

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

CSCW-10W-4S-36-30K-SN

REPORT NUMBER

102602453CHI-030

ISSUE DATE

June 4, 2018

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

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TEST OF ONE LINEAR LED FIXTURE

MODEL NO. CSCW-10W-4S-36-30K-SN
LED MODEL NO. LUMILED/SS10CL-12MM-24VDC-C-30K
DRIVER MODEL NO. MEANWELL APV-16-24

RENDERED TO:

PURE EDGE LIGHTING
1718 WEST FULLERTON
CHICAGO, IL 60614

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-00685500-1.

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 CSCW-10W-4S-36-30K-SN. The sample was received by Intertek on May 17, 2018 in undamaged condition and one sample was tested as received. The sample designation was AH05172018024639-030.

DATE OF TESTS

May 29, 2018 through May 30, 2018.

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SUMMARY

MODEL NO:	CSCW-10W-4S-36-30K-SN
DESCRIPTION:	Linear LED fixture

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1290.1	1271.8
Input Power (W) @ 120 (VAC)	30.68	30.631
Lumen Efficacy (lm/W)	42.1	41.5
Input Power Factor () @ 120 (VAC)	0.991	0.991

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	11.48
Correlated Color Temperature (K)	2943
Color Rendering Index - Ra ()	96.9
Color Rendering - R9 ()	87.4
DUV ()	0.0043
Chromaticity Coordinate (x)	0.435
Chromaticity Coordinate (y)	0.393
Chromaticity Coordinate (u')	0.254
Chromaticity Coordinate (v')	0.517

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EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/10/2017	7/10/2018
Omega Newport Thermometer	DPI8-C24	146920	10/4/2017	10/4/2018
LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
Newport Thermohygrometer	iServer	146957	11/17/2017	11/17/2018
Pacific, AC power supply	118-ACX	CHI0358	VBV	VBV
Labsphere 2M Sphere & Spectroradiometer	CDS1100	146137	VBV	VBV
Elgar AC Power Supply	CW1251M	146113	VBV	VBV
Sorenson DC Power Supply	XFR150-8	146847	VBV	VBV
Yokogawa Power Analyzer	WT1600	146767	4/5/2018	4/5/2019
Omega Temperature	MDSi8	146873	7/20/2017	7/20/2018
Newport Thermohygrometer	iTHX-M	146382	7/14/2017	7/14/2018

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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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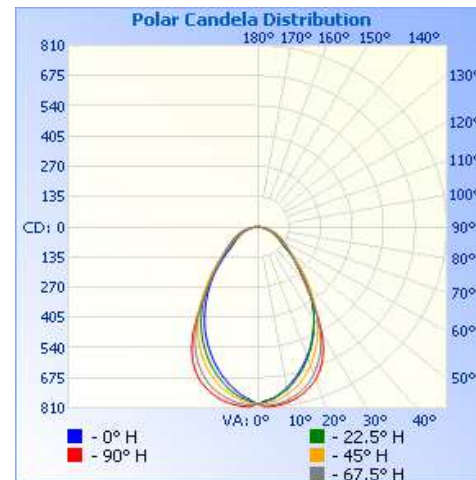
RESULTS OF TESTS

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)
AH05172018024639-030	Base Up	120.0	257.7	30.631	0.991	1271.8	41.5

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	792	792	792	792	792
5	769	772	784	798	804
10	729	737	757	783	793
15	678	685	717	752	768
20	618	625	661	702	728
25	554	558	593	632	658
30	484	485	516	537	552
35	409	409	429	415	415
40	329	330	336	306	305
45	251	253	252	234	235
50	177	181	191	185	186
55	130	128	145	150	151
60	106	103	111	122	124
65	83	80	85	97	101
70	63	60	63	72	80
75	45	42	43	49	58
80	28	25	26	28	33
85	13	10	11	11	9
90	0	0	0	0	0



