



8165 E Kaiser Blvd.
 Anaheim, CA 92808
 www.lightlaboratory.com

Report No: L022111905



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Issue Date: 2/24/2021

Report Prepared For: Hunter Industries
 1940 Diamond St., San Marcos, CA 92078

Model Number: PAR36ECO50WFL

Test: Photometric/Colorimetric/Electrical Test

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. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 2/17/21

Date of Tests: 2/18/21 - 2/23/21

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-S4	1/9/22
BK PRECISION	1747	PS-DC04	1/10/22
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/22
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

General Information

Manufacturer:	Hunter Industries
Model Number:	PAR36ECO50WFL
Driver Model Number:	N/A

Test Summary

Total Lumens:	856.10
Efficacy:	106.68
Color Redering Index:	83.2
Correlated Color Temperature:	2656
Input Voltage (VAC/60Hz):	12.01
Input Current (Amp):	0.9472
Input Power (W):	8.03
Input Power Factor:	0.7057
Current ATHD (%):	66.6%

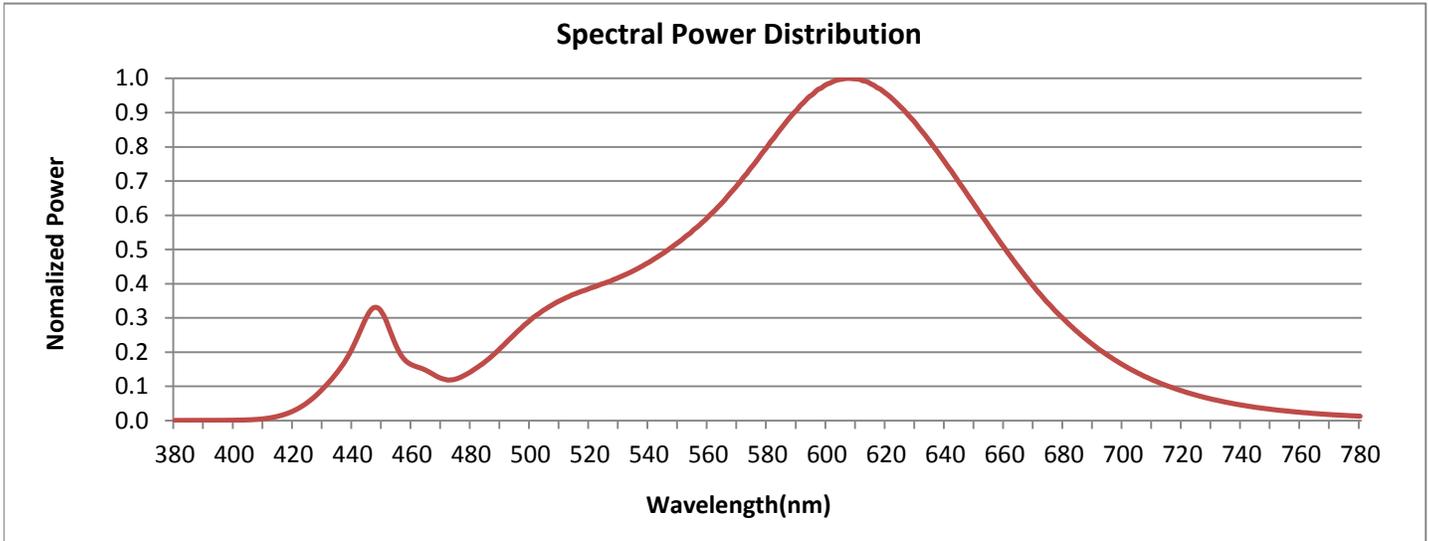
Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:30



