



# REPORT

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

Project No. G102171228

Original Issue Date: August 12, 2016

Revision Date: September 1, 2016

REPORT NO. 102171228CHI-028

TEST OF ONE LED WALL SCONCE

MODEL NO. 700OWLYT18SDC8401201

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

Revision Note September 1, 2016: This report was revised to add BUG rating data.

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 700OWLYT18SDC8401201. The sample was received by Intertek on August 3, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH08032016091921D.

DATES OF TESTS: August 9, 2016 through August 12, 2016.

---

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

SUMMARY

Model No.:	700OWLYT18SDC8401201
Description:	LED Wall Sconce

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	282.1	273.6
Total Power (W)	9.872	9.858
Luminaire Efficacy (LPW)	28.58	27.75

Criteria	Result
Power Factor	0.942
Current ATHD %	23.31
Correlated Color Temperature (CCT - K)	3093
Color Rendering Index (CRI - Ra)	80.3
Color Rendering Index (CRI - R9)	-0.8
DUV	0.000
Chromaticity Coordinate (x)	0.431
Chromaticity Coordinate (y)	0.404
Chromaticity Coordinate (u')	0.247
Chromaticity Coordinate (v')	0.520
BUG rating	B0-U3-G1

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	08/12/16
Omega Newport Thermometer	DPI8-C24	146920	10/09/15	10/09/16	08/12/16
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	08/12/16
Newport Thermohygrometer	iServer	146956	01/04/16	01/04/17	08/12/16
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU	08/12/16
Labsphere Spectroradiometer	CDS1100	CHI0091	VBU	VBU	08/09/16
3 Meter Sphere	SPR600	CHI0088	VBU	VBU	08/09/16
Elgar AC Power Supply	CW1251M	146112	VBU	VBU	08/09/16
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU	08/09/16
Newport Humidity Recorder	iTHX-SD	146382	06/27/16	06/27/17	08/09/16
Yokogawa Power Meter	WT1600	146768	01/14/16	01/14/17	08/09/16
Omega Temperature Meter	MDSi8	146139	03/21/16	03/21/17	08/09/16



## 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**

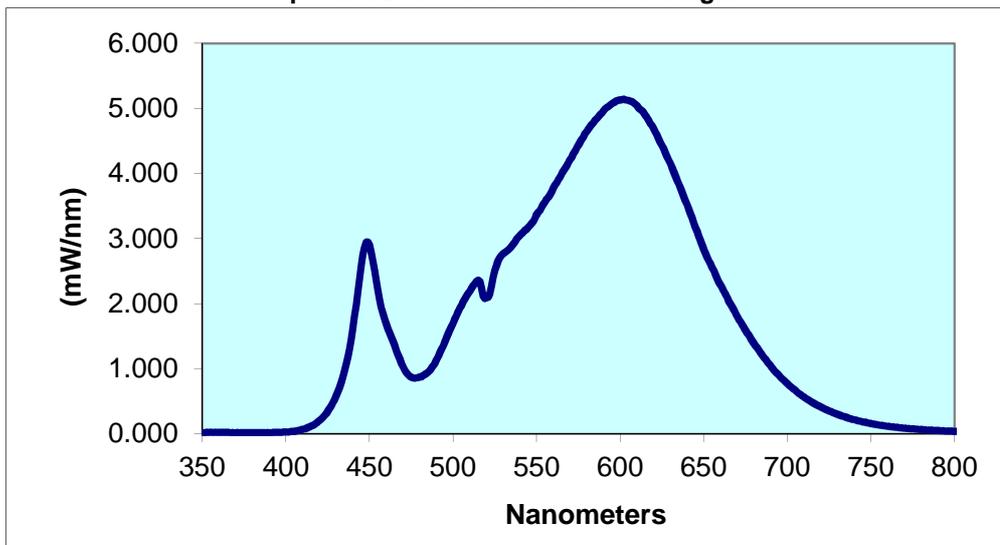
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
AH08032016091921D	Horizontal	120.0	87.35	9.872	0.942	23.31	282.1	28.58

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')
3093	80.3	-0.8	0.000	0.431	0.404	0.247	0.520

**Spectral Distribution over Visible Wavelengths**

nm	mW/nm								
350	0.016	440	1.614	530	2.769	620	4.685	710	0.563
355	0.022	445	2.575	535	2.880	625	4.428	715	0.481
360	0.021	450	2.901	540	3.047	630	4.151	720	0.411
365	0.019	455	2.205	545	3.174	635	3.837	725	0.351
370	0.011	460	1.690	550	3.365	640	3.518	730	0.300
375	0.014	465	1.358	555	3.564	645	3.177	735	0.254
380	0.016	470	1.031	560	3.777	650	2.835	740	0.214
385	0.016	475	0.868	565	3.993	655	2.555	745	0.184
390	0.017	480	0.871	570	4.216	660	2.293	750	0.157
395	0.019	485	0.948	575	4.435	665	2.043	755	0.134
400	0.027	490	1.133	580	4.648	670	1.807	760	0.115
405	0.037	495	1.411	585	4.827	675	1.590	765	0.099
410	0.067	500	1.701	590	4.966	680	1.387	770	0.085
415	0.116	505	1.974	595	5.074	685	1.206	775	0.074
420	0.200	510	2.195	600	5.128	690	1.043	780	0.063
425	0.344	515	2.359	605	5.124	695	0.900		
430	0.578	520	2.091	610	5.044	700	0.772		
435	0.960	525	2.507	615	4.891	705	0.662		

