



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

Report No: L111602310R01

Date: 11/15/2016



NVLAP LAB CODE 200927-0

**Report No:** L111602310R01

**Report Prepared For:** Revolution Lighting Technologies  
 4139 Guardian St. Simi Valley, CA 93063

**Model Number:** 128014-125

**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 128014-125 . Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 11/9/16

**Date of Tests:** 11/11/16 - 11/15/16

**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	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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>	Revolution Lighting Technologies
<b>Model Number:</b>	128014-125
<b>Driver Model Number:</b>	LETRON LP0240-1450 (4 DRIVERS)
<b>Total Lumens:</b>	37309.81
<b>Input Voltage (VAC/60Hz):</b>	277.00
<b>Input Current (Amp):</b>	0.99
<b>Input Power (W):</b>	250.97
<b>Input Power Factor:</b>	0.92
<b>Current ATHD @ 120V(%):</b>	N/A
<b>Current ATHD @ 277V(%):</b>	17%
<b>Efficacy:</b>	149
<b>Color Rendering Index (CRI):</b>	85
<b>Correlated Color Temperature (K):</b>	4986
<b>Chromaticity Coordinate x:</b>	0.3456
<b>Chromaticity Coordinate y:</b>	0.3525
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:30
<b>Total Operating Time (Hours):</b>	1:00
<b>Off State Power(W):</b>	0.00

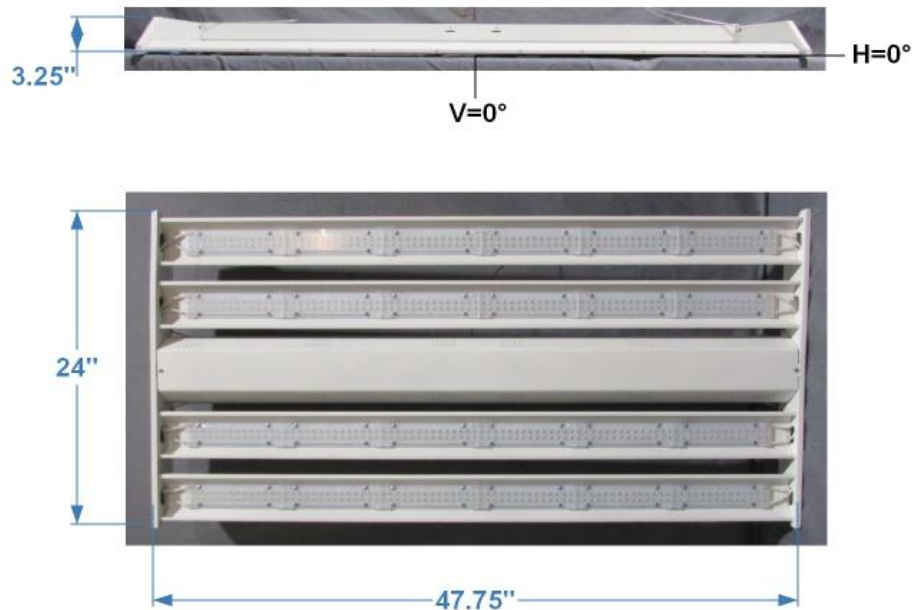
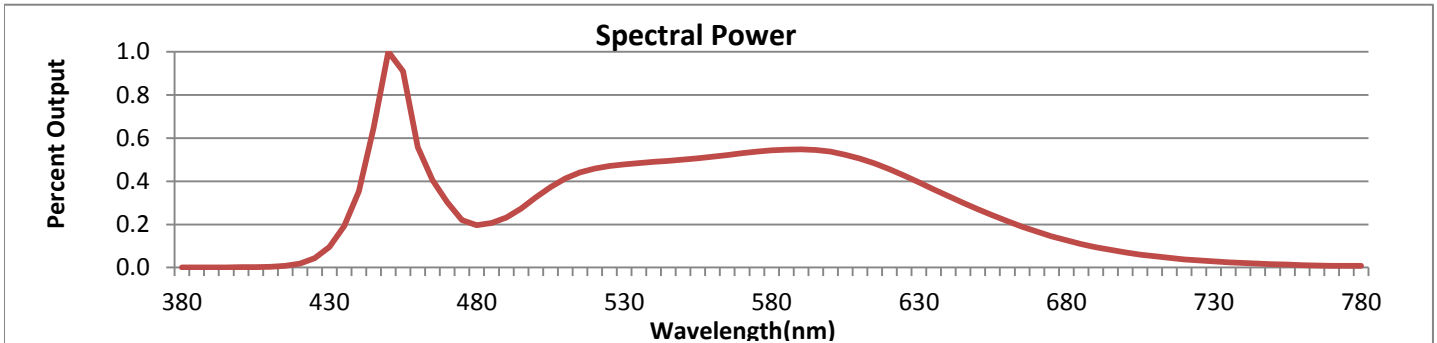


