



PROFESSIONAL
OUTDOOR LIGHTING



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Report No: L081407413
Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407413

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

Model Number: 1059-XX-MF-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-MF-G-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: 8/29/14 - 8/29/14

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-MF-G-30
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D
Total Lumens:	4971.86
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.62
Input Power (W):	74.13
Input Power Factor:	1.00
Current ATHD @ 120V(%):	6%
Current ATHD @ 277V(%):	N/A
Efficacy:	67
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	3130
Chromaticity Coordinate x:	0.4296
Chromaticity Coordinate y:	0.4043
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:10
Off State Power(W):	0.00

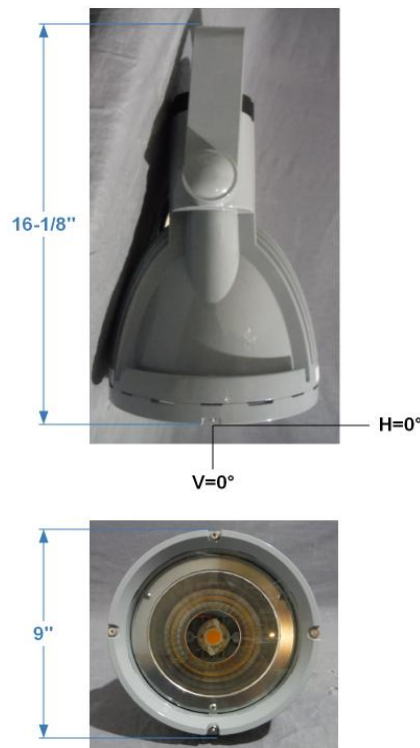
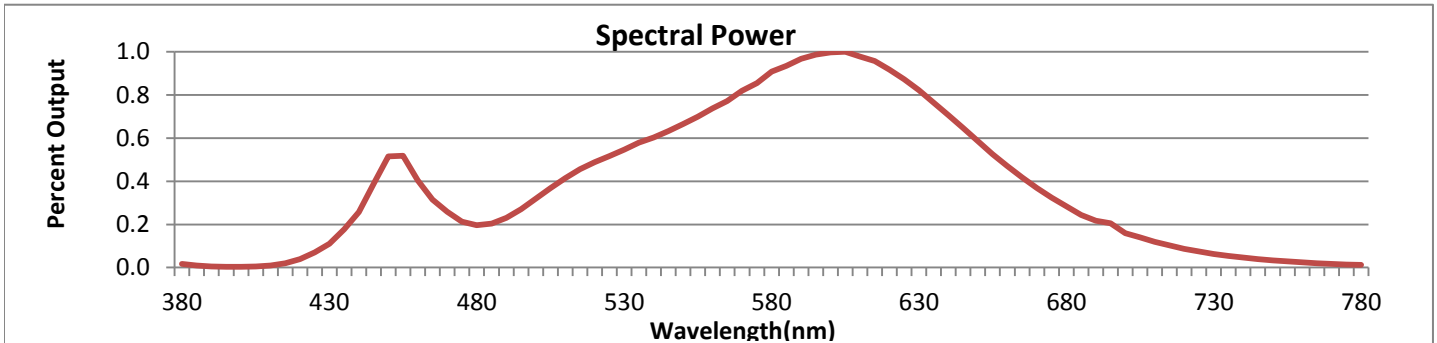


