

REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G104160086

Date: November 26, 2019

REPORT NO. 104160086LAX-017

TEST OF ONE LED LUMINAIRE

MODEL NO. BOLT-LED35-MO-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-MO-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-MO-SAL
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	3329
Total Power (W)	25.91
Luminaire Efficacy (LPW)	128.5
Power Factor	0.969

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.

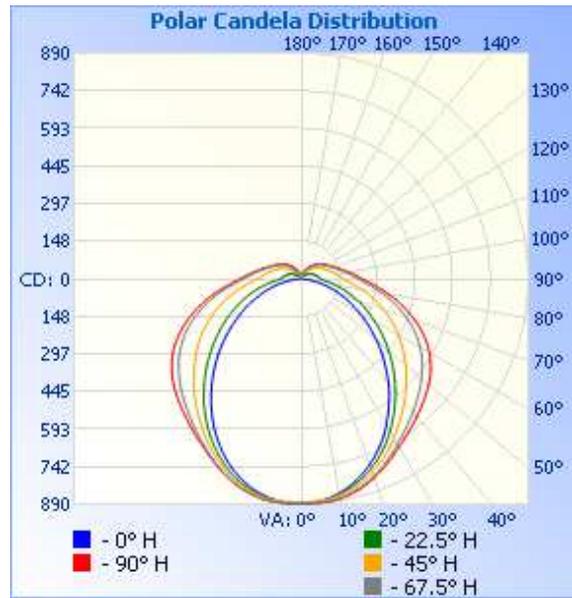
RESULTS OF TEST

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	119.9	223.0	25.91	0.969	3329	128.5

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	884	884	884	884	884
5	880	880	879	886	887
10	859	863	868	877	881
15	826	836	846	858	864
20	782	798	813	829	836
25	728	751	773	793	802
30	668	696	726	754	766
35	600	636	677	716	736
40	532	575	630	683	707
45	460	512	582	650	680
50	392	450	535	616	652
55	323	390	487	580	620
60	261	332	440	538	580
65	202	278	390	490	531
70	147	226	340	437	474
75	97	178	290	379	412
80	53	133	241	321	348
85	18	97	198	267	288
90	0	77	166	223	239
95	0	70	148	194	205
100	0	64	132	169	178
105	0	58	118	149	156
110	0	51	106	132	138
115	0	44	95	119	124
120	0	38	85	107	112
125	0	33	74	97	101
130	0	29	64	86	91
135	0	25	55	74	80
140	0	21	47	62	69
145	0	18	39	53	58
150	0	15	32	44	48
155	0	12	25	36	38
160	0	10	19	26	28
165	0	0	14	19	20
170	0	0	0	12	0

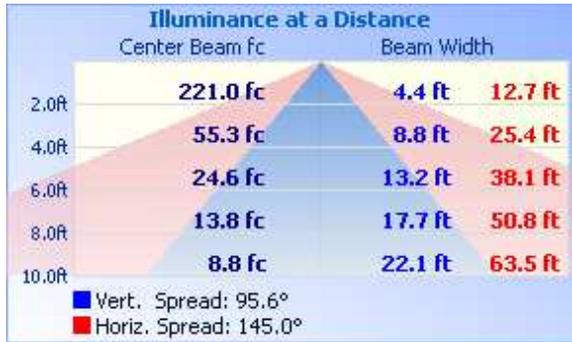


RESULTS OF TEST (cont'd)

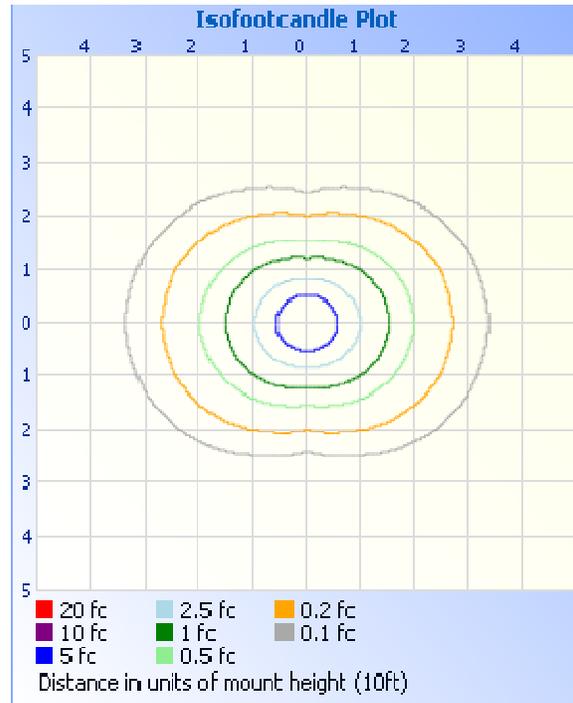
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	680.4	20.4
0-40	1106	33.2
0-60	1994	59.9
60-90	880.5	26.4
0-90	2875	86.4
90-180	454.2	13.6
0-180	3329	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	83.9	2.5
10-20	239.4	7.2
20-30	357.0	10.7
30-40	426.1	12.8
40-50	451.4	13.6
50-60	436.6	13.1
60-70	383.1	11.5
70-80	296.6	8.9
80-90	200.9	6.0
90-100	142.1	4.3
100-110	107.7	3.2
110-120	79.7	2.4
120-130	56.2	1.7
130-140	35.8	1.1
140-150	20.1	0.6
150-160	9.8	0.3
160-170	2.8	0.1

Spacing Criterion at 25°C

Spacing Criterion (0-180)	1.14
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:

Report Reviewed By:

Handwritten signature of Erik Linares in black ink.

Handwritten signature of Vladimir Kozak in black ink.

Erik Linares
Associate Engineer
Lighting Division

Vladimir Kozak
Engineering Supervisor
Lighting Division

Attachment: None