FIG. 1 LUMINAIRE

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



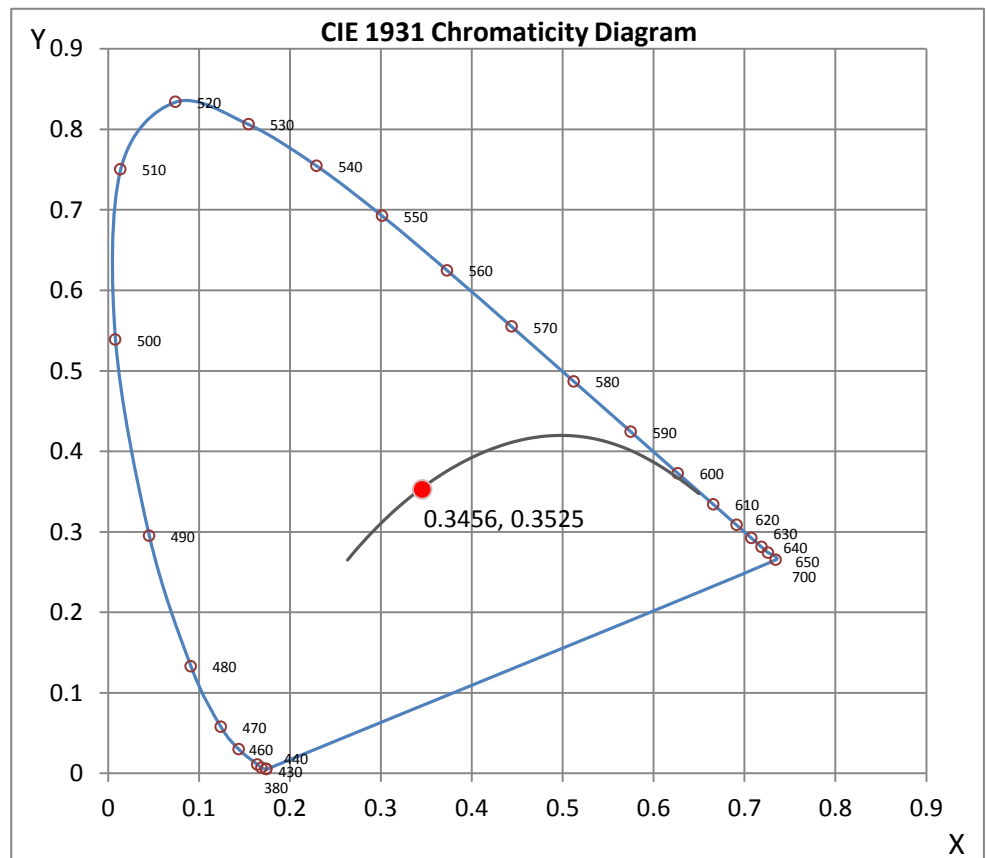
Wavelength	W/m <sup>2</sup> nm	440	0.3540	510	0.4125	580	0.5442	650	0.2706	720	0.0380
380	0.0009	450	1.0000	520	0.4589	590	0.5488	660	0.2152	730	0.0280
390	0.0010	460	0.5588	530	0.4783	600	0.5371	670	0.1660	740	0.0207
400	0.0014	470	0.3039	540	0.4902	610	0.5057	680	0.1262	750	0.0154
410	0.0036	480	0.1959	550	0.5010	620	0.4565	690	0.0944	760	0.0115
420	0.0187	490	0.2324	560	0.5143	630	0.3948	700	0.0702	770	0.0085
430	0.0949	500	0.3255	570	0.5301	640	0.3319	710	0.0518	780	0.0075

