REPORT

545 E. Algonquin Rd., Arlington Heights, IL 60005

Project No. G102056385

Original Issue Date: March 31, 2015
Revison Date: September 16, 2016

REPORT NO. 102056385CHI-016

TEST OF ONE LED WALL SCONCE

MODEL NO. 700WSBOW6W-LED830
LED MODEL NO. EVERLIGHT XI3535-HM307F8-03201-000P
DRIVER MODEL NO. LTF TA60WA12LED-0000

RENDERED TO

GENERATION BRANDS
7400 LINDER AVE
SKOKIE, IL 60077

Revision Note September 16, 2016: This report was revised to add BUG rating.

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 NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500587731.

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

ANSI NEMA ANSLG C78.377: 2012: Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number 700WSBOW6W-LED830. The sample was received by Intertek on March 27, 2015, in undamaged condition and one sample was tested as received. The sample designation was 03272015125056-007D.

DATES OF TESTS: March 31, 2015

SUMMARY

Model No.:	700WSBOW6W-LED830
Description:	LED Wall Sconce

	Result	
Criteria	Sphere	Goniometer
Total Lumen Output (Lumens)	1163	1152
Total Power (W)	47.27	47.90
Luminaire Efficacy (LPW)	24.60	24.05

Criteria	Result
Power Factor	0.925
Current ATHD %	37.94
Correlated Color Temperature (CCT - K)	2942
Color Rendering Index (CRI - Ra)	81.6
Color Rendering Index (CRI - R9)	8.1
DUV	0.003
Chromaticity Coordinate (x)	0.437
Chromaticity Coordinate (y)	0.398
Chromaticity Coordinate (u')	0.254
Chromaticity Coordinate (v')	0.519
BUG Rating	B1-U0-G0

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Yokogawa Power Meter	WT210	146919	07/16/14	07/16/15	03/31/15
Omega Thermometer	DPI8-C24	146920	10/09/14	10/09/15	03/31/15
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	03/31/15
Newport Hygrometer	iServer	146956	01/06/15	01/06/16	03/31/15
Elgar, AC Power Supply	CW1251P	146918	VBU	VBU	03/31/15
Cole-Parmer Triple Timer	94440-00	CHI0041	04/01/14	04/01/15	03/31/15
Labsphere 2M Sphere & Spectroradion	CDS1100	146137	VBU	VBU	03/31/15
Elgar AC Power Supply	CW1251M	146113	VBU	VBU	03/31/15
Sorenson DC Power Supply	XFR150-8	146847	VBU	VBU	03/31/15
Yokogawa Power Analyzer	WT1600	146767	04/09/14	04/09/15	03/31/15
Omega Temperature Meter	MDSi8	146873	07/15/14	07/15/15	03/31/15
Newport Thermohygrometer	iTHX-M	146382	07/02/14	07/02/15	03/31/15

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 Model CDS 1100 CCD 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.

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.

BUG Ratings (Backlight, Uplight, Glare) – for Outdoor Fixtures Only

Zonal Lumens were calculated and grouped using the formula in IESNA TM-15-11 for each zone as defined in
the BUG addendum. The maximum lumen rating in each zone was compared against the BUG zonal requirements of Energy Star. Photometric Toolbox software was used to calculate results.

RESULTS OF TEST

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) - Integrating Sphere Method

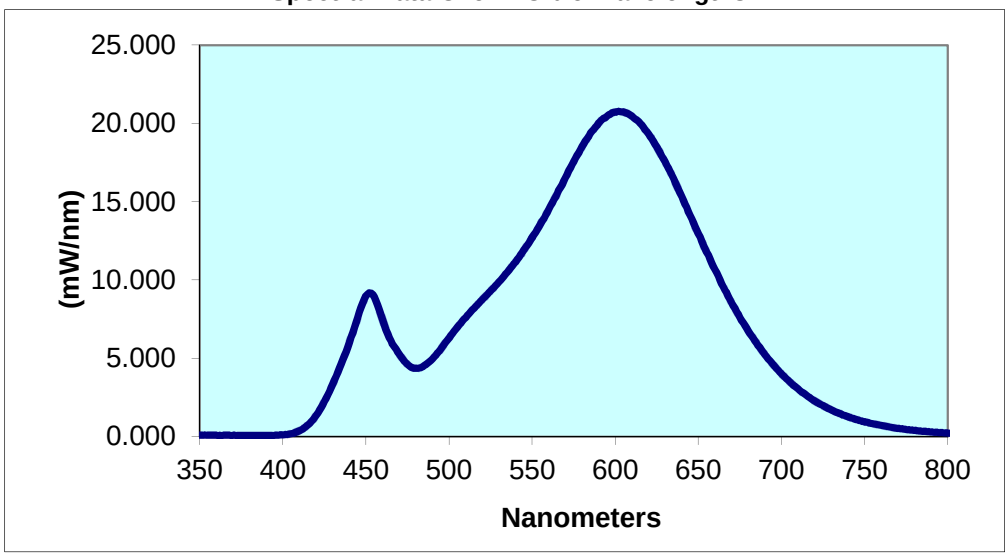
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
03272015125056-007D	UP	120.0	425.9	47.27	0.925	37.94	1163	24.60

