GENERATION BRANDS, LLC

TEST REPORT

SCOPE OF WORK
Electrical and Photometric tests as required to the IESNA test standard.

MODEL NUMBER
700WSGMBTCS-LED927

REPORT NUMBER
103643585CHI-111

ISSUE DATE
May 29, 2019

REVISION DATE
None

DOCUMENT CONTROL NUMBER
TBD

545 E. Algonquin Rd
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REPORT NO.: 103643585CHI-111

TEST REPORT **REPORT DATE: May 29, 2019**

TEST OF ONE LED WALL SCONCE

MODEL NO. 700WSGMBTCS-LED927

RENDERED TO:

GENERATION BRANDS, LLC
7400 LINDER AVE.
SKOKIE, IL 60077

AUTHORIZATION
The testing performed was authorized by signed quote number Qu-00912313-2 .

STANDARDS USED
IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting
ANSI NEMA ANSLG C78.377: 2015: Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE
The client submitted one production sample of model number 700WSGMBTCS-LED927. The sample was received by Intertek on May 15, 2019 in undamaged condition and one sample was tested as received. The sample designation was AH05152019114818-111.

DATE OF TESTS
May 17, 2019 through May 21, 2019.

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SUMMARY

MODEL NO:	700WSGMBTCS-LED927
DESCRIPTION:	LED Wall Sconce

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	496.5	479.4
Input Power (W) @ 120 (VAC)	6.32	6.31
Lumen Efficacy (lm/W)	78.5	76.0
Input Power Factor @ 120 (VAC)	0.947	0.947

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	33.87
Correlated Color Temperature (K)	2728
Color Rendering Index - Ra	91.1
Color Rendering - R9	50.7
DUV	0.0008
Chromaticity Coordinate (x)	0.459
Chromaticity Coordinate (y)	0.413
Chromaticity Coordinate (u')	0.261
Chromaticity Coordinate (v')	0.528

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EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/9/2018	7/9/2019
Omega Newport Thermometer	DPI8-C24	146920	10/4/2018	10/4/2019
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Thermohygrometer	iServer	146957	12/11/2018	12/11/2019
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU
Labsphere 2M Sphere & Spectroradiometer	CDS1100	146137	VBU	VBU
Elgar AC Power Supply	CW1251M	146113	VBU	VBU
Sorenson DC Power Supply	XFR150-8	146847	VBU	VBU
Yokogawa Power Analyzer	WT1600	146767	4/3/2019	4/3/2020
Omega Temperature	MDSi8	146873	7/10/2018	7/10/2019
Newport Thermohygrometer	iTHX-M	146961	7/23/2018	7/23/2019

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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 Spectroradiometer and integrating 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. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a 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 Type C Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for the SSL sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniometer equipment. The SSL sample was operated on the client provided driver at rated input volts in its designated orientation. The SSL sample was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

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TEST REPORT

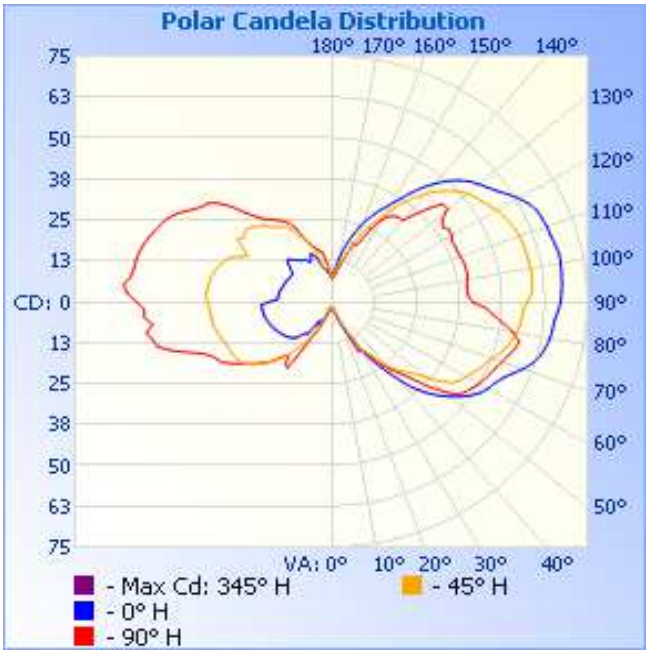
RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR ( )	LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)
AH05152019114818-111	Base Up	119.9	55.6	6.31	0.947	479.4	76.0

INTENSITY SUMMARY - CANDELAS

Angle	0	90	180	270	360
0	2	2	2	2	2
5	2	2	2	2	2
10	2	2	2	2	2
15	3	2	3	3	3
20	5	5	5	6	5
25	9	10	7	10	9
30	16	17	6	17	16
35	23	21	12	23	23
40	32	27	13	22	32
45	39	33	16	26	39
50	45	43	17	29	45
55	50	48	18	33	50
60	53	50	18	37	53
65	55	52	19	39	55
70	60	53	19	45	60
75	64	56	20	53	64
80	65	54	20	55	65
85	66	48	20	55	66
90	67	41	18	57	67
95	68	40	16	61	68
100	68	40	16	59	68
105	68	41	15	58	68
110	67	40	15	57	67
115	66	40	15	55	66
120	63	41	14	53	63
125	59	40	14	49	59
130	56	44	16	47	56
135	52	40	18	41	52
140	47	32	17	34	47
145	41	32	15	31	41
150	34	28	15	28	34
155	29	20	14	25	29
160	24	19	15	19	24
165	19	13	12	17	19
170	14	10	10	15	14
175	9	8	9	11	9
180	8	8	8	8	8