**CRI & CCT**

x	0.3456
y	0.3525
u'	0.2114
v'	0.4852
CRI	84.60
CCT	4986
Duv	0.00026

**R Values**

R1	83.66
R2	89.43
R3	92.63
R4	84.41
R5	83.19
R6	83.83
R7	88.66
R8	70.86
R9	18.13
R10	73.95
R11	83.83
R12	55.91
R13	85.42
R14	95.70



\*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 : Keyur Patel

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: 9*



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

# Photometric Test Report

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L111602310R01.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L111602310R01  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUEDATE] 11/15/2016  
 [MANUFAC] REVOLUTION LIGHTING TECHNOLOGIES  
 [LUMCAT] 128014-125  
 [LUMINAIRE] 258W ECO LINEAR HIGH BAY 5000K MEDIUM OPTIC  
 [BALLASTCAT] LETRON LP0240-1450 (4 DRIVERS)  
 [LAMPPOSITION] 0,0  
 [LAMPCAT] N/A  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 277VAC, 250.97W  
 [TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	37310
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	149
Total Luminaire Watts	250.97
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.90 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	16345	20485	16243
55	7219	10397	6897
65	3613	4387	2815
75	2675	2074	1303
85	3231	2861	2844

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L111602310R01.IES**

**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	20438	20438	20438	20438	20438
<b>5</b>	20679	20654	20635	20617	20594
<b>10</b>	21155	21131	21047	20877	20784
<b>15</b>	21299	21354	21224	20767	20532
<b>20</b>	20490	20796	20772	19934	19445
<b>25</b>	18775	19393	19647	18463	17755
<b>30</b>	16468	17312	17903	16542	15724
<b>35</b>	13887	14775	15608	14249	13465
<b>40</b>	11011	11919	12885	11619	10880
<b>45</b>	7880	8787	9876	8673	7831
<b>50</b>	4953	5757	6751	5664	4849
<b>55</b>	2823	3354	4066	3243	2697
<b>60</b>	1677	1925	2340	1821	1540
<b>65</b>	1041	1120	1264	975	811
<b>70</b>	688	731	723	491	410
<b>75</b>	472	481	366	251	230
<b>80</b>	311	284	199	194	194
<b>85</b>	192	166	170	170	169
<b>90</b>	0	0	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L111602310R01.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	7890.94	N.A.	21.10
0-30	16557.61	N.A.	44.40
0-40	25609.96	N.A.	68.60
0-60	35579.1	N.A.	95.40
0-80	37153.05	N.A.	99.60
0-90	37309.81	N.A.	100.00
10-90	35329.13	N.A.	94.70
20-40	17719.02	N.A.	47.50
20-50	24483.98	N.A.	65.60
40-70	11126.32	N.A.	29.80
60-80	1573.95	N.A.	4.20
70-80	416.76	N.A.	1.10
80-90	156.77	N.A.	0.40
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	37309.81	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1980.68
10-20	5910.26
20-30	8666.67
30-40	9052.35
40-50	6764.96
50-60	3204.17
60-70	1157.18
70-80	416.76
80-90	156.77
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L111602310R01.IES**