FIG. 1 LUMINAIRE

Colorimetry Test Results

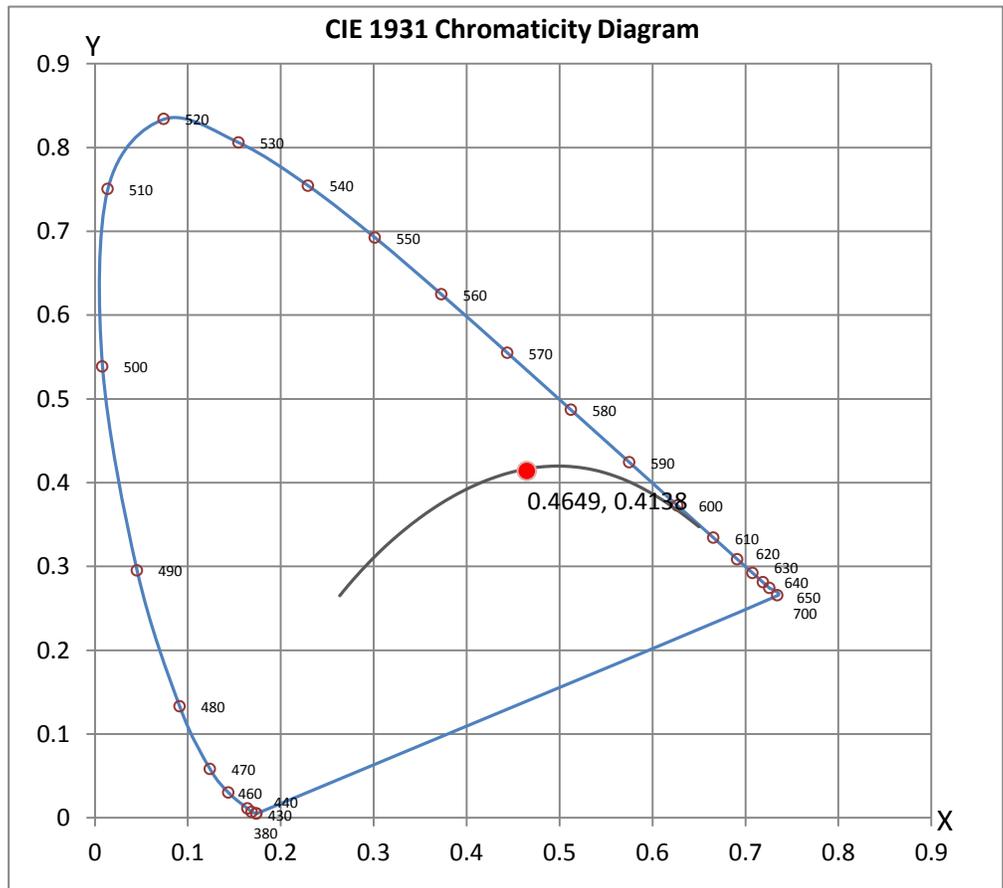


CRI & CCT

x	0.4649
y	0.4138
u'	0.2643
v'	0.5293
CRI	83.20
CCT	2656
Duv	0.00078

R Values

R1	81.29
R2	91.43
R3	96.11
R4	82.45
R5	82.65
R6	92.09
R7	81.79
R8	57.52
R9	8.80
R10	82.04
R11	83.23
R12	81.29
R13	83.49
R14	98.43
R15	72.80



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 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 : L022111905.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L022111905
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 2/24/2021
[MANUFAC] Hunter Industries
[LUMCAT] PAR36ECO50WFL
[LUMINAIRE] PAR36 10W 2700K Flood
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12.01VAC, 8.03W
[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	1521
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	34.8
Vertical Beam Angle (50%)	34.8
Horizontal Field Angle (10%)	76.0
Vertical Field Angle (10%)	76.0
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	315
Beam Efficiency	N.A.
Field Lumens	671
Field Efficiency	N.A.
Spill Lumens	185
Luminaire Lumens	856
Total Efficiency	N.A.
Total Luminaire Watts	8.03
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L022111905.IES

