

## REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656

Date: May 10, 2019

REPORT NO. 103924656LAX-001

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-LV-30K-T5  
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-T5. 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-T5 Description: LED Luminaire
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Criteria	Result
Total Lumen Output (Lumens)	19592
Total Power (W)	156.1
Luminaire Efficacy (LPW)	125.5
Power Factor	0.997
BUG Rating	B4-U0-G2
IES Classification	Type VS
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.

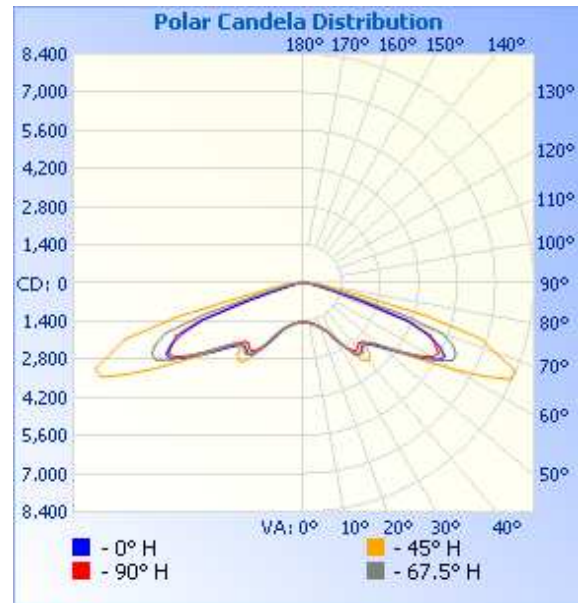
## RESULTS OF TEST

### 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	1305	156.1	0.997	6.82	19592	125.5
		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	1435	1435	1435	1435	1435
5	1460	1458	1457	1449	1440
10	1508	1507	1506	1496	1485
15	1590	1585	1582	1576	1566
20	1716	1702	1698	1700	1695
25	1924	1884	1869	1893	1928
30	2412	2322	2271	2390	2454
35	3095	3156	3195	3055	2989
40	3276	3552	3702	3341	3080
45	3170	3231	3193	3150	3041
50	3646	3563	3505	3509	3539
55	4552	4498	4585	4423	4443
60	5633	5848	6349	5687	5430
65	5462	6482	8347	6132	5289
70	4060	5468	7442	5355	4022
75	1236	2017	4642	1844	1154
80	507	789	1337	712	491
85	270	429	625	370	225
90	0	0	0	0	0

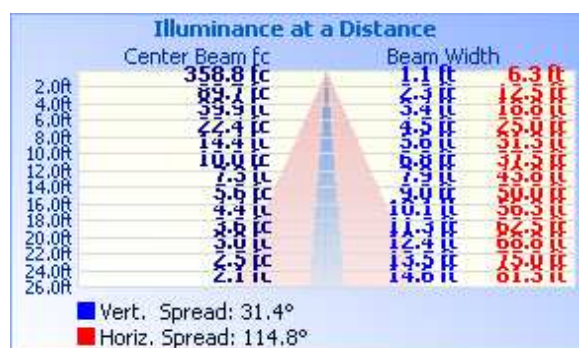


## RESULTS OF TEST (cont'd)

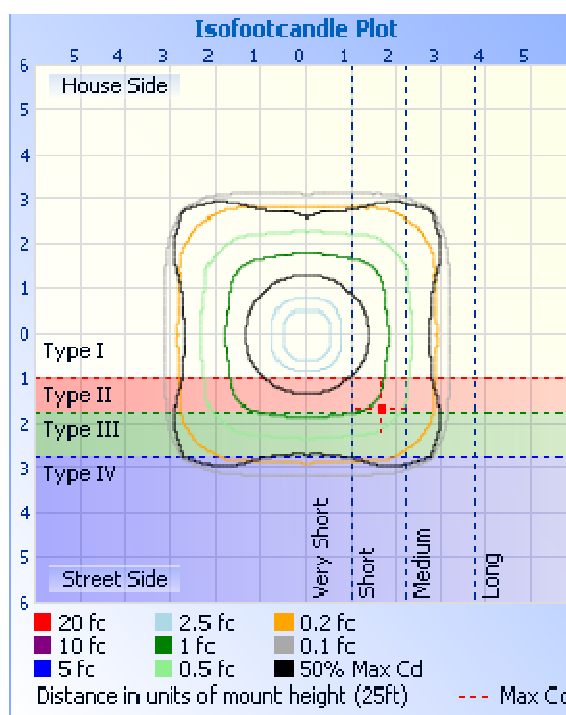
### Illumination Plots

Mounting Height: 25 ft.

Illuminance - Cone of Light



Isoillumination Plot



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

Zone	Lumens	% Luminaire
0-30	1508	7.7
0-40	3438	17.6
0-60	10134	51.7
60-90	9458	48.3
0-90	19592	100.0
90-180	0.0	0.0
0-180	19592	100.0

### Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	752.8	3.8
FM	(30-60)	4301.0	22.0
FH	(60-80)	4514.9	23.0
FVH	(80-90)	220.6	1.1
BL	(0-30)	754.2	3.9
BM	(30-60)	4320.8	22.1
BH	(60-80)	4501.4	23.0
BVH	(80-90)	223.1	1.1
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	140.0	0.7
10-20	452.1	2.3
20-30	916.1	4.7
30-40	1930	9.9
40-50	2566	13.1
50-60	4129	21.1
60-70	6136	31.3
70-80	2879	14.7
80-90	443.6	2.3

BUG Rating: B4-U0-G2

IES Classification: Type VS

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:

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