

## REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656

Date: May 10, 2019

REPORT NO. 103924656LAX-004

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-LV-30K-TF  
LED MODEL NO. GWP9LR34.PM-M2M3  
DRIVER MODEL NO. EUD-150S350DTA  
RETROFIT MODEL NO. LITHONIA KAD CONTOUR SERIES

RENDERED TO

SIMPLYLEDs LLC  
111 W. 34TH STREET  
GARDEN CITY, IDAHO, 83714

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

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-00973316-1.

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 production sample of model number ALD-R-160W-LV-30K-TF. The sample was received by Intertek on April 18, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1904181437-013A.

DATES OF TESTS: May 1, 2019

## SUMMARY

Model No.: ALD-R-160W-LV-30K-TF Description: LED Luminaire
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Criteria	Result
Total Lumen Output (Lumens)	20155
Total Power (W)	155.9
Luminaire Efficacy (LPW)	129.3
Power Factor	0.997
BUG Rating	B5-U0-G1
IES Classification	Type VS
Longitudinal Classification	Very Short

## EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Goniophotometer	6440T	000943	VBU	VBU	05/01/19
AC Source	CW1251P	000944	VBU	VBU	05/01/19
Power Analyzer	WT210	000945	11/28/18	11/28/19	05/01/19
Magnetic Level	581-9	001610	10/31/18	10/31/19	05/01/19
Thermometer	DPI8-C24	001782	09/21/18	09/21/19	05/01/19
Temp. & RH Meter	971	001177	01/29/19	01/29/20	05/01/19

## 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.

### BUG Ratings (Backlight, Uplight, Glare) – for Outdoor Fixtures Only

Zonal Lumens were calculated and grouped using the formula in IESNA TM-15-11 for each zone as defined in the BUG addendum. The maximum lumen rating in each zone was compared against the BUG zonal requirements of Energy Star. Photometric Toolbox software was used to calculate results.

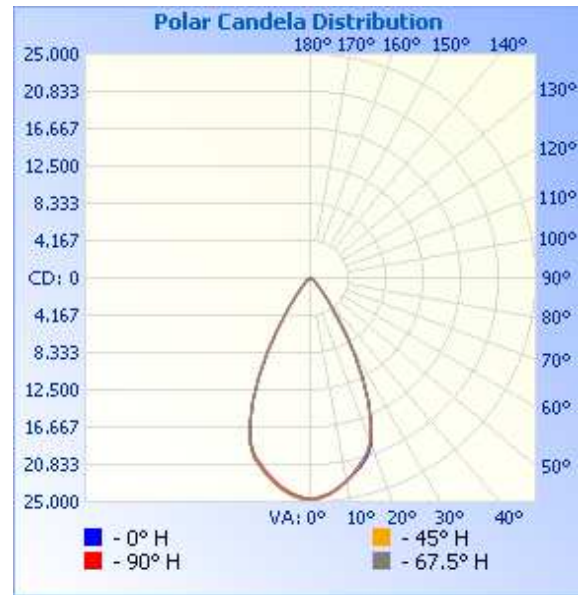
## RESULTS OF TEST

### 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	Current ATHD	Absolute Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1904181437-013A	UP	120.0	1304	155.9	0.997	6.83	20155	129.3
		277.0	566.3	151.9	0.968	7.22		

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

Angle	0	25	45	67.5	90
0	24707	24707	24707	24707	24707
5	24264	24242	24261	24175	24097
10	23107	23113	23062	22941	22933
15	21721	21635	21516	21364	21448
20	19740	19457	19450	19490	19416
25	15234	14975	15144	15105	15119
30	9806	9548	9559	9559	9646
35	5060	4802	4853	4776	4757
40	2352	2322	2354	2310	2293
45	1141	1094	1103	1121	1114
50	698	685	691	676	677
55	502	480	489	487	488
60	359	329	334	328	343
65	216	213	226	216	219
70	152	164	173	169	164
75	129	145	148	147	139
80	110	129	128	119	105
85	73	103	99	74	45
90	0	0	0	0	0

