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NVLAP®
For the Scope of
Accreditation Under
NVLAP Lab Code 600186-0

PURE EDGE LIGHTING

TEST REPORT

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

MODEL NUMBER
SS5N-12MM-24VDC-C-30WD-HG

REPORT NUMBER
104373788CHI-019

ISSUE DATE
August 24, 2020

REVISION DATE
None

DOCUMENT CONTROL NUMBER
TBD

545 E. Algonquin Rd
Arlington Heights, IL 60005
Telephone: (847) 439-5667
www.intertek.com

REPORT NO.: 104373788CHI-019

TEST REPORT **REPORT DATE: August 24, 2020**

TEST OF ONE LED STRIP (36")

MODEL NO. SS5N-12MM-24VDC-C-30WD-HG
LED MODEL NO. LEDWISE/NICHIA
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 SS5N-12MM-24VDC-C-30WD-HG. The sample was received by Intertek on August 4, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH08042020023951-019.

DATE OF TESTS

August 5, 2020 through August 20, 2020.

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SUMMARY

MODEL NO:	SS5N-12MM-24VDC-C-30WD-HG
DESCRIPTION:	LED STRIP (36")

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1895.3	1816.7
Input Power (W) @ 120 (VAC)	17.81	17.71
Lumen Efficacy (lm/W)	106.4	102.6
Input Power Factor ( ) @ 120 (VAC)	0.980	0.979

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	14.69
Correlated Color Temperature (K)	3097
Color Rendering Index - Ra	93.6
Color Rendering - R9	57.2
DUV	0.0050
Chromaticity Coordinate (x)	0.424
Chromaticity Coordinate (y)	0.388
Chromaticity Coordinate (u')	0.249
Chromaticity Coordinate (v')	0.513

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EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
Omega Thermometer	DPI8-C24	146920	10/3/2019	10/3/2020
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Thermohygrometer	iServer	146957	12/2/2019	12/2/2020
Pacific, AC Power Supply	118-ACX	CHI0153	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	4/6/2020	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

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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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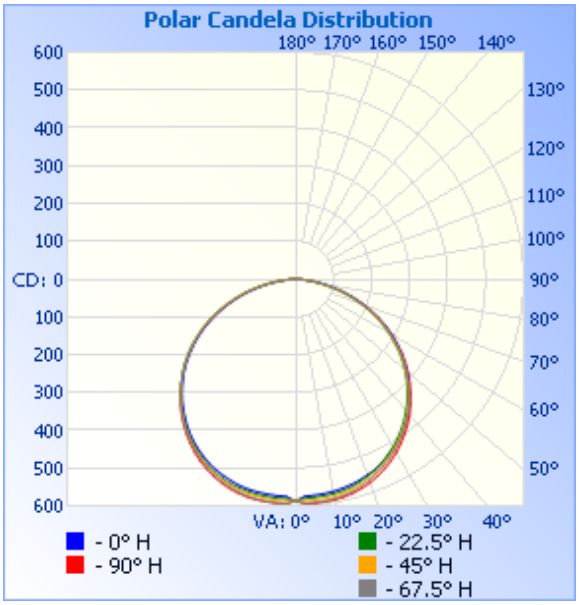
RESULTS OF TESTS

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)
AH08042020023951-019	Base Up	120.0	150.6	17.71	0.979	1816.7	102.6

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	587	587	587	587	587
5	574	579	586	593	594
10	570	576	583	590	593
15	563	568	574	581	586
20	551	554	560	565	573
25	537	536	541	546	554
30	516	512	518	522	530
35	492	485	490	494	500
40	459	452	457	461	466
45	422	416	419	423	428
50	383	376	378	382	386
55	338	331	334	338	341
60	292	283	285	288	292
65	239	231	233	237	240
70	184	176	179	182	185
75	130	120	123	126	129
80	76	68	70	73	75
85	31	26	26	28	29
90	4	4	4	4	3
95	0	0	1	1	1



