

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

LCMG.6-5W-36-30K-SN

REPORT NUMBER

104373788CHI-015

ISSUE DATE

August 26, 2020

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

© 2017 INTERTEK



REPORT NO.: 104373788CHI-015

REPORT DATE: August 26, 2020

TEST REPORT

TEST OF ONE LINEAR LED

MODEL NO. LCMG.6-5W-36-30K-SN
LED MODEL NO. LUMILED/ L128-2780CB3500001
DRIVER MODEL NO. HUARUI/DR-24V-2000-60D

RENDERED TO:

PURE EDGE LIGHTING
1718 W. FULLERTON AVE.
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-01087644-1.

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 LCMG.6-5W-36-30K-SN. The sample was received by Intertek on August 4, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH08042020023951-015.

DATE OF TESTS

August 6, 2020 through August 26, 2020.

REPORT NO.: 104373788CHI-015

TEST REPORT

REPORT DATE: August 26, 2020

SUMMARY

MODEL NO:	LCMG.6-5W-36-30K-SN
DESCRIPTION:	LINEAR LED

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1021.6	1033.5
Input Power (W) @ 120 (VAC)	16.08	16.12
Lumen Efficacy (lm/W)	63.5	64.1
Input Power Factor A175:AB175@ 120 (VAC)	0.977	0.977

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	13.87
Correlated Color Temperature (K)	3024
Color Rendering Index - Ra	94.0
Color Rendering - R9	64.4
DUV	0.0034
Chromaticity Coordinate (x)	0.430
Chromaticity Coordinate (y)	0.394
Chromaticity Coordinate (u')	0.251
Chromaticity Coordinate (v')	0.516

REPORT NO.: 104373788CHI-015

TEST REPORT

REPORT DATE: August 26, 2020

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
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
Pacific, AC Power Supply	118-ACX	CHI0153	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	4/6/2020	4/6/2021
Omega Temperature	MDSi8	146873	7/2/2020	7/2/2021
Newport Humidity Recorder	iTHX-SD	CHI0452	10/11/2019	10/11/2020

REPORT NO.: 104373788CHI-015

REPORT DATE: August 26, 2020

TEST REPORT

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.

REPORT NO.: 104373788CHI-015

TEST REPORT

REPORT DATE: August 26, 2020

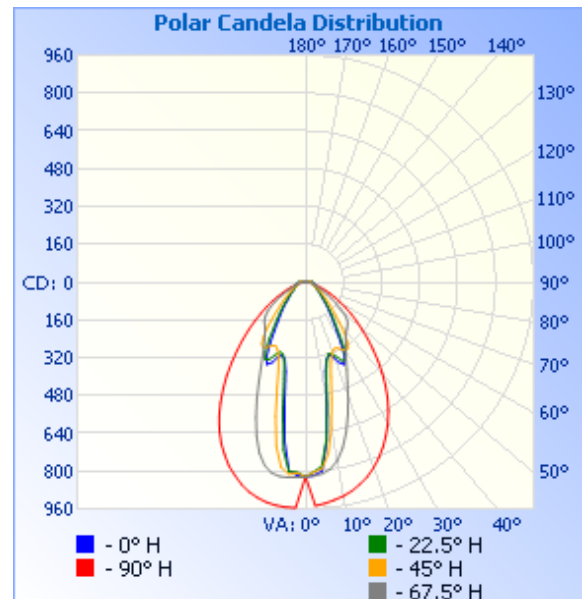
RESULTS OF TESTS

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)
AH08042020023951-015	Base Up	120.1	137.4	16.12	0.977	1033.5	64.1