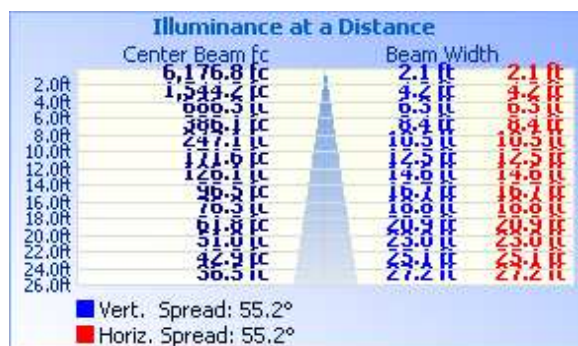


## RESULTS OF TEST (cont'd)

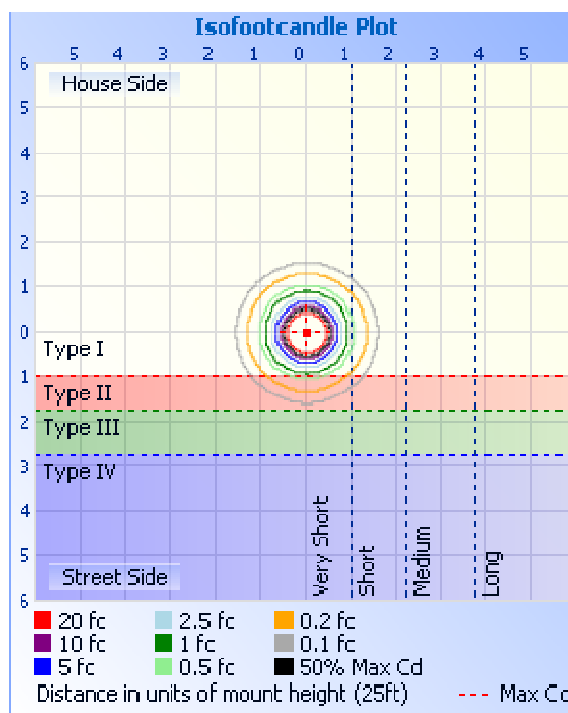
### Illumination Plots

Mounting Height: 25 ft.

Illuminance - Cone of Light



Isoillumination Plot



### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	15079	74.8
0-40	18293	90.8
0-60	19699	97.7
60-90	456.4	2.3
0-90	20155	100.0
90-180	0.0	0.0
0-180	20155	100.0

### Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	7521.7	37.3
FM	(30-60)	2306.6	11.4
FH	(60-80)	189.7	0.9
FVH	(80-90)	40.8	0.2
BL	(0-30)	7578.7	37.5
BM	(30-60)	2323.8	11.5
BH	(60-80)	186.6	0.9
BVH	(80-90)	39.4	0.2
UL	(90-100)	0.0	0.0
UH	(100-180)	0.0	0.0

### Zonal Lumens and Percentages at 25°C

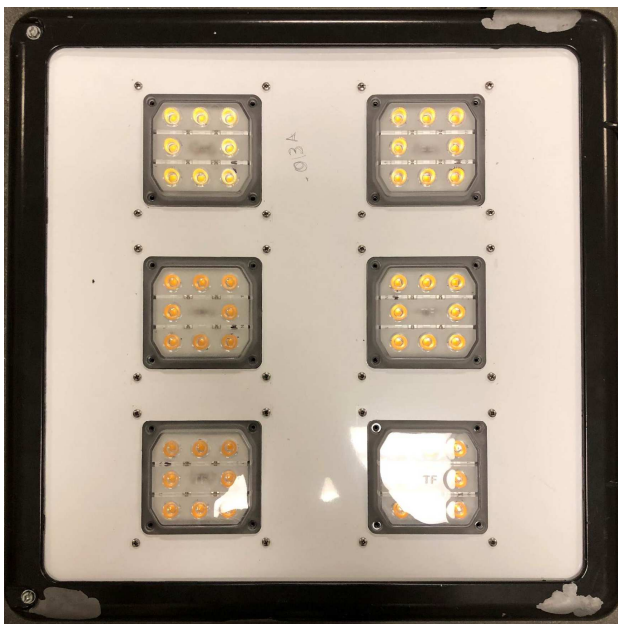
Zone	Lumens	% Luminaire
0-10	2275	11.3
10-20	6046	30.0
20-30	6758	33.5
30-40	3214	15.9
40-50	966.5	4.8
50-60	439.5	2.2
60-70	226.4	1.1
70-80	149.8	0.7
80-90	80.2	0.4

BUG Rating: B5-U0-G1

IES Classification: Type VS

Longitudinal Classification: Very Short

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