



**PROFESSIONAL  
OUTDOOR LIGHTING**



8165 E Kaiser Blvd. Anaheim, CA 92808  
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Report No: L081407410  
Date: 9/3/2014



NVLAP LAB CODE 200927-0

**Report No: L081407410**

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

**Model Number: 1059-XX-MF-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-MF-F-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:** 9/3/14 - 9/3/14

**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 Outdoo
<b>Model Number:</b>	1059-XX-MF-F-30
<b>Driver Model Number:</b>	THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D
<b>Total Lumens:</b>	4150.94
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.50
<b>Input Power (W):</b>	59.75
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	9%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	69
<b>Color Rendering Index (CRI):</b>	82
<b>Correlated Color Temperature (K):</b>	3132
<b>Chromaticity Coordinate x:</b>	0.4295
<b>Chromaticity Coordinate y:</b>	0.4044
<b>Ambient Temperature (°F):</b>	77.0
<b>Stabilization Time (Hours):</b>	0:50
<b>Total Operating Time (Hours):</b>	1:30
<b>Off State Power(W):</b>	0.00

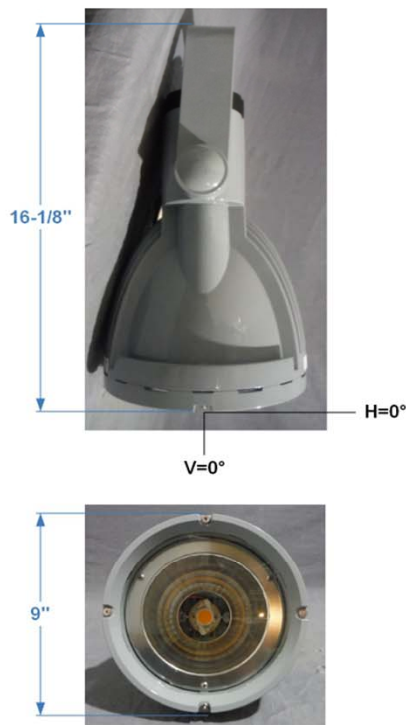
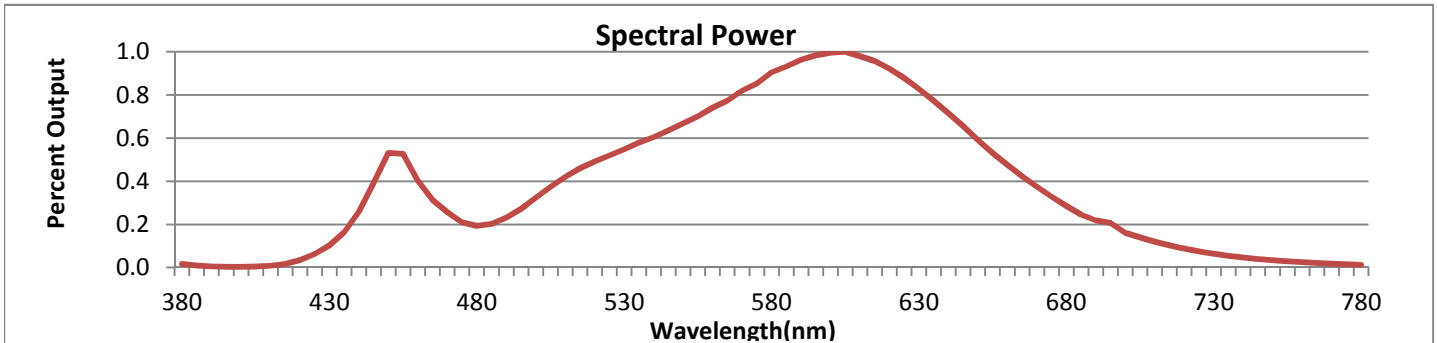