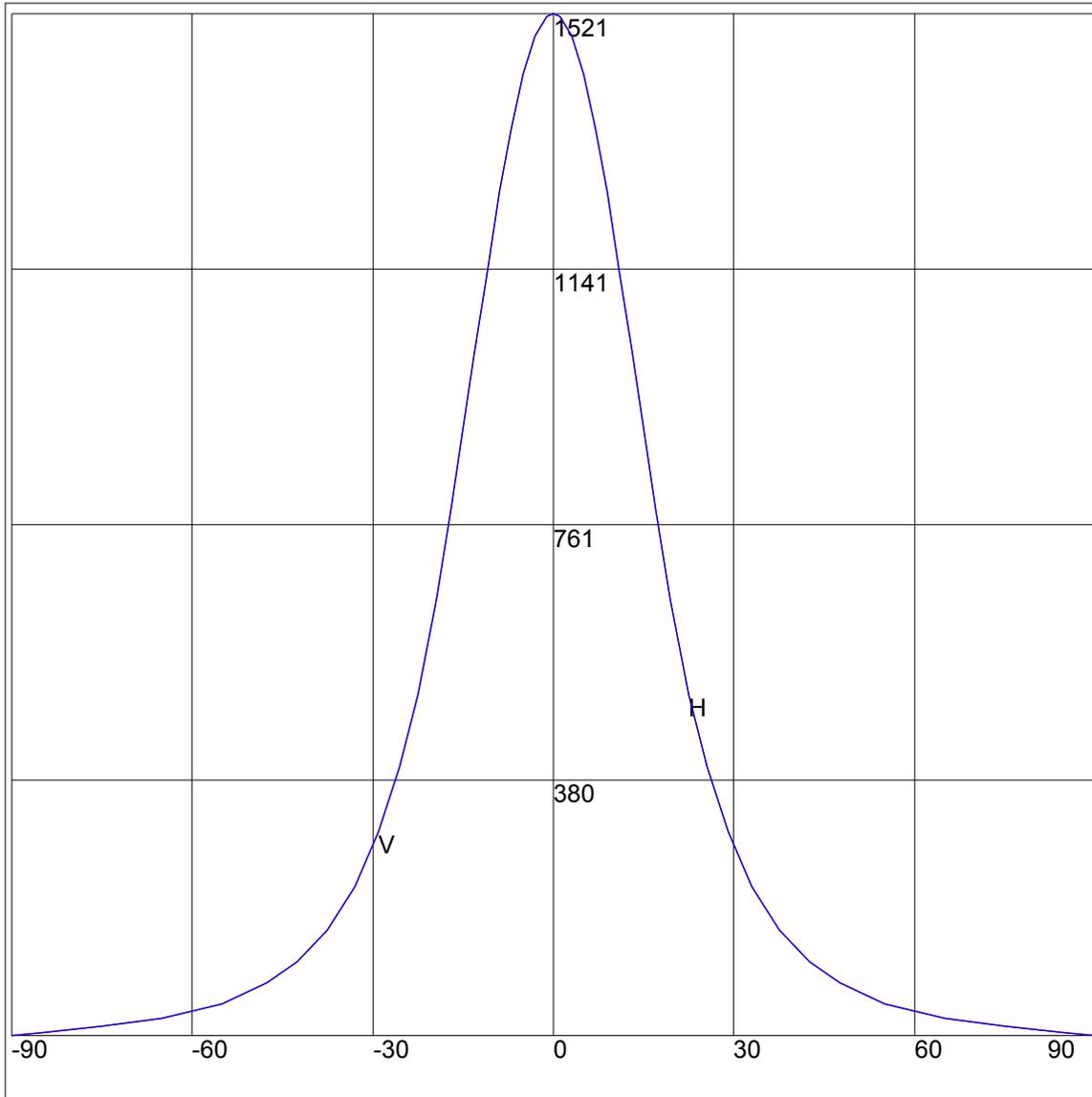
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	4	85	4
75	14	75	14
65	27	65	27
55	48	55	48
47.5	79	47.5	79
42.5	110	42.5	110
37.5	157	37.5	157
33	223	33	223
29	305	29	305
25.5	401	25.5	401
22.5	509	22.5	509
19.5	649	19.5	649
17	783	17	783
15	901	15	901
13	1018	13	1018
11	1140	11	1140
9	1257	9	1257
7	1350	7	1350
5	1430	5	1430
3	1487	3	1487
1	1517	1	1517
0	1521	0	1521
-1	1517	-1	1517
-3	1487	-3	1487
-5	1430	-5	1430
-7	1350	-7	1350
-9	1257	-9	1257
-11	1140	-11	1140
-13	1018	-13	1018
-15	901	-15	901
-17	783	-17	783
-19.5	649	-19.5	649
-22.5	509	-22.5	509
-25.5	401	-25.5	401
-29	305	-29	305
-33	223	-33	223
-37.5	157	-37.5	157
-42.5	110	-42.5	110
-47.5	79	-47.5	79
-55	48	-55	48
-65	27	-65	27
-75	14	-75	14
-85	4	-85	4
-90	0	-90	0

