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-001

TEST OF ONE LINEAR RETROFIT

RETROFIT MODEL NO. RKL23U4041(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 RKL23U4041(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 LAN1410221013-003.

DATES OF TESTS: October 28, 2014

SUMMARY

Model No.:	RKL23U4041(DV)
Description:	Linear Retrofit

Criteria	Result
Total Lumen Output (Lumens)	3431
Total Power (W)	38.00
Luminaire Efficacy (LPW)	90.29
Power Factor at 120.02Vac	0.990
Power Factor at 277.07Vac	0.92
Current ATHD % at 120.02Vac	12.22
Current ATHD % at 277.07Vac	17.65
Correlated Color Temperature (CCT - K)	4121
Color Rendering Index (CRI - Ra)	85.0
Color Rendering Index (CRI - R9)	23.0
DUV	0.001
Chromaticity Coordinate (x)	0.375
Chromaticity Coordinate (y)	0.372
Chromaticity Coordinate (u')	0.223
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

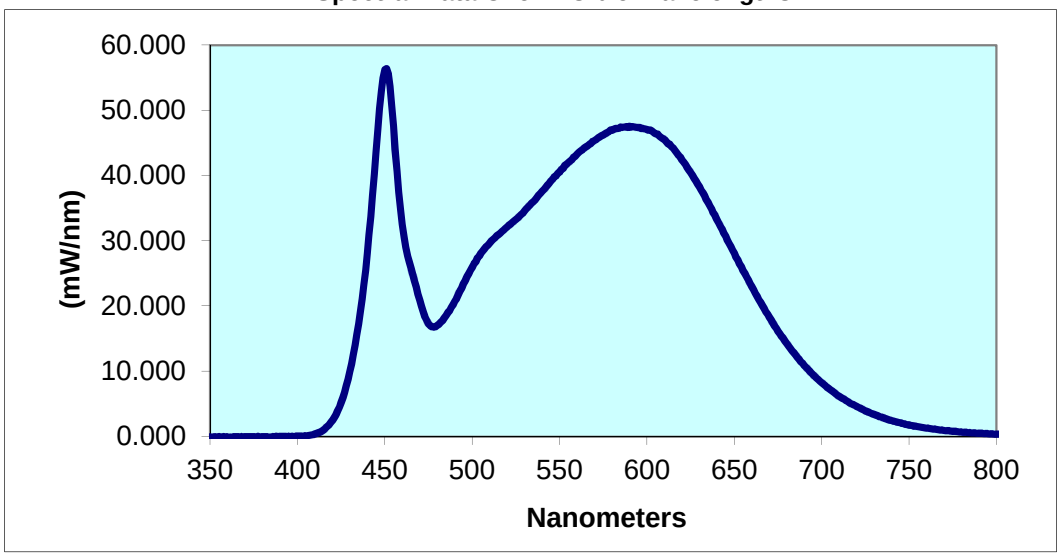
Intertek Sample No.	Base Orientation	Input Voltage {}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
LAN1410221013-003	UP	120.0	319.0	38.00	0.990	12.22	3431	90.29
		277.1	153.0	39.00	0.922	17.65		

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')
4121	85.0	23.0	0.001	0.375	0.372	0.223	0.498

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	-0.07	440	28.06	530	34.67	620	42.41	710	6.19
355	-0.01	445	43.53	535	36.03	625	40.48	715	5.34
360	-0.05	450	56.22	540	37.60	630	38.28	720	4.60
365	-0.06	455	47.62	545	39.17	635	35.87	725	3.94
370	-0.07	460	32.52	550	40.58	640	33.30	730	3.38
375	-0.03	465	25.79	555	42.02	645	30.66	735	2.87
380	-0.07	470	20.89	560	43.27	650	28.06	740	2.45
385	-0.05	475	17.26	565	44.41	655	25.49	745	2.09
390	-0.02	480	17.02	570	45.42	660	23.00	750	1.78
395	0.04	485	18.57	575	46.24	665	20.56	755	1.51
400	0.03	490	20.72	580	46.98	670	18.29	760	1.28
405	0.11	495	23.39	585	47.45	675	16.17	765	1.11
410	0.38	500	25.97	590	47.57	680	14.25	770	0.94
415	1.04	505	28.11	595	47.34	685	12.51	775	0.80
420	2.46	510	29.64	600	47.08	690	10.91	780	0.69
425	5.22	515	30.95	605	46.45	695	9.47		
430	9.90	520	32.16	610	45.52	700	8.27		
435	17.29	525	33.26	615	44.21	705	7.15		

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