



REPORT

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

Project No. G102171228

Date: September 20, 2016

REPORT NO. 102171228CHI-058

TEST OF ONE LED WALL SCONCE

MODEL NO. 700OWLYT12SCZ8401201

LED MODEL NO. LUMINUS MP-3030-2100-40-90

DRIVER MODEL NO. LTF DS12W350C1534D010-0000

RENDERED TO

GENERATION BRANDS
7400 LINDER AVE.
SKOKIE, IL, 60077

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

AUTHORIZATION: The testing performed was authorized by signed quote number 500606081.

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 700OWLYT12SCZ8401201. The sample was received by Intertek on September 16, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH09162016092757-58.

DATES OF TESTS: September 20, 2016

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SUMMARY

Model No.: 700OWLYT12SCZ8401201
Description: LED Wall Sconce

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	286.4	276.8
Total Power (W)	9.861	9.877
Luminaire Efficacy (LPW)	29.04	28.02

Criteria	Result
Power Factor	0.934
Current ATHD %	24.39
Correlated Color Temperature (CCT - K)	3055
Color Rendering Index (CRI - Ra)	80.4
Color Rendering Index (CRI - R9)	-0.3
DUV	0.001
Chromaticity Coordinate (x)	0.434
Chromaticity Coordinate (y)	0.404
Chromaticity Coordinate (u')	0.248
Chromaticity Coordinate (v')	0.521
BUG Rating	B0-U3-G1
IES Classification	Type III
Longitudinal Classification	Very Short

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Yokogawa Power Meter	WT210	146919	07/11/16	07/11/17	09/20/16
Omega Newport Thermometer	DPI8-C24	146920	10/09/15	10/09/16	09/20/16
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	09/20/16
Newport Thermohygrometer	iServer	146956	01/04/16	01/04/17	09/20/16
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU	09/20/16
Labsphere Spectroradiometer	CDS1100	CHI0091	VBU	VBU	09/20/16
3 Meter Sphere	SPR600	CHI0088	VBU	VBU	09/20/16
Elgar AC Power Supply	CW1251M	146112	VBU	VBU	09/20/16
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU	09/20/16
Newport Humidity Recorder	iTHX-SD	146382	06/27/16	06/27/17	09/20/16
Yokogawa Power Meter	WT1600	146768	01/14/16	01/14/17	09/20/16
Omega Temperature Meter	MDSi8	146139	03/21/16	03/21/17	09/20/16

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

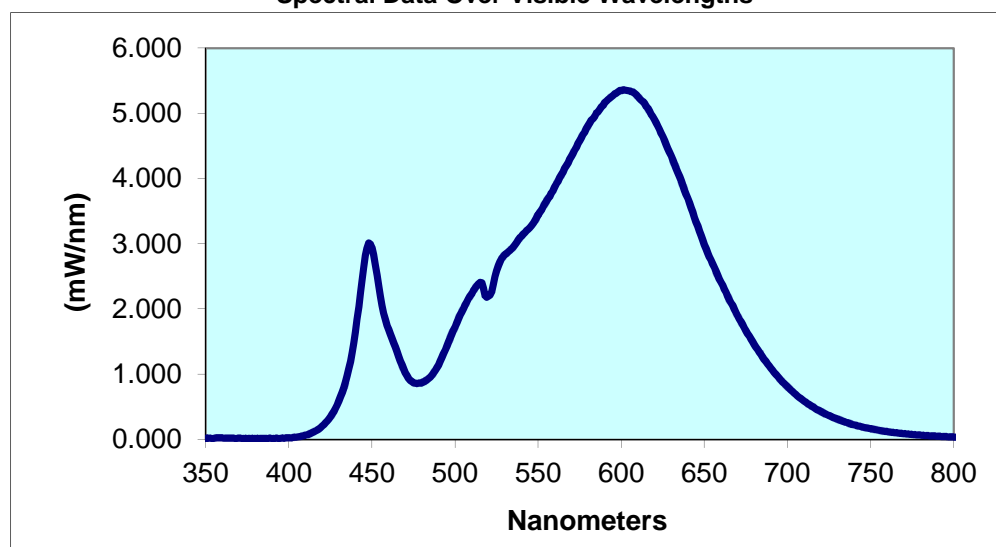
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
AH09162016092757-58	LINEAR	120.0	88.01	9.861	0.934	24.39	286.4	29.04

