



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

Report No: L091407201

Date: 9/30/2014



NVLAP LAB CODE 200927-0

Report No: L091407201

Report Prepared For: Prudential Lighting
1737 East 22nd Street

Model Number: Wal14-LED4LO-WFA

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 Wal14-LED4LO-WFA. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/22/14

Date of Tests: 9/25/14 - 9/25/14

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:	Prudential Lighting
Model Number:	Wal14-LED4LO-WFA
Driver Model Number:	OSRAM OPTOTRONIC OT30W/PRG1050C/UNV/DIM/L
Total Lumens:	2203.34
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.16
Input Power (W):	18.49
Input Power Factor:	0.99
Current ATHD @ 120V(%):	5%
Current ATHD @ 277V(%):	N/A
Efficacy:	119
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	0:55
Off State Power(W):	0.00

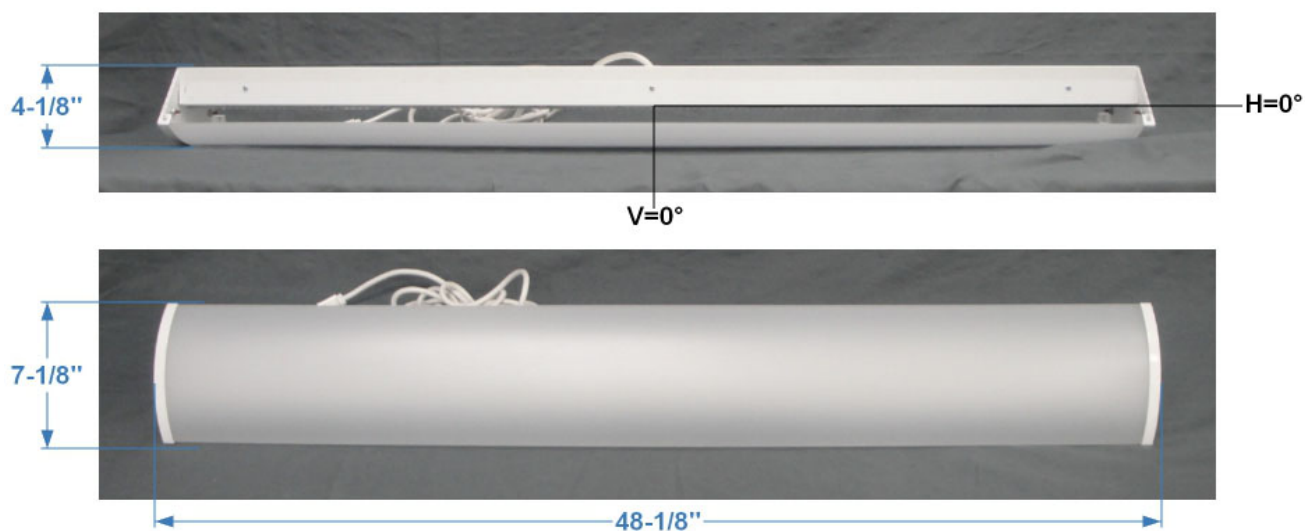


FIG. 1 LUMINAIRE



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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 : Randy Chau

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: 10*

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



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L091407201.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L091407201
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 9/30/2014
[MANUFAC] PRUDENTIAL LIGHTING
[LUMCAT] Wal14-LED4LO-WFA
[LUMINAIRE] 48-1/8"L. X 7-1/8"W. X 4-1/8"H. LED LUMINAIRE
[MORE] DIFFUSED LENS
[BALLASTCAT] OSRAM OPTOTRONIC OT30W/PRG1050C/UNV/DIM/L
[BALLAST] INPUT: 120-277VAC, 0.31-0.15A, 50/60Hz. OUTPUT: 30W, 10-55VDC, 350-1050mA
[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, 18.49W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2203
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	18.49
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.59 ft
Luminous Height	0.17 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091407201.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2303	2055	2083
55	2106	1823	1875
65	1849	1563	1669
75	1418	1304	1538
85	666	1393	1584

