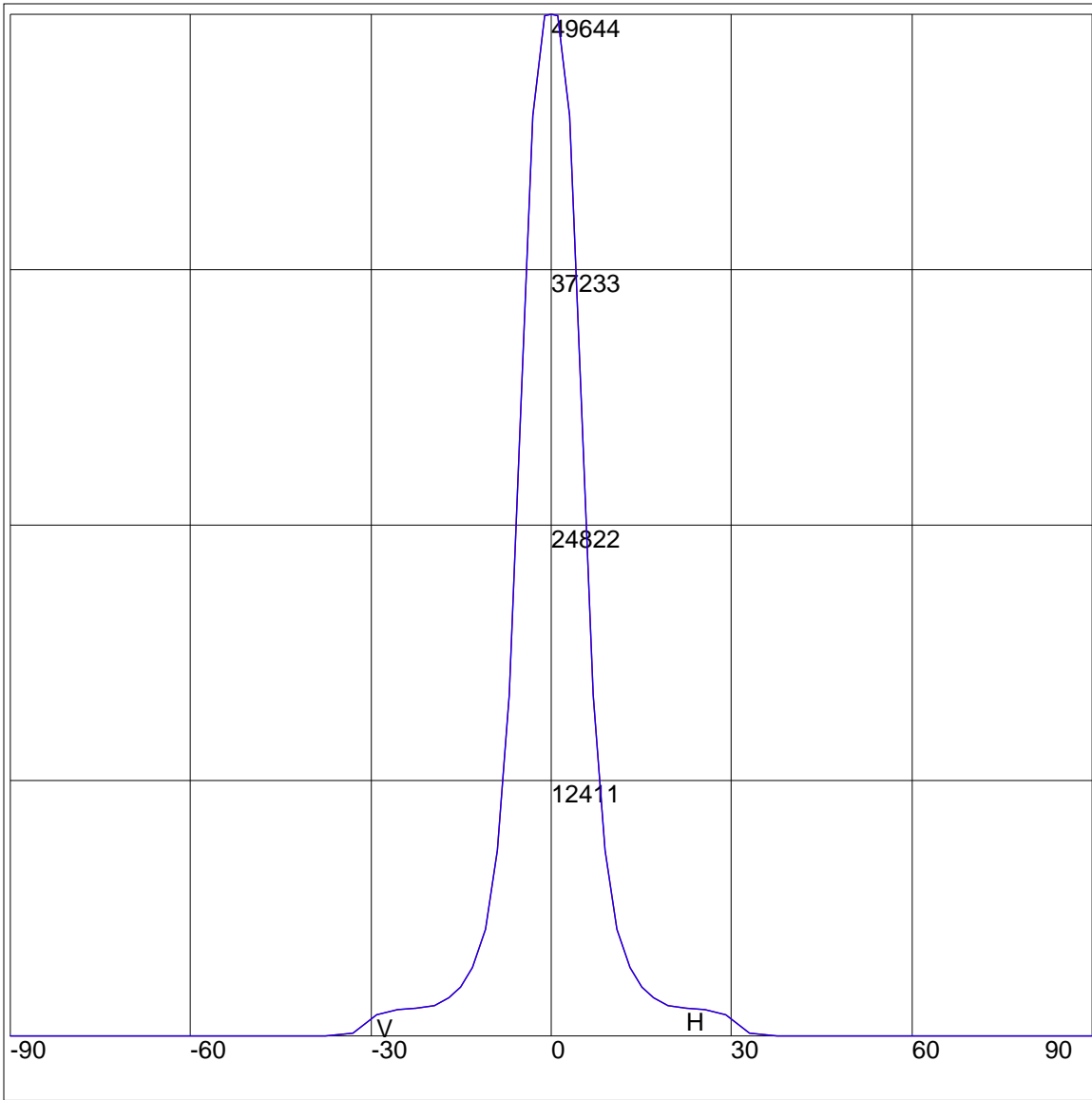
NEMA Type	2 H x 2 V
Maximum Candela	49644
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	11.7
Vertical Beam Angle (50%)	11.7
Horizontal Field Angle (10%)	22.6
Vertical Field Angle (10%)	22.6
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1131
Beam Efficiency	N.A.
Field Lumens	2199
Field Efficiency	N.A.
Spill Lumens	1359
Luminaire Lumens	3559
Total Efficiency	N.A.
