



REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G101844208

Original Release Date: October 30, 2014

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REPORT NO. 101844208LAX-005

TEST OF ONE LINEAR RETROFIT

RETROFIT MODEL NO. RKL45U4541(DV)
LED MODEL NO. SAMSUNG LM561B
DRIVER MODEL NO. HANSOL HPL45W1B-DIM
TROFFER MODEL NO. LITHONIA 2GT8 FIXTURES

RENDERED TO

MAXLITE, INC.
12 YORK AVENUE
WEST CALDWELL, NJ 07006

Revision Note November 11, 2014: Revised report to correct the products model number.

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

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500553301.

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 RKL45U4541(DV). The sample was received by Intertek on October 22, 2014, with the troffer lens slightly damaged, and one sample was tested as received. The sample designation was LAN1410221013-006.

DATES OF TESTS: October 29, 2014

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SUMMARY

Model No.:	RKL45U4541(DV)
Description:	Linear Retrofit

Criteria	Result
Total Lumen Output (Lumens)	4223
Total Power (W)	44.80
Luminaire Efficacy (LPW)	94.26
Power Factor at 120.01Vac	0.989
Power Factor at 277.08Vac	0.89
Current ATHD % at 120.01Vac	12.03
Current ATHD % at 277.08Vac	26.59
Correlated Color Temperature (CCT - K)	4210
Color Rendering Index (CRI - Ra)	84.6
Color Rendering Index (CRI - R9)	21.0
DUV	0.000
Chromaticity Coordinate (x)	0.372
Chromaticity Coordinate (y)	0.372
Chromaticity Coordinate (u')	0.221
Chromaticity Coordinate (v')	0.498

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
DC Power Supply	LPS-100-0833	000832	05/20/14	05/20/15
LapSphere 3M Integrating Sphere	CA-11821-LRT	000830	10/03/14	11/03/14
LabSphere Spectrometer	CDS-3020	000834	10/03/14	11/03/14
California Instruments Power Supply	CSW5550	001338	06/05/14	06/05/15
Yokogawa Power Meter	WT333	001320	05/15/14	05/15/15
Extech Instruments Stop Watch	365510	001380	11/05/13	11/05/14
Temp. & RH Meter	971	001178	12/03/13	12/03/14



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 CDS 3020 Spectrometer and 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 Yokogawa Power Analyzer.

The calibration of the sphere spectrometer system is traceable to the National Institute of Standards and Technology.

RESULTS OF TEST

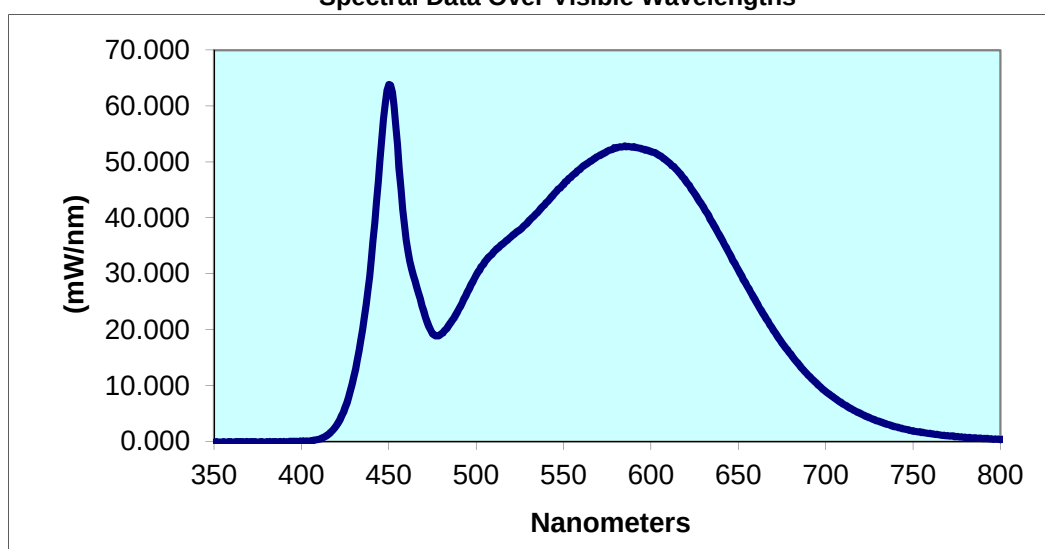
Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) - Integrating Sphere Method

Intertek Sample No.	Base Orientation	Input Voltage (V)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1410221013-006	UP	120.0	377.0	44.80	0.989	12.03	4223	94.26
		277.1	182.0	44.90	0.888	26.59		
Correlated Color Temperature (K)	CRI -Ra	CRI -R9	DUV	CIE 31' Chromaticity Coordinate	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')	
4210	84.6	21.0	0.000	0.372	0.372	0.221	0.498	

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	-0.12	440	32.60	530	39.38	620	46.54	710	6.72
355	-0.08	445	50.32	535	40.93	625	44.36	715	5.78
360	-0.08	450	63.82	540	42.71	630	41.93	720	5.00
365	-0.03	455	53.02	545	44.43	635	39.25	725	4.28
370	-0.07	460	36.04	550	46.01	640	36.45	730	3.65
375	-0.10	465	28.71	555	47.59	645	33.50	735	3.11
380	-0.09	470	23.28	560	48.88	650	30.65	740	2.63
385	-0.07	475	19.29	565	50.08	655	27.83	745	2.24
390	0.00	480	19.22	570	51.08	660	25.12	750	1.90
395	0.01	485	21.12	575	51.91	665	22.46	755	1.62
400	0.04	490	23.62	580	52.51	670	19.95	760	1.44
405	0.12	495	26.76	585	52.85	675	17.64	765	1.18
410	0.42	500	29.77	590	52.75	680	15.56	770	1.02
415	1.18	505	32.15	595	52.33	685	13.61	775	0.86
420	2.86	510	33.88	600	51.88	690	11.88	780	0.73
425	6.06	515	35.32	605	51.12	695	10.33		
430	11.52	520	36.66	610	50.01	700	8.95		
435	20.12	525	37.86	615	48.52	705	7.77		

Spectral Data Over Visible Wavelengths



PICTURE (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
Technician
Lighting Division

Attachment: None

Report Reviewed By:



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Engineering Manager
Lighting Division