FIG. 1 LUMINAIRE

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



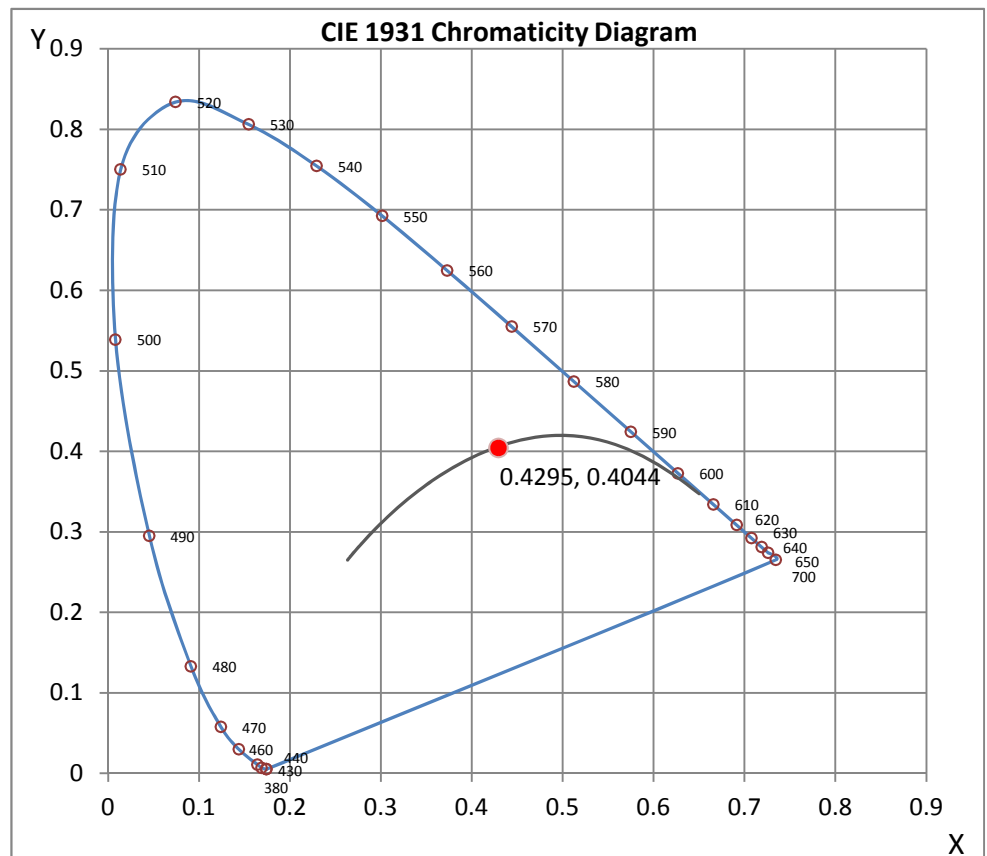
Wavelength	W/m <sup>2</sup> nm	440	0.0848	510	0.1378	580	0.2972	650	0.1938	720	0.0287
380	0.0055	450	0.1746	520	0.1612	590	0.3162	660	0.1565	730	0.0211
390	0.0017	460	0.1323	530	0.1796	600	0.3267	670	0.1226	740	0.0153
400	0.0011	470	0.0844	540	0.1981	610	0.3214	680	0.0937	750	0.0112
410	0.0027	480	0.0635	550	0.2194	620	0.3026	690	0.0717	760	0.0081
420	0.0112	490	0.0759	560	0.2430	630	0.2718	700	0.0526	770	0.0059
430	0.0337	500	0.1064	570	0.2687	640	0.2349	710	0.0392	780	0.0043

**CRI & CCT**

x	0.4295
y	0.4044
u'	0.2456
v'	0.5204
CRI	82.00
CCT	3132
Duv	0.00122

**R Values**

R1	79.98
R2	89.21
R3	96.51
R4	80.03
R5	79.50
R6	85.77
R7	84.38
R8	60.53
R9	7.60
R10	74.75
R11	78.27
R12	65.80
R13	82.59
R14	98.01



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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 : Keyur Patel

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: 10*

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## Photometric Test Report

### IES FLOOD REPORT

PHOTOMETRIC FILENAME : L081407410.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L081407410  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUE DATE] 9/3/2014  
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING  
[LUMCAT] 1059-XX-MF-F-30  
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE  
[MORE] CLEAR LENS WITH INTERNAL SOURCE SHIELD  
[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, 59.75W  
[TEST PROCEDURE] IESNA:LM-79-08

