



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP LAB
CODE 100402-0.

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100346803

Original Issue Date: May 12, 2011

Revision Date: May 24, 2011

REPORT NO. 100346803CRT-005

TEST OF ONE LED PAR38 LAMP

MODEL NO. LP10562SP4D

RENDERED TO

LITETRONICS INTERNATIONAL INC.
4101 WEST 123RD STREET
ALSIP, IL 60803

Revision Note May 24, 2011: This report was revised to correct the lamp description on page 2.

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.

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

AUTHORIZATION: The testing performed was authorized by signed quote number 500287913.

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 one sample of model number LP10562SP4D. The sample was received by Intertek on April 12, 2011, in undamaged condition, and one sample was tested as received. The sample designation was L11315L.

DATES OF TESTS: April 29, 2011 through May 10, 2011.

SUMMARY

Model No.: LP10562SP4D
Description: 10W PAR30 MED 120V SP 3000K 50,000H DIM

Criteria	Result	
	Sphere	Distribution
Total Lumen Output (lm)	568.3	510.8
Total Power (W)	10.27	10.20
Luminaire Efficacy (lm/W)	55.33	50.08
Power Factor	0.964	0.967
Current ATHD (%)	20.20	
Color Rendering Index (CRI) -Ra	81.5	
Duv	0.003	
Correlated Color Temperature (CCT)	2996 K	
Chromaticity Coordinate (x)	0.433	
Chromaticity Coordinate (y)	0.397	
Chromaticity Coordinate (u')	0.252	
Chromaticity Coordinate (v')	0.518	

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Leeds & Northup Standard Resistor	Manganin	Y089	02/17/11	02/17/12
Data Precision Digital Voltmeter	3600	V124	02/17/11	02/17/12
Fluke Multimeter	45	M133	02/17/11	02/17/12
Fluke Temperature Meter	52	T801	06/11/10	06/11/11
Kikusui DC Power Supply	35-10L	E160	---	---
Sorenson DC Power Supply	DLM150-20E	--	---	---
NIST Spectral Flux Standard Source	RF1024	---	09/18/10	100 hours of use
Elgar AC Power Supply	CW1251	--	--	--
Yokogawa Power Meter	WT210	E464	04/19/11	04/19/12
LSI High Speed Mirror Goniometer	6440	--	w/use	w/use
Cole Parmer Hygro Thermometer	445703	T1357	10/12/10	10/12/11
Xitron Power Analyzer	2503AH	E235	04/20/11	04/20/12
ITS 2 Meter Sphere	W/ CDS 600	N308	w/use	w/use
Fluke Temp Meter	53 II	N1324	03/11/11	03/11/12
Elgar Power Supply	CW1251	NA	NA	NA



TEST METHODS

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

Photometric and Electrical measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample 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.

Some graphics were created with Photometrics Plus software.

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

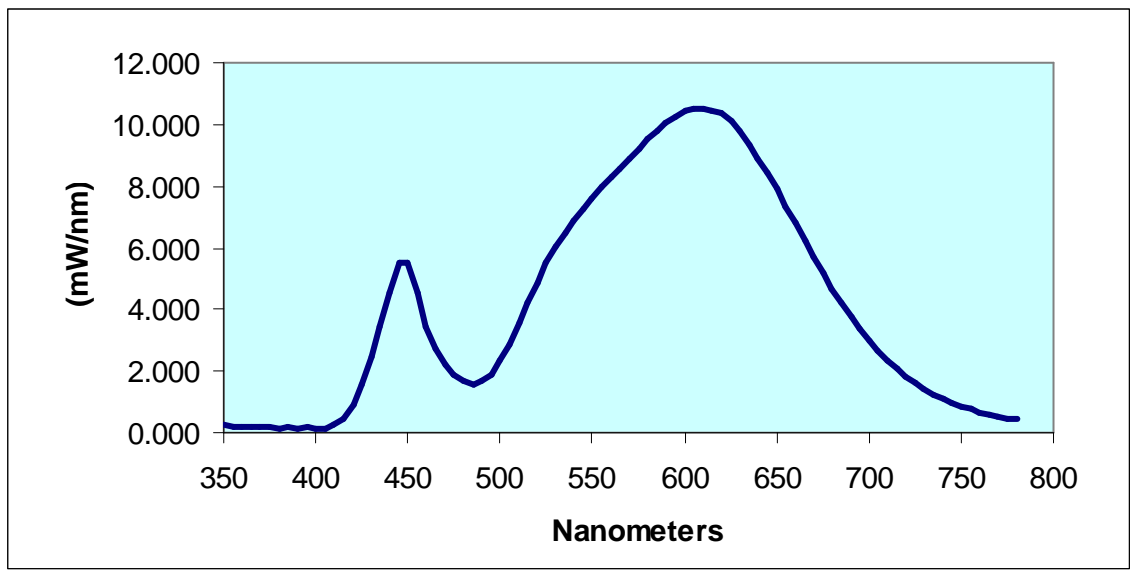
<u>Model No.</u>	<u>Total Hours</u>
LP10562SP4D	4