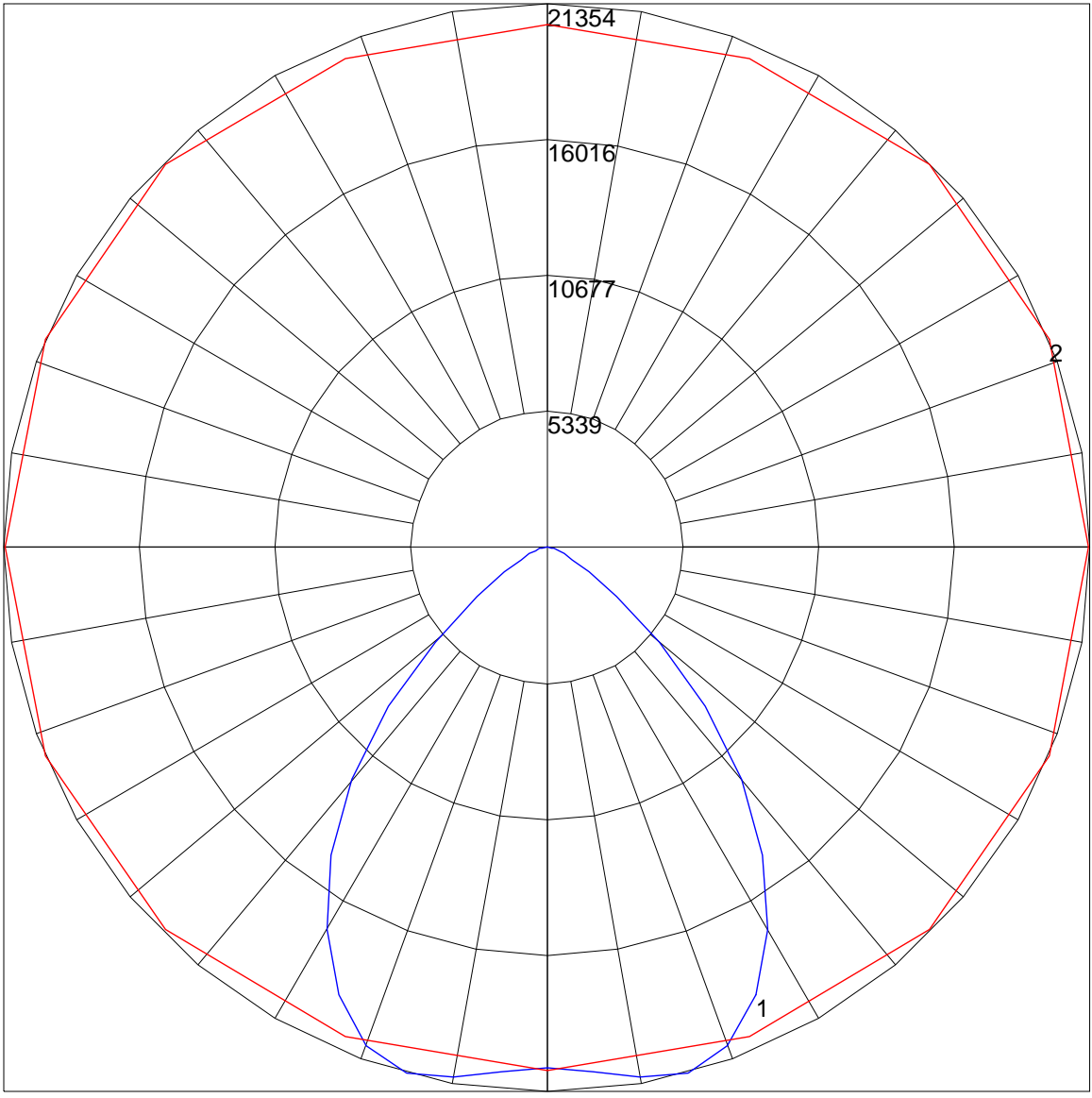
**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	0
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90	0
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80	0
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71	0
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64	0
5	84	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57	0
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52	0
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47	0
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43	0
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39	0
10	61	50	43	38	60	49	42	38	48	42	38	47	42	38	47	41	37	36	0



POLAR GRAPH



Maximum Candela = 21354 Located At Horizontal Angle = 22.5, Vertical Angle = 15  
# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)