



**PROFESSIONAL
OUTDOOR LIGHTING**



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Report No: L081407412
Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407412

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

Model Number: 1059-XX-NS-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-NS-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-NS-G-30
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D
Total Lumens:	5180.76
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.62
Input Power (W):	74.14
Input Power Factor:	1.00
Current ATHD @ 120V(%):	6%
Current ATHD @ 277V(%):	N/A
Efficacy:	70
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	3148
Chromaticity Coordinate x:	0.4278
Chromaticity Coordinate y:	0.4025
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	1:00
Total Operating Time (Hours):	1:40
Off State Power(W):	0.00

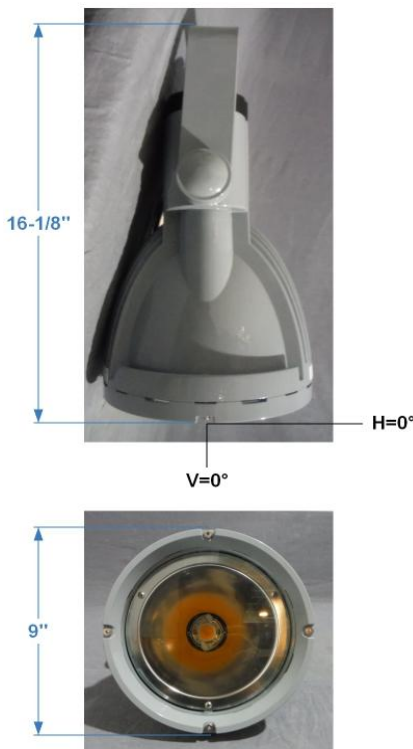
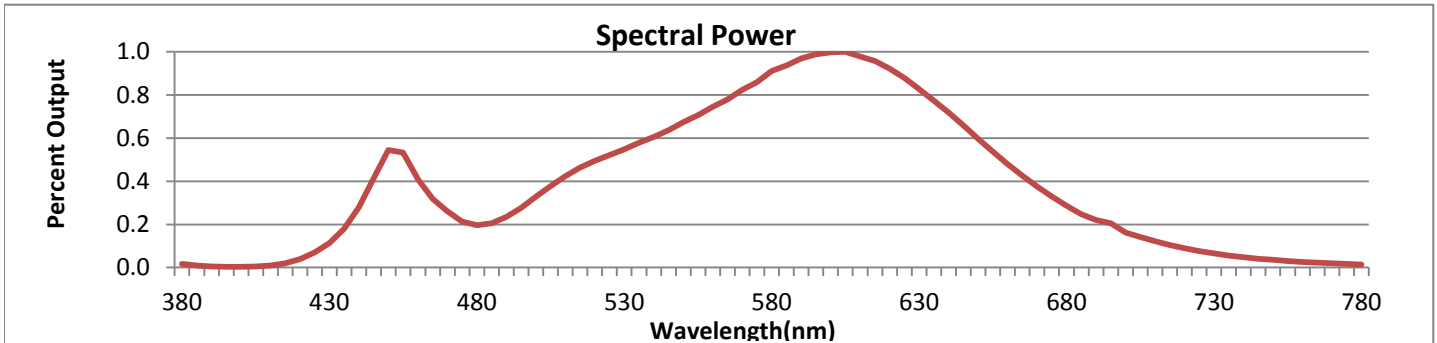