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

### CHARACTERISTICS

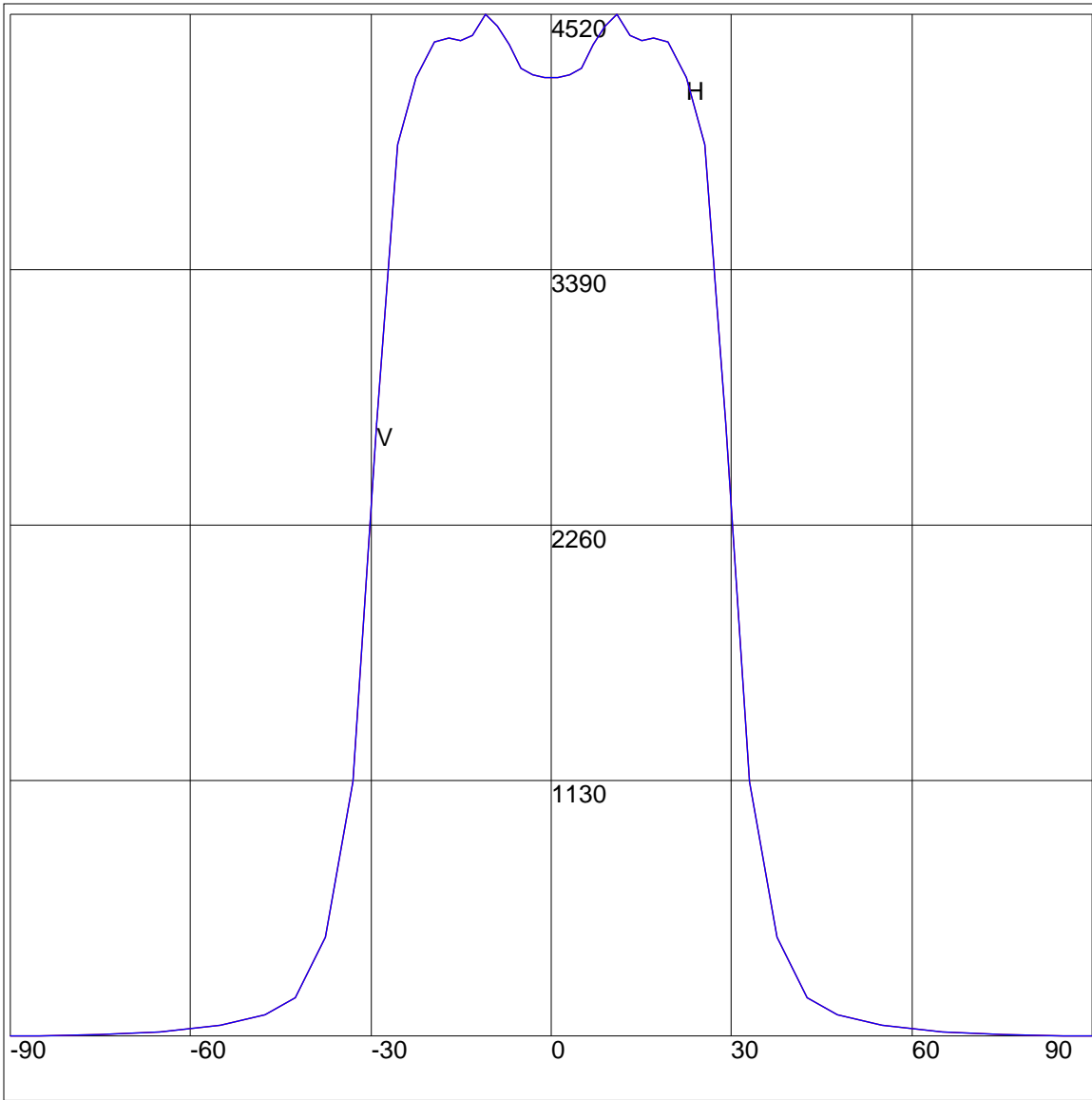
NEMA Type	5 H x 5 V
Maximum Candela	4520
Maximum Candela Angle	-11H -1V
Horizontal Beam Angle (50%)	60.3
Vertical Beam Angle (50%)	56.4
Horizontal Field Angle (10%)	74.8
Vertical Field Angle (10%)	73.5
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	3343
Beam Efficiency	N.A.
Field Lumens	3906
Field Efficiency	N.A.
Spill Lumens	245
Luminaire Lumens	4151
Total Efficiency	N.A.
Total Luminaire Watts	59.75
Ballast Factor	1.00

