



REPORT

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

Project No. G102171228

Date: September 21, 2016

REPORT NO. 102171228CHI-059

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

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 September 16, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH09162016092757-59.

DATES OF TESTS: September 20, 2016 through September 21, 2016.

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SUMMARY

Model No.: 700OWLYT18SDC8401201
 Description: LED Wall Sconce

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	220.9	215.8
Total Power (W)	9.909	9.909
Luminaire Efficacy (LPW)	22.29	21.78

Criteria	Result
Power Factor	0.938
Current ATHD %	22.70
Correlated Color Temperature (CCT - K)	3075
Color Rendering Index (CRI - Ra)	78.8
Color Rendering Index (CRI - R9)	-6.2
DUV	0.002
Chromaticity Coordinate (x)	0.434
Chromaticity Coordinate (y)	0.408
Chromaticity Coordinate (u')	0.247
Chromaticity Coordinate (v')	0.522
BUG Rating	B0-U3-G1
IES Classification	Type IV
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	09/21/16
3 Meter Sphere	SPR600	CHI0088	VBU	VBU	09/21/16
Elgar AC Power Supply	CW1251M	146112	VBU	VBU	09/21/16
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU	09/21/16
Newport Humidity Recorder	iTHX-SD	146382	06/27/16	06/27/17	09/21/16
Yokogawa Power Meter	WT1600	146768	01/14/16	01/14/17	09/21/16
Omega Temperature Meter	MDSi8	146139	03/21/16	03/21/17	09/21/16



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

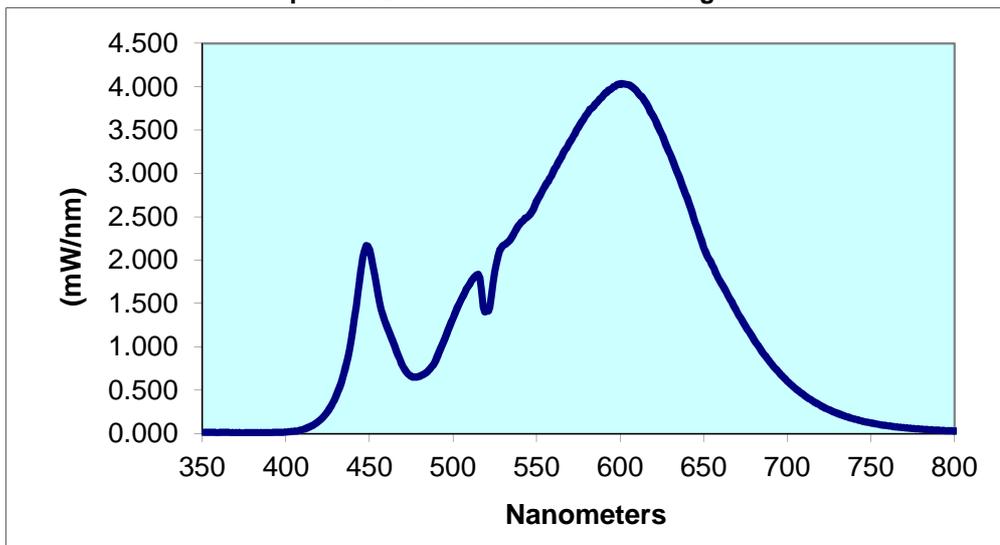
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
AH09162016092757-59	LINEAR	120.0	87.98	9.909	0.938	22.70	220.9	22.29

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')
3075	78.8	-6.2	0.002	0.434	0.408	0.247	0.522

Spectral Distribution over Visible Wavelengths

nm	mW/nm								
350	0.017	440	1.200	530	2.170	620	3.653	710	0.444
355	0.015	445	1.903	535	2.260	625	3.444	715	0.381
360	0.016	450	2.123	540	2.417	630	3.216	720	0.324
365	0.016	455	1.618	545	2.507	635	2.969	725	0.277
370	0.011	460	1.254	550	2.679	640	2.715	730	0.236
375	0.012	465	1.012	555	2.854	645	2.428	735	0.200
380	0.010	470	0.775	560	3.019	650	2.147	740	0.170
385	0.013	475	0.661	565	3.196	655	1.948	745	0.145
390	0.011	480	0.663	570	3.368	660	1.751	750	0.125
395	0.014	485	0.725	575	3.533	665	1.579	755	0.107
400	0.019	490	0.867	580	3.684	670	1.403	760	0.093
405	0.029	495	1.097	585	3.802	675	1.240	765	0.079
410	0.049	500	1.336	590	3.906	680	1.084	770	0.069
415	0.088	505	1.556	595	3.983	685	0.943	775	0.059
420	0.150	510	1.730	600	4.028	690	0.818	780	0.052
425	0.258	515	1.835	605	4.023	695	0.706		
430	0.433	520	1.413	610	3.944	700	0.605		
435	0.718	525	1.871	615	3.824	705	0.520		

