



REPORT

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

Project No. G102171228

Date: January 6, 2017

REPORT NO. 102171228CHI-077

TEST OF ONE LED WALL

MODEL NO. 700OWTAG83010C4UNVS
LED MODEL NO. LUXEON 3030 2D
DRIVER MODEL NO. YG LY75W-56-C1330-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 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 700OWTAG83010C4UNVS. The sample was received by Intertek on December 21, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH12212016085441.

DATES OF TESTS: December 28, 2016 through December 29, 2016.

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SUMMARY

Model No.:	700OWTAG83010C4UNVS
Description:	LED Wall

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	8873	8746
Total Power (W)	75.80	75.76
Luminaire Efficacy (LPW)	117.1	115.4

Criteria	Result
Power Factor at 120Vac	0.996
Power Factor at 277Vac	0.939
Current ATHD % at 120Vac	5.72
Current ATHD % at 277Vac	15.36
Correlated Color Temperature (CCT - K)	4054
Color Rendering Index (CRI - Ra)	82.5
Color Rendering Index (CRI - R9)	6.7
DUV	0.001
Chromaticity Coordinate (x)	0.379
Chromaticity Coordinate (y)	0.378
Chromaticity Coordinate (u')	0.223
Chromaticity Coordinate (v')	0.502
BUG Rating	B2-U1-G2
IES Classification	Type IV
Longitudinal Classification	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	12/29/16
Omega Newport Thermometer	DPI8-C24	146920	10/07/16	10/07/17	12/29/16
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	12/29/16
Newport Thermohygrometer	iServer	146956	01/04/16	01/04/17	12/29/16
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU	12/29/16
Labsphere Spectroradiometer	CDS1100	CHI0091	VBU	VBU	12/28/16
3 Meter Sphere	SPR600	CHI0088	VBU	VBU	12/28/16
Elgar AC Power Supply	CW1251M	146112	VBU	VBU	12/28/16
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU	12/28/16
Newport Humidity Recorder	iTHX-SD	146382	06/27/16	06/27/17	12/28/16
Yokogawa Power Meter	WT1600	146768	01/14/16	01/14/17	12/28/16
Omega Temperature Meter	MDSi8	146139	03/21/16	03/21/17	12/28/16

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.

RESULTS OF TEST

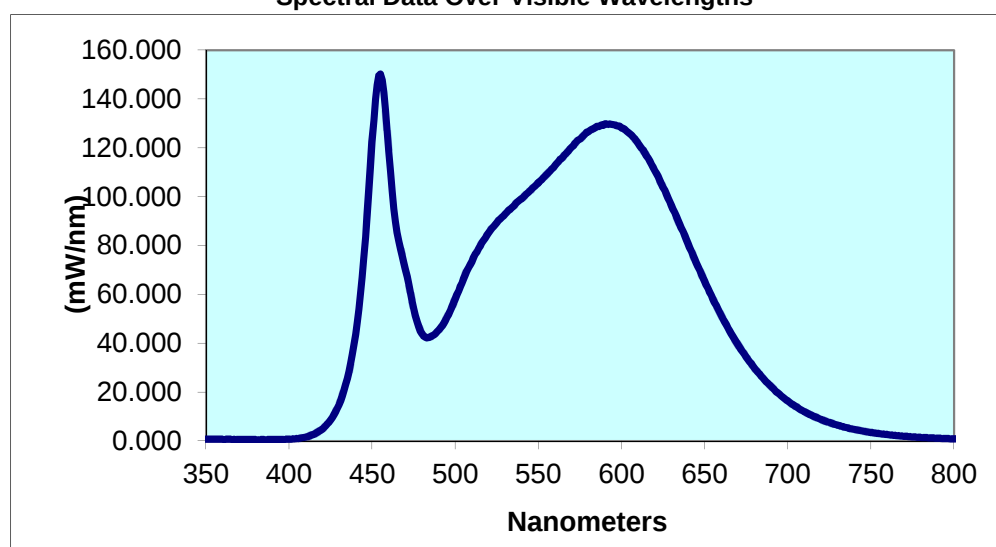
Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) - Integrating Sphere Method

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)
AH12212016085441	Up	120.0	634.3	75.80	0.996	5.72	8873	117.1
		277.0	285.9	74.35	0.939	15.36		
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')	
4054	82.5	6.7	0.001	0.379	0.378	0.223	0.502	

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.644	440	43.64	530	92.99	620	110.8	710	12.01
355	0.649	445	74.77	535	96.11	625	103.9	715	10.29
360	0.678	450	122.4	540	99.26	630	96.50	720	8.834
365	0.629	455	150.2	545	102.5	635	88.77	725	7.565
370	0.552	460	118.7	550	105.8	640	80.84	730	6.477
375	0.545	465	85.30	555	109.2	645	73.01	735	5.529
380	0.493	470	70.28	560	112.9	650	65.41	740	4.713
385	0.478	475	54.25	565	116.5	655	58.16	745	4.042
390	0.498	480	43.87	570	120.3	660	51.46	750	3.477
395	0.553	485	42.62	575	123.6	665	45.10	755	2.989
400	0.680	490	45.36	580	126.6	670	39.43	760	2.584
405	0.995	495	50.60	585	128.7	675	34.37	765	2.224
410	1.600	500	58.21	590	129.8	680	29.82	770	1.903
415	2.762	505	66.42	595	129.5	685	25.79	775	1.648
420	4.900	510	73.46	600	128.2	690	22.24	780	1.429
425	8.627	515	79.90	605	125.8	695	19.11		
430	14.84	520	85.21	610	121.9	700	16.40		
435	25.53	525	89.44	615	116.7	705	14.04		