FIG. 1 LUMINAIRE

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



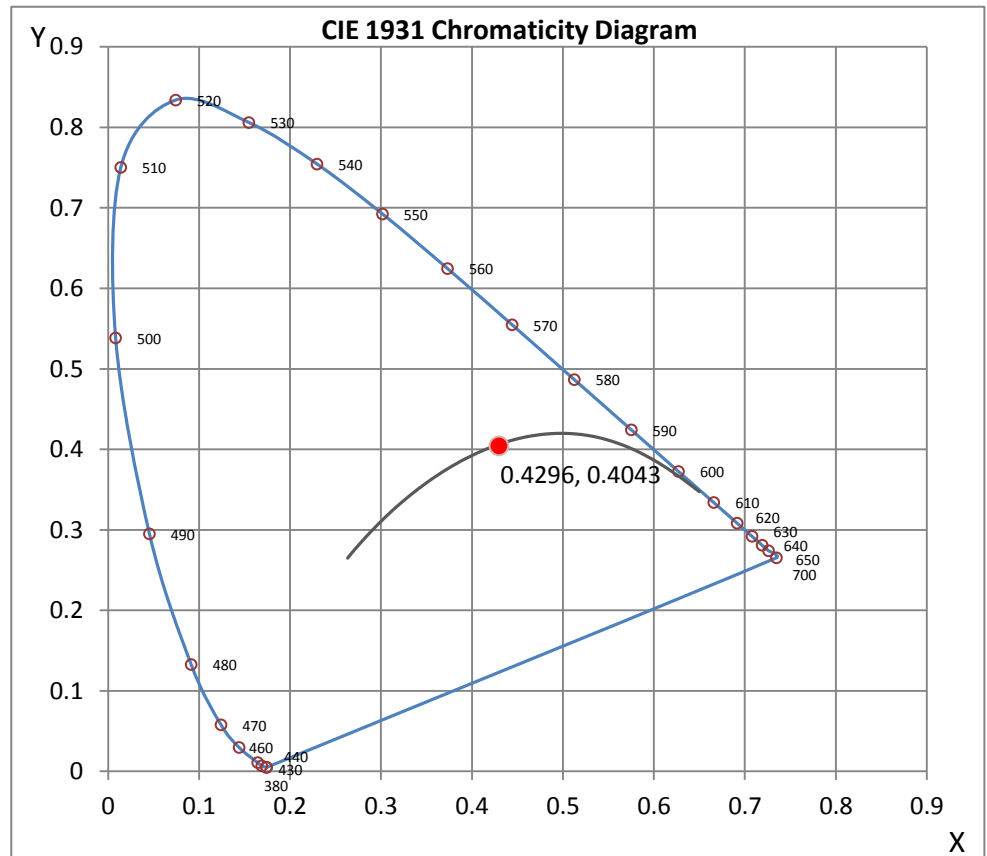
Wavelength	W/m ² nm	440	0.1044	510	0.1680	580	0.3680	650	0.2377	720	0.0353
380	0.0069	450	0.2088	520	0.1982	590	0.3922	660	0.1908	730	0.0257
390	0.0021	460	0.1637	530	0.2218	600	0.4043	670	0.1495	740	0.0186
400	0.0015	470	0.1051	540	0.2447	610	0.3966	680	0.1148	750	0.0135
410	0.0041	480	0.0795	550	0.2698	620	0.3721	690	0.0879	760	0.0096
420	0.0159	490	0.0934	560	0.2990	630	0.3332	700	0.0648	770	0.0067
430	0.0448	500	0.1296	570	0.3320	640	0.2868	710	0.0486	780	0.0050

CRI & CCT

x	0.4296
y	0.4043
u'	0.2458
v'	0.5204
CRI	81.70
CCT	3130
Duv	0.00117

R Values

R1	79.61
R2	89.07
R3	96.49
R4	79.62
R5	79.14
R6	85.61
R7	84.06
R8	59.78
R9	5.85
R10	74.41
R11	77.77
R12	65.89
R13	82.29
R14	98.02



*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 : L081407413.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407413
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-MF-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
[LAMP] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 74.13W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