Spectral Data Over Visible Wavelengths



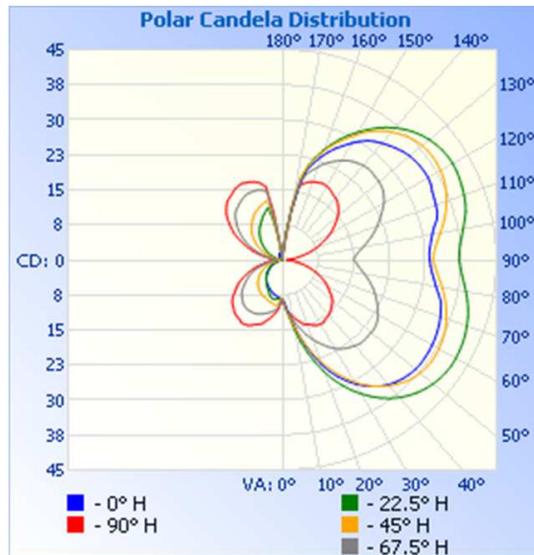
RESULTS OF TEST (cont'd)

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)
AH09162016092757-59	LINEAR	120.0	88.31	9.909	0.935	215.8	21.78

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	8	8	8	8	8
5	10	11	11	11	11
10	14	15	15	13	12
15	19	20	19	16	14
20	24	25	23	18	15
25	28	30	27	20	15
30	31	33	30	22	16
35	33	36	33	23	16
40	35	38	35	24	15
45	36	40	37	24	14
50	36	41	38	24	14
55	37	42	38	24	12
60	36	42	38	23	11
65	36	42	38	22	9
70	35	41	37	21	7
75	34	40	36	19	6
80	33	39	34	18	4
85	32	38	33	16	2
90	31	37	32	15	1
95	31	38	32	16	2
100	32	39	34	17	3
105	34	40	35	19	5
110	34	41	37	21	8
115	35	41	38	23	10
120	35	41	38	25	12
125	35	41	39	26	14
130	35	40	38	26	15
135	34	39	37	27	17
140	33	37	36	26	17
145	31	35	34	26	18
150	29	32	31	25	18
155	26	29	28	23	18
160	23	25	25	21	18
165	20	21	21	19	17
170	11	12	12	11	10
175	2	1	1	1	1
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	13.0	6.0
0-40	25.1	11.6
0-60	57.9	26.8
60-90	49.1	22.7
0-90	107.0	49.6
90-180	108.8	50.4
0-180	215.8	100.0

Luminaire Classification System (LCS)

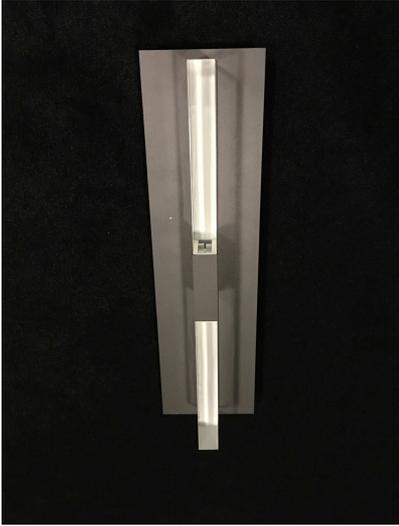
LCS	Zone	Lumens	% Luminaire
FL	(0-30)	8.8	4.1
FM	(30-60)	35.7	16.6
FH	(60-80)	30.5	14.2
FVH	(80-90)	14.2	6.6
BL	(0-30)	4.2	1.9
BM	(30-60)	9.2	4.3
BH	(60-80)	3.8	1.8
BVH	(80-90)	0.6	0.3
UL	(90-100)	14.5	6.7
UH	(100-180)	94.3	43.7
Total		215.8	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1.0	0.5
10-20	4.0	1.8
20-30	8.0	3.7
30-40	12.1	5.6
40-50	15.4	7.2
50-60	17.4	8.1
60-70	17.8	8.2
70-80	16.6	7.7
80-90	14.7	6.8
90-100	14.5	6.7
100-110	16.4	7.6
110-120	17.9	8.3
120-130	17.9	8.3
130-140	16.0	7.4
140-150	12.7	5.9
150-160	8.7	4.0
160-170	4.4	2.0
170-180	0.3	0.2

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 Tests:



Vladimir Kozak
Senior Associate Engineer
Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley
Engineer
Lighting Division