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	824	824	824	824	824
5	802	782	792	814	940
10	506	520	625	767	919
15	338	344	413	659	885
20	337	321	324	523	836
25	385	367	307	410	770
30	298	323	332	338	691
35	204	221	308	293	602
40	151	162	220	268	501
45	109	118	156	250	400
50	85	88	115	217	310
55	67	69	83	157	234
60	55	55	63	105	167
65	49	47	49	73	112
70	46	43	40	52	70
75	38	37	34	36	40
80	34	33	30	26	20
85	30	30	26	19	8
90	26	26	23	14	2
95	22	22	20	10	0
100	19	18	16	5	0
105	16	15	12	2	0
110	13	12	8	0	0
115	11	10	4	0	0
120	8	6	2	0	0
125	4	3	0	1	0
130	2	1	0	1	1
135	0	0	1	1	1



REPORT NO.: 104373788CHI-015

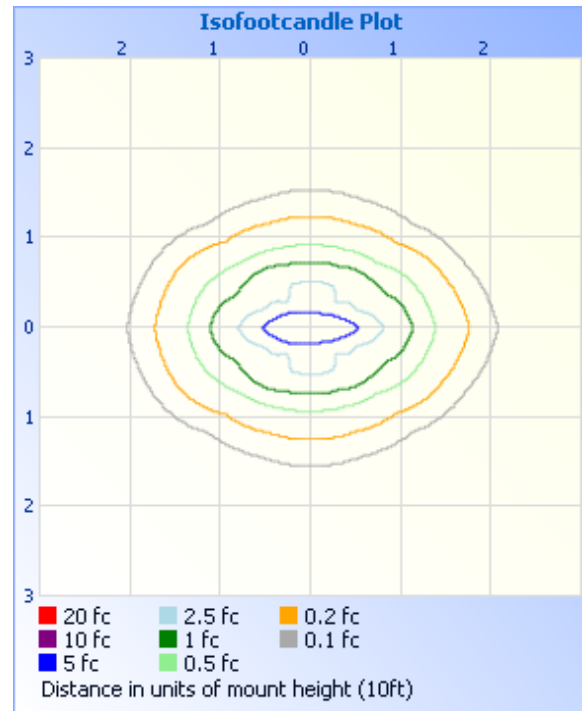
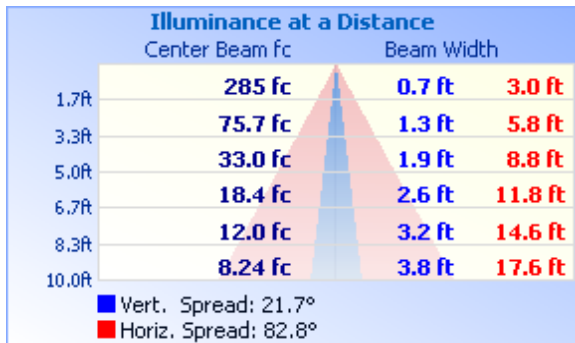
REPORT DATE: August 26, 2020

TEST REPORT

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	416.4	40.3
0-40	610.7	59.1
0-60	869.5	84.1
60-90	129.5	12.5
70-100	83.1	8.0
90-120	32.6	3.2
0-90	998.9	96.7
90-180	34.6	3.3
0-180	1033.5	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	73.5	7.1
10-20	149.9	14.5
20-30	193.0	18.7
30-40	194.3	18.8
40-50	152.8	14.8
50-60	105.9	10.2
60-70	63.8	6.2
70-80	39.7	3.8
80-90	26.0	2.5
90-100	17.4	1.7
100-110	10.1	1.0
110-120	5.1	0.5
120-130	1.7	0.2
130-140	0.3	0.0