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')
3055	80.4	-0.3	0.001	0.434	0.404	0.248	0.521

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.017	440	1.650	530	2.837	620	4.898	710	0.590
355	0.020	445	2.642	535	2.951	625	4.643	715	0.506
360	0.025	450	2.939	540	3.118	630	4.348	720	0.430
365	0.019	455	2.200	545	3.249	635	4.032	725	0.368
370	0.018	460	1.688	550	3.445	640	3.694	730	0.313
375	0.016	465	1.351	555	3.654	645	3.339	735	0.266
380	0.016	470	1.025	560	3.871	650	2.989	740	0.226
385	0.015	475	0.867	565	4.101	655	2.695	745	0.193
390	0.016	480	0.876	570	4.342	660	2.416	750	0.165
395	0.019	485	0.957	575	4.582	665	2.152	755	0.141
400	0.025	490	1.145	580	4.815	670	1.901	760	0.122
405	0.040	495	1.434	585	5.006	675	1.667	765	0.104
410	0.068	500	1.734	590	5.166	680	1.458	770	0.090
415	0.118	505	2.009	595	5.278	685	1.268	775	0.077
420	0.205	510	2.239	600	5.349	690	1.093	780	0.066
425	0.350	515	2.411	605	5.345	695	0.942		
430	0.590	520	2.201	610	5.255	700	0.809		
435	0.979	525	2.589	615	5.104	705	0.692		

Spectral Data Over Visible Wavelengths



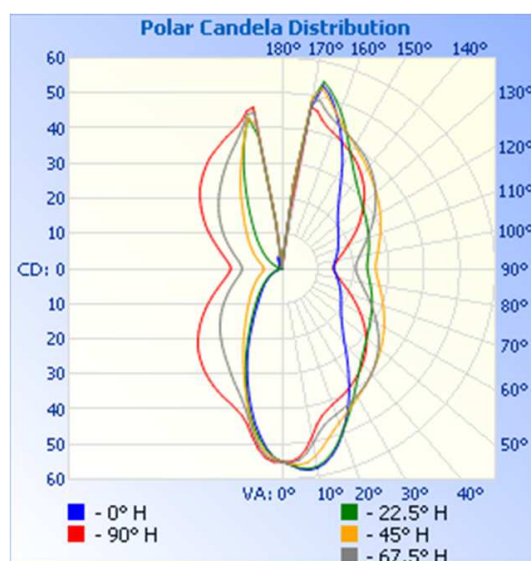
RESULTS OF TEST (cont'd)

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 (LPW)
AH09162016092757-58	LINEAR	120.0	88.34	9.877	0.932	276.8	28.02

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	55	55	55	55	55
5	57	57	56	55	54
10	58	57	54	50	49
15	55	54	50	46	43
20	50	50	47	44	41
25	44	45	44	43	40
30	38	41	42	42	39
35	32	37	41	41	37
40	27	35	39	39	35
45	24	33	38	37	33
50	22	31	36	35	31
55	20	30	35	33	28
60	19	29	33	31	25
65	18	28	32	28	23
70	17	27	30	26	20
75	17	26	29	24	18
80	16	25	28	22	16
85	15	24	27	21	15
90	15	24	26	21	14
95	15	24	27	21	15
100	15	25	27	22	16
105	16	25	28	24	18
110	17	26	29	26	20
115	17	27	31	28	22
120	18	27	32	30	25
125	19	28	33	32	27
130	20	29	34	34	30
135	22	31	36	36	33
140	25	32	37	38	35
145	29	35	39	40	37
150	34	38	41	41	38
155	40	43	43	43	40
160	46	48	46	44	41
165	51	53	50	47	44
170	46	49	49	48	47
175	3	3	2	1	0
180	0	0	0	0	0

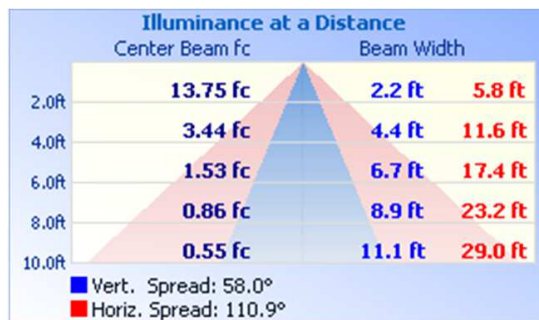


RESULTS OF TEST (cont'd)