FIG. 1 LUMINAIRE

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



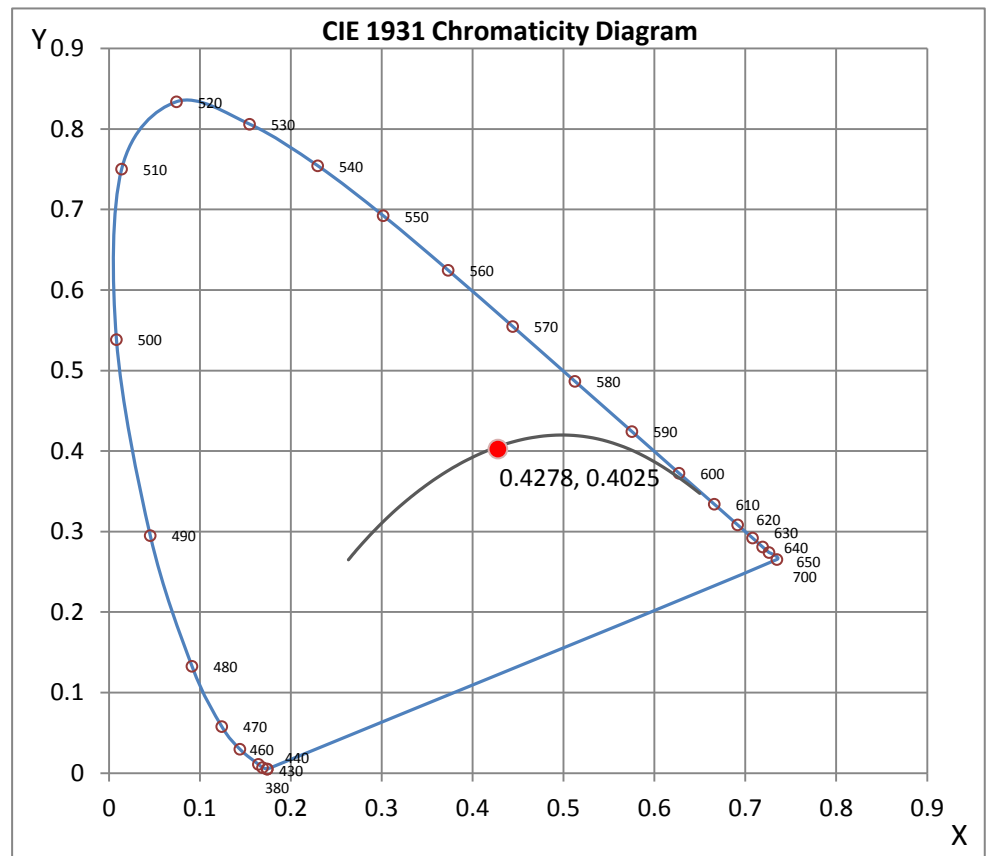
Wavelength	W/m ² nm	440	0.0941	510	0.1424	580	0.3064	650	0.2008	720	0.0301
380	0.0058	450	0.1835	520	0.1661	590	0.3258	660	0.1615	730	0.0219
390	0.0018	460	0.1372	530	0.1845	600	0.3357	670	0.1266	740	0.0160
400	0.0012	470	0.0875	540	0.2035	610	0.3291	680	0.0966	750	0.0120
410	0.0031	480	0.0663	550	0.2266	620	0.3100	690	0.0741	760	0.0088
420	0.0130	490	0.0789	560	0.2508	630	0.2782	700	0.0543	770	0.0066
430	0.0383	500	0.1103	570	0.2773	640	0.2415	710	0.0410	780	0.0048

CRI & CCT

x	0.4278
y	0.4025
u'	0.2454
v'	0.5194
CRI	82.00
CCT	3148
Duv	0.00072

R Values

R1	80.00
R2	89.24
R3	96.39
R4	80.01
R5	79.60
R6	85.76
R7	84.31
R8	60.70
R9	8.03
R10	74.84
R11	78.23
R12	66.42
R13	82.59
R14	97.97



*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 : L081407412.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407412
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-NS-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 CAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 74.14W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