REPORT NO.: 104373788CHI-015

REPORT DATE: August 26, 2020

TEST REPORT

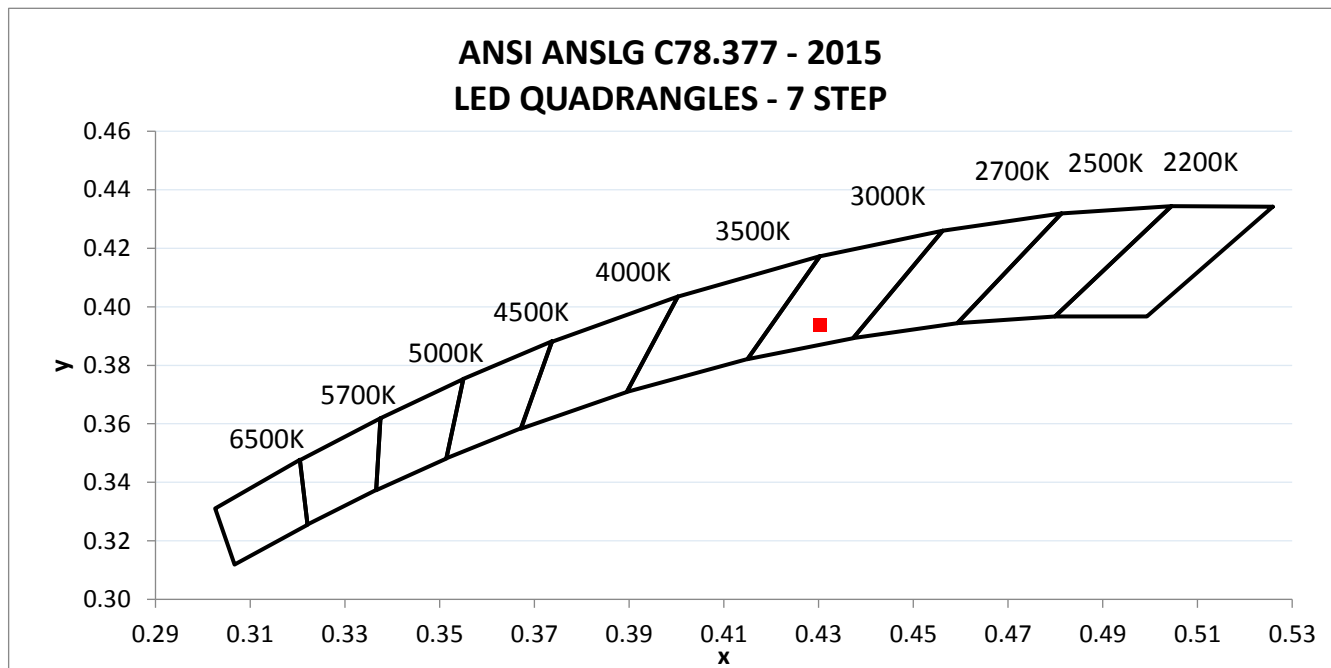
RESULTS OF TESTS

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 (%)
AH08042020023951-015	Base Up	120.01	137.09	16.08	0.977	13.87

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1021.6	63.5	3024	94.0	64.4	0.0034

