

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

PW-10W-36IN-27K-XX

REPORT NUMBER

103597691CHI-038

ISSUE DATE

February 19, 2020

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

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TEST REPORT

TEST OF ONE LINEAR LUMINAIRE

MODEL NO. PW-10W-36IN-27K-XX
LED MODEL NO. LUMILED 2835
DRIVER MODEL NO. LTF TA60WD24LEDRE-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 PW-10W-36IN-27K-XX. The sample was received by Intertek on February 3, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH02032020121245.

DATE OF TESTS

February 6, 2020 through February 11, 2020.

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SUMMARY

MODEL NO:	PW-10W-36IN-27K-XX
DESCRIPTION:	Linear Luminaire

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1616.5	1637.4
Input Power (W) @ 120 (VAC)	38.63	38.94
Lumen Efficacy (lm/W)	41.8	42.1
Input Power Factor () @ 120 (VAC)	0.938	0.940

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	36.09
Correlated Color Temperature (K)	2698
Color Rendering Index - Ra	92.6
Color Rendering - R9	62.2
DUV	-0.0019
Chromaticity Coordinate (x)	0.457
Chromaticity Coordinate (y)	0.405
Chromaticity Coordinate (u')	0.263
Chromaticity Coordinate (v')	0.525

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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
Pacific, AC Power Supply	118-ACX	CHI-0153	VBV	VBV
Labsphere Spectroradiometer	CDS1100	CHI0091	VBV	VBV
3 Meter Sphere	SPR600	CHI0088	VBV	VBV
Elgar AC Power Supply	CW1251	146112	VBV	VBV
Sorenson DC Power Supply	XFR150-8	146846	VBV	VBV
Newport Humidity Recorder	iTHX-SD	146382	4/17/2019	4/17/2020
Yokogawa Power Meter	WT1600	146769	4/3/2019	4/3/2020
Extech K Temperature Meter	SD200	CHI0207	4/3/2019	4/3/2020

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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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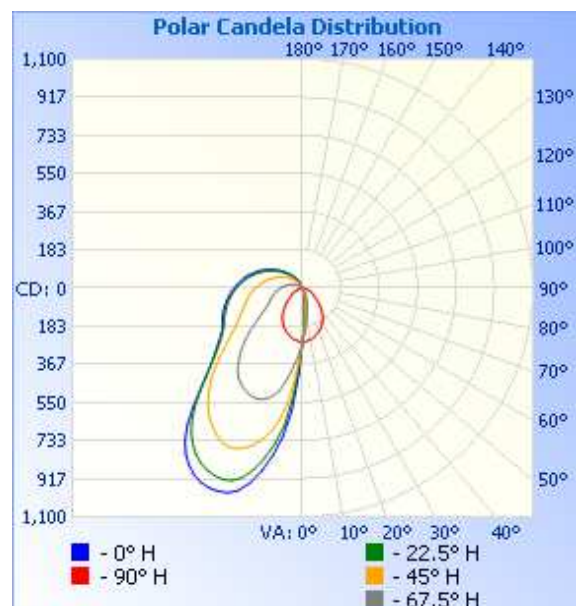
RESULTS OF TESTS

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)
AH02032020121245	Horizontal	119.9	345.5	38.94	0.940	1637.4	42.1

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	260	260	260	260	260
5	108	110	136	184	254
10	38	43	70	131	249
15	4	7	29	87	237
20	0	0	6	59	223
25	0	0	0	36	209
30	0	0	0	16	188
35	0	0	0	4	168
40	0	0	0	0	142
45	0	0	0	0	116
50	0	0	0	0	90
55	0	0	0	0	68
60	0	0	0	0	55
65	0	0	0	0	42
70	0	0	0	0	32
75	0	0	0	0	22
80	0	0	0	0	13
85	0	0	0	0	7
90	0	0	0	0	2