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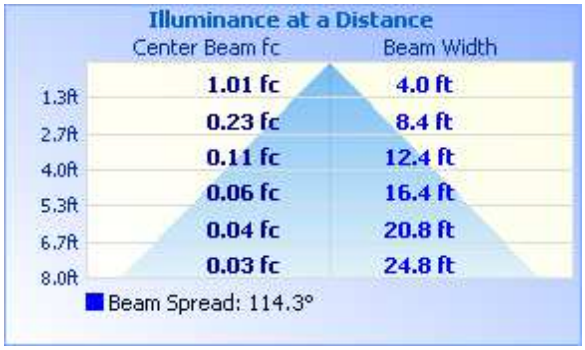
RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	5.4	1.1
0-40	18.6	3.9
0-60	78.3	16.3
60-90	145.8	30.4
70-100	157.3	32.8
90-120	152.8	31.9
0-90	224.1	46.7
90-180	255.3	53.3
0-180	479.4	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	0.2	0.0
10-20	0.9	0.2
20-30	4.3	0.9
30-40	13.2	2.7
40-50	24.7	5.2
50-60	35.0	7.3
60-70	42.9	8.9
70-80	49.8	10.4
80-90	53.1	11.1
90-100	54.4	11.4
100-110	52.0	10.8
110-120	46.4	9.7
120-130	38.0	7.9
130-140	29.5	6.2
140-150	19.3	4.0
150-160	10.4	2.2
160-170	4.4	0.9
170-180	0.9	0.2

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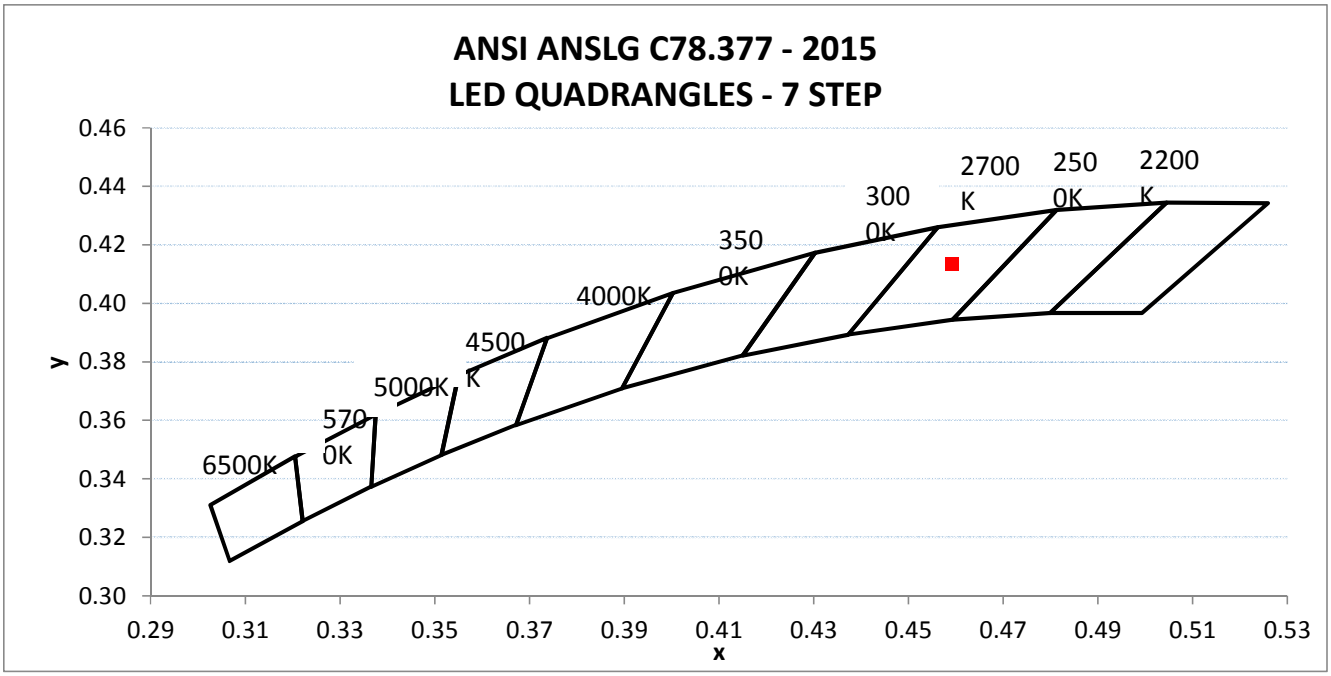
RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR	INPUT CURRENT ATHD (%)
AH05152019114818-111	Base Up	120.03	55.62	6.32	0.947	33.87

