



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

Report No: L121605926



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Issue Date: 2/8/2017

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

Model Number: 133433-205

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

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 12/21/16

Date of Tests: 1/5/17 - 1/9/17

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	11/28/17
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
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:	Revolution Lighting
Model Number:	133433-205
Driver Model Number:	N/A
Total Lumens:	16657.13
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	1.04
Input Power (W):	124.04
Input Power Factor:	0.99
Current ATHD @ 120V(%):	13%
Current ATHD @ 277V(%):	N/A
Efficacy:	134
Color Rendering Index (CRI):	86
Correlated Color Temperature (K):	5092
Chromaticity Coordinate x:	0.3425
Chromaticity Coordinate y:	0.3486
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:15
Off State Power(W):	0.00

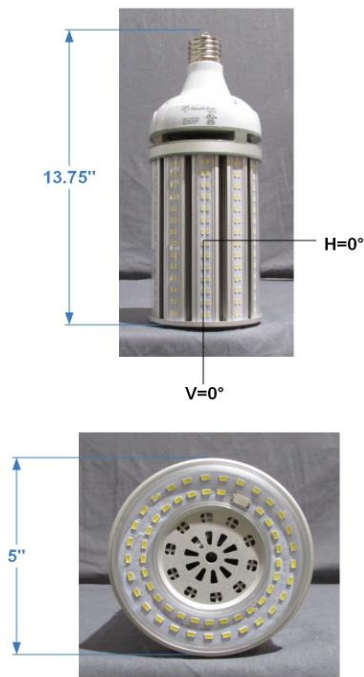
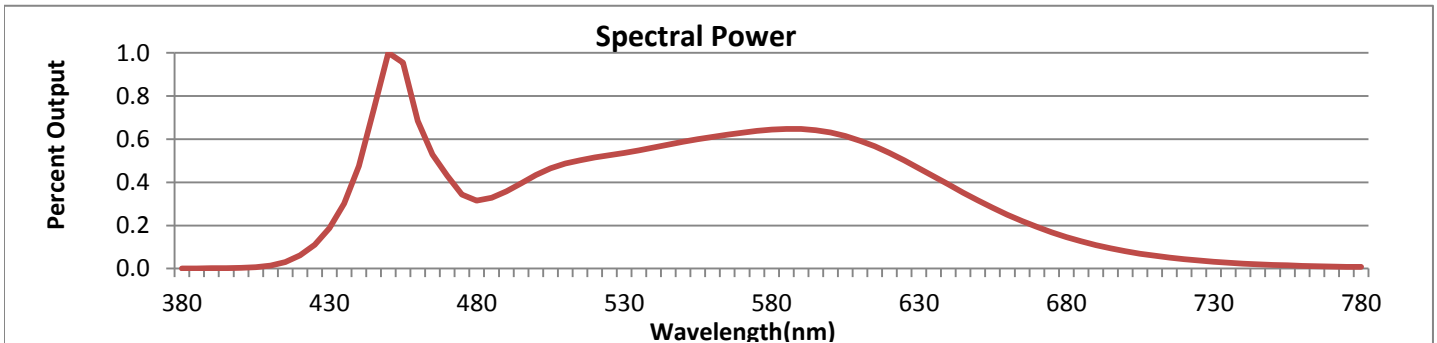