Spectral Data Over Visible Wavelengths



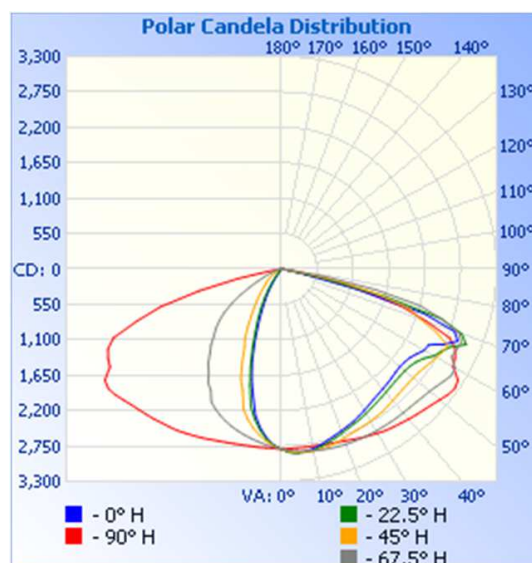
RESULTS OF TEST (cont'd)

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)
AH12212016085441	Up	120.0	633.7	75.76	0.996	8746	115.4

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	2799	2799	2799	2799	2799
5	2861	2869	2859	2836	2788
10	2829	2852	2868	2863	2790
15	2751	2790	2845	2883	2808
20	2674	2711	2797	2896	2840
25	2610	2648	2754	2900	2891
30	2538	2592	2730	2903	2946
35	2467	2536	2699	2906	2994
40	2424	2494	2661	2910	3041
45	2390	2466	2636	2924	3091
50	2366	2465	2633	2960	3164
55	2402	2518	2672	3039	3243
60	2526	2698	2745	3075	3038
65	2764	2861	2811	2965	2940
70	2823	2940	2263	2895	2359
75	1165	1649	1570	2205	1304
80	99	165	385	667	217
85	14	17	24	23	16
90	10	9	8	6	3
95	8	7	6	4	2
100	6	6	5	3	0
105	5	5	4	3	0
110	4	4	4	3	0
115	3	3	3	3	0
120	2	2	2	3	0
125	1	2	2	3	0
130	1	1	2	3	0

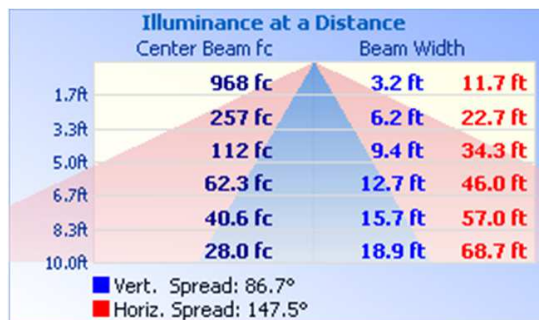


RESULTS OF TEST (cont'd)

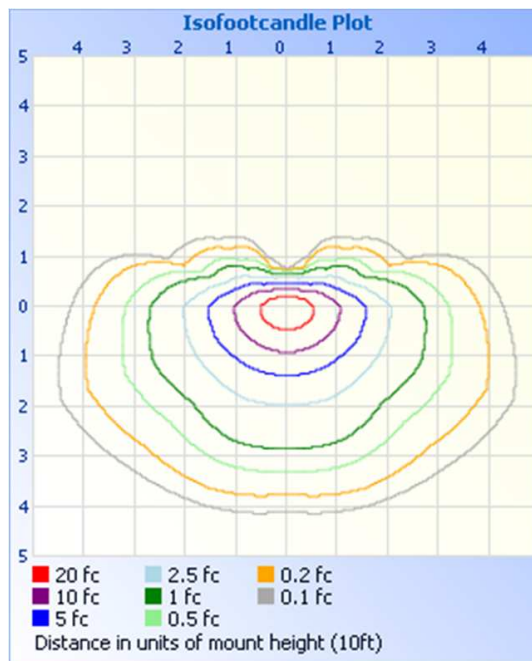
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	1982	22.7
0-40	3189	36.5
0-60	6112	69.9
60-90	2626	30.0
0-90	8738	99.9
90-180	8.1	0.1
0-180	8746	100.0

Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	1174.8	13.4
FM	(30-60)	3138.3	35.9
FH	(60-80)	2243.7	25.6
FVH	(80-90)	39.7	0.5
BL	(0-30)	808.6	9.2
BM	(30-60)	991.9	11.3
BH	(60-80)	336.1	3.8
BVH	(80-90)	6.5	0.1
UL	(90-100)	3.7	0.0
UH	(100-180)	4.4	0.1
Total		8747.7	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	261.6	3.0
10-20	711.5	8.1
20-30	1009	11.5
30-40	1207	13.8
40-50	1376	15.7
50-60	1547	17.7
60-70	1633	18.7
70-80	946.5	10.8
80-90	46.1	0.5
90-100	3.7	0.0
100-110	2.0	0.0
110-120	1.3	0.0
120-130	0.8	0.0
130-140	0.2	0.0

BUG Rating: B2-U1-G2

IES Classification: Type IV

Longitudinal Classification: 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:



Jehue Williams
Associate Engineer
Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley
Engineer
Lighting Division