



REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100242492

Date: December 6, 2010

REPORT NO. 100242492CRT-001

TEST OF ONE LED WALL SCONCE

FIXTURE MODEL NO. TAOS-W-SQ-LED-SA
DRIVER MODEL NO. MDR-501-700-5-N

RENDERED TO

EDGE LIGHTING
1718 W FULLERTON AVENUE
CHICAGO, IL 60614

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

LABORATORY NOTE: The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for SSL by US DOE's CALiPER program.

AUTHORIZATION: The testing performed was authorized by signed quote number 500263695.

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 Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one sample of model number TAOS-W-SQ-LED-SA. The sample was received by Intertek on October 18, 2010, in undamaged condition, and one sample was tested as received. The sample designation was I7679L.

DATES OF TESTS: December 2, 2010 through December 6, 2010.

SUMMARY

Model No.: TAOS-W-SQ-LED-SA
Description: LED Wall Sconce

Criteria	Result
Total Lumen Output	158.3 Lumens
Total Power	6.520 W
Luminaire Efficacy	24.28
Power Factor	0.988
Current ATHD	12.91 %
Correlated Color Temperature (CCT)	3182 K
Color Rendering Index (CRI)	83.9
Chromaticity Coordinate (x)	0.426
Chromaticity Coordinate (y)	0.402
Chromaticity Coordinate (u')	0.244
Chromaticity Coordinate (v')	0.519

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Xitron Power Analyzer	2503H	E235	04/09/10	04/09/11
Elgar AC Power Supply	CW1251	--	--	--
Yokogawa Power Analyzer	WT1600	E462	06/11/10	06/11/11
Labsphere Diode Array	DAS 1100	N714	Before Use	Before Use
Leeds & Northup Standard Resistor	Manganin	Y089	02/10/10	02/10/11
Data Precision Digital Voltmeter	3600	V124	02/10/10	02/10/11
Fluke Multimeter	45	M133	02/10/10	02/10/11
Fluke Temperature Meter	52	T801	06/11/10	06/11/11
Kikusui DC Power Supply	35-10L	E160	---	---
Sorenson DC Power Supply	DLM150-20E	--	---	---
UDT Optometer	S370	N301	Before Use	Before Use
ITS Two Meter Diameter Integrating Sphere	---	N308	Before Use	Before Use
ITS Ten Foot Diameter Integrating Sphere	---	N307	Before Use	Before Use
NIST Luminous Flux Standard Sources	---	150-14, 8043, 8830	03/17/10	03/17/11
NIST Spectral Flux Standard Source	RF1024	---	09/18/10	100 hours of use
LSI High Speed Mirror Goniophotometer	6440	--	Before Use	Before Use
Labsphere CDS 1100 CCD Spectroradiometer	CDS1100	--	Before Use	Before Use



TEST METHODS

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

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.

Photometric and Electrical Measurements – Integrating Sphere Method

A Labsphere Model DAS 1100 Diode 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.