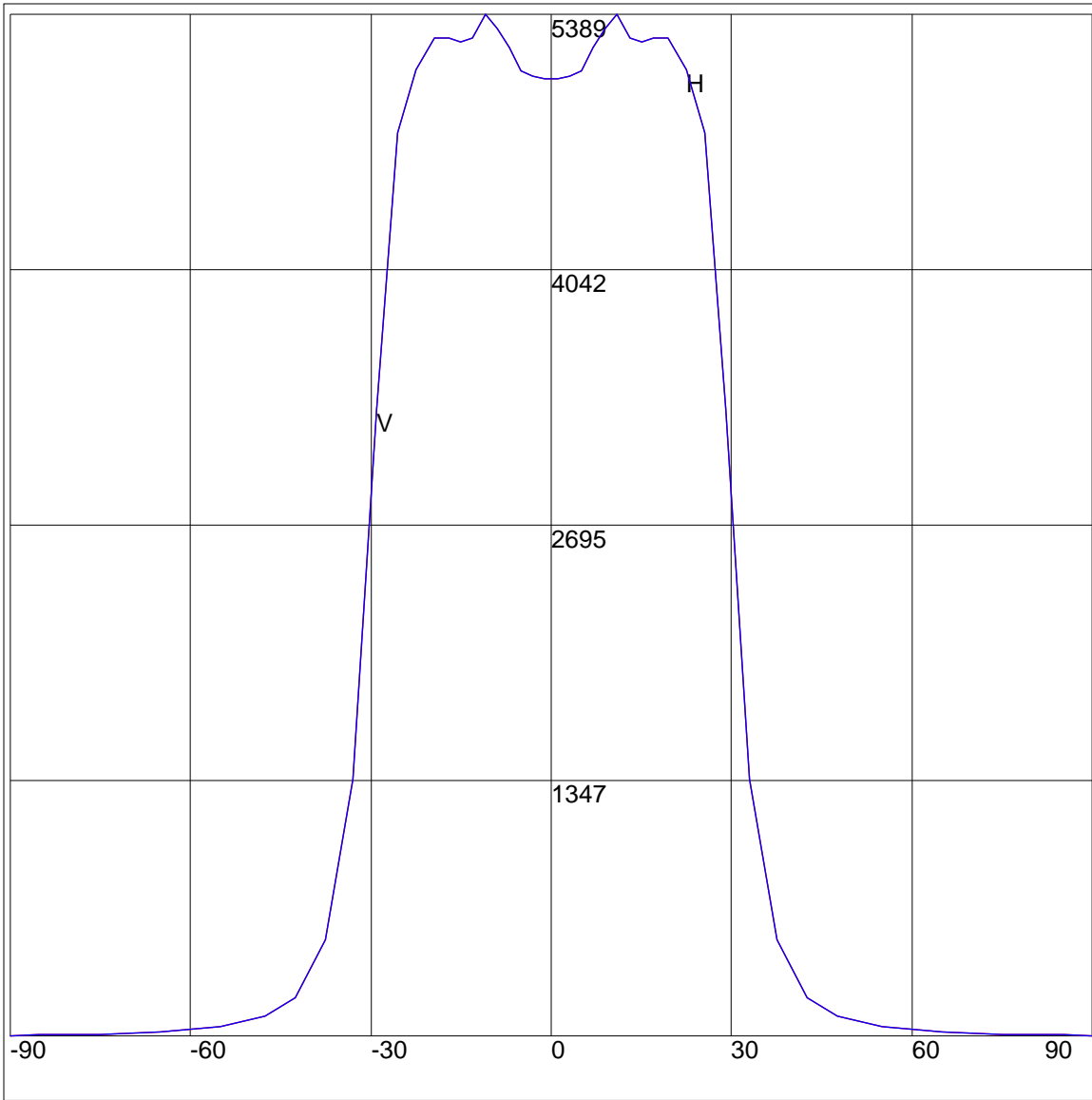
NEMA Type	5 H x 5 V
Maximum Candela	5389
Maximum Candela Angle	-11H -1V
Horizontal Beam Angle (50%)	60.5
Vertical Beam Angle (50%)	56.6
Horizontal Field Angle (10%)	74.7
Vertical Field Angle (10%)	73.4
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	4009
Beam Efficiency	N.A.
Field Lumens	4687
Field Efficiency	N.A.
Spill Lumens	285
Luminaire Lumens	4972
Total Efficiency	N.A.
Total Luminaire Watts	74.13
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407413.IES