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091407201.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	608.50	608.50	608.50	608.50	608.50	608.50	608.50	608.50	608.50	608.50
5	604.04	603.86	603.77	603.81	603.95	604.08	604.28	604.43	604.39	604.48
10	592.62	592.31	592.33	592.32	592.80	593.22	593.62	593.98	594.19	594.53
15	574.15	574.09	574.21	574.42	575.11	575.99	576.75	577.30	577.95	578.57
20	550.38	550.25	550.49	550.74	551.90	553.28	554.32	555.34	556.36	557.32
25	520.86	520.80	521.12	521.72	523.39	525.18	526.65	528.07	529.37	530.81
30	486.52	486.71	487.20	487.97	490.10	492.35	494.44	495.81	497.53	499.55
35	448.64	449.10	449.77	450.89	453.24	455.99	458.33	460.08	462.37	464.74
40	407.89	408.62	409.60	411.07	413.54	416.51	419.12	421.03	423.52	426.33
45	365.47	366.00	367.02	368.70	371.48	374.77	377.27	379.43	382.46	385.76
50	321.28	321.39	322.32	324.30	327.69	331.07	333.61	336.44	339.78	343.39
55	275.89	275.98	276.73	278.82	282.29	285.88	288.75	291.98	296.17	300.24
60	229.94	229.89	230.54	232.65	236.37	239.91	243.47	247.51	252.25	256.90
65	183.71	183.65	184.44	186.58	190.36	194.44	198.70	203.42	208.46	213.51
70	137.11	137.37	138.67	141.38	145.46	150.09	154.90	160.39	165.97	171.74
75	91.72	92.38	94.28	97.62	102.33	107.60	113.23	120.78	128.69	136.06
80	50.87	51.75	54.16	58.31	63.98	71.94	79.86	87.54	99.58	160.13
85	18.66	19.66	23.21	29.67	55.76	65.76	73.65	81.63	88.87	96.04
90	1.11	9.13	13.02	16.32	20.94	26.33	31.57	37.53	42.77	48.46
95	9.28	18.09	22.10	23.64	24.89	26.66	29.25	31.94	34.88	38.08
100	21.54	26.02	26.50	29.81	34.59	39.15	40.23	40.72	41.57	42.65
105	32.68	35.48	36.37	38.80	42.81	46.53	50.38	53.43	54.72	55.19
110	42.98	43.59	46.01	46.03	49.49	53.82	58.17	60.92	63.12	64.92
115	49.85	49.44	53.28	53.12	54.69	58.84	62.99	66.33	68.66	70.86
120	55.70	54.12	58.56	59.52	59.24	61.81	66.14	70.03	73.69	76.86
125	61.36	58.34	63.15	64.99	65.98	66.08	69.20	72.38	75.72	79.30
130	64.61	60.71	65.84	68.93	70.29	71.19	71.65	74.46	77.65	81.33
135	67.77	62.33	68.20	72.31	74.56	75.98	76.89	77.56	79.27	82.30
140	71.01	64.38	70.70	74.77	77.77	79.60	80.28	81.35	82.04	82.99
145	70.55	65.58	68.39	75.56	79.44	82.10	83.29	83.89	84.90	85.94
150	67.95	65.26	63.53	72.51	77.54	81.27	83.66	85.32	86.51	87.32
155	63.87	64.66	59.55	66.30	73.37	77.50	80.59	82.45	84.57	86.86
160	66.93	67.31	61.50	60.83	68.03	73.79	77.01	78.84	80.51	82.43
165	68.79	69.44	66.36	59.86	59.86	65.85	71.27	74.36	76.68	78.10
170	70.92	71.05	70.94	68.06	62.82	59.90	59.31	61.74	65.61	69.06
175	72.69	72.67	72.61	73.01	72.94	72.17	70.67	68.40	65.56	63.16
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert.
Angles**

Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0	608.50	608.50	608.50	608.50	608.50	608.50	608.50	608.50	608.50
5	604.62	604.71	604.89	604.94	605.12	605.04	605.17	605.03	605.08
10	594.71	595.11	595.61	595.83	596.26	596.36	596.54	596.40	596.67
15	579.12	579.83	580.74	581.32	581.99	582.16	582.52	582.55	582.80
20	558.28	559.48	560.69	561.87	562.92	563.24	563.69	563.90	564.32
25	532.18	533.87	535.85	537.61	538.86	539.53	540.21	540.41	540.84
30	501.51	504.19	506.33	508.68	510.32	511.12	511.83	512.39	512.75
35	467.11	470.17	473.08	475.88	477.77	478.83	479.85	480.49	480.86
40	429.43	433.11	436.83	439.93	441.98	443.22	444.51	445.27	445.74
45	389.49	393.93	397.85	401.11	403.28	405.08	406.45	407.28	408.03
50	347.80	352.90	356.88	360.36	362.83	364.90	366.40	367.35	368.29
55	305.19	310.53	314.62	318.21	320.67	323.02	324.92	325.85	326.52
60	261.98	267.10	271.30	275.24	278.37	280.82	282.79	284.03	284.65

