



REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100125842

Date: August 17, 2010

REPORT NO. 100125842CRT-022

TEST OF PAR 30L LED LAMPS

MODEL NOS.

S8819 / S8826

RENDERED TO

SATCO PRODUCTS, INC / KOLOURONE / WOOREE LIGHTING
110 HEARLAND BLVD
BRENTWOOD, NY 11717

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

LABORATORY NOTE: The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for SSL by US DOE's CALiPER program.

AUTHORIZATION: The testing performed was authorized by signed quote number 500233869.

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 Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2008 Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted three samples of model number S8819 / S8826. The samples were received by Intertek on July 13, 2010, in undamaged condition, and three samples were tested as received. The sample designations were S6103L through S6105L.

DATES OF TESTS: July 26, 2010.

SUMMARY

Model Nos.: S8819 / S8826
Description: PAR 30L - 14W 60 DEGREE 3500K

Criteria	Result
Total Lumen Output	765.5 Lumens
Total Power	14.62 W
Luminaire Efficacy	52.37
Power Factor	0.957
Color Rendering Index (CRI)	85.33
Correlated Color Temperature (CCT)	5279 K
Chromaticity Coordinate (x)	0.337
Chromaticity Coordinate (y)	0.341
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.425

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Elgar AC Power Supply	1001SX	---	---	---
Xitron Power Analyzer	2503H	E235	04/09/10	04/09/11
Elgar AC Power Supply	CW1251	--	--	--
Yokogawa Power Analyzer	WT1600	E462	06/11/10	06/11/11
Labsphere Diode Array	DAS 1100	N714	Before Use	Before Use
Leeds & Northup Standard Resistor	Manganin	Y089	02/10/10	02/10/11
Data Precision Digital Voltmeter	3600	V124	02/10/10	02/10/11
Fluke Multimeter	45	M133	02/10/10	02/10/11
Fluke Temperature Meter	52	T801	06/11/10	06/11/11
Kikusui DC Power Supply	35-10L	E160	---	---
Sorenson DC Power Supply	DLM150-20E	--	---	---
UDT Optometer	S370	N301	Before Use	Before Use
ITS Two Meter Diameter Integrating Sphere	---	N308	Before Use	Before Use
ITS Ten Foot Diameter Integrating Sphere	---	N307	Before Use	Before Use
NIST Luminous Flux Standard Sources	---	150-14, 8043, 8830	03/17/2010	03/17/11
NIST Spectral Flux Standard Source	RF0605	---	11/29/06	100 hours of use
LSI High Speed Mirror Goniophotometer	6440	--	Before Use	Before Use
Labsphere CDS 1100 CCD Spectroradiometer	CDS1100	--	Before Use	Before Use
Optronics Spectroradiometer	EL750D	E288	Before Use	Before Use



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 DAS 1100 Diode Array Spectroradiometer and Two Meter or Ten Foot 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.

Estimated Total Operating Time

<u>Model Nos.</u>	<u>Total Hours</u>
S8819 / S8826	5

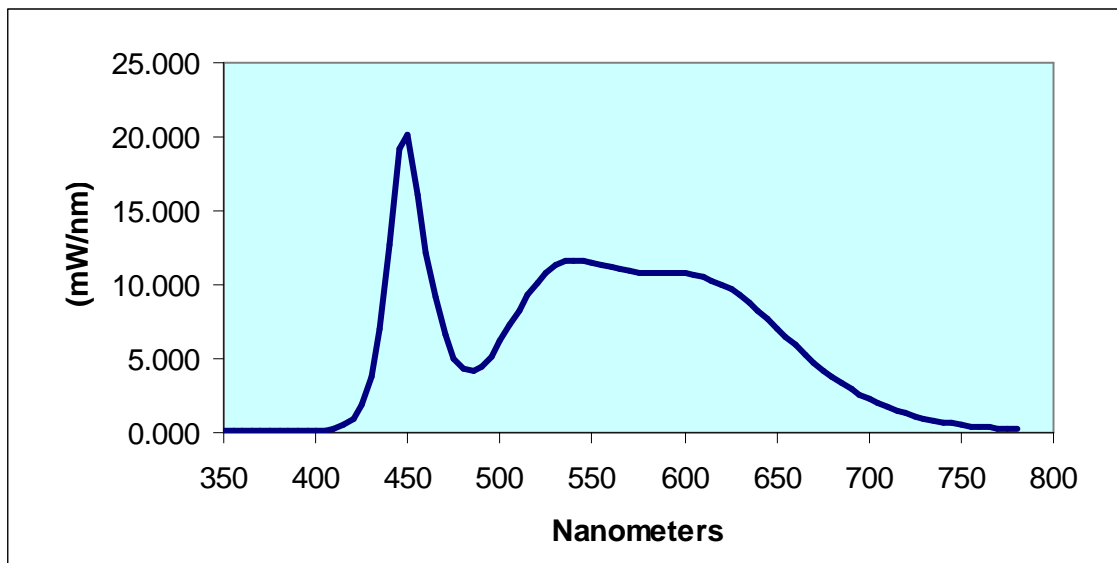


RESULTS OF TESTS

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
Sample No. S6103L, Model Nos. S8819 / S8826							
350	0.100	460	12.199	570	10.930	680	3.778
355	0.105	465	9.200	575	10.859	685	3.340
360	0.109	470	6.623	580	10.839	690	2.939
365	0.072	475	5.027	585	10.791	695	2.577
370	0.097	480	4.295	590	10.819	700	2.257
375	0.091	485	4.127	595	10.825	705	1.967
380	0.086	490	4.454	600	10.773	710	1.703
385	0.077	495	5.182	605	10.676	715	1.487
390	0.084	500	6.159	610	10.573	720	1.285
395	0.099	505	7.235	615	10.332	725	1.114
400	0.123	510	8.283	620	10.062	730	0.959
405	0.160	515	9.302	625	9.688	735	0.833
410	0.267	520	10.179	630	9.258	740	0.718
415	0.484	525	10.865	635	8.767	745	0.616
420	0.967	530	11.333	640	8.242	750	0.531
425	1.931	535	11.591	645	7.664	755	0.463
430	3.749	540	11.673	650	7.054	760	0.396
435	6.962	545	11.677	655	6.468	765	0.341
440	12.770	550	11.544	660	5.889	770	0.295
445	19.239	555	11.378	665	5.301	775	0.256
450	20.174	560	11.187	670	4.760	780	0.221
455	16.074	565	11.068	675	4.247		

SATCO
Sample No. S6103L
Model Nos. S8819 / S8826
Spectral Data Over Visible Wavelengths



RESULTS OF TESTS (cont'd)

Photometric Measurements at 25°C – Integrating Sphere Method

Intertek Sample No.	Correlated Color Temperature (K)	CRI	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
Model Nos. S8819 / S8826						
S6103L	5267	85.30	0.338	0.342	0.210	0.319
S6104L	5300	85.50	0.337	0.340	0.210	0.478
S6105L	5269	85.20	0.338	0.341	0.211	0.479
Average	5279	85.33	0.337	0.341	0.210	0.425

Photometric and Electrical Measurements – Integrating Sphere Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
Model Nos. S8819 / S8826							
S6103L	UP	120.0	126.5	14.56	0.957	767.2	52.69
S6104L	UP	120.0	127.3	14.61	0.955	755.6	51.72
S6105L	UP	120.0	127.4	14.68	0.958	773.7	52.70
Average	UP	120.0	127.1	14.62	0.957	765.5	52.37

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:

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Attachment: None