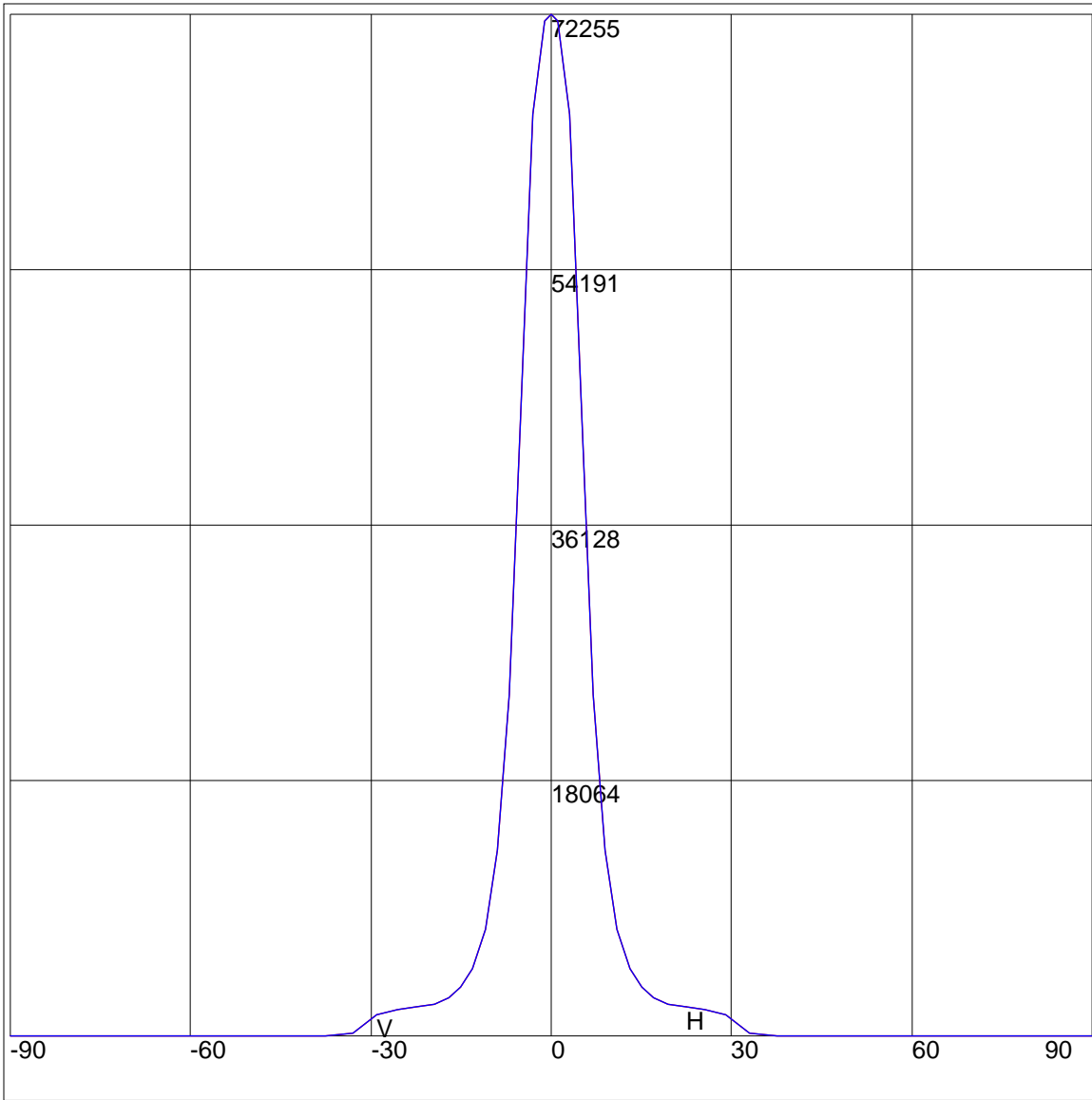
NEMA Type	2 H x 2 V
Maximum Candela	72255
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	11.6
Vertical Beam Angle (50%)	11.6
Horizontal Field Angle (10%)	22.5
Vertical Field Angle (10%)	22.5
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1644
Beam Efficiency	N.A.
Field Lumens	3197
Field Efficiency	N.A.
Spill Lumens	1984
Luminaire Lumens	5181
Total Efficiency	N.A.
Total Luminaire Watts	74.14
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407412.IES