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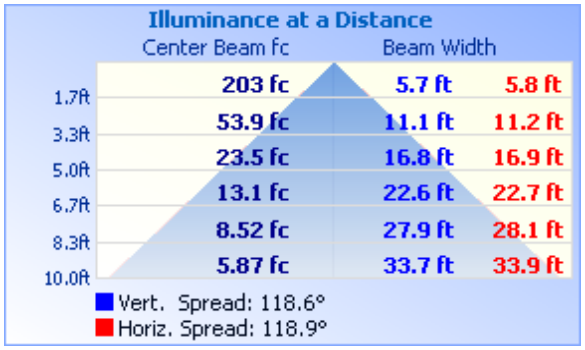
RESULTS OF TESTS

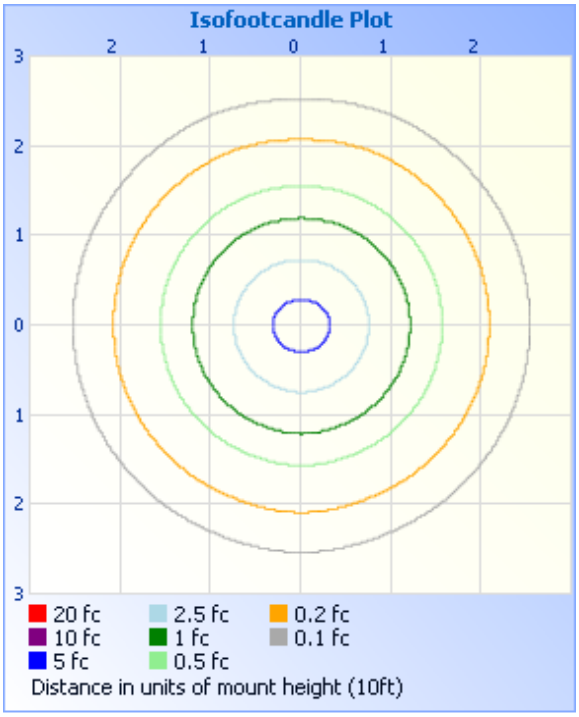
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT



ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	469.0	25.8
0-40	777.4	42.8
0-60	1406.8	77.4
60-90	408.7	22.5
70-100	173.7	9.6
90-120	1.1	0.1
0-90	1815.5	99.9
90-180	1.1	0.1
0-180	1816.7	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	55.8	3.1
10-20	162.5	8.9
20-30	250.7	13.8
30-40	308.4	17.0
40-50	326.7	18.0
50-60	302.8	16.7
60-70	236.1	13.0
70-80	136.1	7.5
80-90	36.5	2.0
90-100	1.1	0.1

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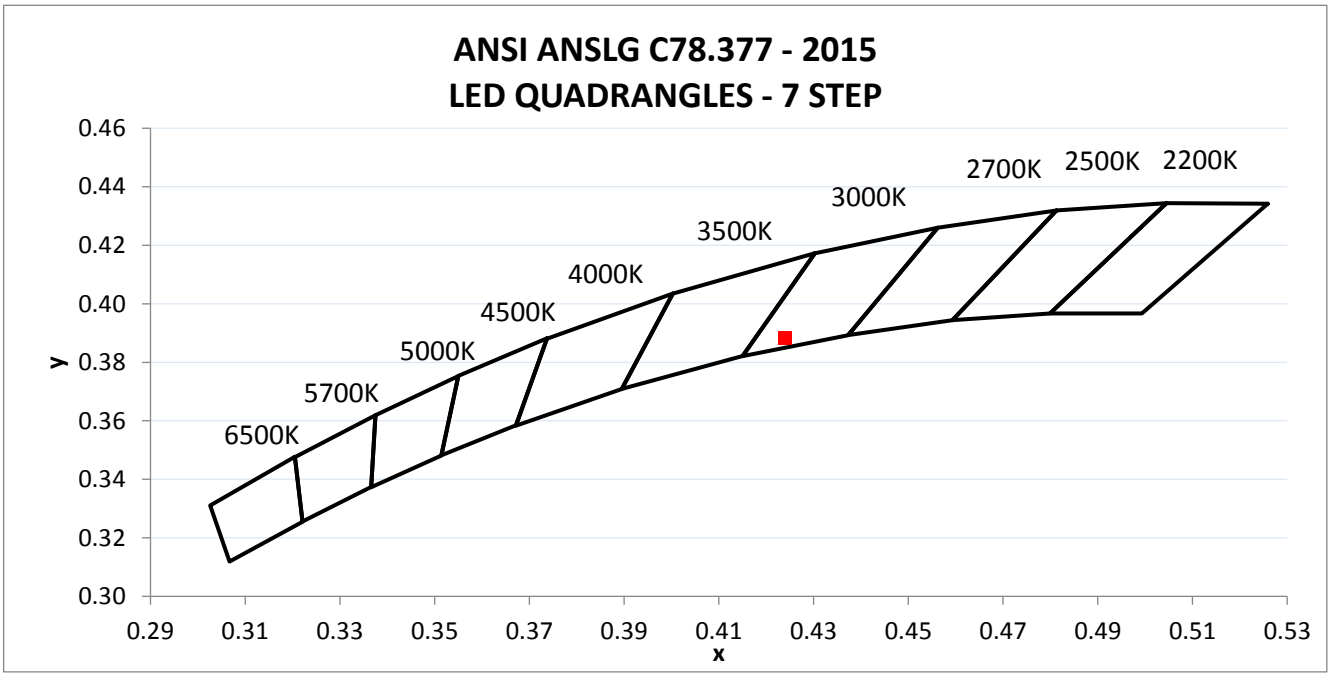
RESULTS OF TESTS