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

65	218.64	223.85	228.81	233.42	237.27	240.78	243.25	244.70	245.38
70	178.28	185.17	191.40	196.96	201.48	204.71	207.58	209.16	210.16
75	143.42	150.83	156.94	161.88	165.97	169.42	172.89	176.01	177.63
80	186.08	194.73	202.11	207.68	211.18	214.39	217.18	217.51	217.19
85	102.70	108.65	114.04	118.40	121.82	124.40	126.19	127.08	127.45
90	53.54	58.57	63.14	66.87	69.96	72.10	73.64	74.23	74.31
95	41.46	44.68	47.62	50.33	52.37	53.69	54.68	54.93	54.99
100	43.76	45.14	46.28	47.60	48.67	49.31	49.51	49.44	49.45
105	55.25	55.11	54.92	54.76	54.49	54.15	53.89	53.45	53.42
110	66.13	67.48	67.85	67.61	67.14	66.51	65.79	65.46	65.25
115	73.00	74.77	75.24	77.17	77.99	77.95	77.88	78.06	78.00
120	78.72	80.63	82.49	84.15	84.78	85.01	85.40	86.27	86.50
125	82.64	85.94	88.22	89.79	90.88	91.47	92.19	93.11	93.71
130	84.90	87.97	90.71	92.70	94.07	94.88	95.74	96.98	97.60
135	85.31	88.25	90.80	93.21	94.67	95.66	96.76	98.00	98.61
140	84.99	87.42	89.74	92.05	93.51	94.47	95.65	96.61	97.13
145	86.61	87.19	88.31	90.25	91.62	92.53	93.34	94.21	94.64
150	88.31	88.99	89.92	90.71	91.30	91.56	91.77	92.28	92.61
155	88.68	89.31	90.25	91.08	91.80	92.02	92.19	92.51	92.88
160	84.71	87.41	89.55	90.62	91.66	91.79	91.86	92.14	92.42
165	79.31	81.45	83.53	87.14	89.35	90.04	90.80	91.03	91.22
170	71.89	72.87	73.68	76.07	78.25	81.83	83.19	85.45	86.78
175	61.01	58.89	57.07	55.14	54.24	56.05	58.74	59.78	59.33
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L091407201.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	220.58	N.A.	10.00
0-30	465.16	N.A.	21.10
0-40	756.15	N.A.	34.30
0-60	1324.2	N.A.	60.10
0-80	1690.47	N.A.	76.70
0-90	1787.8	N.A.	81.10
10-90	1730.41	N.A.	78.50
20-40	535.57	N.A.	24.30
20-50	834.14	N.A.	37.90
40-70	780.49	N.A.	35.40
60-80	366.27	N.A.	16.60
70-80	153.83	N.A.	7.00
80-90	97.33	N.A.	4.40
90-110	96.96	N.A.	4.40
90-120	163.36	N.A.	7.40
90-130	233.00	N.A.	10.60
90-150	349.93	N.A.	15.90
90-180	415.54	N.A.	18.90
110-180	318.58	N.A.	14.50
0-180	2203.34	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