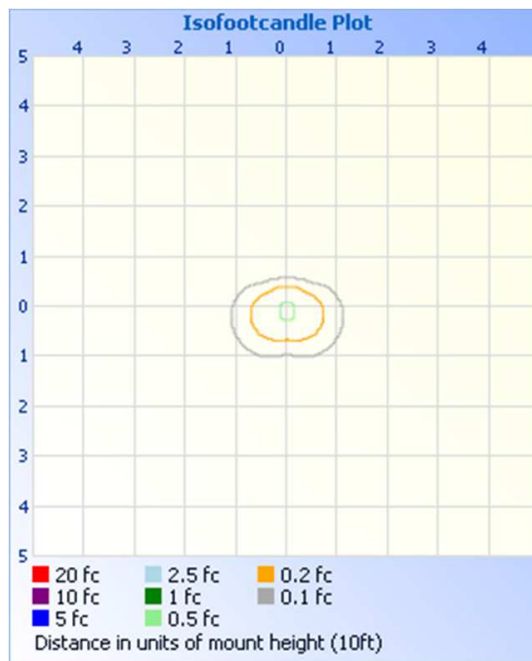
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	34.1	12.3
0-40	52.8	19.1
0-60	91.9	33.2
60-90	50.6	18.3
0-90	142.5	51.5
90-180	134.4	48.5
0-180	276.8	100.0

Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	19.7	7.1
FM	(30-60)	38.8	14.0
FH	(60-80)	26.2	9.5
FVH	(80-90)	12.0	4.3
BL	(0-30)	14.5	5.2
BM	(30-60)	19.0	6.8
BH	(60-80)	9.0	3.2
BVH	(80-90)	3.4	1.2
UL	(90-100)	15.3	5.5
UH	(100-180)	119.1	43.0
Total		277.0	100.0

Zonal Lumens and Percentages at 25°C

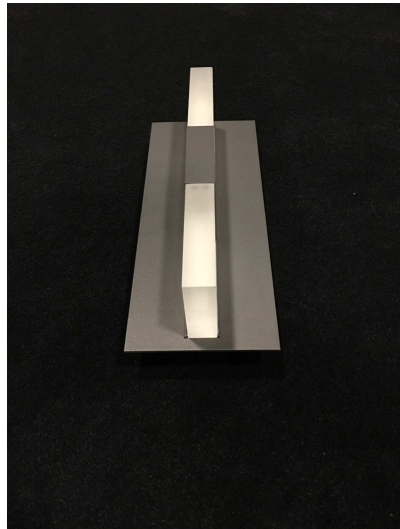
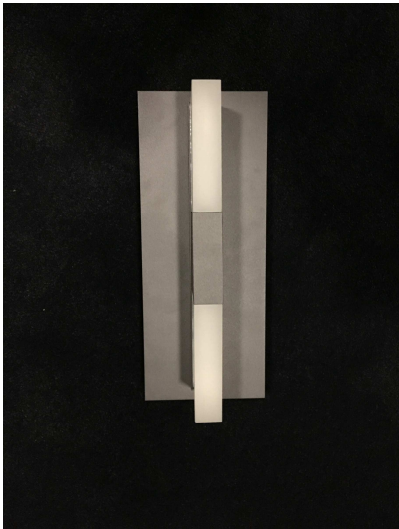
Zone	Lumens	% Luminaire
0-10	5.0	1.8
10-20	12.5	4.5
20-30	16.6	6.0
30-40	18.6	6.7
40-50	19.6	7.1
50-60	19.5	7.0
60-70	18.4	6.7
70-80	16.8	6.1
80-90	15.4	5.6
90-100	15.3	5.5
100-110	16.4	5.9
110-120	17.8	6.4
120-130	18.8	6.8
130-140	18.8	6.8
140-150	17.9	6.5
150-160	15.9	5.8
160-170	11.9	4.3
170-180	1.6	0.6

BUG Rating: B0-U3-G1

IES Classification: Type III

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:



Vladimir Kozak
Senior Associate Engineer
Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley
Engineer
Lighting Division