

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

Electrical and Photometric tests as required to the IESNA LM-79 test standard.

MODEL NUMBER

LCS6-7W-36-C-30K-SA

REPORT NUMBER

103597691CHI-034

ISSUE DATE

January 21, 2020

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

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REPORT NO.: 103597691CHI-034

REPORT DATE: January 20, 2020

TEST REPORT

TEST OF ONE LINEAR LUMINAIRE

MODEL NO. LCS6-7W-36-C-30K-SA
LED MODEL NO. LUMILED 2835
DRIVER MODEL NO. LTF DA25W24VBF1-0000

RENDERED TO:

PURE EDGE LIGHTING
1718 WEST FULLERTON
CHICAGO, IL 60614

STATEMENT OF LIMITATIONS

NVLAP Lab Code 600186-0. 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 Qu-00901421-1 .

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 LCS6-7W-36-C-30K-SA. The sample was received by Intertek on January 13, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH01132020121521-034.

DATE OF TESTS

January 14, 2020 through January 16, 2020.

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SUMMARY

MODEL NO:	LCS6-7W-36-C-30K-SA
DESCRIPTION:	Linear Luminaire

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1367.5	1377.9
Input Power (W) @ 120 (VAC)	23.53	23.33
Lumen Efficacy (lm/W)	58.1	59.1
Input Power Factor () @ 120 (VAC)	0.914	0.913

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	28.45
Correlated Color Temperature (K)	3058
Color Rendering Index - Ra	94.1
Color Rendering - R9	71.1
DUV	0.0028
Chromaticity Coordinate (x)	0.429
Chromaticity Coordinate (y)	0.394
Chromaticity Coordinate (u')	0.250
Chromaticity Coordinate (v')	0.516

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EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/1/2019	7/1/2020
Omega Thermometer	DPI8-C24	146920	10/3/2019	10/3/2020
LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
Newport Thermohygrometer	iServer	146957	12/2/2019	12/2/2020
Elgar, AC Power Supply	CW1251	146111	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	4/3/2019	4/3/2020
Omega Temperature	MDSi8	146873	7/2/2019	7/2/2020
Newport Thermohygrometer	iTHX-M	146961	7/26/2019	7/26/2020

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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

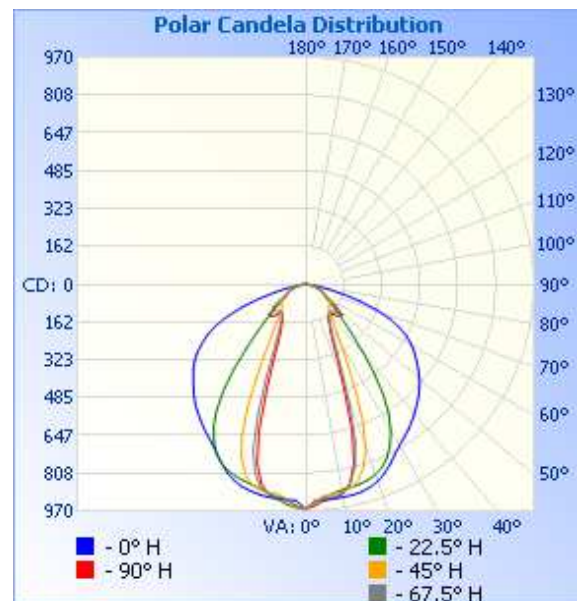
RESULTS OF TESTS

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)
AH01132020121521-034	Base Up	120.0	213.1	23.33	0.913	1377.9	59.1

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	962	962	962	962	962
5	926	915	908	919	926
10	924	894	905	907	910
15	920	886	866	811	794
20	897	867	747	543	485
25	850	819	502	310	279
30	798	724	306	214	206
35	761	575	210	171	170
40	721	378	161	157	166
45	679	240	141	167	190
50	631	166	134	176	204
55	577	119	124	158	126
60	520	95	102	99	93
65	442	80	83	76	79
70	322	60	69	58	61
75	166	39	46	38	38
80	56	21	21	20	20
85	13	7	7	7	7
90	1	1	1	1	1