FIG. 1 LUMINAIRE

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



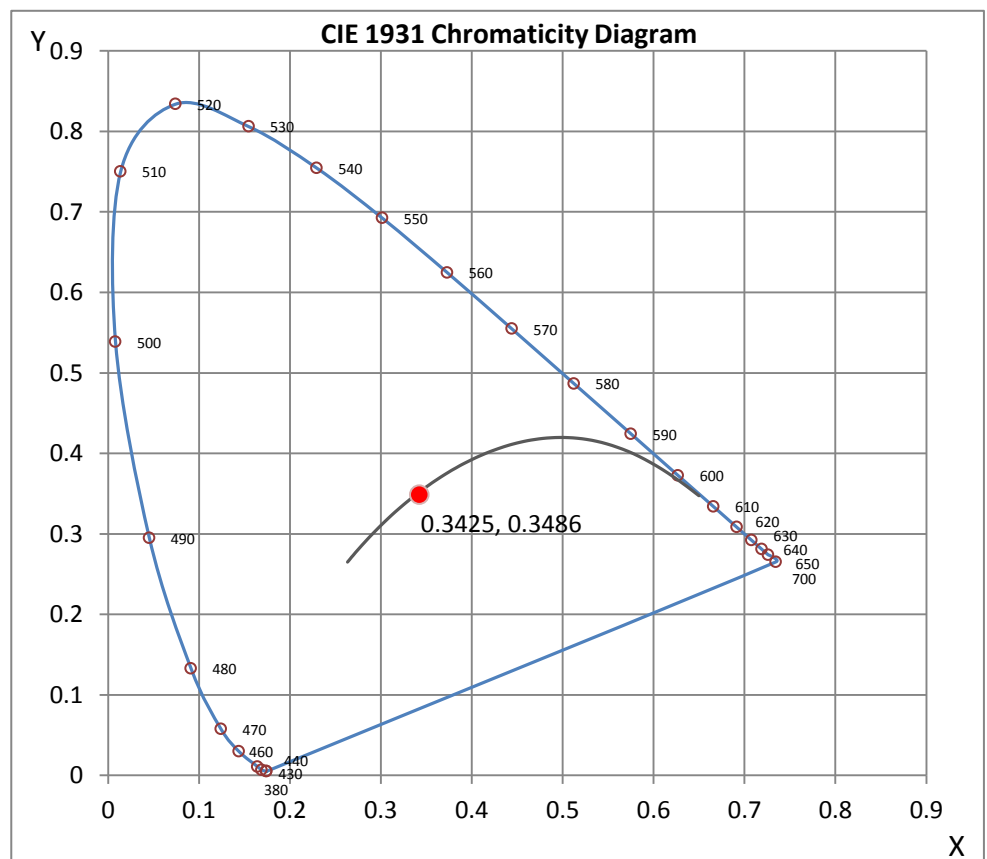
Wavelength	W/m ² nm	440	0.4748	510	0.4880	580	0.6448	650	0.3169	720	0.0432
380	0.0012	450	1.0000	520	0.5150	590	0.6468	660	0.2505	730	0.0318
390	0.0013	460	0.6840	530	0.5358	600	0.6307	670	0.1930	740	0.0235
400	0.0029	470	0.4302	540	0.5617	610	0.5933	680	0.1462	750	0.0174
410	0.0131	480	0.3146	550	0.5877	620	0.5359	690	0.1090	760	0.0130
420	0.0614	490	0.3581	560	0.6106	630	0.4643	700	0.0806	770	0.0097
430	0.1870	500	0.4336	570	0.6302	640	0.3902	710	0.0592	780	0.0084

CRI & CCT

x	0.3425
y	0.3486
u'	0.2108
v'	0.4828
CRI	86.10
CCT	5092
Duv	-0.00045

R Values

R1	85.18
R2	91.73
R3	94.81
R4	85.70
R5	85.89
R6	87.37
R7	87.45
R8	70.69
R9	20.10
R10	79.79
R11	85.54
R12	69.71
R13	87.14
R14	97.26



*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*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121605926.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121605926
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 1/9/2017
[MANUFAC] REVOLUTION LIGHTING
[LUMCAT] 133433-205
[LUMINAIRE] 125W 5000K EX39 Omnidirectional Utility Lamp
[BALLASTCAT] N/A
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 124.04W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	16657
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	124.04
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.42 ft (Diameter)
Luminous Width (90-270)	0.42 ft (Diameter)
Luminous Height	0.60 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	67329	67329	67329
55	65864	65864	65864
65	61950	61950	61950
75	59608	59608	59608
85	61307	61307	61307

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121605926.IES

CANDELA TABULATION

	<u>0</u>
0	1063
5	1070
10	1110
15	1189
20	1297
25	1404
30	1500
35	1587
40	1663
45	1729
50	1762
55	1751
60	1710
65	1653
70	1598
75	1548
80	1512
85	1500
90	1487
95	1469
100	1439
105	1400
110	1351
115	1289
120	1217
125	1131
130	1034
135	919
140	790
145	661
150	536
155	409
160	282
165	173
170	88
175	49
180	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121605926.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	444.74	N.A.	2.70
0-30	1095.53	N.A.	6.60
0-40	2092.35	N.A.	12.60
0-60	4989.66	N.A.	30.00
0-80	8271.47	N.A.	49.70
0-90	9907.77	N.A.	59.50
10-90	9804.28	N.A.	58.90
20-40	1647.61	N.A.	9.90
20-50	2981.07	N.A.	17.90
40-70	4538.03	N.A.	27.20
60-80	3281.81	N.A.	19.70
70-80	1641.08	N.A.	9.90
80-90	1636.3	N.A.	9.80
90-110	3078.25	N.A.	18.50
90-120	4355.93	N.A.	26.20
90-130	5369.41	N.A.	32.20
90-150	6498.83	N.A.	39.00
90-180	6749.36	N.A.	40.50
110-180	3671.11	N.A.	22.00
0-180	16657.13	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	103.48
10-20	341.26
20-30	650.79
30-40	996.82
40-50	1333.46
50-60	1563.84
60-70	1640.73
70-80	1641.08
80-90	1636.3
90-100	1599.55
100-110	1478.7
110-120	1277.68
120-130	1013.48
130-140	711.07
140-150	418.36
150-160	192.06
160-170	52.98
170-180	5.49

