



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

# REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100403047

Original Issue Date: May 26, 2011

Revision Date: July 12, 2011

REPORT NO. 100403047CRT-004

TEST OF ONE LED WALL PACK LAMP

LED MODEL NO. WP14

RENDERED TO

INTENCITY LIGHTING, INC.  
22922 NORTH HIGHWAY 7  
DARDANELLE, AR 72834

Revision Note July 12, 2011: This report was revised to add off-state power results.

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 500299124.

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 WP14. The sample was received by Intertek on April 15, 2011, in undamaged condition, and one sample was tested as received. The sample designation was I11390L-B.

DATES OF TESTS: May 19, 2011 through July 12, 2011

SUMMARY

Model No.: WP14
Description: LED Wall Pack Lamp

Criteria	Result
Total Lumen Output	1348 Lumens
Total Power	23.61 W
Luminaire Efficacy	57.09
Power Factor	0.973
Current ATHD	14.42%
Correlated Color Temperature (CCT)	5523 K
Color Rendering Index (CRI) - Ra	72.2
Color Rendering Index (CRI) - R9	-8.3
Duv	0.008
Chromaticity Coordinate (x)	0.332
Chromaticity Coordinate (y)	0.356
Chromaticity Coordinate (u')	0.201
Chromaticity Coordinate (v')	0.485
Off State Power	0.0 W

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
Yokogawa Power Analyzer	WT1600	E462	06/11/10	06/11/11
ITS 3 Meter Sphere	W/ CDS 1100	N307	w/use	w/use
Fluke Temp Meter	53 II	T1318	02/25/11	02/25/12
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



## 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.

### Off-State Power

A power analyzer is used to record the electrical data during normal operation and again while the unit is switched off.

### Estimated Total Operating Time

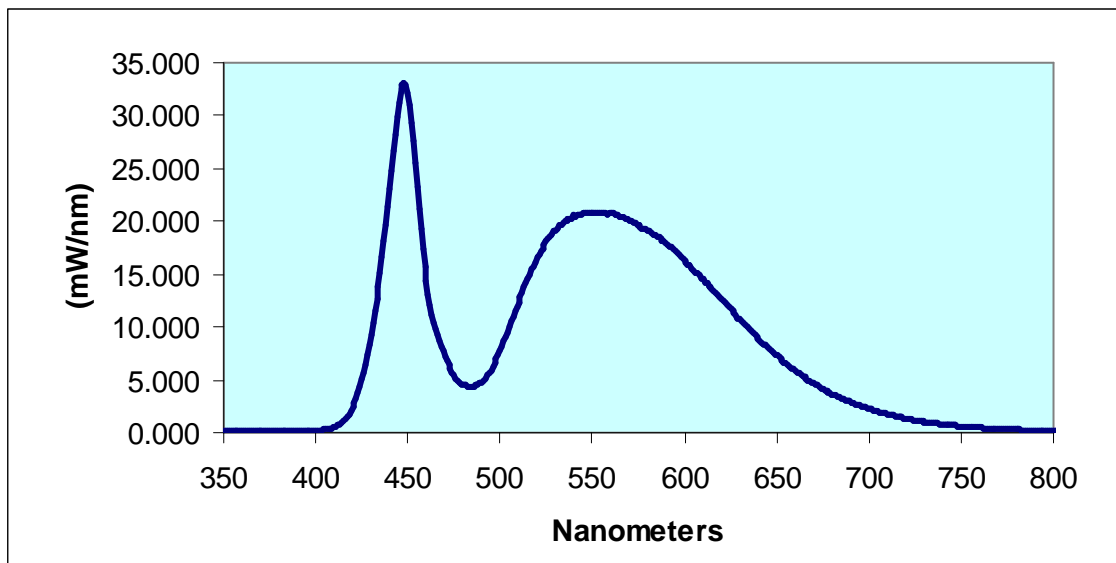
<u>Model No.</u>	<u>Total Hours</u>
WP14	5