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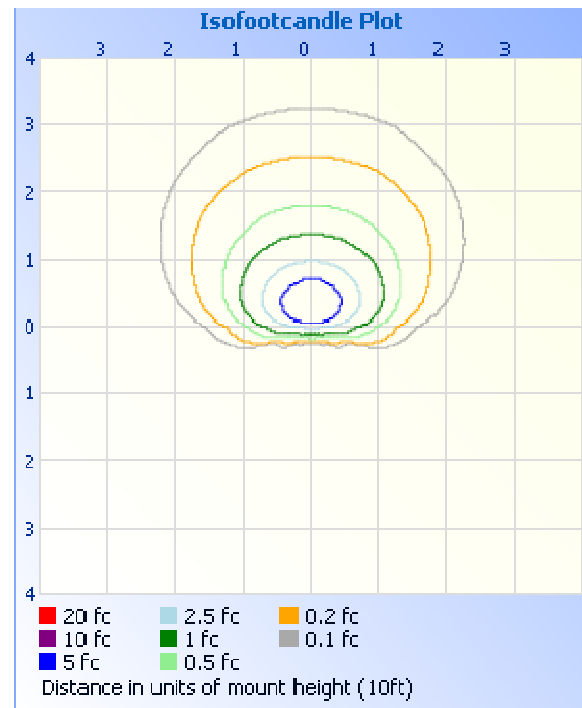
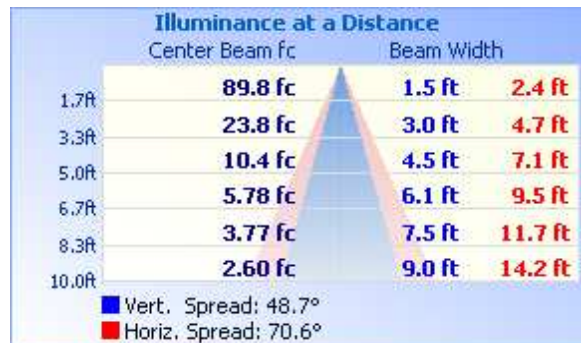
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RESULTS OF TESTS

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	320.5	19.6
0-40	543.9	33.2
0-60	924.3	56.4
60-90	404.0	24.7
70-100	358.2	21.9
90-120	239.5	14.6
0-90	1328.3	81.1
90-180	309.1	18.9
0-180	1637.4	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	30.0	1.8
10-20	107.7	6.6
20-30	182.7	11.2
30-40	223.4	13.6
40-50	210.1	12.8
50-60	170.2	10.4
60-70	147.4	9.0
70-80	135.8	8.3
80-90	120.8	7.4
90-100	101.5	6.2
100-110	80.0	4.9
110-120	57.9	3.5
120-130	37.4	2.3
130-140	20.7	1.3
140-150	9.1	0.6
150-160	2.3	0.1
160-170	0.1	0.0