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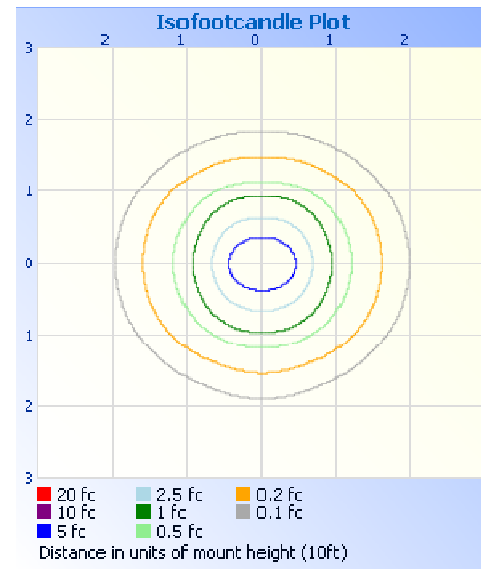
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RESULTS OF TESTS

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

MOUNTING HEIGHT: 10ft	
ILLUMINANCE - CONE OF LIGHT	ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	545.7	42.9
0-40	803.5	63.2
0-60	1122.0	88.2
60-90	149.8	11.8
70-100	61.7	4.9
90-120	0.0	0.0
0-90	1271.8	100.0
90-180	0.0	0.0
0-180	1271.8	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	73.8	5.8
10-20	200.6	15.8
20-30	271.3	21.3
30-40	257.8	20.3
40-50	190.1	14.9
50-60	128.4	10.1
60-70	88.0	6.9
70-80	49.0	3.9
80-90	12.7	1.0

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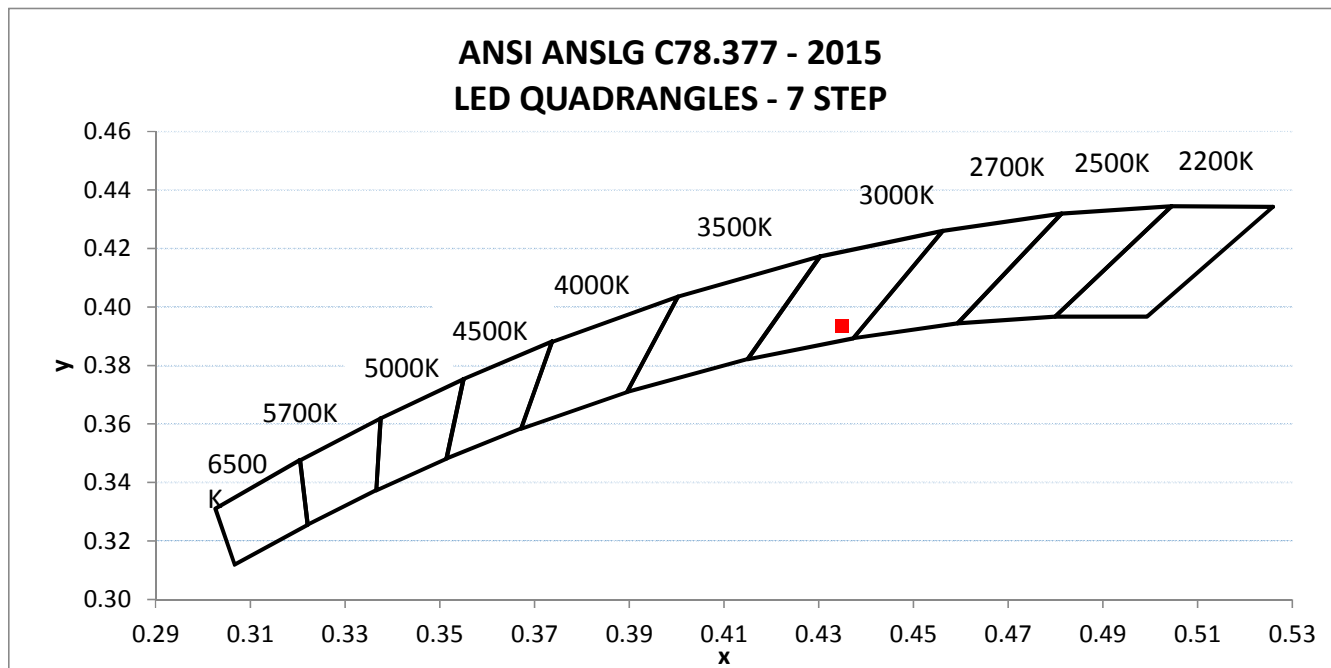
RESULTS OF TESTS