AXIAL CANDELA

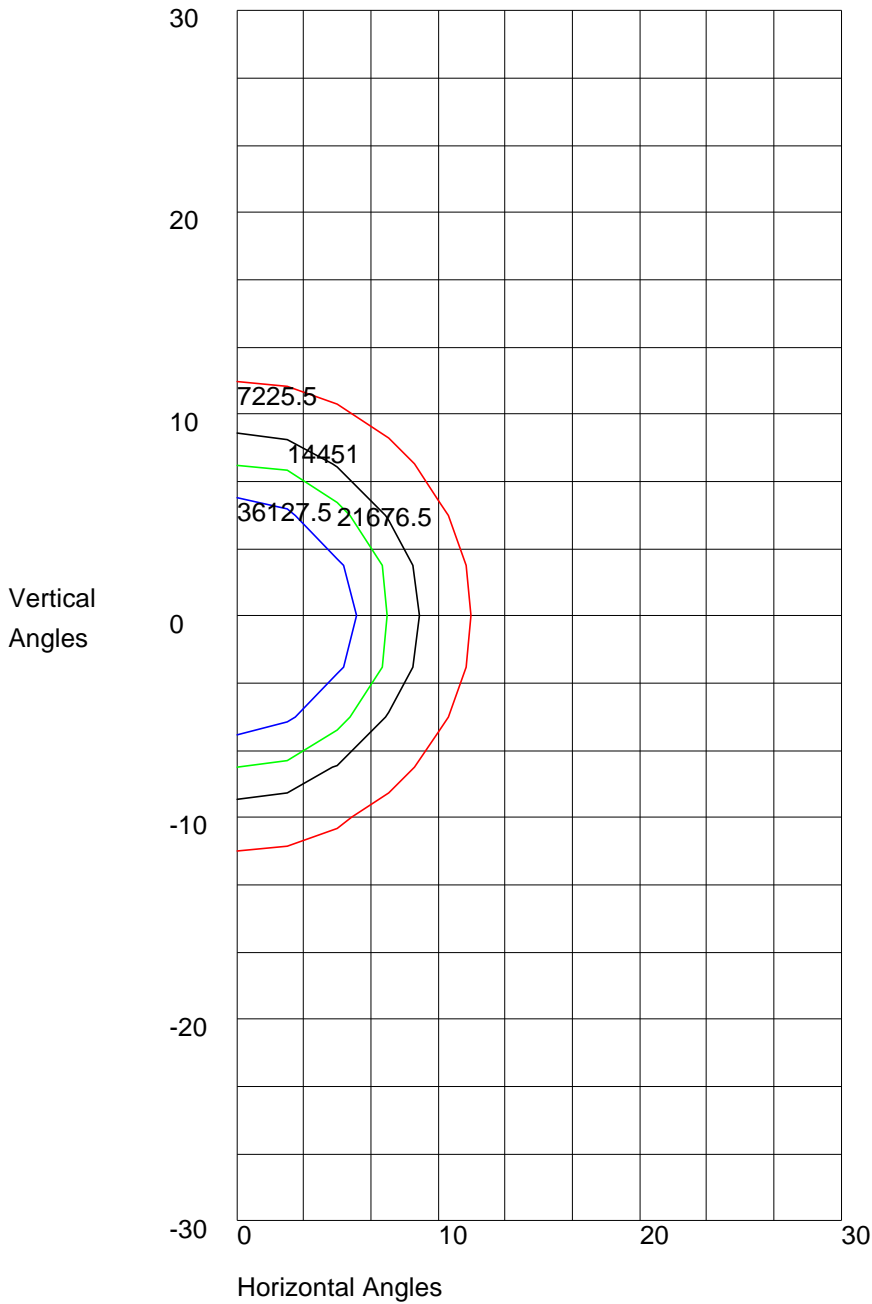
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	5	85	5
75	7	75	7
65	9	65	9
55	12	55	12
47.5	19	47.5	19
42.5	31	42.5	31
37.5	59	37.5	59
33	233	33	233
29	1489	29	1489
25.5	1947	25.5	1947
22.5	2051	22.5	2051
19.5	2258	19.5	2258
17	2708	17	2708
15	3447	15	3447
13	4829	13	4829
11	7588	11	7588
9	13148	9	13148
7	24178	7	24178
5	44388	5	44388
3	65216	3	65216
1	71814	1	71814
0	72255	0	72255
-1	71814	-1	71814
-3	65216	-3	65216
-5	44388	-5	44388
-7	24178	-7	24178
-9	13148	-9	13148
-11	7588	-11	7588
-13	4829	-13	4829
-15	3447	-15	3447
-17	2708	-17	2708
-19.5	2258	-19.5	2258
-22.5	2051	-22.5	2051
-25.5	1947	-25.5	1947
-29	1489	-29	1489
-33	233	-33	233
-37.5	59	-37.5	59
-42.5	31	-42.5	31
-47.5	19	-47.5	19
-55	12	-55	12
-65	9	-65	9
-75	7	-75	7
-85	5	-85	5
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 72255 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 72255 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 36127.5
10% Maximum Candela = 7225.5