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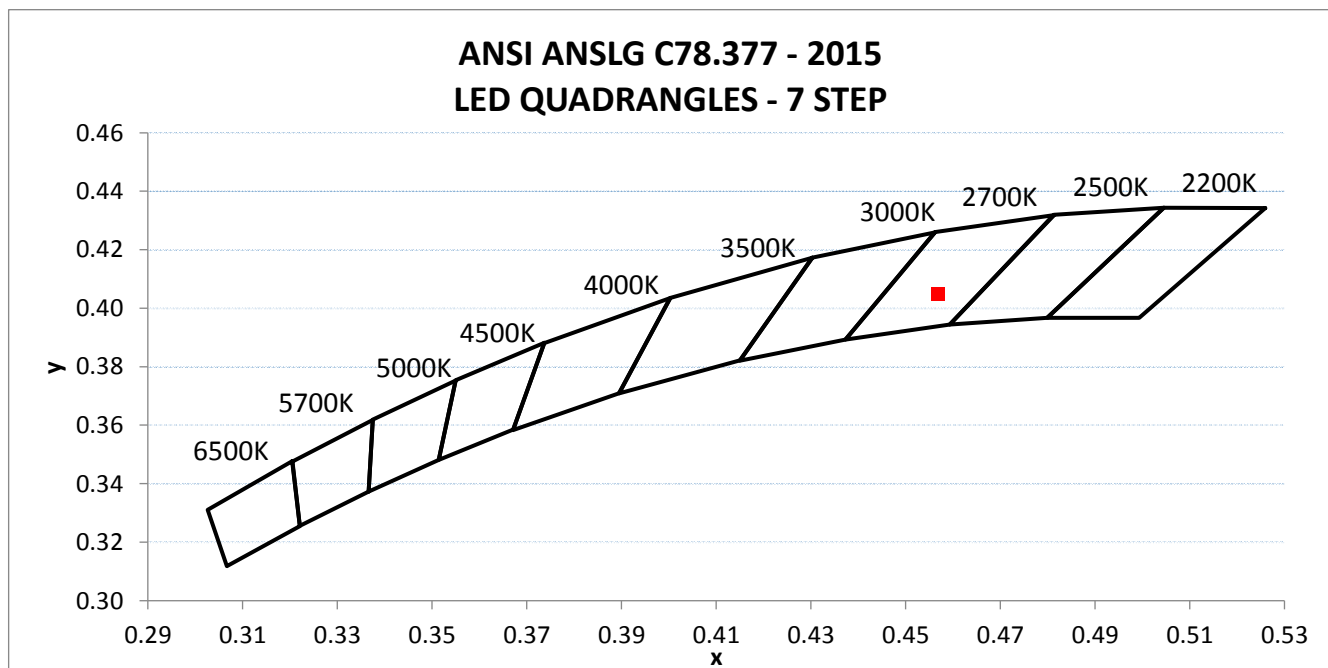
RESULTS OF TESTS

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 (%)
AH02032020121245	Horizontal	120.01	343.23	38.63	0.938	36.09

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1616.5	41.8	2698	92.6	62.2	-0.0019

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.457	0.405	0.263	0.525



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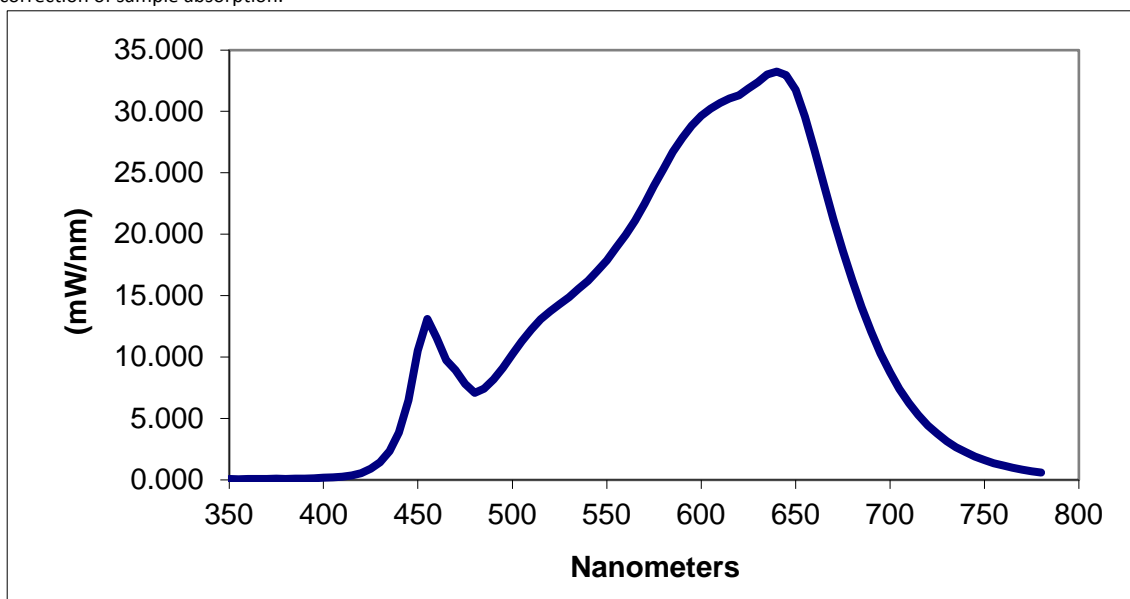
TEST REPORT