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')
2942	81.6	8.1	0.003	0.437	0.398	0.254	0.519

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.087	440	6.012	530	9.875	620	19.32	710	3.040
355	0.084	445	7.617	535	10.49	625	18.49	715	2.634
360	0.078	450	8.996	540	11.15	630	17.53	720	2.277
365	0.084	455	8.915	545	11.91	635	16.48	725	1.974
370	0.073	460	7.451	550	12.72	640	15.32	730	1.698
375	0.067	465	6.113	555	13.58	645	14.15	735	1.464
380	0.061	470	5.253	560	14.51	650	12.96	740	1.265
385	0.056	475	4.600	565	15.50	655	11.80	745	1.090
390	0.061	480	4.354	570	16.53	660	10.68	750	0.944
395	0.075	485	4.530	575	17.57	665	9.569	755	0.815
400	0.101	490	4.974	580	18.52	670	8.553	760	0.707
405	0.185	495	5.614	585	19.39	675	7.612	765	0.611
410	0.374	500	6.301	590	20.04	680	6.758	770	0.522
415	0.744	505	7.003	595	20.47	685	5.975	775	0.452
420	1.350	510	7.607	600	20.72	690	5.239	780	0.389
425	2.250	515	8.203	605	20.73	695	4.596		
430	3.363	520	8.760	610	20.47	700	4.014		
435	4.630	525	9.304	615	19.99	705	3.497		

Spectral Data Over Visible Wavelengths



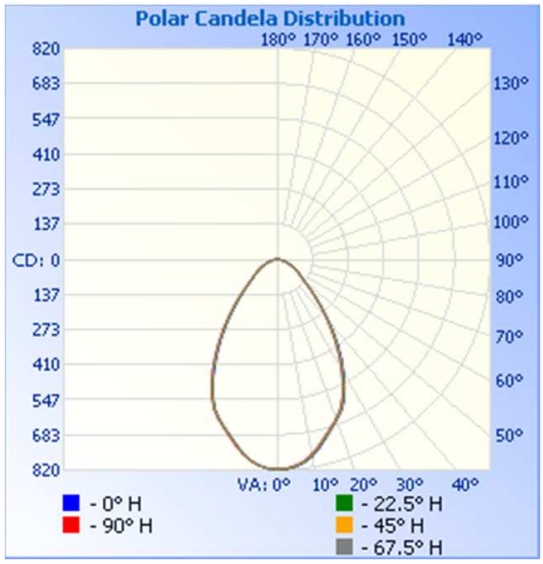
RESULTS OF TEST (cont'd)

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – 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)
03272015125056-007D	UP	120.0	465.6	47.90	0.848	1152	24.05

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	817	817	817	817	817
5	810	809	808	807	805
10	778	776	774	771	769
15	720	718	716	712	712
20	667	666	665	662	661
25	608	603	600	596	594
30	511	507	504	499	496
35	407	401	399	395	391
40	304	299	298	295	291
45	216	213	212	209	206
50	149	147	146	145	142
55	111	110	109	109	108
60	87	86	86	85	84
65	66	65	64	63	63
70	48	47	47	46	45
75	33	32	32	31	30
80	21	20	20	19	19
85	10	10	9	9	9
90	0	0	0	0	0

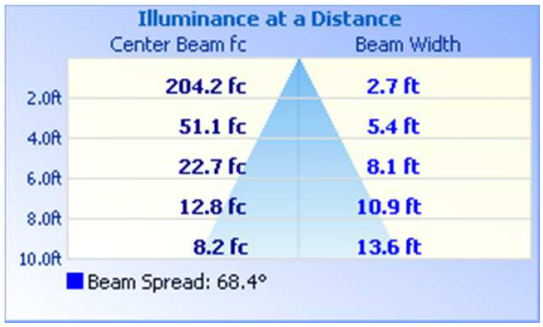


RESULTS OF TEST (cont'd)

