



REPORT

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

Project No. G102171228

Date: August 25, 2016

REPORT NO. 102171228CHI-044

TEST OF ONE LED WALL-MOUNT LUMINAIRE

MODEL NO. 700OWTAGSSD1UNV830C
LED MODEL NO. (LUXEON) DS207 3030 2D
DRIVER MODEL NO. YG LPS20W-36-C0550-RD

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 Qu-00718855-0.

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 700OWTAGSSD1UNV830C. The sample was received by Intertek on August 18, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH08182016094438-044.

DATES OF TESTS: August 23, 2016 through August 24, 2016.



SUMMARY

Model No.:	700OWTAGSSD1UNV830C
Description:	LED Wall-Mount Luminaire

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	625.2	620.4
Total Power (W)	10.25	10.26
Luminaire Efficacy (LPW)	61.00	60.47

Criteria	Result
Power Factor	0.955
Current ATHD %	20.01
Correlated Color Temperature (CCT - K)	3940
Color Rendering Index (CRI - Ra)	84.4
Color Rendering Index (CRI - R9)	17.2
DUV	0.001
Chromaticity Coordinate (x)	0.384
Chromaticity Coordinate (y)	0.380
Chromaticity Coordinate (u')	0.226
Chromaticity Coordinate (v')	0.503
BUG Rating	B1-U1-G0
IES Classification	Type I
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	08/24/16
Omega Newport Thermometer	DPI8-C24	146920	10/09/15	10/09/16	08/24/16
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	08/24/16
Newport Thermohygrometer	iServer	146956	01/04/16	01/04/17	08/24/16
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU	08/24/16
Labsphere 2M Sphere & Spectroradiometer	CDS1100	146137	VBU	VBU	08/23/16
Elgar AC Power Supply	CW1251M	146113	VBU	VBU	08/23/16
Sorenson DC Power Supply	XFR150-8	146847	VBU	VBU	08/23/16
Yokogawa Power Analyzer	WT1600	146767	04/14/16	04/14/17	08/23/16
Omega Temperature	MDSi8	146873	06/24/16	06/24/17	08/23/16
Newport Thermohygrometer	iTHX-M	146382	06/27/16	06/27/17	08/23/16



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

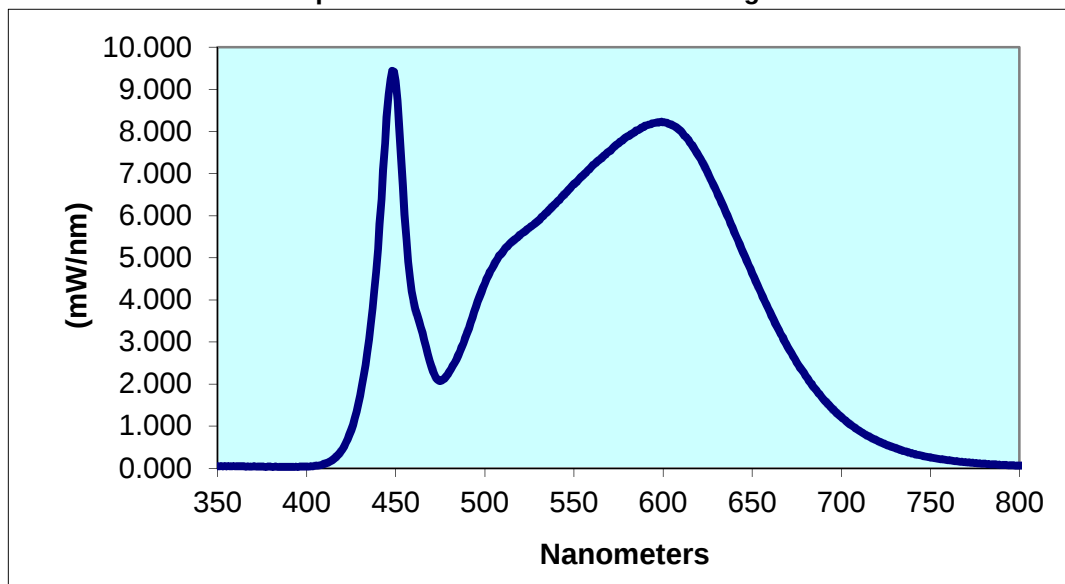
Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
AH08182016094438-042	Up	120.0	89.40	10.25	0.955	20.01	625.2	61.00

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')
3940	84.4	17.2	0.001	0.384	0.380	0.226	0.503

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.048	440	5.207	530	5.886	620	7.421	710	0.893
355	0.048	445	8.336	535	6.087	625	7.026	715	0.766
360	0.045	450	9.202	540	6.294	630	6.576	720	0.658
365	0.043	455	6.025	545	6.522	635	6.105	725	0.564
370	0.040	460	3.977	550	6.746	640	5.611	730	0.482
375	0.036	465	3.211	555	6.954	645	5.114	735	0.410
380	0.033	470	2.411	560	7.165	650	4.631	740	0.349
385	0.032	475	2.077	565	7.350	655	4.164	745	0.300
390	0.030	480	2.284	570	7.537	660	3.710	750	0.258
395	0.031	485	2.678	575	7.715	665	3.276	755	0.221
400	0.037	490	3.202	580	7.882	670	2.883	760	0.191
405	0.056	495	3.837	585	8.024	675	2.518	765	0.164
410	0.101	500	4.394	590	8.139	680	2.194	770	0.139
415	0.211	505	4.826	595	8.200	685	1.904	775	0.121
420	0.443	510	5.133	600	8.215	690	1.643	780	0.104
425	0.907	515	5.373	605	8.159	695	1.416		
430	1.722	520	5.552	610	8.009	700	1.214		
435	3.065	525	5.718	615	7.748	705	1.042		

