



REPORT

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

Project No. G102056385

Date: April 6, 2015

REPORT NO. 102056385CHI-011

TEST OF ONE LED WALL SCENCE

MODEL NO. 700WSWNTS-LED830
LED MODEL NO. EVERLIGHT 45-21S/KK2D-H3030M31N4B2Z6/2T
DRIVER MODEL NO. LTF TA60WA12LED-0000

RENDERED TO

GENERATION BRANDS
7400 LINDER AVE
SKOKIE, IL 60077

TEST: Electrical and Photometric tests as required to the IESNA test standard.

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500587731.

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 700WSWNTS-LED830. The sample was received by Intertek on March 27, 2015, in undamaged condition and one sample was tested as received. The sample designation was 03272015125046-006.

DATES OF TESTS: April 2, 2015 through April 6, 2015.

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SUMMARY

Model No.:	700WSWNTS-LED830
Description:	LED Wall Sconce

Criteria	Result	
	Sphere	Goniometer
Total Lumen Output (Lumens)	439.2	424.0
Total Power (W)	24.82	24.81
Luminaire Efficacy (LPW)	17.70	17.09

Criteria	Result
Power Factor	0.919
Current ATHD %	39.41
Correlated Color Temperature (CCT - K)	2980
Color Rendering Index (CRI - Ra)	81.9
Color Rendering Index (CRI - R9)	6.6
DUV	0.001
Chromaticity Coordinate (x)	0.440
Chromaticity Coordinate (y)	0.408
Chromaticity Coordinate (u')	0.251
Chromaticity Coordinate (v')	0.523

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Yokogawa Power Meter	WT210	146919	07/16/14	07/16/15	04/02/15
Omega Thermometer	DPI8-C24	146920	10/09/14	10/09/15	04/02/15
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	04/02/15
Newport Hygrometer	iServer	146956	01/06/15	01/06/16	04/02/15
Elgar, AC Power Supply	CW1251P	146918	VBU	VBU	04/02/15
Labsphere Spectroradiometer	CDS1100	CHI0091	VBU	VBU	04/06/15
3 Meter Sphere	SPR600	CHI0088	VBU	VBU	04/06/15
Elgar AC Power Supply	CW1251M	146112	VBU	VBU	04/06/15
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU	04/06/15
Newport Humidity Recorder	iTHX-SD	146382	07/02/14	07/02/15	04/06/15
Yokogawa Power Meter	WT1600	146768	01/15/15	01/15/16	04/06/15
Omega Temperature Meter	MDSi8	146873	07/15/14	07/15/15	04/06/15

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

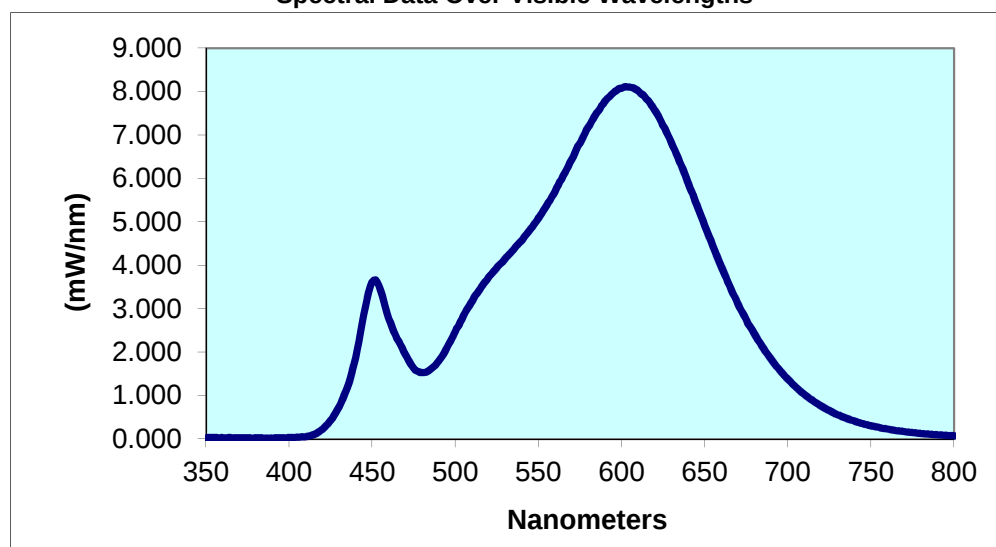
Intertek Sample No.	Base Orientatio n	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Current ATHD (%)	Luminous Flux (Lumens)	Lumen Efficacy (LPW)
03272015125046-006	Horizontal	120.0	225.2	24.82	0.919	39.41	439.2	17.70

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')
2980	81.9	6.6	0.001	0.440	0.408	0.251	0.523

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.026	440	1.871	530	4.152	620	7.570	710	1.024
355	0.034	445	2.860	535	4.359	625	7.222	715	0.882
360	0.030	450	3.616	540	4.574	630	6.829	720	0.760
365	0.027	455	3.438	545	4.819	635	6.381	725	0.654
370	0.022	460	2.774	550	5.085	640	5.902	730	0.556
375	0.022	465	2.318	555	5.383	645	5.421	735	0.478
380	0.021	470	1.946	560	5.703	650	4.922	740	0.411
385	0.019	475	1.631	565	6.065	655	4.437	745	0.354
390	0.019	480	1.525	570	6.434	660	3.977	750	0.305
395	0.023	485	1.600	575	6.813	665	3.530	755	0.264
400	0.029	490	1.794	580	7.189	670	3.118	760	0.228
405	0.038	495	2.105	585	7.515	675	2.750	765	0.194
410	0.052	500	2.471	590	7.787	680	2.417	770	0.169
415	0.101	505	2.836	595	7.972	685	2.110	775	0.145
420	0.221	510	3.162	600	8.073	690	1.836	780	0.125
425	0.428	515	3.461	605	8.106	695	1.597		
430	0.736	520	3.722	610	8.019	700	1.380		
435	1.185	525	3.946	615	7.832	705	1.190		