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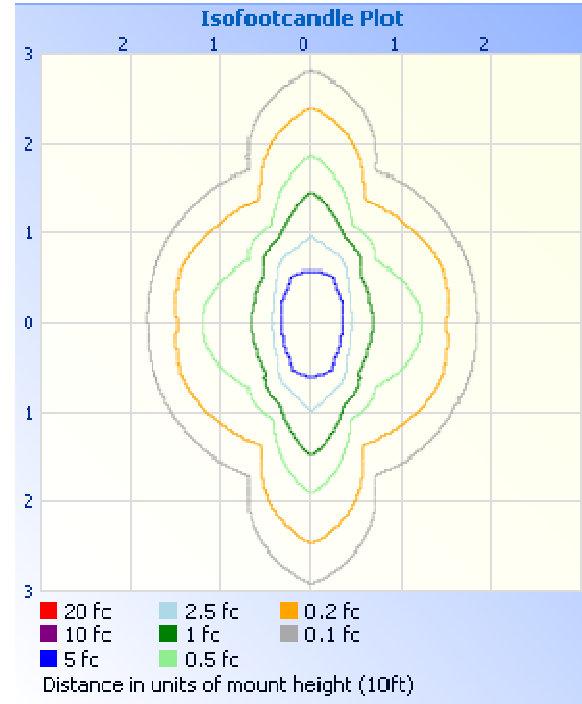
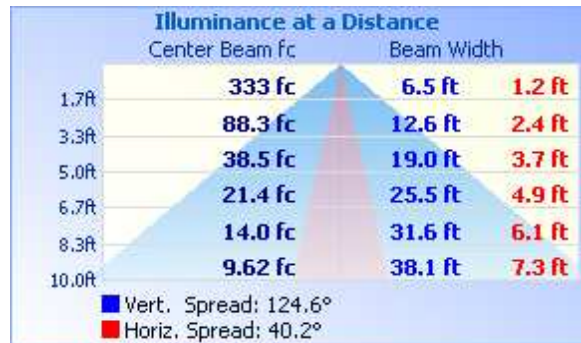
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RESULTS OF TESTS

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	585.2	42.5
0-40	815.6	59.2
0-60	1182.0	85.8
60-90	192.7	14.0
70-100	71.0	5.2
90-120	1.1	0.1
0-90	1374.7	99.8
90-180	3.2	0.2
0-180	1377.9	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	87.8	6.4
10-20	236.1	17.1
20-30	261.3	19.0
30-40	230.4	16.7
40-50	196.8	14.3
50-60	169.6	12.3
60-70	122.1	8.9
70-80	59.9	4.3
80-90	10.7	0.8
90-100	0.4	0.0
100-110	0.3	0.0
110-120	0.3	0.0
120-130	0.4	0.0
130-140	0.4	0.0
140-150	0.5	0.0
150-160	0.4	0.0
160-170	0.3	0.0
170-180	0.1	0.0