AXIAL CANDELA

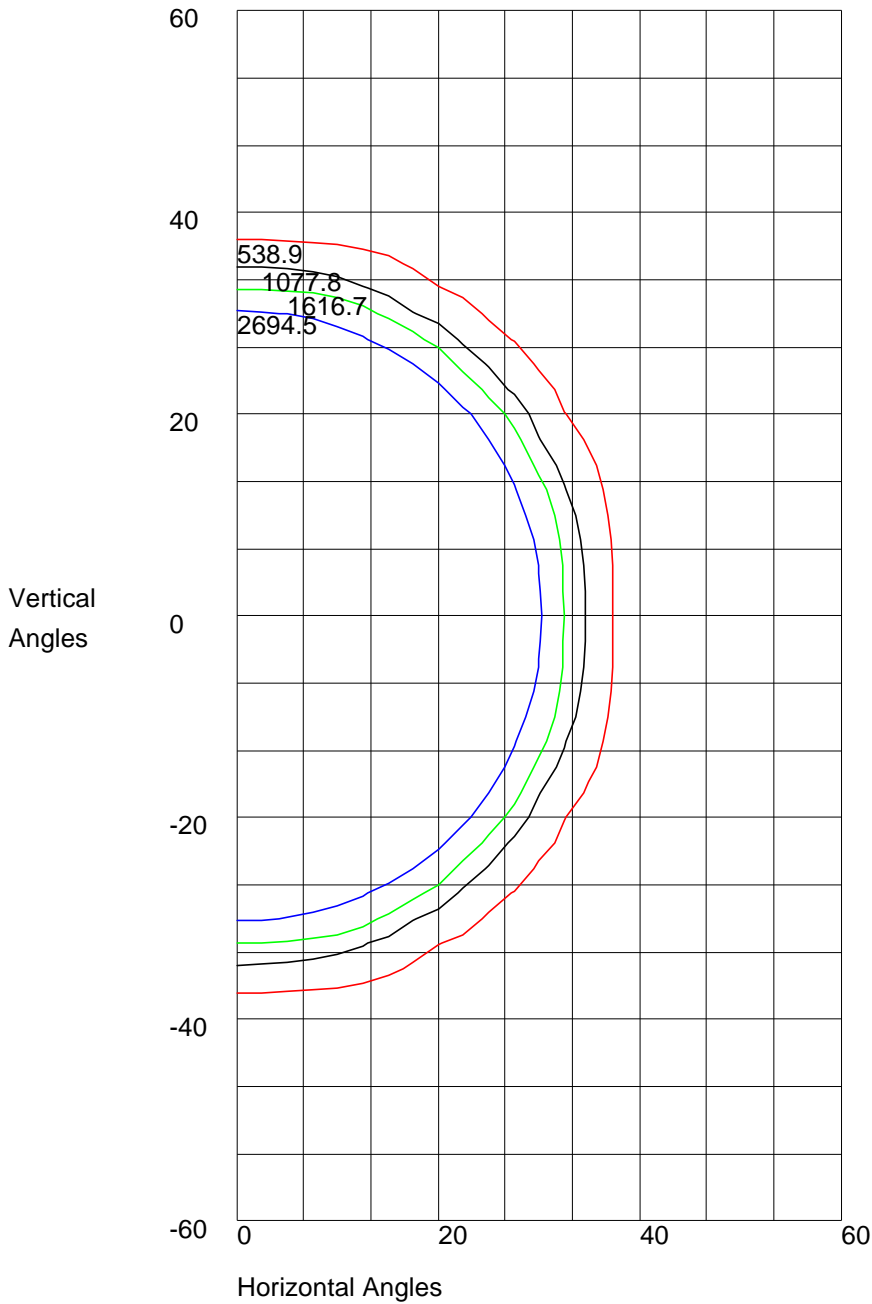
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	7	85	7
75	10	75	10
65	23	65	23
55	53	55	53
47.5	108	47.5	108
42.5	203	42.5	203
37.5	513	37.5	513
33	1355	33	1355
29	3304	29	3304
25.5	4766	25.5	4766
22.5	5100	22.5	5100
19.5	5262	19.5	5262
17	5264	17	5264
15	5240	15	5240
13	5266	13	5266
11	5389	11	5389
9	5314	9	5314
7	5215	7	5215
5	5088	5	5088
3	5064	3	5064
1	5050	1	5050
0	5051	0	5051
-1	5050	-1	5050
-3	5064	-3	5064
-5	5088	-5	5088
-7	5215	-7	5215
-9	5314	-9	5314
-11	5389	-11	5389
-13	5266	-13	5266
-15	5240	-15	5240
-17	5264	-17	5264
-19.5	5262	-19.5	5262
-22.5	5100	-22.5	5100
-25.5	4766	-25.5	4766
-29	3304	-29	3304
-33	1355	-33	1355
-37.5	513	-37.5	513
-42.5	203	-42.5	203
-47.5	108	-47.5	108
-55	53	-55	53
-65	23	-65	23
-75	10	-75	10
-85	7	-85	7
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 5389 Located At Horizontal Angle =-11, Vertical Angle =-1
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 5389 Located At Horizontal Angle =-11, Vertical Angle =-1
50% Maximum Candela = 2694.5
10% Maximum Candela = 538.9