Estimated Total Operating Time

<u>Model No.</u>	<u>Total Hours</u>
TAOS-W-SQ-LED-SA	3

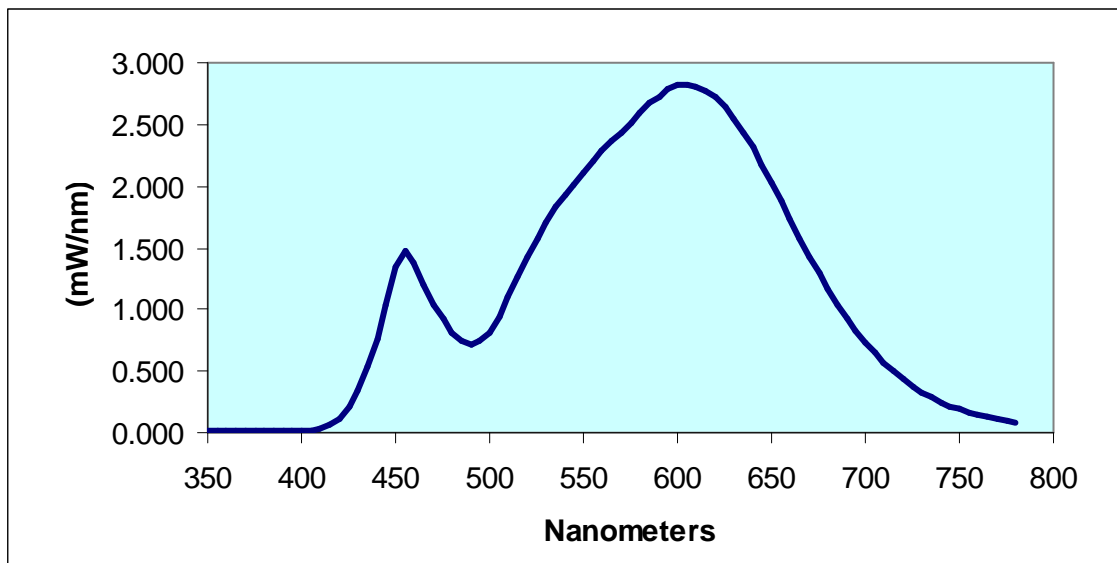


RESULTS OF TESTS

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
TAOS-W-SQ-LED-SA							
350	0.021	460	1.383	570	2.439	680	1.168
355	0.021	465	1.197	575	2.512	685	1.044
360	0.018	470	1.044	580	2.591	690	0.932
365	0.016	475	0.917	585	2.668	695	0.825
370	0.018	480	0.811	590	2.730	700	0.731
375	0.015	485	0.750	595	2.784	705	0.645
380	0.015	490	0.721	600	2.815	710	0.570
385	0.012	495	0.739	605	2.823	715	0.496
390	0.015	500	0.814	610	2.803	720	0.435
395	0.017	505	0.939	615	2.775	725	0.377
400	0.015	510	1.096	620	2.726	730	0.328
405	0.024	515	1.263	625	2.643	735	0.285
410	0.030	520	1.425	630	2.554	740	0.248
415	0.057	525	1.576	635	2.437	745	0.218
420	0.110	530	1.705	640	2.314	750	0.188
425	0.204	535	1.825	645	2.178	755	0.164
430	0.343	540	1.925	650	2.034	760	0.144
435	0.537	545	2.019	655	1.885	765	0.124
440	0.756	550	2.109	660	1.728	770	0.107
445	1.043	555	2.201	665	1.580	775	0.093
450	1.343	560	2.284	670	1.429	780	0.081
455	1.479	565	2.360	675	1.294		

EDGE LIGHTING
Sample No. I7679L
Model No. TAOS-W-SQ-LED-SA
Spectral Data Over Visible Wavelengths



RESULTS OF TESTS (cont'd)

Photometric Measurements at 25°C – Integrating Sphere Method

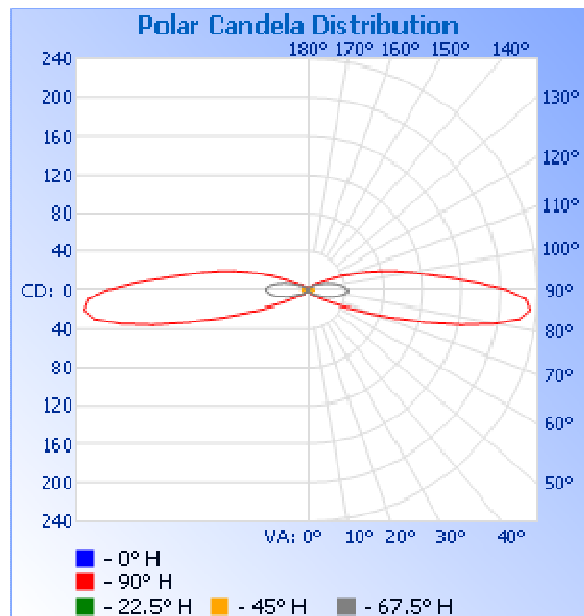
Intertek Sample No.	Current ATHD (%)	Correlated Color Temperature (K)	CRI	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
TAOS-W-SQ-LED-SA							
I7679L	12.91	3182	83.9	0.426	0.402	0.244	0.519

Photometric and Electrical Measurements – 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 (Lumens Per Watt)
TAOS-W-SQ-LED-SA							
I7679L	UP	120.0	54.94	6.520	0.988	158.3	24.28

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
TAOS-W-SQ-LED-SA					
0	0	0	0	0	0
5	0	0	0	0	0
10	0	0	0	0	0
15	0	0	0	0	0
20	0	0	0	1	1
25	0	0	1	1	2
30	0	0	1	2	2
35	0	0	2	3	4
40	0	0	2	4	5
45	0	1	3	5	7
50	0	1	3	7	9
55	0	1	4	9	14
60	0	1	4	12	22
65	0	1	5	16	37
70	0	1	6	22	69
75	0	1	6	28	126
80	0	1	6	36	197
85	0	1	6	41	233
90	0	1	6	42	207
95	0	1	6	39	150
100	0	1	6	33	110
105	0	1	5	26	79
110	0	1	5	19	52
115	0	1	4	14	31
120	0	1	4	10	18
125	0	1	3	8	12
130	0	1	3	6	8
135	0	1	2	5	6
140	0	0	2	4	4
145	0	0	1	3	3
150	0	0	1	2	2
155	0	0	1	1	2
160	0	0	0	1	1
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0



RESULTS OF TESTS (cont'd)

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
TAOS-W-SQ-LED-SA		
0-30	0.5	0.3
0-40	1.6	1.0
0-60	8.7	5.5
60-90	80.3	50.7
0-90	89.0	56.2
90-180	69.3	43.8
0-180	158.3	100.0

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:

Steven Mosier
Technician I
Lighting Division

Attachment: None

Report Reviewed By:

Jacki Swiernik
Project Engineer
Lighting Division