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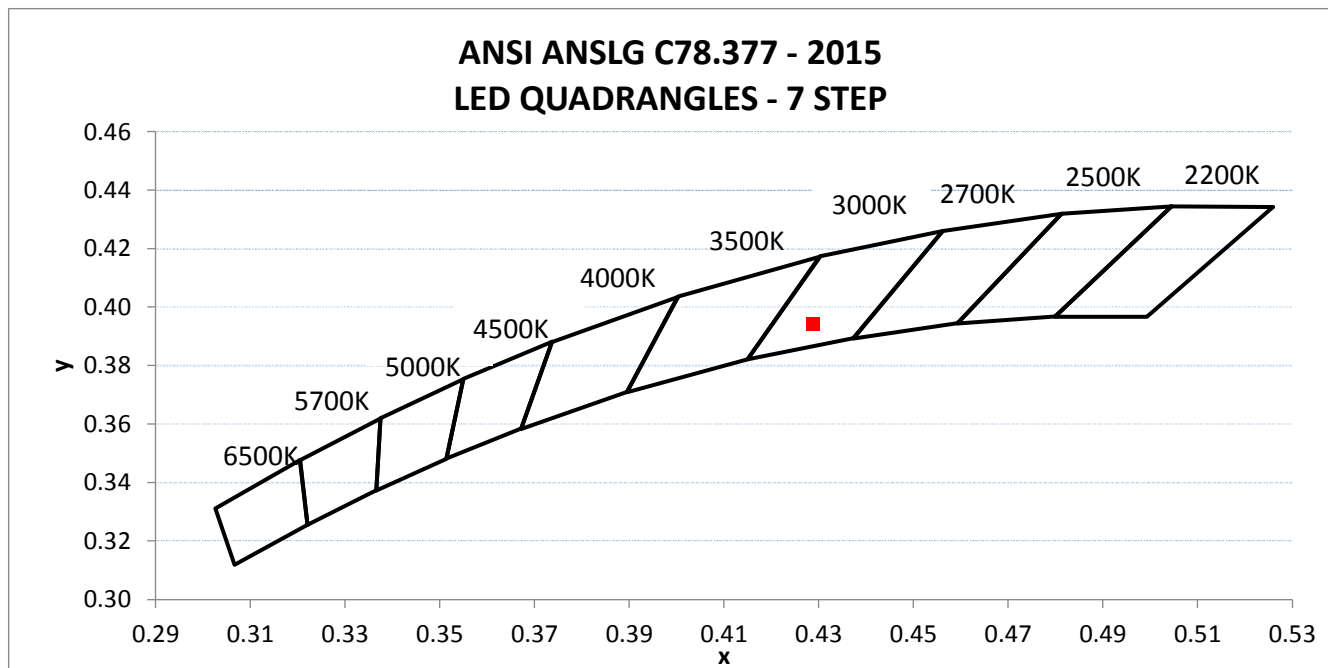
RESULTS OF TESTS

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 (%)
AH01132020121521-034	Base Up	120.00	214.50	23.53	0.914	28.45

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1367.5	58.1	3058	94.1	71.1	0.0028

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.429	0.394	0.250	0.516



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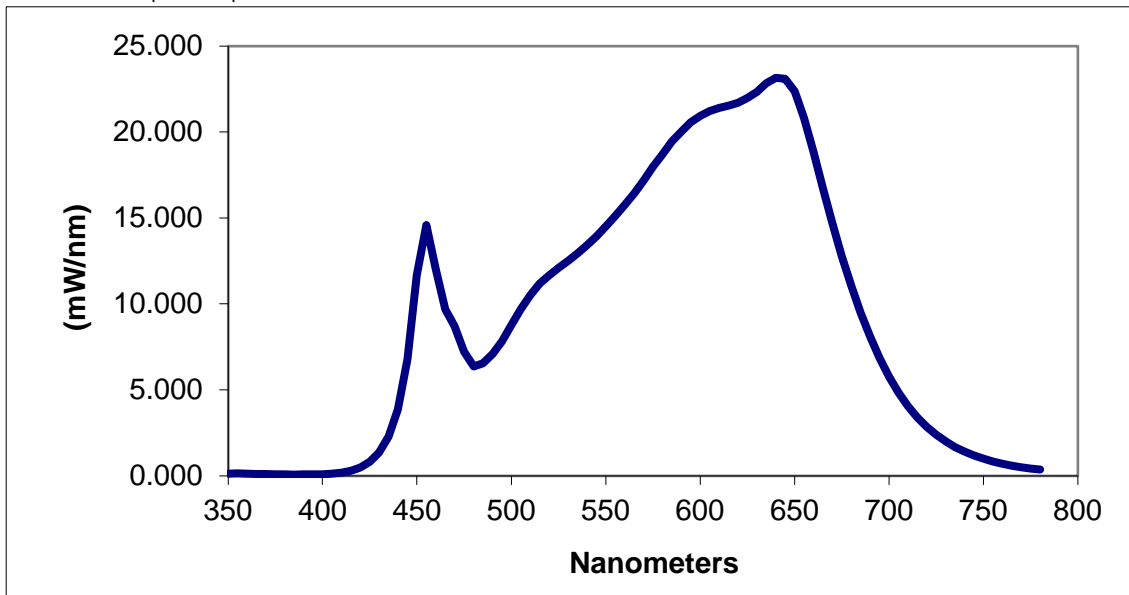
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PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.134	460	12.044	570	17.166	680	11.040
355	0.149	465	9.696	575	17.963	685	9.488
360	0.124	470	8.705	580	18.701	690	8.096
365	0.109	475	7.225	585	19.438	695	6.858
370	0.105	480	6.360	590	20.021	700	5.774
375	0.096	485	6.538	595	20.557	705	4.844
380	0.085	490	7.081	600	20.934	710	4.059
385	0.083	495	7.807	605	21.197	715	3.398
390	0.086	500	8.775	610	21.388	720	2.852
395	0.087	505	9.690	615	21.520	725	2.388
400	0.094	510	10.510	620	21.681	730	1.999
405	0.120	515	11.179	625	21.963	735	1.676
410	0.175	520	11.659	630	22.320	740	1.404
415	0.290	525	12.085	635	22.828	745	1.181
420	0.484	530	12.492	640	23.143	750	0.997
425	0.808	535	12.919	645	23.087	755	0.839
430	1.350	540	13.419	650	22.365	760	0.709
435	2.284	545	13.922	655	20.819	765	0.599
440	3.862	550	14.508	660	18.830	770	0.505
445	6.785	555	15.101	665	16.743	775	0.426
450	11.658	560	15.761	670	14.678	780	0.363
455	14.580	565	16.404	675	12.779		