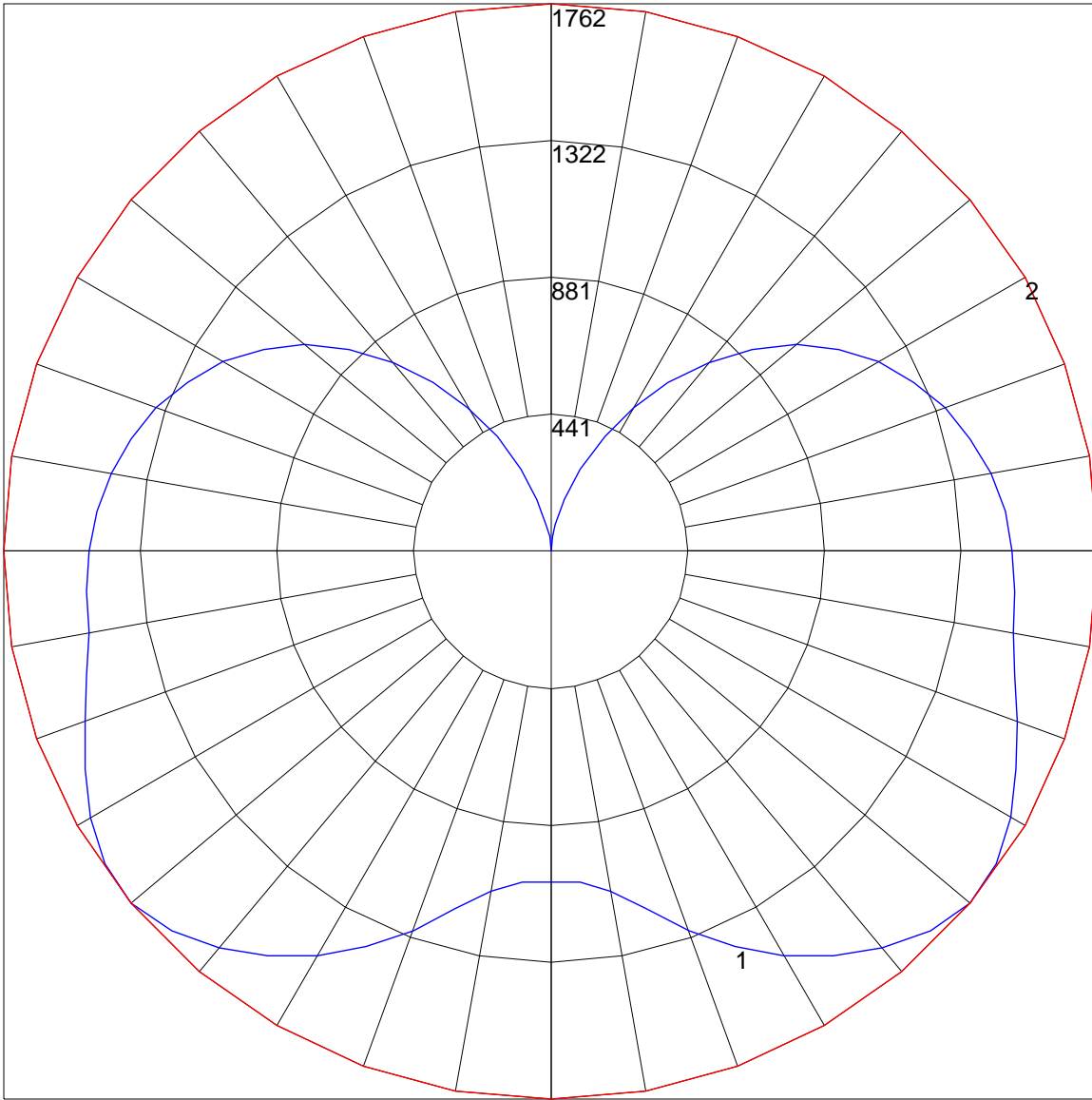
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	59
1	95	88	83	77	88	82	77	72	70	66	63	60	56	54	50	47	45	40
2	85	75	66	59	78	69	62	55	59	53	48	49	45	41	41	37	34	30
3	76	64	55	47	70	59	51	44	50	44	38	42	37	32	35	30	27	23
4	69	56	46	38	63	51	43	36	44	37	31	37	31	26	30	26	22	18
5	63	49	39	32	58	45	37	30	39	31	26	32	27	22	26	22	18	15
6	57	43	34	27	53	40	32	25	34	27	22	29	23	19	24	19	15	12
7	53	39	30	23	49	36	28	22	31	24	19	26	20	16	21	17	13	10
8	49	35	26	20	45	32	24	19	28	21	16	23	18	14	19	15	11	9
9	45	32	23	18	42	29	22	17	25	19	14	21	16	12	18	13	10	8
10	42	29	21	16	39	27	20	15	23	17	13	20	14	11	16	12	9	7

POLAR GRAPH



Maximum Candela = 1762 Located At Horizontal Angle = 0, Vertical Angle = 50
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (50) (Through Max. Cd.)