REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G101844208

Original Release Date: October 29, 2014
Revision Date: November 11, 2014

REPORT NO. 101844208LAX-003

TEST OF ONE LINEAR RETROFIT

RETROFIT MODEL NO. RKL23U4050(DV)
LED MODEL NO. SAMSUNG LM561B
DRIVER MODEL NO. HANSOL HPL40W1B-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 RKL23U4050(DV). The sample was received by Intertek on October 22, 2014, in undamaged condition and one sample was tested as received. The sample designation was LAN1410221013-004.

DATES OF TESTS: October 27, 2014

SUMMARY

Model No.:	RKL23U4050(DV)
Description:	Linear Retrofit

Criteria	Result
Total Lumen Output (Lumens)	3663
Total Power (W)	38.60
Luminaire Efficacy (LPW)	94.9
Power Factor at 120.01Vac	0.989
Power Factor at 277.07Vac	0.92
Current ATHD % at 120.01Vac	12.92
Current ATHD % at 277.07Vac	17.21
Correlated Color Temperature (CCT - K)	5324
Color Rendering Index (CRI - Ra)	83.5
Color Rendering Index (CRI - R9)	13.9
DUV	0.002
Chromaticity Coordinate (x)	0.337
Chromaticity Coordinate (y)	0.349
Chromaticity Coordinate (u')	0.207
Chromaticity Coordinate (v')	0.482

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
Omega Environmental Monitor	N/A	000886	09/10/14	09/10/15

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

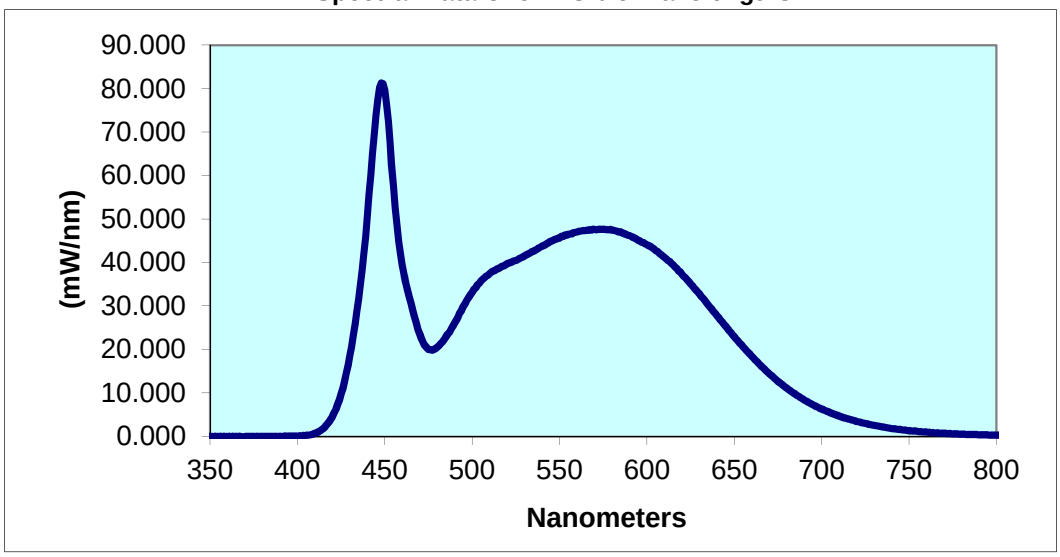
Intertek Sample No.	Base Orientation	Input Voltage {}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1410221013-004	UP	120.0	325.0	38.60	0.989	12.92	3663	94.9
		277.1	155.0	39.60	0.919	17.21		

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')
5324	83.5	13.9	0.002	0.337	0.349	0.207	0.482

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.04	440	50.65	530	41.60	620	37.31	710	4.71
355	-0.03	445	73.84	535	42.61	625	35.10	715	4.07
360	-0.03	450	79.53	540	43.81	630	32.75	720	3.49
365	0.00	455	57.41	545	44.89	635	30.29	725	3.02
370	-0.03	460	39.41	550	45.72	640	27.82	730	2.57
375	0.03	465	30.57	555	46.52	645	25.32	735	2.18
380	0.02	470	23.52	560	47.06	650	22.91	740	1.86
385	0.04	475	19.99	565	47.42	655	20.64	745	1.59
390	0.04	480	20.55	570	47.63	660	18.46	750	1.36
395	0.04	485	22.94	575	47.64	665	16.36	755	1.16
400	0.10	490	26.17	580	47.47	670	14.43	760	1.01
405	0.26	495	29.91	585	47.05	675	12.69	765	0.84
410	0.73	500	33.21	590	46.26	680	11.11	770	0.73
415	1.94	505	35.77	595	45.14	685	9.70	775	0.62
420	4.58	510	37.46	600	44.11	690	8.41	780	0.54
425	9.77	515	38.66	605	42.79	695	7.29		
430	18.46	520	39.75	610	41.21	700	6.33		
435	31.68	525	40.49	615	39.45	705	5.46		

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:

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Report Reviewed By:

Jeffrey Davis
Engineering Manager
Lighting Division

Attachment: None