Spectral Data Over Visible Wavelengths



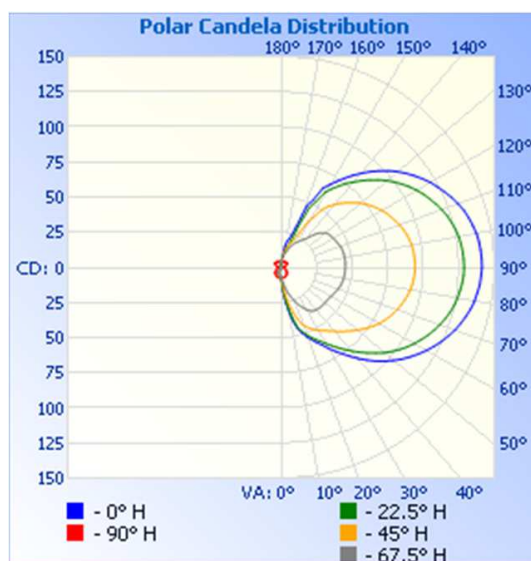
RESULTS OF TEST (cont'd)

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

Intertek Sample No.	Base Orientatio n	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
03272015125046-006	Horizontal	120.0	236.5	24.81	0.874	424.0	17.09

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	8	8	8	8	8
5	18	17	13	9	8
10	32	30	23	14	7
15	45	44	34	19	7
20	52	51	43	24	7
25	59	56	48	29	7
30	66	62	52	34	7
35	75	70	55	38	6
40	85	78	59	39	6
45	94	86	64	40	6
50	103	94	69	40	5
55	111	102	75	40	5
60	118	108	80	41	4
65	125	114	84	42	4
70	130	119	87	43	3
75	135	123	90	44	2
80	138	126	92	45	2
85	140	128	94	45	2
90	141	129	94	45	1
95	141	128	94	45	2
100	140	127	93	45	2
105	137	124	91	45	3
110	132	120	89	44	3
115	127	115	85	43	4
120	121	110	82	42	5
125	114	104	77	41	5
130	106	96	71	38	5
135	97	88	65	33	5
140	88	79	58	27	5
145	77	71	50	23	5
150	68	62	38	20	5
155	53	47	22	17	4
160	31	20	18	13	4
165	21	15	14	11	4
170	15	10	9	9	4
175	6	6	7	6	5
180	3	3	3	3	3

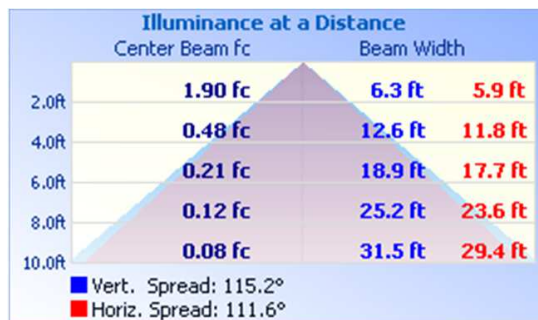


RESULTS OF TEST (cont'd)

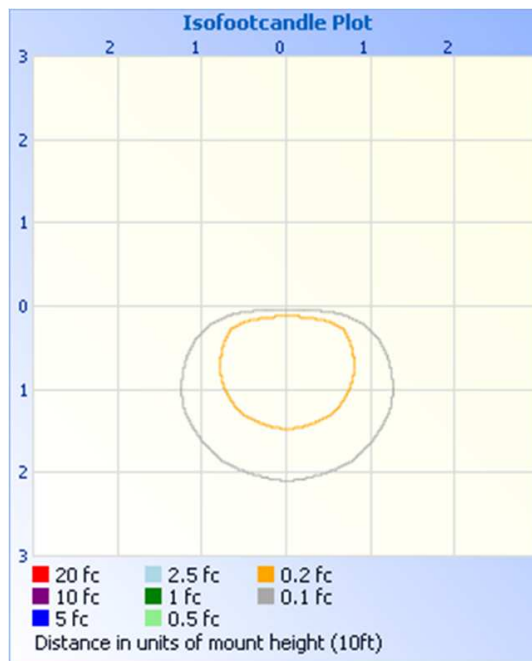
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	16.3	3.8
0-40	32.7	7.7
0-60	87.6	20.6
60-90	127.6	30.1
0-90	215.1	50.7
90-180	208.9	49.3
0-180	424.0	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1.1	0.3
10-20	5.0	1.2
20-30	10.2	2.4
30-40	16.5	3.9
40-50	23.7	5.6
50-60	31.1	7.3
60-70	38.0	9.0
70-80	43.3	10.2
80-90	46.2	10.9
90-100	46.4	11.0
100-110	43.9	10.4
110-120	38.8	9.1
120-130	31.8	7.5
130-140	23.4	5.5
140-150	14.9	3.5
150-160	7.0	1.7
160-170	2.2	0.5
170-180	0.5	0.1

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.

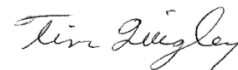
In Charge Of Tests:



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Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley
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