REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G103924656 Date: May 14, 2019

REPORT NO. 103924656LAX-016

TEST OF ONE LED LUMINAIRE

MODEL NO. ALD-R-160W-HV-40K-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-40K-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 14, 2019

SUMMARY

Model No.:	ALD-R-160W-HV-40K-T4
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	20231
Total Power (W)	160.5
Luminaire Efficacy (LPW)	126.0
Power Factor at 277Vac	0.994
Power Factor at 480Vac	0.962
Current ATHD % at 277Vac	7.90
Current ATHD % at 480Vac	6.61
Correlated Color Temperature (CCT - K)	3974
Color Rendering Index (CRI - Ra)	71.5
Color Rendering Index (CRI - R9)	-35.9
DUV	0.001
Chromaticity Coordinate (x)	0.382
Chromaticity Coordinate (y)	0.380
Chromaticity Coordinate (u')	0.225
Chromaticity Coordinate (v')	0.503

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	05/14/19
Spectrometer	CDS-3020-T	000834	VBU	VBU	05/14/19
Power Supply (AC 3P / DC)	CSW5550-208-LAN	001339	VBU	VBU	05/14/19
Power Meter	WT330	001319	08/13/18	08/13/19	05/14/19
Temp. & RH Meter	971	001177	01/29/19	01/29/20	05/14/19
DC Power Supply	LPS-100-0833	000832	01/31/19	01/31/20	05/14/19
Network TC Reader	iSD-TC	000824	02/01/19	02/01/20	05/14/19

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

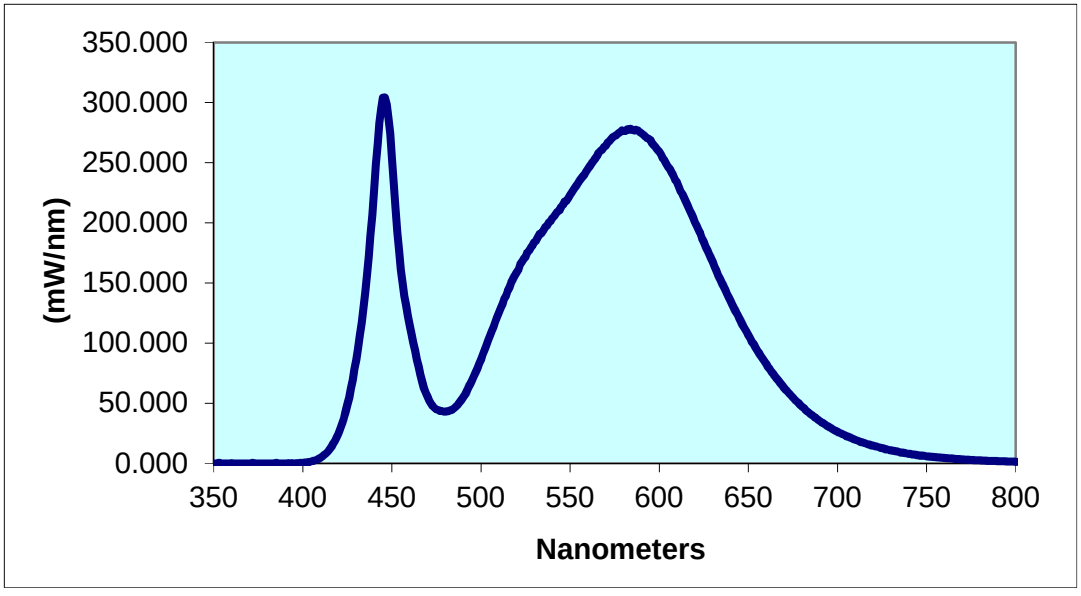
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1903191345-003A	Up	276.9	583.3	160.5	0.994	7.90	20231	126.0
		480.0	345.4	159.4	0.962	6.61		

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')
3974	71.5	-35.9	0.001	0.382	0.380	0.225	0.503

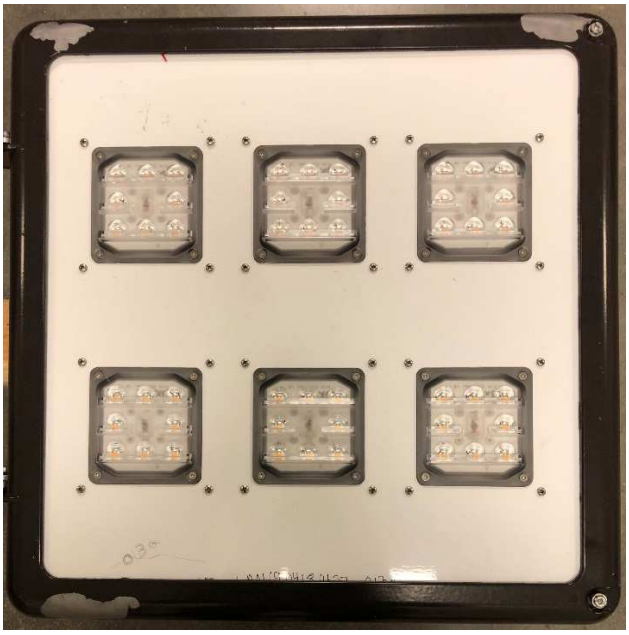
Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.000	440	228.9	530	184.0	620	200.5	710	19.65
355	0.000	445	304.1	535	193.8	625	184.0	715	16.95
360	0.172	450	254.9	540	203.8	630	167.6	720	14.73
365	0.000	455	161.2	545	213.3	635	150.3	725	12.69
370	0.000	460	114.8	550	223.3	640	135.4	730	10.96
375	0.000	465	80.22	555	234.3	645	120.4	735	9.302
380	0.000	470	55.20	560	244.9	650	106.7	740	8.013
385	0.350	475	45.02	565	255.4	655	93.85	745	6.953
390	0.000	480	42.93	570	264.1	660	82.86	750	5.768
395	0.000	485	45.91	575	272.1	665	72.39	755	5.178
400	0.277	490	54.83	580	276.3	670	62.96	760	4.520
405	1.716	495	68.91	585	277.2	675	54.79	765	3.892
410	4.857	500	86.39	590	274.7	680	47.44	770	3.306
415	11.44	505	106.3	595	269.0	685	40.99	775	2.945
420	24.64	510	124.9	600	259.2	690	35.41	780	2.479
425	48.81	515	143.4	605	246.7	695	30.52		
430	86.14	520	158.8	610	233.8	700	26.37		
435	142.3	525	171.9	615	217.6	705	22.68		

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:

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Report Reviewed By:

Vladimir Kozak
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Lighting Division

Attachment: None