REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656 Date: May 16, 2019

REPORT NO. 103924656LAX-017

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-HV-50K-T4
LED MODEL NO. GWP9LR34.PM-M2M3
DRIVER MODEL NO. ESD-150S350DT
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.

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

ANSI NEMA ANSLG C78.377: 2015: Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number ALD-R-160W-HV-50K-T4. 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 16, 2019

SUMMARY

Model No.:	ALD-R-160W-HV-50K-T4
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	20578
Total Power (W)	159.0
Luminaire Efficacy (LPW)	129.4
Power Factor at 277Vac	0.993
Power Factor at 480Vac	0.962
Current ATHD % at 277Vac	8.19
Current ATHD % at 480Vac	6.61
Correlated Color Temperature (CCT - K)	5052
Color Rendering Index (CRI - Ra)	70.4
Color Rendering Index (CRI - R9)	-37.6
DUV	0.001
Chromaticity Coordinate (x)	0.344
Chromaticity Coordinate (y)	0.353
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.485

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
3m Sphere	CSTM-LMS-3M-3020	000830	VBU	VBU	05/16/19
Spectrometer	CDS-3020-T	000834	VBU	VBU	05/16/19
Power Supply (AC 3P / DC)	CSW5550-208-LAN	001339	VBU	VBU	05/16/19
Power Meter	WT330	001319	08/13/18	08/13/19	05/16/19
Temp. & RH Meter	971	001177	01/29/19	01/29/20	05/16/19
DC Power Supply	LPS-100-0833	000832	01/31/19	01/31/20	05/16/19
Network TC Reader	iSD-TC	000824	02/01/19	02/01/20	05/16/19

TEST METHODS

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

Photometric and Electrical Measurements – Integrating Sphere Method

A Labsphere Model CDS-3020 High Sensitivity Multi Channel Spectrometer and Two Meter or Three Meter Sphere was used to measure correlated color temperature, chromaticity coordinates, and the color rendering index for each SSL unit.

Ambient temperature was measured at a position inside the sphere. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation. Each SSL unit 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.

The calibration of the sphere photometer-spectroradiometer system is traceable to the National Institute of Standards and Technology.

RESULTS OF TEST

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) - Integrating Sphere Method

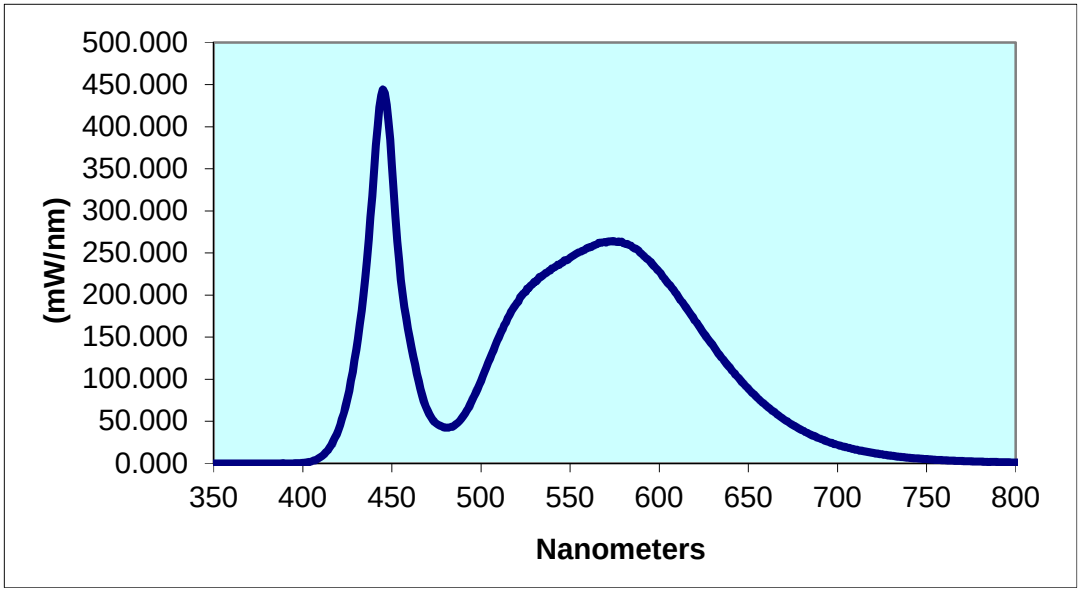
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1903191345-003A	Up	276.9	578.0	159.0	0.993	8.19	20578	129.4
		480.0	345.4	159.4	0.962	6.61		

Correlated Color Temperature (K)	CRI -Ra	CRI -R9	DUV	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
5052	70.4	-37.6	0.001	0.344	0.353	0.210	0.485

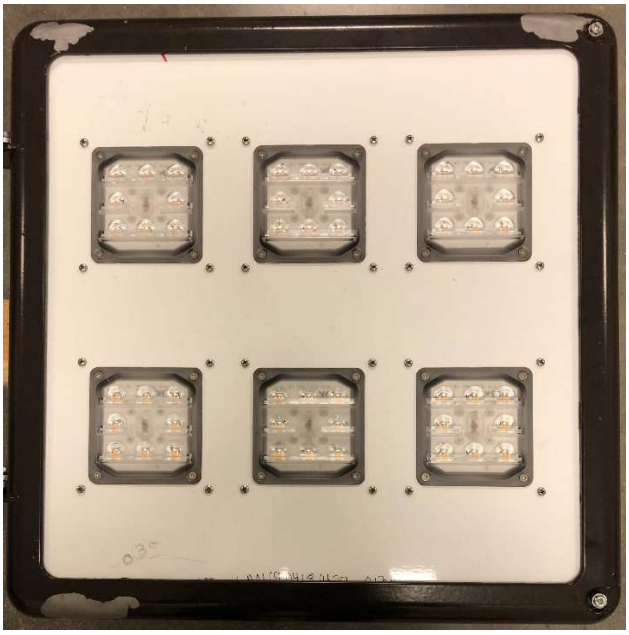
Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.000	440	350.2	530	215.8	620	169.4	710	16.44
355	0.000	445	444.2	535	223.8	625	154.8	715	14.18
360	0.000	450	354.5	540	231.7	630	140.4	720	12.34
365	0.000	455	218.3	545	238.1	635	125.4	725	10.75
370	0.000	460	148.5	550	244.2	640	112.8	730	9.070
375	0.000	465	97.59	555	250.6	645	100.3	735	7.851
380	0.000	470	62.81	560	256.3	650	88.65	740	6.604
385	0.000	475	47.31	565	260.2	655	77.99	745	5.824
390	0.000	480	42.51	570	262.2	660	68.75	750	5.070
395	0.095	485	44.85	575	263.6	665	60.19	755	4.220
400	0.712	490	55.76	580	261.5	670	52.28	760	3.753
405	2.497	495	74.41	585	257.0	675	45.68	765	3.321
410	7.465	500	97.99	590	249.4	680	39.55	770	2.908
415	18.55	505	124.6	595	239.9	685	34.26	775	2.457
420	39.53	510	149.5	600	227.7	690	29.52	780	2.014
425	76.82	515	172.4	605	214.1	695	25.57		
430	134.9	520	190.1	610	200.7	700	22.06		
435	220.5	525	203.8	615	185.5	705	19.11		

Spectral Data Over Visible Wavelengths



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:

Gregory V. Rosandich
Technician
Lighting Division

Report Reviewed By:

Vladimir Kozak
Engineering Supervisor
Lighting Division

Attachment: None