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
496.5	78.5	2728	91.1	50.7	0.0008

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.459	0.413	0.261	0.528



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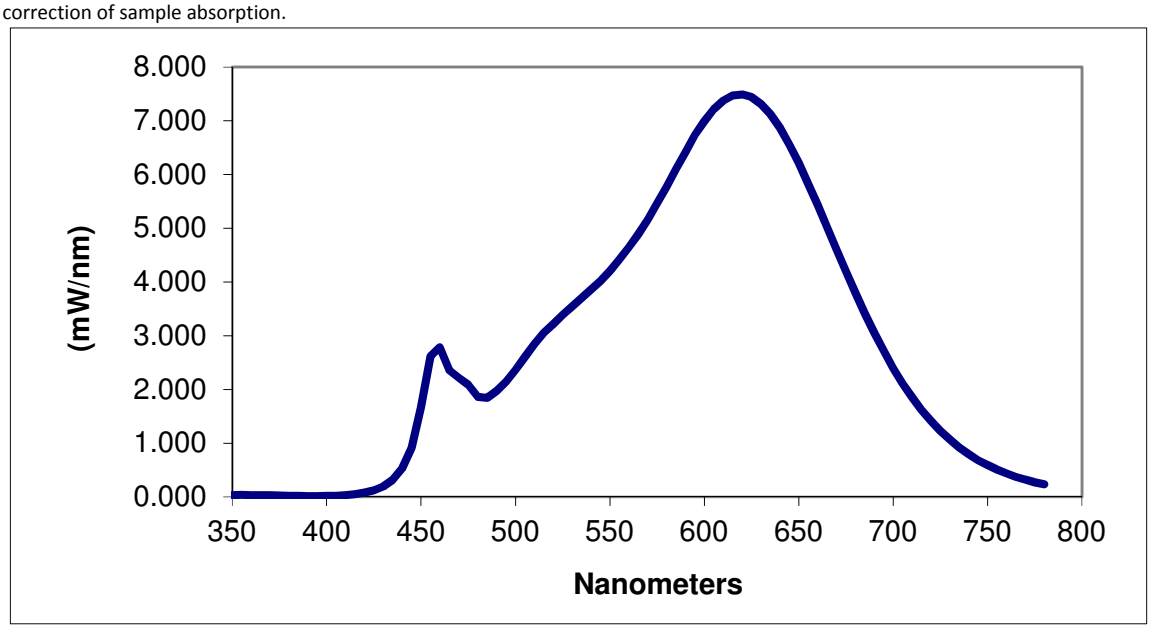
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.038	460	2.787	570	5.163	680	3.796
355	0.039	465	2.360	575	5.465	685	3.414
360	0.034	470	2.217	580	5.771	690	3.052
365	0.035	475	2.087	585	6.097	695	2.733
370	0.033	480	1.866	590	6.415	700	2.400
375	0.028	485	1.846	595	6.730	705	2.115
380	0.024	490	1.978	600	6.996	710	1.856
385	0.024	495	2.143	605	7.214	715	1.624
390	0.020	500	2.366	610	7.373	720	1.417
395	0.019	505	2.608	615	7.468	725	1.230
400	0.021	510	2.843	620	7.490	730	1.068
405	0.025	515	3.053	625	7.443	735	0.922
410	0.034	520	3.221	630	7.309	740	0.794
415	0.052	525	3.385	635	7.123	745	0.684
420	0.080	530	3.549	640	6.870	750	0.592
425	0.124	535	3.701	645	6.559	755	0.508
430	0.197	540	3.865	650	6.214	760	0.441
435	0.319	545	4.021	655	5.829	765	0.376
440	0.528	550	4.207	660	5.436	770	0.322
445	0.913	555	4.415	665	5.025	775	0.276
450	1.667	560	4.648	670	4.603	780	0.237
455	2.621	565	4.886	675	4.200		

*Without correction of sample absorption.



End Of Test Results

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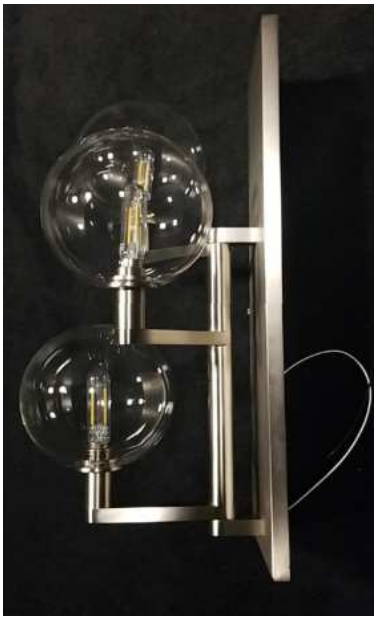
TEST REPORT

PICTURES



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:

Tess Gallagher
Engineer
Lighting Division

Report Reviewed By:

Timothy Quigley
Project Engineer
Lighting Division

Attachments: IES File

REVISION HISTORY

JOB NUMBER	DATE OF REVISION	PROJECT HANDLER	REVIEWED BY	REVISION NOTE
None				