

REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G104160086

Date: November 26, 2019

REPORT NO. 104160086LAX-016

TEST OF ONE LED LUMINAIRE

MODEL NO. BOLT-LED35-LO-SAL
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 BOLT-LED35-LO-SAL. The sample was received by Intertek on November 21, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1911211331-001.

DATES OF TESTS: November 24, 2019

SUMMARY

Model No.:	BOLT-LED35-LO-SAL
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	1962
Total Power (W)	15.00
Luminaire Efficacy (LPW)	130.8
Power Factor	0.948

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Goniophotometer	6440T	000943	VBU	VBU	11/24/19
AC Source	CW1251P	000944	VBU	VBU	11/24/19
Power Analyzer	WT210	000945	10/02/19	10/02/20	11/24/19
Tape Measure	33-428	001491	VBU	VBU	11/24/19
Magnetic Level	581-9	001610	10/11/19	10/11/20	11/24/19
Temp. & RH Meter	971	001177	01/29/19	01/29/20	11/24/19
Thermometer	DPI8-C24	001782	10/15/19	10/15/20	11/24/19

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.

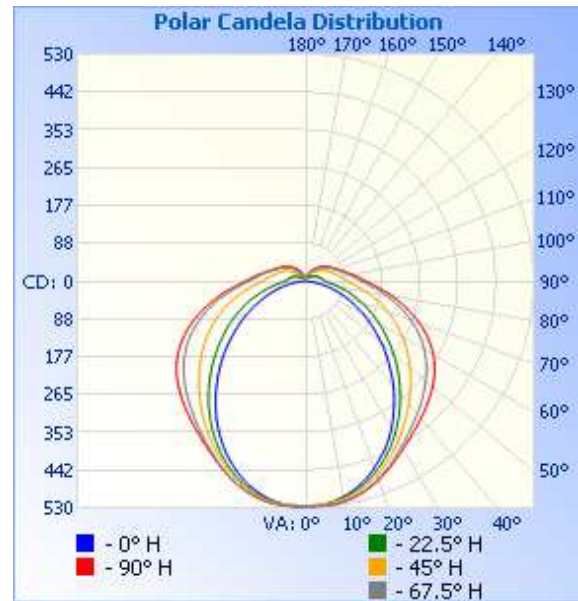
RESULTS OF TEST

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)
LAN1911211331-001	Up	120.0	131.8	15.00	0.948	1962	130.8

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	525	525	525	525	525
5	523	523	522	526	527
10	511	513	516	521	523
15	492	497	502	509	512
20	466	475	483	492	495
25	434	447	458	470	474
30	399	414	431	446	453
35	358	379	402	424	434
40	317	342	373	404	417
45	274	305	345	384	402
50	234	268	317	364	385
55	193	232	289	343	366
60	156	198	260	318	343
65	120	165	231	290	314
70	88	134	202	258	280
75	59	106	172	224	243
80	32	79	143	189	205
85	0	58	117	157	169
90	0	46	98	131	140
95	0	42	87	113	120
100	0	38	78	99	104
105	0	34	69	87	90
110	0	30	62	77	80
115	0	26	56	69	72
120	0	22	50	63	65
125	0	20	44	57	59
130	0	17	38	50	53
135	0	15	32	43	47
140	0	12	28	37	40
145	0	10	23	31	34
150	0	0	19	26	28
155	0	0	15	21	23
160	0	0	11	16	16
165	0	0	0	11	12



RESULTS OF TEST (cont'd)

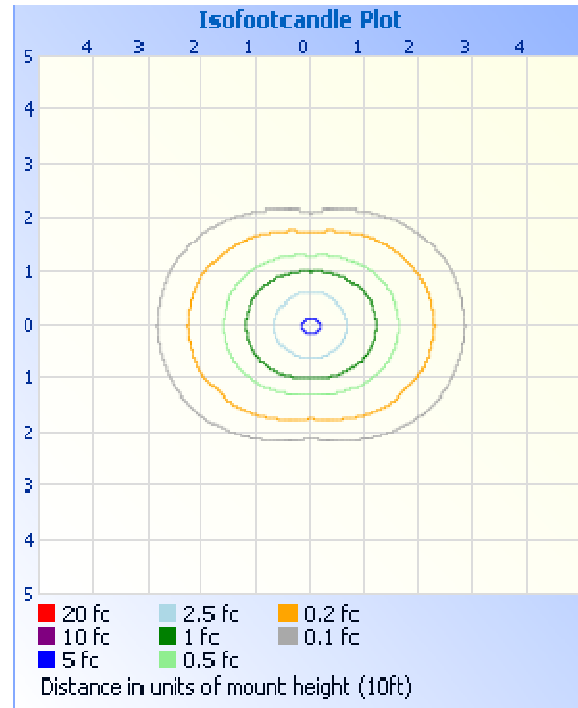
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	403.5	20.6
0-40	655.8	33.4
0-60	1180	60.2
60-90	518.6	26.4
0-90	1699	86.6
90-180	263.4	13.4
0-180	1962	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	49.9	2.5
10-20	142.1	7.2
20-30	211.6	10.8
30-40	252.2	12.9
40-50	266.9	13.6
50-60	257.9	13.1
60-70	226.0	11.5
70-80	174.7	8.9
80-90	117.9	6.0
90-100	83.1	4.2
100-110	62.8	3.2
110-120	46.5	2.4
120-130	32.8	1.7
130-140	21.0	1.1
140-150	11.3	0.6
150-160	4.9	0.3
160-170	0.9	0.0

Spacing Criterion at 25°C

Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38

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'.

Erik Linares
Associate Engineer
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Vladimir Kozak'.

Vladimir Kozak
Engineering Supervisor
Lighting Division