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 (%)
AH05172018024639-030	Base Up	120.00	257.94	30.68	0.991	11.48

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra ()	CRI - R9 ()	DUV ()
1290.1	42.1	2943	96.9	87.4	0.0043

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.435	0.393	0.254	0.517



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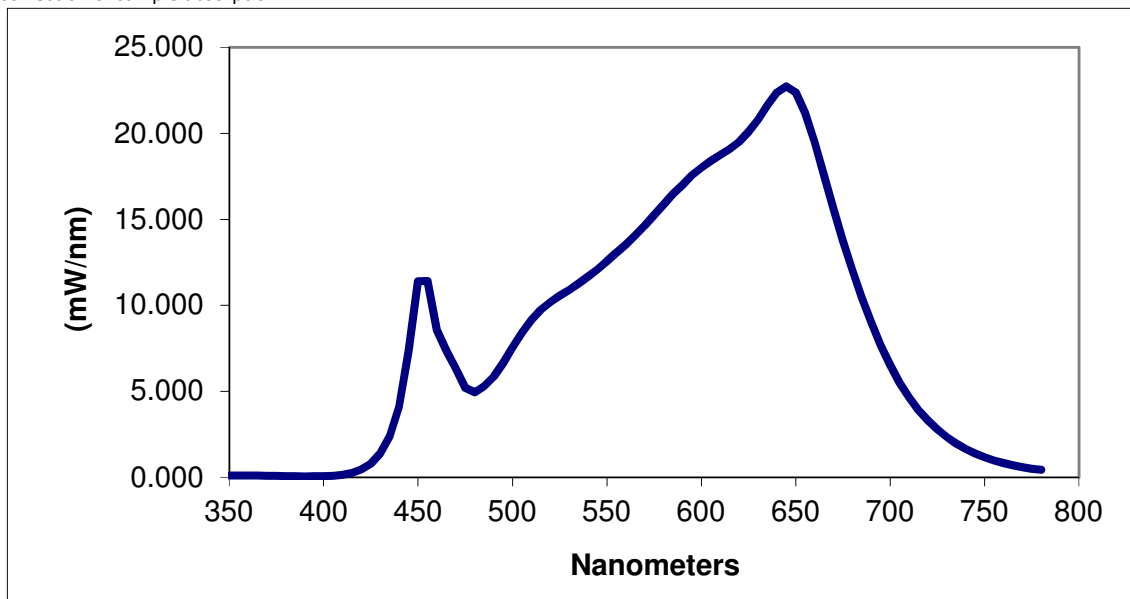
TEST REPORT

RESULTS OF TESTS

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	0.114	460	8.581	570	14.643	680	12.042
355	0.102	465	7.373	575	15.262	685	10.451
360	0.115	470	6.355	580	15.870	690	8.994
365	0.100	475	5.205	585	16.477	695	7.682
370	0.090	480	4.944	590	17.010	700	6.519
375	0.084	485	5.299	595	17.558	705	5.508
380	0.078	490	5.856	600	18.015	710	4.652
385	0.063	495	6.642	605	18.403	715	3.923
390	0.060	500	7.578	610	18.756	720	3.311
395	0.063	505	8.400	615	19.082	725	2.787
400	0.072	510	9.153	620	19.509	730	2.344
405	0.082	515	9.754	625	20.088	735	1.966
410	0.139	520	10.185	630	20.788	740	1.650
415	0.252	525	10.564	635	21.637	745	1.395
420	0.454	530	10.890	640	22.381	750	1.173
425	0.805	535	11.263	645	22.739	755	0.992
430	1.400	540	11.685	650	22.388	760	0.842
435	2.403	545	12.087	655	21.185	765	0.707
440	4.111	550	12.566	660	19.475	770	0.600
445	7.366	555	13.057	665	17.592	775	0.509
450	11.408	560	13.545	670	15.618	780	0.435
455	11.423	565	14.055	675	13.784		

*Without correction of sample absorption.



End Of Test Results

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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

Tess Gallagher
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Report Reviewed By:

Tim Quigley

Timothy Quigley
Engineer
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Attachments: IES File

REVISION HISTORY

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