



# REPORT

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

Project No. G102171228

Original Issue Date: August 12, 2016

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REPORT NO. 102171228CHI-027

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

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 700OWLYT12SCZ8401201. The sample was received by Intertek on August 3, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH08032016091921C.

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

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## SUMMARY

Model No.:	700OWLYT12SCZ8401201
Description:	LED Wall Sconce

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	215.0	206.7
Total Power (W)	9.975	9.971
Luminaire Efficacy (LPW)	21.55	20.73

Criteria	Result
Power Factor	0.942
Current ATHD %	24.21
Correlated Color Temperature (CCT - K)	3021
Color Rendering Index (CRI - Ra)	79.5
Color Rendering Index (CRI - R9)	-3.3
DUV	0.001
Chromaticity Coordinate (x)	0.437
Chromaticity Coordinate (y)	0.407
Chromaticity Coordinate (u')	0.249
Chromaticity Coordinate (v')	0.523
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)
AH08032016091921C	Horizontal	120.0	88.26	9.975	0.942	24.21	215.0	21.55

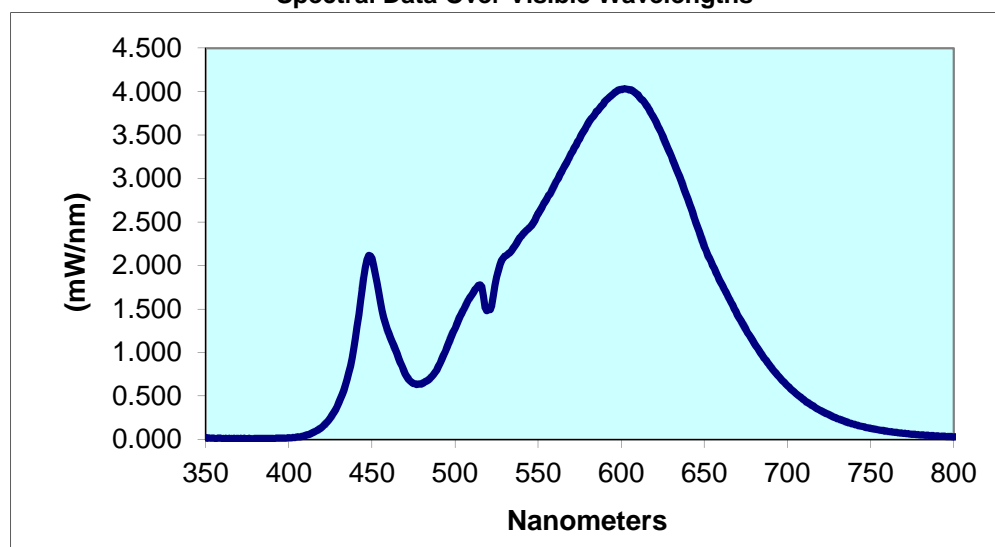
  

Correlated Color Temperature (K)	CRI -Ra	CRI -R9	DUV	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
3021	79.5	-3.3	0.001	0.437	0.407	0.249	0.523

## Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.020	440	1.168	530	2.108	620	3.681	710	0.455
355	0.016	445	1.864	535	2.199	625	3.483	715	0.389
360	0.010	450	2.080	540	2.341	630	3.260	720	0.332
365	0.013	455	1.585	545	2.439	635	3.021	725	0.286
370	0.011	460	1.227	550	2.600	640	2.764	730	0.241
375	0.013	465	0.990	555	2.761	645	2.492	735	0.205
380	0.012	470	0.753	560	2.934	650	2.220	740	0.175
385	0.012	475	0.643	565	3.114	655	2.004	745	0.150
390	0.011	480	0.645	570	3.295	660	1.804	750	0.128
395	0.014	485	0.705	575	3.462	665	1.621	755	0.110
400	0.018	490	0.842	580	3.635	670	1.432	760	0.095
405	0.028	495	1.059	585	3.772	675	1.266	765	0.081
410	0.048	500	1.282	590	3.888	680	1.108	770	0.071
415	0.085	505	1.494	595	3.973	685	0.966	775	0.061
420	0.144	510	1.664	600	4.022	690	0.834	780	0.053
425	0.249	515	1.779	605	4.019	695	0.722		
430	0.424	520	1.489	610	3.963	700	0.619		
435	0.693	525	1.867	615	3.842	705	0.531		