*Without correction of sample absorption.



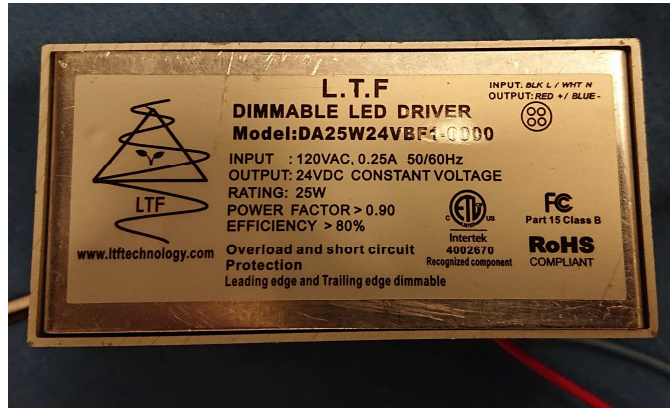
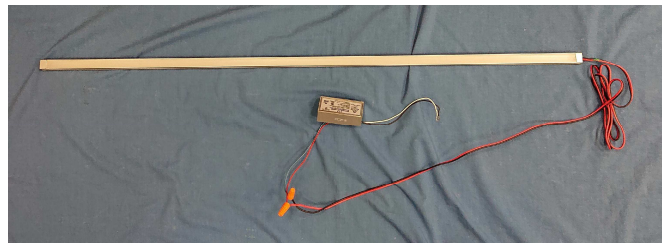
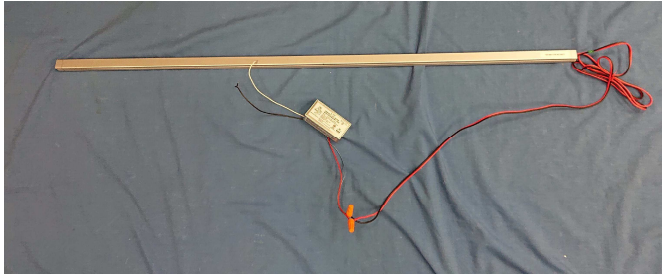
End Of Test Results

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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:

Ian Smith

Ian Smith
Engineer
Lighting Division

Report Reviewed By:

Jeffrey Davis

Jeff Davis
NA Technical Lead
Lighting Division

Attachments: IES File

REVISION HISTORY

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