RESULTS OF TESTS

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
LP10562SP4D							
350	0.263	460	3.457	570	8.889	680	4.678
355	0.217	465	2.721	575	9.209	685	4.211
360	0.214	470	2.210	580	9.523	690	3.774
365	0.192	475	1.851	585	9.792	695	3.383
370	0.189	480	1.654	590	10.080	700	3.005
375	0.171	485	1.582	595	10.273	705	2.662
380	0.161	490	1.659	600	10.470	710	2.353
385	0.186	495	1.891	605	10.514	715	2.066
390	0.134	500	2.329	610	10.525	720	1.839
395	0.185	505	2.875	615	10.456	725	1.608
400	0.123	510	3.539	620	10.351	730	1.418
405	0.144	515	4.231	625	10.107	735	1.231
410	0.232	520	4.893	630	9.788	740	1.089
415	0.448	525	5.500	635	9.367	745	0.958
420	0.879	530	6.033	640	8.909	750	0.850
425	1.573	535	6.489	645	8.431	755	0.760
430	2.484	540	6.881	650	7.909	760	0.662
435	3.447	545	7.253	655	7.356	765	0.581
440	4.513	550	7.595	660	6.815	770	0.517
445	5.505	555	7.952	665	6.257	775	0.476
450	5.521	560	8.279	670	5.691	780	0.425
455	4.516	565	8.586	675	5.167		

LITETRONICS
Sample No. L11315L
Model No. LP10562SP4D
Spectral Data Over Visible Wavelengths



RESULTS OF TESTS (cont'd)

Photometric and Electrical Measurements at 25°C – Integrating Sphere Method

Intertek Sample No.	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')
LP10562SP4D								
L11315L	2996	81.5	24.1	0.003	0.433	0.397	0.252	0.518

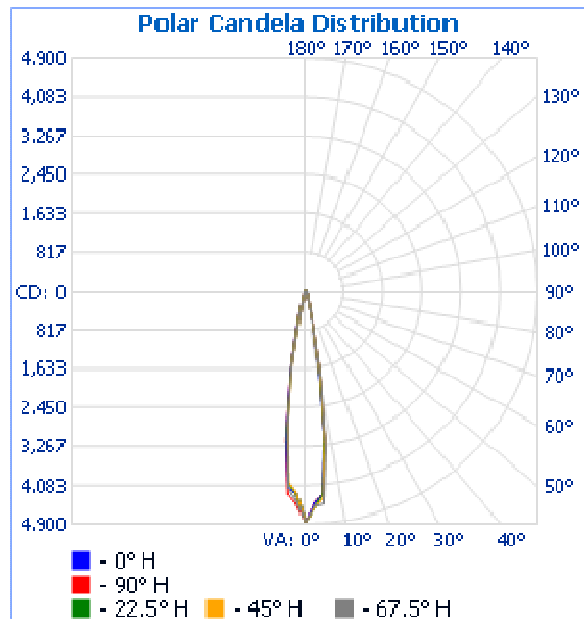
Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
LP10562SP4D								
L11315L	UP	120.0	88.7	10.27	0.964	20.20	568.3	55.33

Photometric and Electrical Measurements – Distribution 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)
LP10562SP4D							
L11315L	UP	120.0	87.98	10.20	0.967	510.8	50.08