**Spectral Data Over Visible Wavelengths**



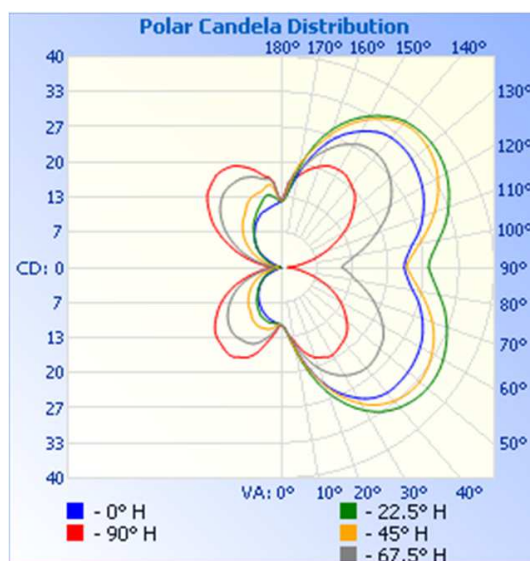
## RESULTS OF TEST (cont'd)

### 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)
AH08032016091921C	Horizontal	120.0	88.12	9.971	0.943	206.7	20.73

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

Angle	0	22.5	45	67.5	90
0	11	11	11	11	11
5	12	12	12	12	12
10	16	16	16	15	14
15	20	21	20	18	17
20	23	25	24	20	18
25	26	29	27	22	19
30	29	31	30	24	19
35	30	33	32	25	19
40	31	35	33	25	18
45	31	35	34	25	17
50	31	36	34	24	16
55	31	36	33	23	15
60	30	35	33	22	13
65	29	34	32	20	11
70	28	33	30	18	9
75	27	32	28	16	6
80	25	30	27	14	4
85	24	29	25	13	2
90	23	28	24	11	1
95	24	28	25	13	2
100	25	30	26	14	4
105	27	32	29	17	7
110	28	33	31	19	9
115	30	35	32	21	11
120	31	36	34	24	14
125	31	36	35	25	16
130	32	37	36	27	18
135	32	37	36	28	20
140	32	36	36	28	20
145	31	35	34	28	21
150	30	33	32	27	21
155	28	31	30	26	21
160	25	28	27	23	20
165	22	24	23	21	19
170	18	19	20	19	18
175	14	14	15	16	16
180	13	13	13	13	13

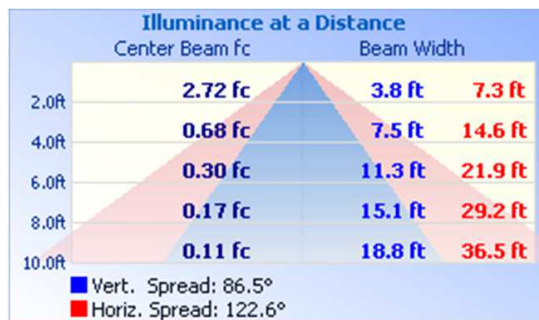


# RESULTS OF TEST (cont'd)

## 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	14.5	7.0
0-40	27.1	13.1
0-60	58.9	28.5
60-90	41.2	20.0
0-90	100.1	48.4
90-180	106.5	51.6
0-180	206.7	100.0

Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	9.2	4.5
FM	(30-60)	33.2	16.1
FH	(60-80)	25.4	12.3
FVH	(80-90)	10.9	5.3
BL	(0-30)	5.2	2.5
BM	(30-60)	11.2	5.4
BH	(60-80)	4.3	2.1
BVH	(80-90)	0.6	0.3
UL	(90-100)	11.4	5.5
UH	(100-180)	95.2	46.1
Total		206.6	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1.2	0.6
10-20	4.5	2.2
20-30	8.7	4.2
30-40	12.6	6.1
40-50	15.3	7.4
50-60	16.5	8.0
60-70	15.9	7.7
70-80	13.9	6.7
80-90	11.5	5.6
90-100	11.4	5.5
100-110	14.0	6.8
110-120	16.5	8.0
120-130	17.5	8.5
130-140	16.6	8.0
140-150	13.9	6.7
150-160	9.8	4.8
160-170	5.3	2.6
170-180	1.5	0.7

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