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.430	0.394	0.251	0.516



REPORT NO.: 104373788CHI-015

TEST REPORT

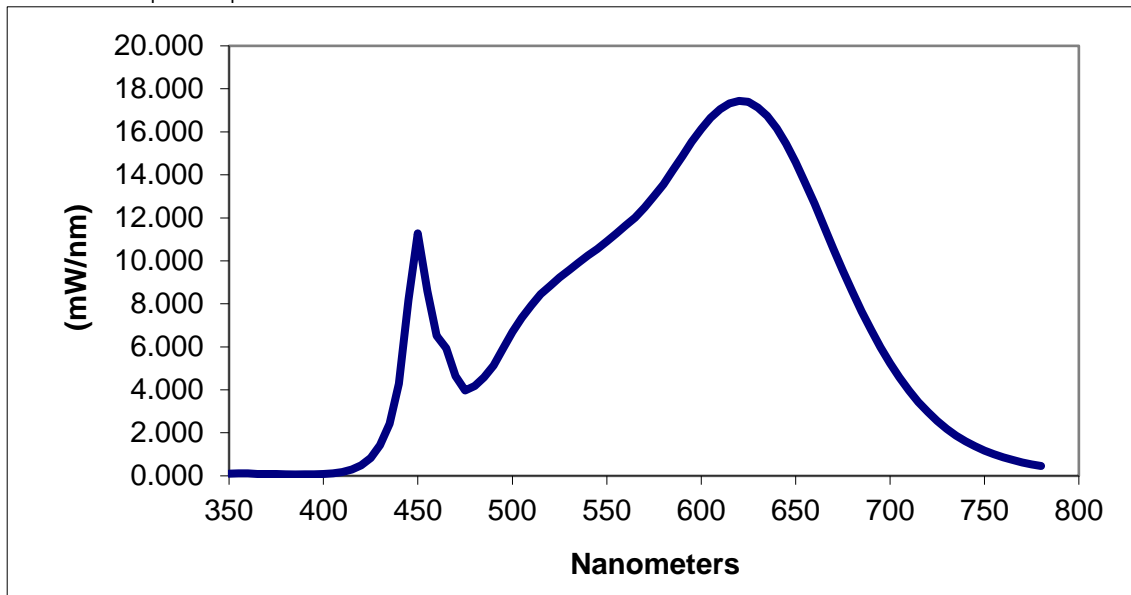
REPORT DATE: August 26, 2020

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	0.096	460	6.510	570	12.480	680	8.568
355	0.114	465	5.932	575	13.012	685	7.647
360	0.115	470	4.638	580	13.557	690	6.785
365	0.091	475	3.967	585	14.211	695	5.986
370	0.087	480	4.184	590	14.861	700	5.237
375	0.086	485	4.577	595	15.540	705	4.578
380	0.076	490	5.130	600	16.135	710	3.971
385	0.067	495	5.899	605	16.655	715	3.432
390	0.074	500	6.694	610	17.057	720	2.971
395	0.078	505	7.351	615	17.329	725	2.552
400	0.087	510	7.937	620	17.440	730	2.192
405	0.116	515	8.449	625	17.399	735	1.878
410	0.179	520	8.840	630	17.133	740	1.609
415	0.295	525	9.225	635	16.745	745	1.379
420	0.494	530	9.573	640	16.169	750	1.180
425	0.835	535	9.915	645	15.446	755	1.009
430	1.424	540	10.259	650	14.591	760	0.867
435	2.420	545	10.554	655	13.644	765	0.737
440	4.284	550	10.906	660	12.661	770	0.627
445	8.188	555	11.267	665	11.620	775	0.533
450	11.286	560	11.645	670	10.558	780	0.454
455	8.597	565	12.016	675	9.560		

*Without correction of sample absorption.



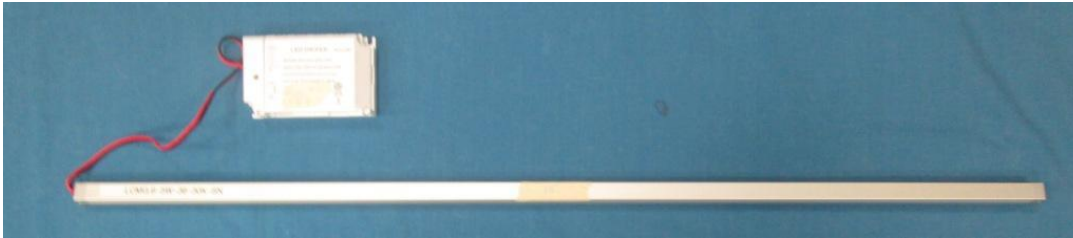
End Of Test Results

REPORT NO.: 104373788CHI-015

REPORT DATE: August 26, 2020

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:

A handwritten signature in black ink, reading "Tim Quigley".

Timothy Quigley
Project Engineer
Lighting Division

Report Reviewed By:

A handwritten signature in black ink, reading "Jeff Davis".

Jeff Davis
N.A. Technical Lead
Lighting Division

Attachments: IES File

REVISION HISTORY

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