ZONAL LUMEN SUMMARY

Zone	%
0-20	44
0-30	66.7
0-40	80.9
0-60	94.5
0-80	99.5
0-90	100
10-90	84.9
20-40	36.8
20-50	45.3
40-70	16.8
60-80	4.9
70-80	1.8
80-90	0.5
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY

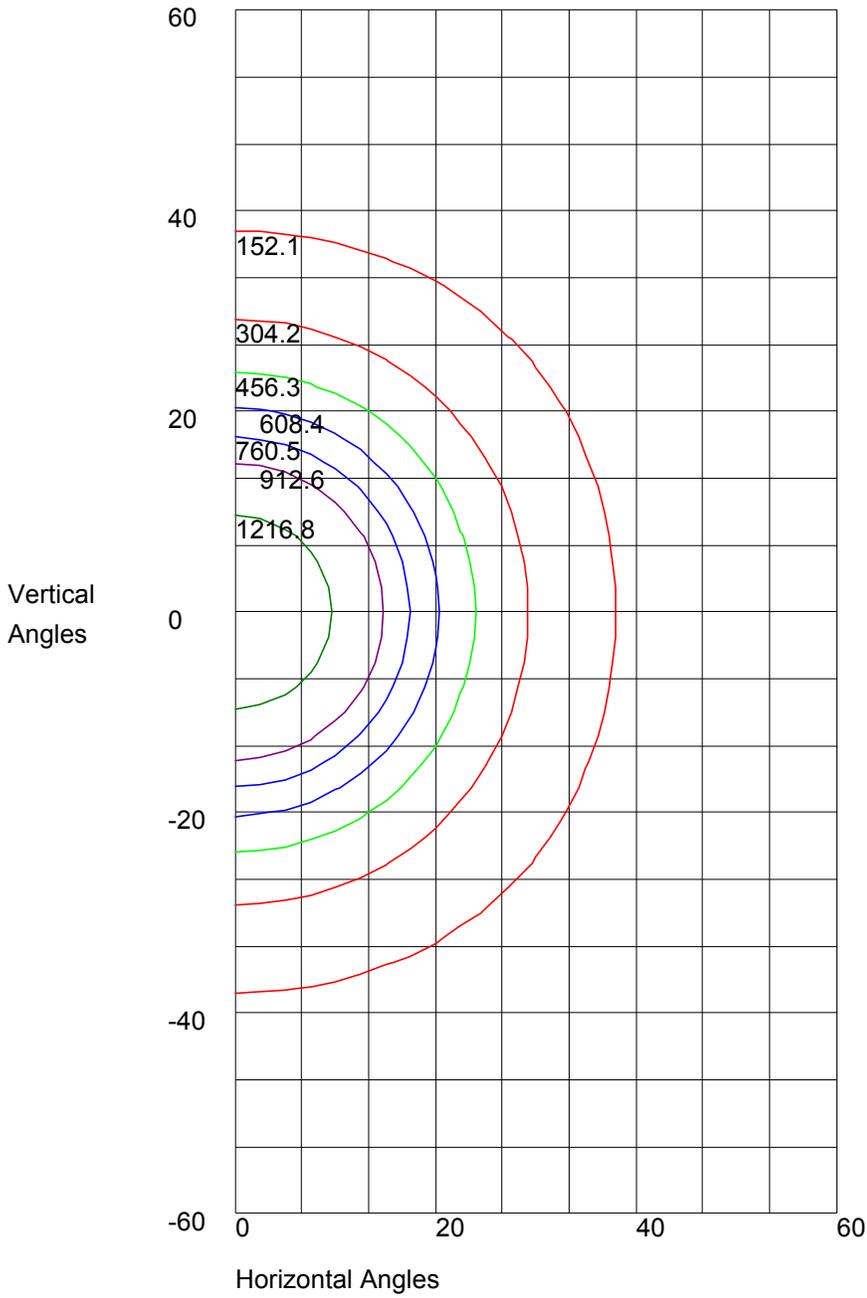


Maximum Candela = 1521 Located At Horizontal Angle = 0, Vertical Angle = 0

H - Horizontal Axial Candela

V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 1521 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 760.5
10% Maximum Candela = 152.1