Total Luminaire Watts	48.1
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L081407403.IES**

**AXIAL CANDELA**

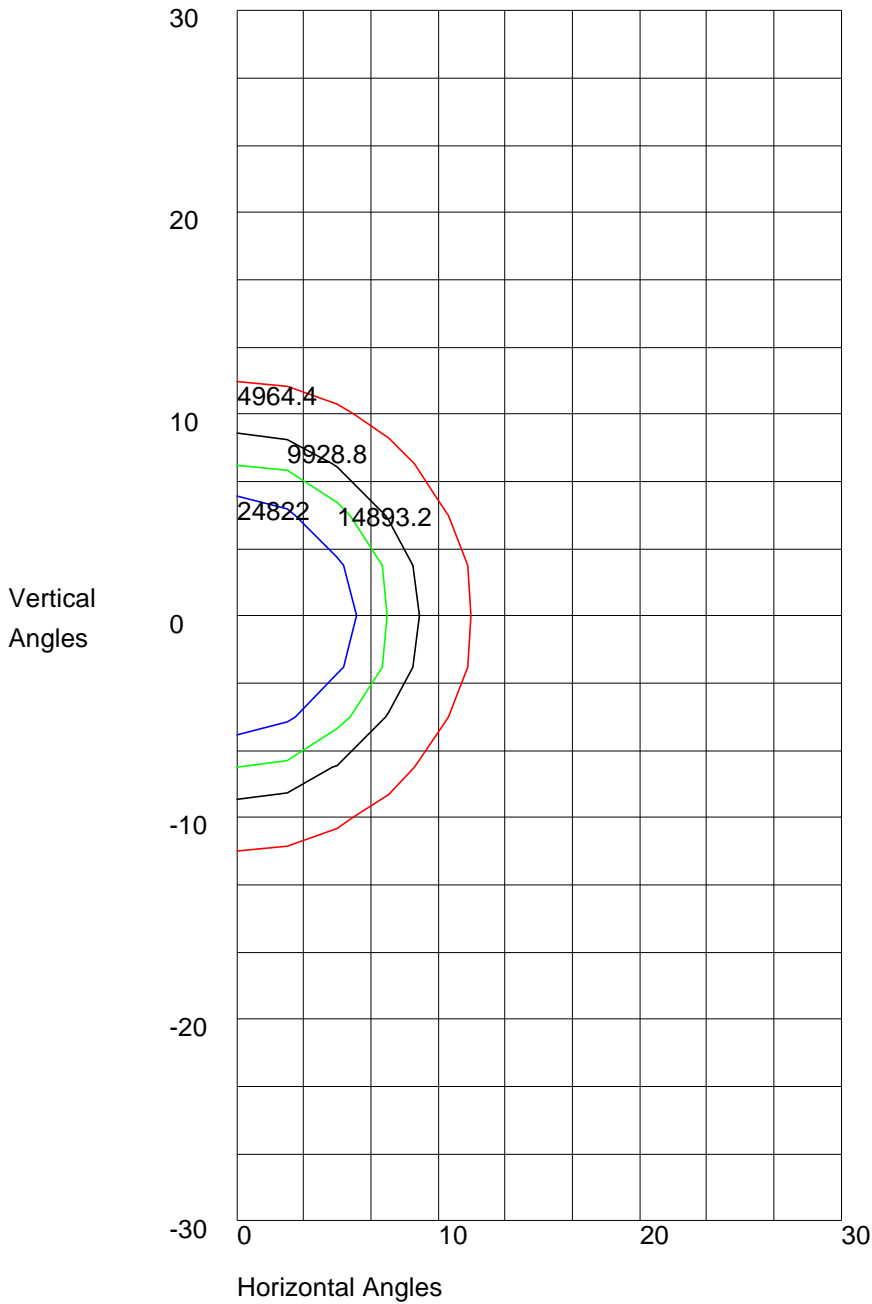
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	4	85	4
75	5	75	5
65	7	65	7
55	9	55	9
47.5	14	47.5	14
42.5	22	42.5	22
37.5	41	37.5	41
33	162	33	162
29	1027	29	1027
25.5	1315	25.5	1315
22.5	1384	22.5	1384
19.5	1520	19.5	1520
17	1856	17	1856
15	2381	15	2381
13	3342	13	3342
11	5237	11	5237
9	9042	9	9042
7	16589	7	16589
5	30629	5	30629
3	44738	3	44738
1	49570	1	49570
0	49644	0	49644
-1	49570	-1	49570
-3	44738	-3	44738
-5	30629	-5	30629
-7	16589	-7	16589
-9	9042	-9	9042
-11	5237	-11	5237
-13	3342	-13	3342
-15	2381	-15	2381
-17	1856	-17	1856
-19.5	1520	-19.5	1520
-22.5	1384	-22.5	1384
-25.5	1315	-25.5	1315
-29	1027	-29	1027
-33	162	-33	162
-37.5	41	-37.5	41
-42.5	22	-42.5	22
-47.5	14	-47.5	14
-55	9	-55	9
-65	7	-65	7
-75	5	-75	5
-85	4	-85	4
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 49644 Located At Horizontal Angle = 0, Vertical Angle = 0  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 49644 Located At Horizontal Angle = 0, Vertical Angle = 0  
50% Maximum Candela = 24822  
10% Maximum Candela = 4964.4