Intensity (Candlepower) Summary at 25°C - Candelas

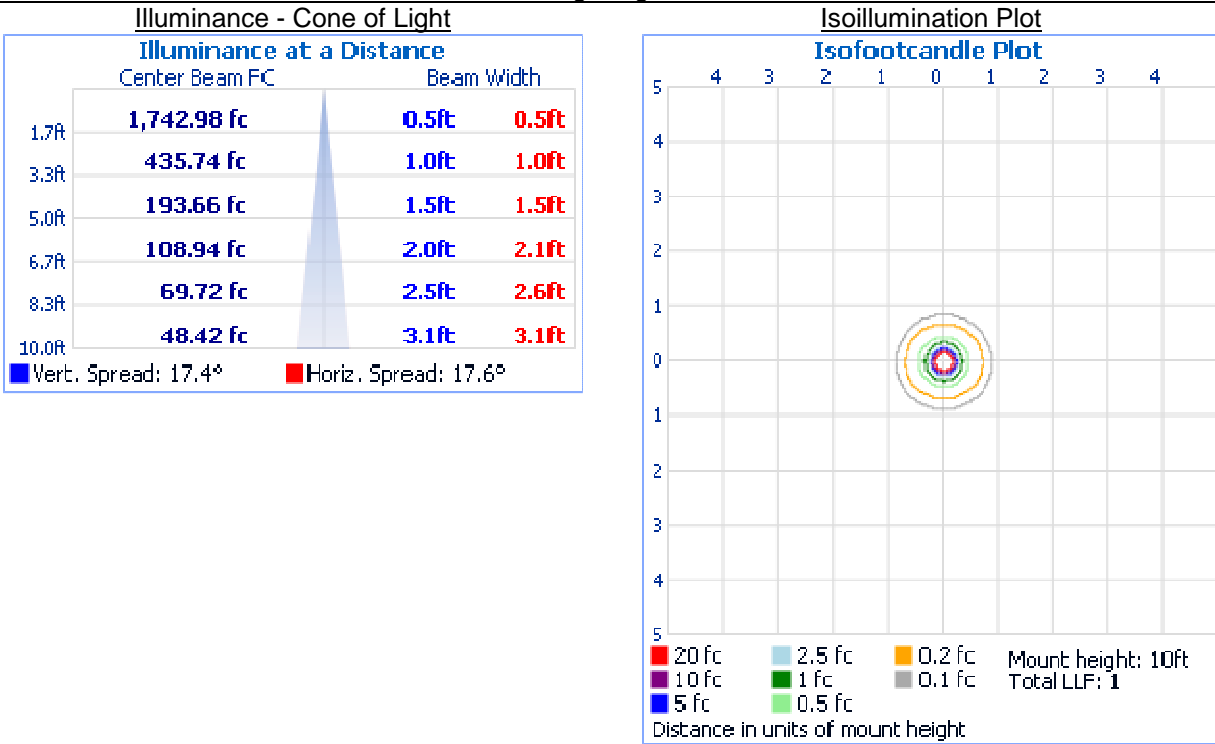
Angle	0	22.5	45	67.5	90
LP10562SP4D					
0	4842	4842	4842	4842	4842
5	4270	4270	4361	4499	4271
10	1665	1716	1798	1946	1760
15	254	264	266	276	258
20	104	104	105	107	102
25	65	65	66	66	64
30	48	50	52	53	51
35	34	34	36	37	36
40	26	25	27	26	25
45	16	16	17	17	16
50	12	12	12	13	12
55	10	10	9	10	9
60	9	9	9	9	8
65	7	7	7	7	7
70	5	5	5	5	5
75	3	3	3	3	3
80	1	1	1	2	1
85	0	0	0	0	0
90	0	0	0	0	0



RESULTS OF TESTS (cont'd)

Illumination Plots

Model No.: LP10562SP4D
Mounting Height: 10 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
LP10562SP4D		
0-30	456.5	89.4
0-40	478.8	93.7
0-60	500.7	98.0
60-90	10.1	2.0
0-90	510.8	100.0
90-180	0.0	0.0
0-180	510.8	100.0

Reflector Summary

	Efficiency (%)	Lumens	Horizontal Spread (°)	Vertical Spread (°)
LP10562SP4D				
Field (10%):	74.9	382.6	27.3	27.1
Beam (50%):	47.0	239.9	17.6	17.4
Total:	101.0	515.7		

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:

A handwritten signature in black ink, appearing to read "S Mosier".

Steven Mosier
Technician I
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read "Jeffrey Davis".

Jeffrey Davis
Senior Associate Engineer
Lighting Division