**Spectral Data Over Visible Wavelengths**



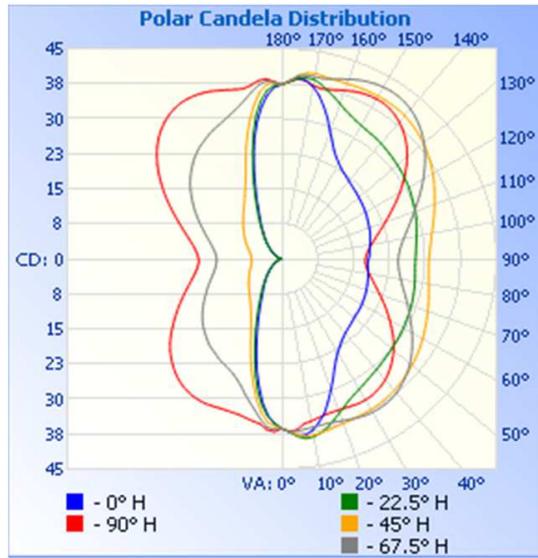
**RESULTS OF TEST (cont'd)**

**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)
AH08032016091921D	Horizontal	120.0	87.15	9.858	0.943	273.6	27.75

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

Angle	0	22.5	45	67.5	90
0	36	36	36	36	36
5	38	38	38	37	37
10	37	39	38	37	35
15	34	37	38	36	35
20	30	35	38	37	34
25	26	33	37	38	35
30	23	32	37	38	35
35	22	31	37	38	35
40	21	31	37	37	34
45	20	30	36	36	32
50	20	30	36	35	31
55	20	30	35	33	28
60	19	29	34	32	26
65	19	29	33	30	24
70	19	29	33	28	22
75	19	29	32	26	20
80	18	28	31	25	19
85	18	28	31	25	18
90	18	28	31	24	17
95	18	28	31	25	18
100	19	29	32	26	19
105	19	29	33	28	21
110	20	30	34	30	23
115	20	30	35	32	26
120	20	31	37	34	29
125	21	31	38	37	32
130	21	32	39	39	34
135	21	32	39	41	37
140	22	32	40	42	38
145	23	33	40	43	39
150	24	33	40	43	40
155	26	34	40	42	39
160	29	35	40	41	38
165	34	37	40	40	38
170	38	39	40	40	38
175	39	39	39	39	39
180	37	37	37	37	37

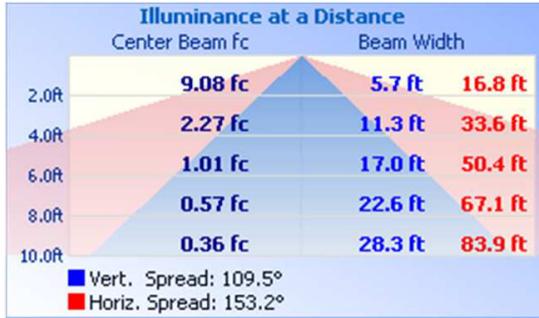


RESULTS OF TEST (cont'd)

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	24.6	9.0
0-40	40.1	14.7
0-60	76.8	28.1
60-90	55.2	20.2
0-90	132.0	48.3
90-180	141.6	51.7
0-180	273.6	100.0

Zonal Lumens and Percentages at 25°C

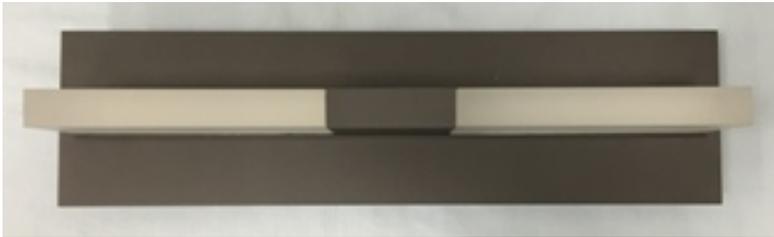
Zone	Lumens	% Luminaire
0-10	3.4	1.2
10-20	8.8	3.2
20-30	12.4	4.5
30-40	15.5	5.7
40-50	17.8	6.5
50-60	18.9	6.9
60-70	18.9	6.9
70-80	18.4	6.7
80-90	17.9	6.5
90-100	18.1	6.6
100-110	19.1	7.0
110-120	20.1	7.4
120-130	20.6	7.5
130-140	19.7	7.2
140-150	17.3	6.3
150-160	13.7	5.0
160-170	9.5	3.5
170-180	3.6	1.3

Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	15.0	5.5
FM	(30-60)	36.7	13.4
FH	(60-80)	28.2	10.3
FVH	(80-90)	13.9	5.1
BL	(0-30)	9.7	3.5
BM	(30-60)	15.5	5.6
BH	(60-80)	9.2	3.3
BVH	(80-90)	4.0	1.5
UL	(90-100)	18.1	6.6
UH	(100-180)	123.5	45.1
Total		273.8	100.0

BUG Rating: B0-U3-G1  
 IES Classification: Type IV  
 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 Report:



Vladimir Kozak  
Senior Associate Engineer  
Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley  
Engineer  
Lighting Division