Spectral Data Over Visible Wavelengths



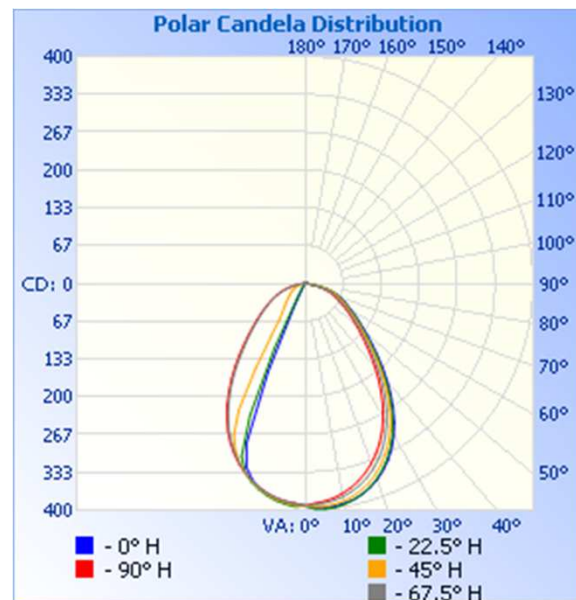
RESULTS OF TEST (cont'd)

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)
AH08182016094438-044	Up	120.0	90.11	10.26	0.948	620.4	60.47

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	392	392	392	392	392
5	397	399	395	389	386
10	394	396	390	382	376
15	385	385	378	369	361
20	369	367	359	349	338
25	344	341	332	321	310
30	311	307	299	286	274
35	269	264	257	245	232
40	223	219	212	201	190
45	180	175	169	160	151
50	143	139	134	127	119
55	115	111	108	101	95
60	94	90	88	82	76
65	76	74	72	65	60
70	61	60	57	50	45
75	41	42	41	35	30
80	9	11	19	18	13
85	4	3	3	2	0
90	3	3	2	1	0
95	3	3	2	1	0
100	2	2	2	1	0
105	2	2	2	1	0
110	2	2	1	1	0
115	1	1	1	1	0
120	1	1	1	1	0
125	1	1	1	1	0
130	0	0	1	1	0



RESULTS OF TEST (cont'd)

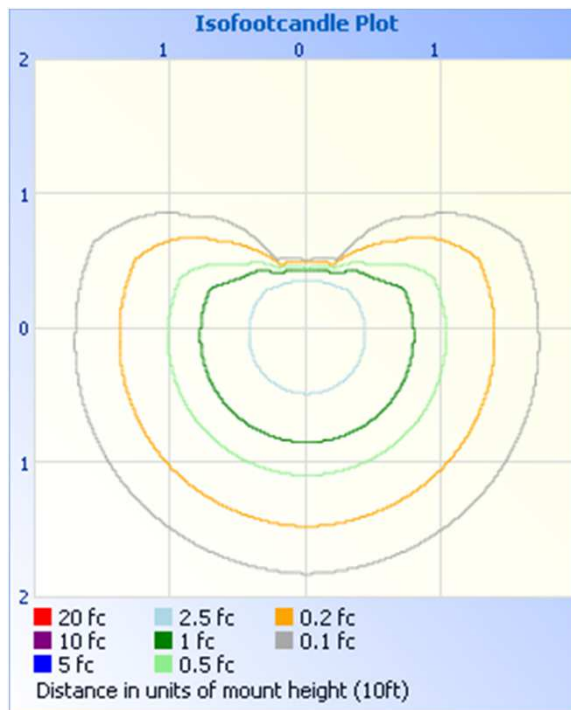
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	268.4	43.3
0-40	381.5	61.5
0-60	539.7	87.0
60-90	77.9	12.6
0-90	617.7	99.6
90-180	2.7	0.4
0-180	620.4	100.0

Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	147.3	23.7
FM	(30-60)	192.1	30.9
FH	(60-80)	54.2	8.7
FVH	(80-90)	2.6	0.4
BL	(0-30)	121.3	19.5
BM	(30-60)	79.3	12.8
BH	(60-80)	20.5	3.3
BVH	(80-90)	0.6	0.1
UL	(90-100)	1.0	0.2
UH	(100-180)	2.4	0.4
Total		621.3	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	37.0	6.0
10-20	103.3	16.6
20-30	128.1	20.6
30-40	113.1	18.2
40-50	90.9	14.6
50-60	67.3	10.8
60-70	48.4	7.8
70-80	26.3	4.2
80-90	3.2	0.5
90-100	1.0	0.2
100-110	0.8	0.1
110-120	0.5	0.1
120-130	0.3	0.1

BUG Rating: B1-U1-G0

IES Classification: Type I

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:



Timothy Quigley
Engineer
Lighting Division

Attachment: None

Report Reviewed By:



Vladimir Kozak
Senior Associate Engineer
Lighting Division