

## REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656

Date: May 10, 2019

REPORT NO. 103924656LAX-003

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-LV-30K-T3  
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-T3. The sample was received by Intertek on March 19, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1903191345-003A.

DATES OF TESTS: May 1, 2019

## SUMMARY

Model No.: ALD-R-160W-LV-30K-T3 Description: LED Luminaire
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Criteria	Result
Total Lumen Output (Lumens)	18910
Total Power (W)	156.3
Luminaire Efficacy (LPW)	121.0
Power Factor	0.997
BUG Rating	B3-U0-G3
IES Classification	Type III
Longitudinal Classification	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.

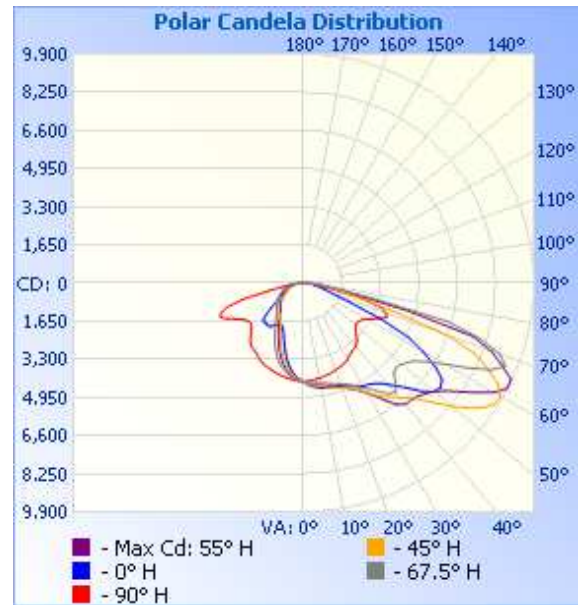
## RESULTS OF TEST

### 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)
LAN1903191345-003A	UP	120.0	1306	156.3	0.997	6.82	18910	121.0
		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	4276	4276	4276	4276	4276
5	4483	4453	4418	4331	4215
10	4610	4581	4539	4390	4157
15	4663	4660	4663	4488	4088
20	4711	4741	4822	4644	4007
25	4886	4922	5047	4896	3917
30	5134	5232	5454	5242	3787
35	5299	5400	5985	5744	3610
40	5735	5725	6458	6153	3514
45	6443	6379	7130	5484	3216
50	7310	7392	8265	5464	2918
55	7270	7887	9390	5874	2877
60	5942	7119	9782	7000	3119
65	3699	5638	8730	8869	3629
70	1319	2825	6594	8996	3791
75	810	2052	2440	6442	2698
80	524	1322	1222	1595	878
85	347	535	685	633	318
90	0	0	0	0	0



## RESULTS OF TEST (cont'd)

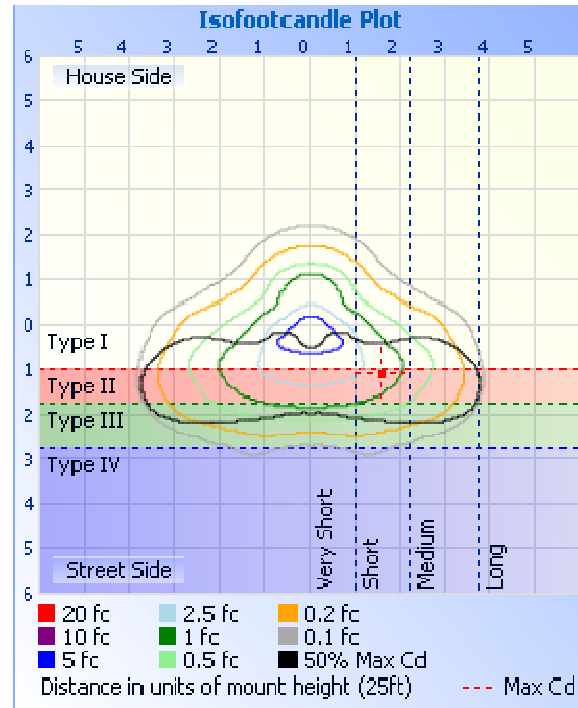
### Illumination Plots

Mounting Height: 25 ft.

Illuminance - Cone of Light



Isoillumination Plot



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

Zone	Lumens	% Luminaire
0-30	3255	17.2
0-40	5650	29.9
0-60	12569	66.5
60-90	6340	33.5
0-90	18910	100.0
90-180	0.0	0.0
0-180	18910	100.0

### Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	1984.8	10.5
FM	(30-60)	7182.2	38.0
FH	(60-80)	4814.3	25.5
FVH	(80-90)	307.4	1.6
BL	(0-30)	1271.3	6.7
BM	(30-60)	2130.6	11.3
BH	(60-80)	1026.9	5.4
BVH	(80-90)	193.0	1.0
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	401.9	2.1
10-20	1127	6.0
20-30	1727	9.1
30-40	2394	12.7
40-50	3123	16.5
50-60	3797	20.1
60-70	3767	19.9
70-80	2073	11.0
80-90	500.4	2.6

BUG Rating: B3-U0-G3

IES Classification: Type III

Longitudinal Classification: 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:

Erik Linares  
Associate Engineer  
Lighting Division

Attachment: None

Report Reviewed By:

Vladimir Kozak  
Engineering Supervisor  
Lighting Division