**RESULTS OF TESTS**

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
WP14							
350	0.176	460	14.304	570	20.118	680	3.682
355	0.178	465	9.757	575	19.679	685	3.244
360	0.186	470	7.221	580	19.168	690	2.900
365	0.157	475	5.445	585	18.590	695	2.560
370	0.173	480	4.561	590	17.936	700	2.254
375	0.164	485	4.404	595	17.141	705	1.994
380	0.158	490	4.795	600	16.330	710	1.754
385	0.154	495	5.909	605	15.372	715	1.535
390	0.181	500	7.766	610	14.499	720	1.354
395	0.189	505	9.989	615	13.538	725	1.187
400	0.234	510	12.330	620	12.629	730	1.040
405	0.313	515	14.639	625	11.657	735	0.916
410	0.543	520	16.571	630	10.732	740	0.808
415	1.109	525	18.120	635	9.769	745	0.707
420	2.435	530	19.195	640	8.873	750	0.629
425	5.031	535	20.023	645	8.090	755	0.558
430	9.301	540	20.529	650	7.318	760	0.495
435	15.189	545	20.752	655	6.547	765	0.000
440	23.084	550	20.848	660	5.857	770	0.382
445	31.286	555	20.846	665	5.226	775	0.338
450	32.230	560	20.731	670	4.656	780	0.300
455	23.308	565	20.476	675	4.141		

**IntenCity Lighting Inc.  
Sample No. I11390L-B  
Model No. WP14  
Spectral Data Over Visible Wavelengths**



## RESULTS OF TESTS (cont'd)

### Photometric Measurements at 25°C – Integrating Sphere Method

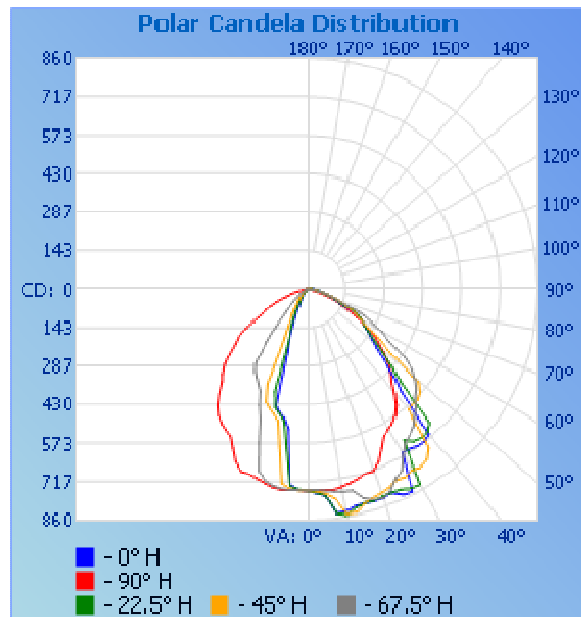
Intertek Sample No.	Correlated Color		CRI -Ra	CRI -R9	Duv	Current ATHD (%)	CIE 31' Chromaticity Coordinate	CIE 31' Chromaticity Coordinate	CIE 76' Chromaticity Coordinate	CIE 76' Chromaticity Coordinate
	Temperature (K)						(x)	(y)	(u')	(v')
WP14										
I11390L-B	5523	72.2	-8.3	0.008	14.42	0.332	0.356	0.201	0.485	