IES FLOOD REPORT  
PHOTOMETRIC FILENAME : L081407410.IES

AXIAL CANDELA

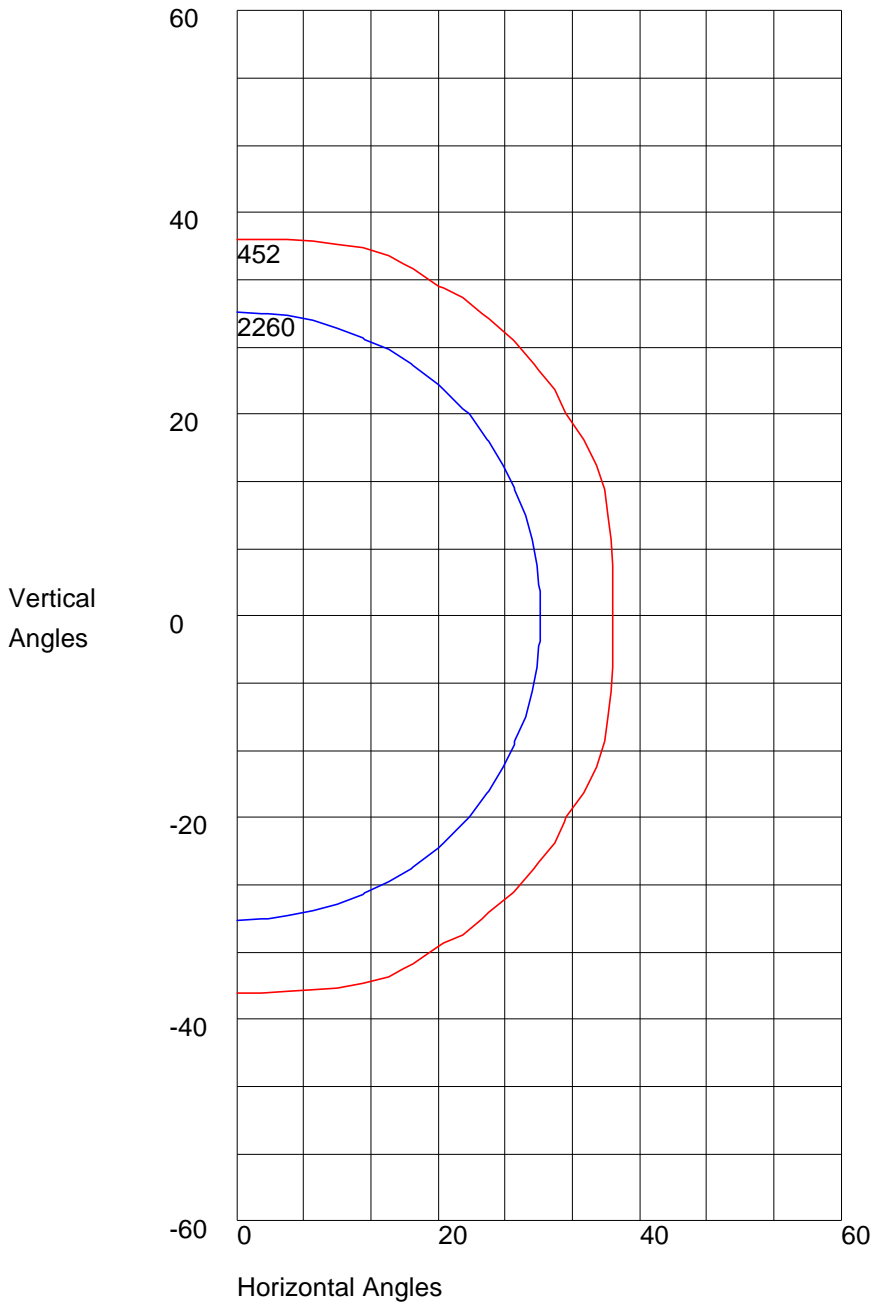
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	5	85	5
75	9	75	9
65	20	65	20
55	47	55	47
47.5	94	47.5	94
42.5	172	42.5	172
37.5	437	37.5	437
33	1129	33	1129
29	2712	29	2712
25.5	3944	25.5	3944
22.5	4242	22.5	4242
19.5	4397	19.5	4397
17	4414	17	4414
15	4401	15	4401
13	4428	13	4428
11	4520	11	4520
9	4469	9	4469
7	4386	7	4386
5	4279	5	4279
3	4251	3	4251
1	4241	1	4241
0	4239	0	4239
-1	4241	-1	4241
-3	4251	-3	4251
-5	4279	-5	4279
-7	4386	-7	4386
-9	4469	-9	4469
-11	4520	-11	4520
-13	4428	-13	4428
-15	4401	-15	4401
-17	4414	-17	4414
-19.5	4397	-19.5	4397
-22.5	4242	-22.5	4242
-25.5	3944	-25.5	3944
-29	2712	-29	2712
-33	1129	-33	1129
-37.5	437	-37.5	437
-42.5	172	-42.5	172
-47.5	94	-47.5	94
-55	47	-55	47
-65	20	-65	20
-75	9	-75	9
-85	5	-85	5
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 4520 Located At Horizontal Angle =-11, Vertical Angle =-1  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 4520 Located At Horizontal Angle =-11, Vertical Angle =-1  
50% Maximum Candela = 2260  
10% Maximum Candela = 452