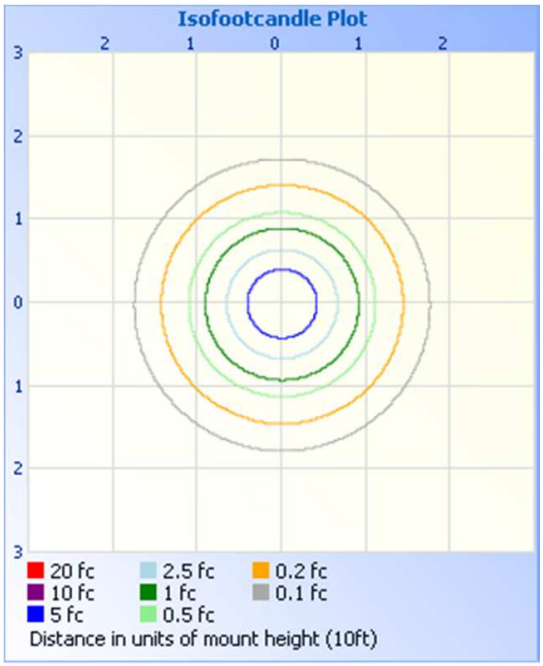
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	546.1	47.4
0-40	789.5	68.5
0-60	1047	90.9
60-90	104.7	9.1
0-90	1152	100.0
90-180	0.0	0.0
0-180	1152	100.0

Luminaire Classification System (LCS)

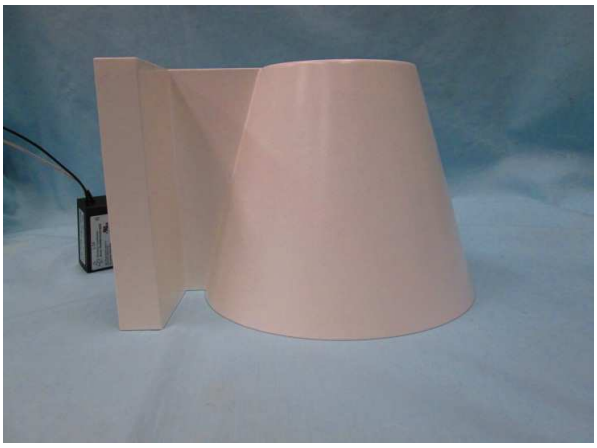
LCS	Zone	Lumens	% Luminaire
FL	(0-30)	275.1	23.9
FM	(30-60)	256.3	22.2
FH	(60-80)	49.1	4.3
FVH	(80-90)	5.2	0.5
BL	(0-30)	271.4	23.5
BM	(30-60)	245.2	21.3
BH	(60-80)	46.0	4.0
BVH	(80-90)	4.4	0.4
UL	(90-100)	0.0	0.0
UH	(100-180)	0.0	0.0
Total		1152.7	100.0

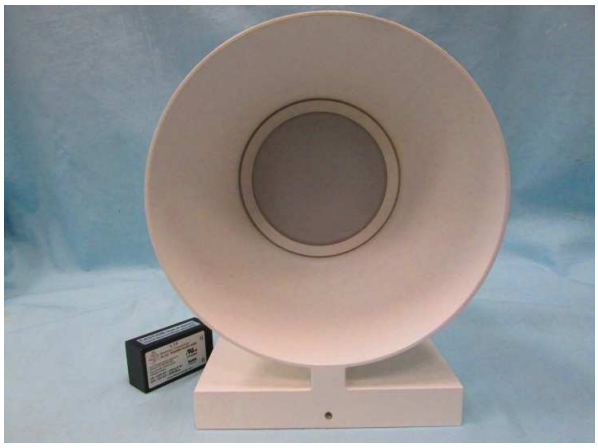
Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	75.7	6.6
10-20	200.5	17.4
20-30	269.9	23.4
30-40	243.4	21.1
40-50	160.3	13.9
50-60	97.3	8.4
60-70	62.5	5.4
70-80	32.6	2.8
80-90	9.6	0.8

BUG Rating: B1-U0-G0
IES Classification: Type VS
Longitudinal Classification: Very Short

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:

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Report Reviewed By:

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Attachment: None