### 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)
WP14							
I11390L-B	UP	120.0	202.1	23.61	0.973	1348	57.09

### Intensity (Candlepower) Summary at 25°C - Candelas

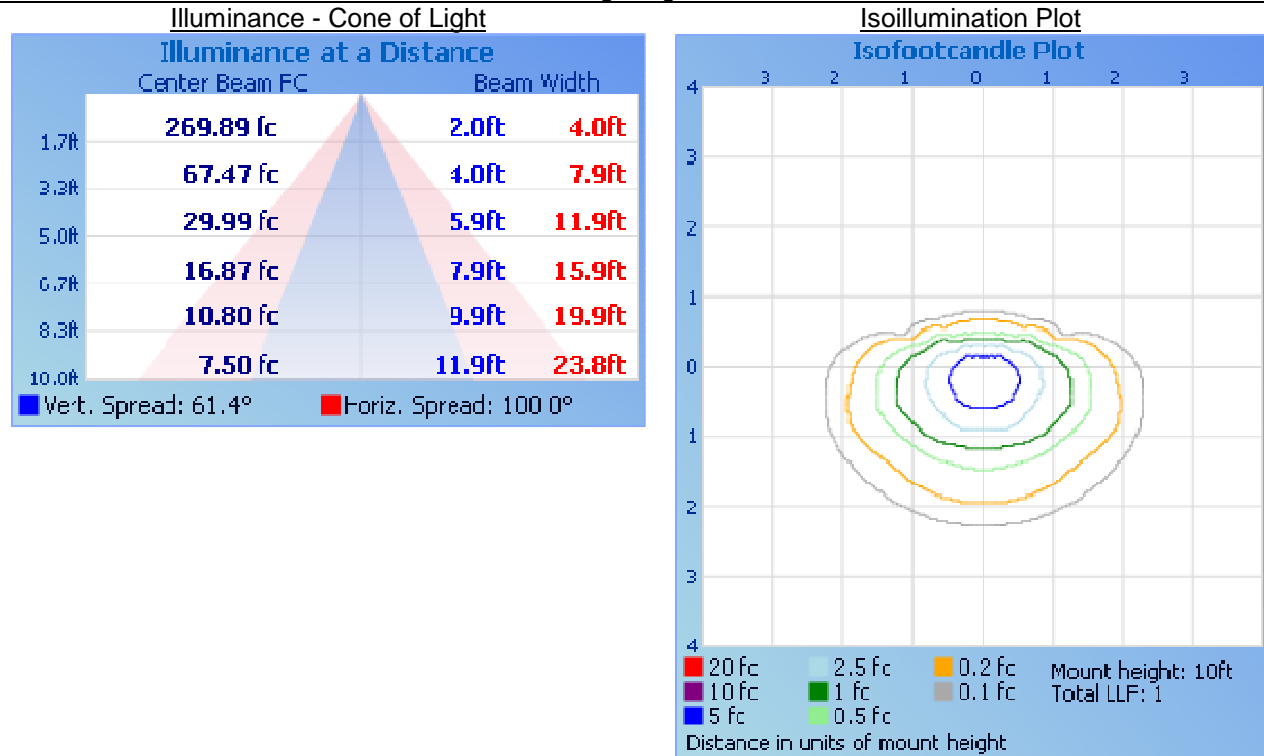
Angle	0	22.5	45	67.5	90
WP14					
0	750	750	750	750	750
5	770	770	762	753	751
10	840	854	847	765	748
15	827	826	828	804	730
20	827	820	807	826	719
25	844	822	785	780	653
30	704	840	778	712	606
35	714	691	776	664	573
40	704	695	585	623	508
45	456	494	582	569	444
50	336	366	542	524	376
55	278	281	331	439	308
60	235	235	232	321	213
65	167	183	178	234	150
70	108	112	131	127	88
75	70	70	73	73	38
80	49	47	42	39	8
85	35	32	26	16	0
90	22	20	14	5	0
95	13	12	7	0	0
100	8	6	2	0	0
105	3	2	0	0	0



## RESULTS OF TESTS (cont'd)

### Illumination Plots

Model No.: WP14  
Mounting Height: 10 ft.



### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
	WP14	
0-30	506.3	37.5
0-40	777.2	57.6
0-60	1189	88.2
60-90	154.8	11.5
0-90	1344	99.7
90-180	4.5	0.3
0-180	1348	100.0

### Off State Power

Sample No.	Input Power in Off State (Watts)
	WP14
111390L-B	0.0

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:

Handwritten signature of Kenda Branch.

Kenda Branch  
Engineer  
Lighting Division

Attachment: None

Report Reviewed By:

Handwritten signature of David Ellis.

FOR:  
Jeffery Davis  
Senior Associate Engineer  
Lighting Division