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	0.069	460	11.572	570	22.476	680	16.254
355	0.052	465	9.738	575	23.934	685	14.059
360	0.087	470	8.938	580	25.325	690	12.067
365	0.076	475	7.818	585	26.686	695	10.278
370	0.085	480	7.093	590	27.840	700	8.751
375	0.095	485	7.423	595	28.828	705	7.391
380	0.073	490	8.178	600	29.647	710	6.255
385	0.097	495	9.100	605	30.199	715	5.273
390	0.113	500	10.220	610	30.686	720	4.433
395	0.134	505	11.272	615	31.034	725	3.762
400	0.169	510	12.244	620	31.302	730	3.151
405	0.196	515	13.069	625	31.844	735	2.658
410	0.266	520	13.715	630	32.368	740	2.253
415	0.366	525	14.306	635	32.996	745	1.893
420	0.555	530	14.862	640	33.241	750	1.599
425	0.902	535	15.542	645	32.943	755	1.358
430	1.441	540	16.201	650	31.742	760	1.156
435	2.337	545	17.007	655	29.559	765	0.988
440	3.855	550	17.873	660	26.815	770	0.830
445	6.482	555	18.907	665	24.024	775	0.698
450	10.518	560	19.953	670	21.186	780	0.598
455	13.104	565	21.102	675	18.670		

*Without correction of sample absorption.



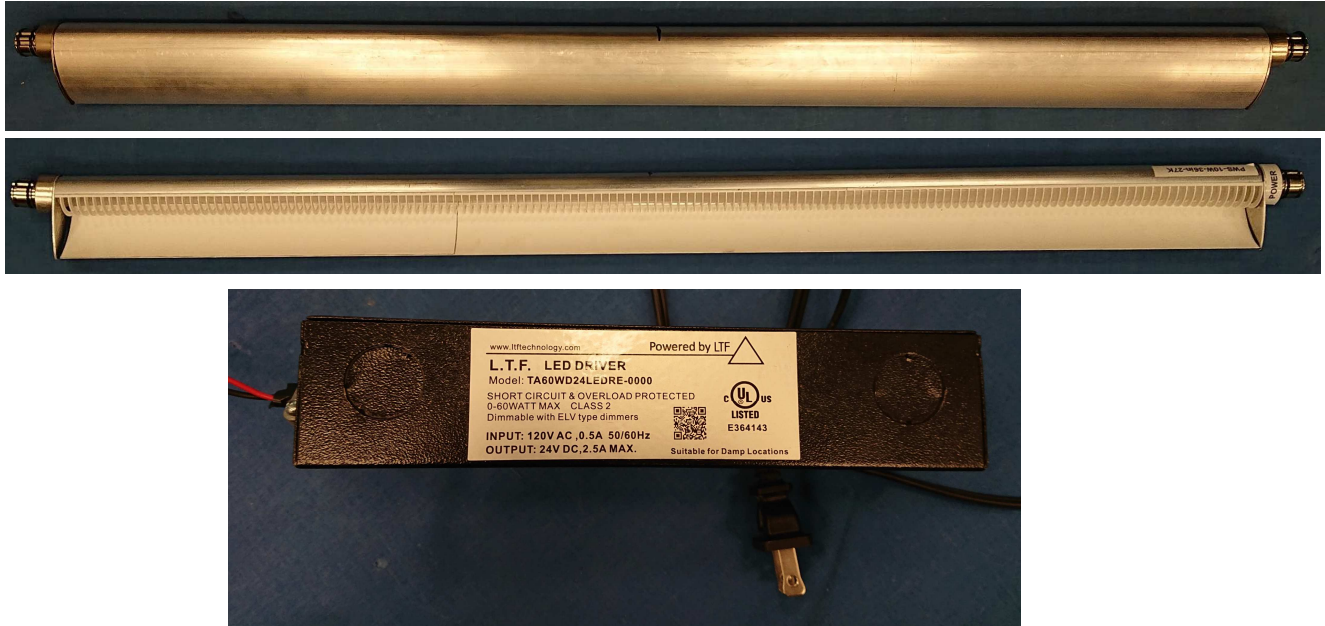
End Of Test Results

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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:

Jeff 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				