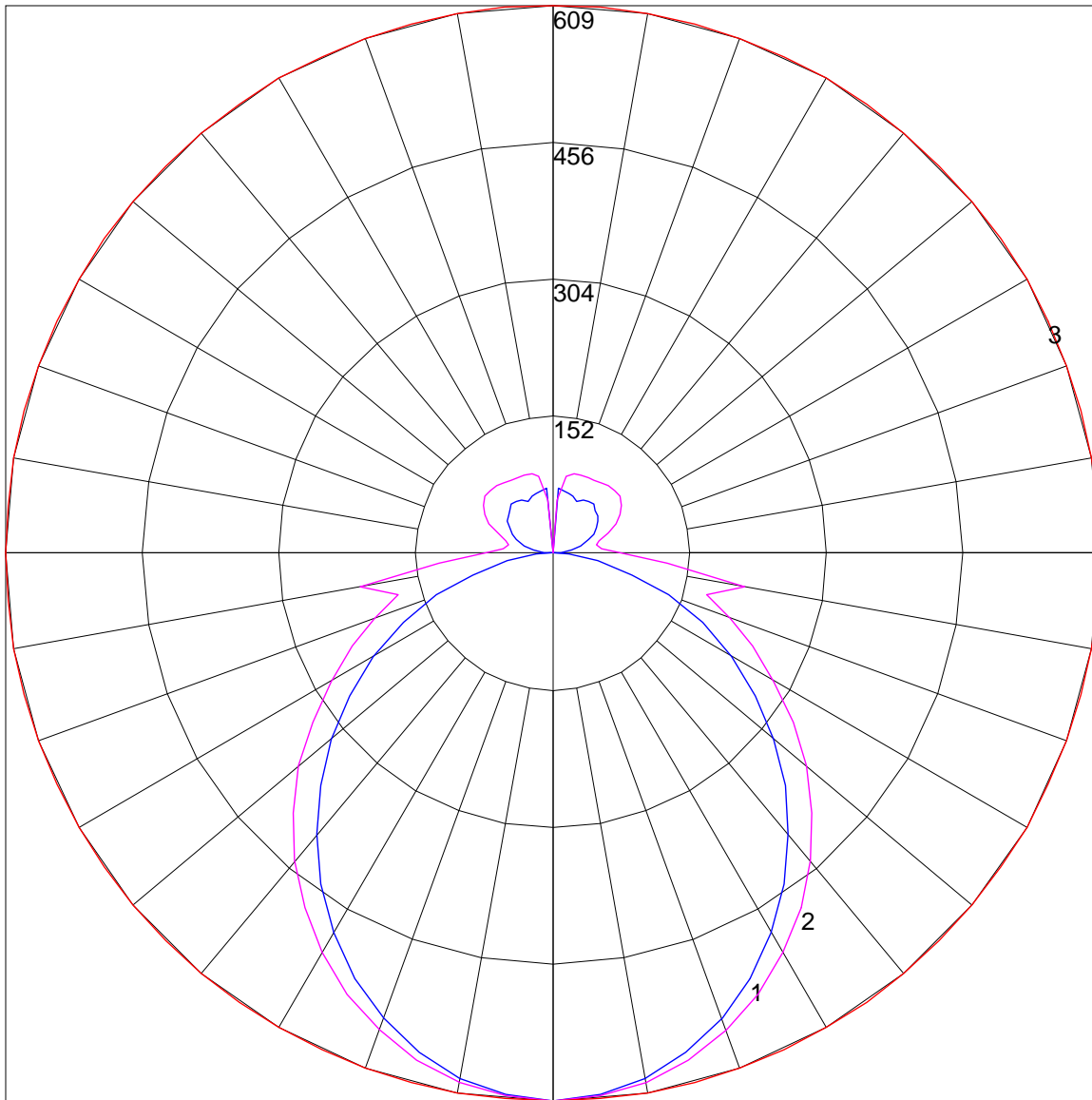
Zone	Lumens
0-10	57.39
10-20	163.19
20-30	244.58
30-40	290.99
40-50	298.57
50-60	269.48
60-70	212.44
70-80	153.83
80-90	97.33
90-100	44.18
100-110	52.78
110-120	66.40
120-130	69.64
130-140	64.13
140-150	52.81
150-160	38.10
160-170	21.87
170-180	5.64

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	115	115	115	115	110	110	110	110	101	101	101	92	92	92	85	85	85	81
1	103	98	93	89	99	94	90	86	86	83	80	79	76	74	73	71	69	65
2	94	85	78	72	89	81	75	70	75	70	65	69	65	61	63	60	57	54
3	85	74	66	60	81	71	64	58	66	60	54	60	55	51	56	51	48	45
4	78	66	57	50	74	63	55	49	58	52	46	54	48	44	50	45	41	38
5	72	59	50	43	68	56	48	42	52	45	40	48	42	38	45	40	36	33
6	66	53	44	38	63	51	43	37	47	40	35	44	38	33	40	35	31	29
7	61	48	39	33	58	46	38	32	43	36	31	40	34	29	37	32	28	26
8	57	43	35	29	54	42	34	29	39	32	27	36	30	26	34	29	25	23
9	53	40	32	26	51	39	31	26	36	29	25	34	28	24	31	26	22	20
10	50	37	29	24	48	36	28	23	33	27	22	31	25	21	29	24	20	19

POLAR GRAPH



Maximum Candela = 608.5 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)