

## REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G104160086

Date: November 26, 2019

REPORT NO. 104160086LAX-009

TEST OF ONE LED LUMINAIRE

MODEL NO. R1-LED35-SO-LLP  
LED MODEL NO. LUMILEDS 2835E 9V  
DRIVER MODEL NO. OSRAM OTI 50W G2

RENDERED TO

PRUDENTIAL LIGHTING  
1774 E 21ST STREET  
LOS ANGELES, CA 90058

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

TEST: Electrical and Photometric tests as required to the IESNA test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-01019626-1.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

DESCRIPTION OF SAMPLE: The client submitted one Prototype sample of model number R1-LED35-SO-LLP. The sample was received by Intertek on November 18, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1911181404-001.

DATES OF TESTS: November 20, 2019

## SUMMARY

Model No.:	R1-LED35-SO-LLP
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	5186
Total Power (W)	37.58
Luminaire Efficacy (LPW)	138.0
Power Factor	0.984

## EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Goniophotometer	6440T	000943	VBU	VBU	11/20/19
AC Source	CW1251P	000944	VBU	VBU	11/20/19
Power Analyzer	WT210	000945	10/02/19	10/02/20	11/20/19
Tape Measure	33-428	001491	VBU	VBU	11/20/19
Magnetic Level	581-9	001610	10/11/19	10/11/20	11/20/19
Temp. & RH Meter	971	001177	01/29/19	01/29/20	11/20/19
Thermometer	DPI8-C24	001782	10/15/19	10/15/20	11/20/19

## TEST METHODS

### Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

### Photometric and Electrical Measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

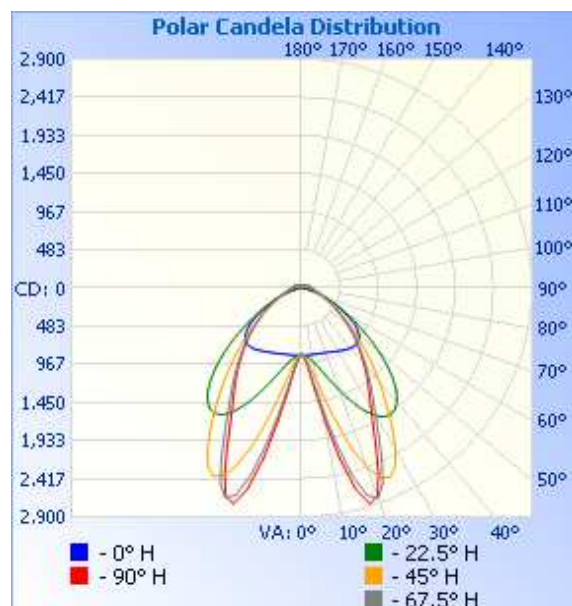
## RESULTS OF TEST

### Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1911181404-001	Up	120.1	317.9	37.58	0.984	5186	138.0

### Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	845	845	845	845	845
5	850	878	943	1016	1040
10	852	971	1264	1583	1712
15	859	1134	1828	2449	2640
20	871	1366	2424	2827	2799
25	892	1638	2642	2392	2217
30	919	1866	2365	1865	1748
35	952	1956	1911	1520	1459
40	983	1870	1505	1248	1209
45	993	1631	1164	1014	995
50	950	1299	886	815	802
55	831	956	665	631	620
60	639	668	494	479	473
65	437	454	368	362	357
70	267	308	279	273	266
75	151	210	218	209	200
80	74	146	177	169	160
85	28	103	150	146	138
90	0	76	130	130	123
95	0	60	114	117	112
100	0	49	101	107	104
105	0	39	89	99	98
110	0	31	78	91	91
115	0	26	65	82	84
120	0	23	54	72	75
125	0	20	46	61	65
130	0	18	39	52	55
135	0	16	34	44	47
140	0	15	29	38	41
145	0	14	25	33	35
150	0	13	21	28	30
155	0	12	18	23	24
160	0	13	16	19	19
165	0	13	14	16	11
170	0	14	14	14	10
175	0	15	15	14	10



## RESULTS OF TEST (cont'd)

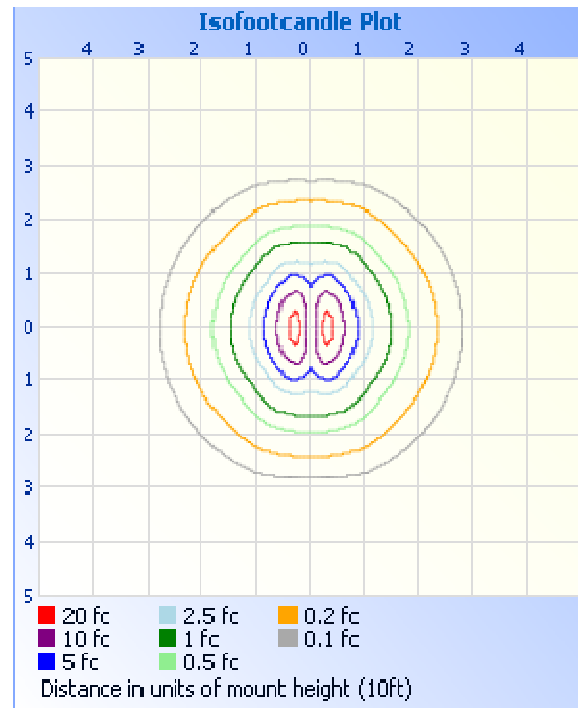
### Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	1543	29.8
0-40	2570	49.6
0-60	4150	80.0
60-90	737.8	14.2
0-90	4888	94.3
90-180	297.6	5.7
0-180	5186	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	101.0	1.9
10-20	508.7	9.8
20-30	933.5	18.0
30-40	1027	19.8
40-50	920.1	17.7
50-60	660.3	12.7
60-70	390.2	7.5
70-80	215.9	4.2
80-90	131.8	2.5
90-100	94.4	1.8
100-110	72.5	1.4
110-120	52.2	1.0
120-130	33.6	0.6
130-140	20.6	0.4
140-150	12.7	0.2
150-160	7.1	0.1
160-170	3.4	0.1
170-180	1.1	0.0

Spacing Criterion at 25°C

Spacing Criterion (0-180)	1.76
Spacing Criterion (90-270)	1.88
Spacing Criterion (Diagonal)	1.74

PICTURES (not to scale)



## CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:

A handwritten signature in black ink, appearing to read 'Erik Linares', written in a cursive style.

Erik Linares  
Associate Engineer  
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Vladimir Kozak', written in a cursive style.

Vladimir Kozak  
Engineering Supervisor  
Lighting Division