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 (%)
AH08042020023951-019	Base Up	120.01	151.44	17.81	0.980	14.69

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1895.3	106.4	3097	93.6	57.2	0.0050

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.424	0.388	0.249	0.513



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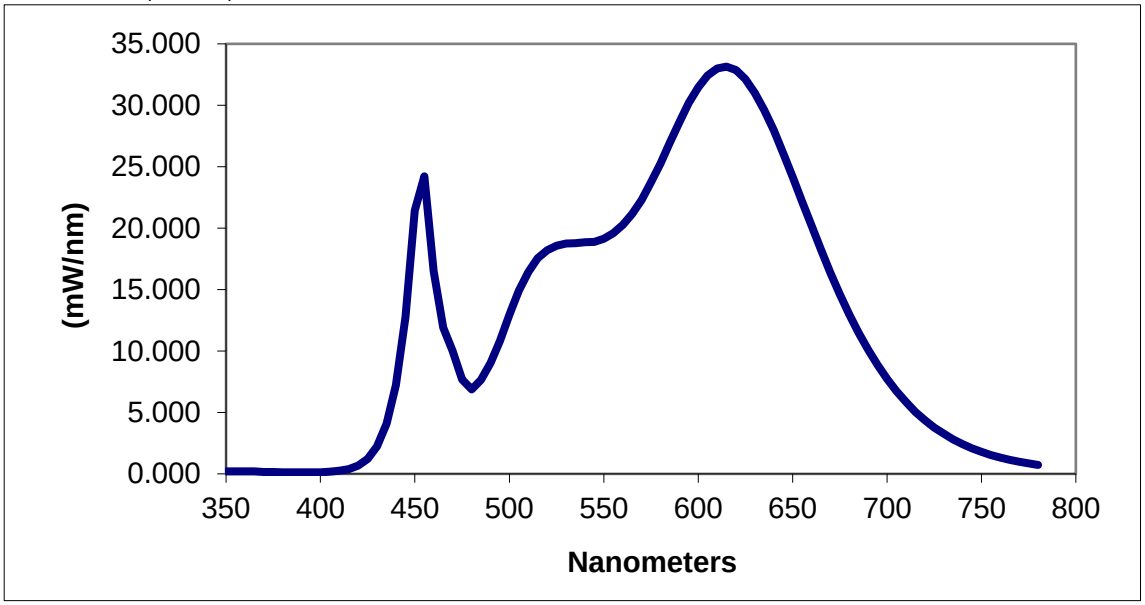
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.210	460	16.506	570	22.290	680	12.979
355	0.200	465	11.887	575	23.733	685	11.473
360	0.192	470	10.014	580	25.259	690	10.104
365	0.197	475	7.693	585	26.954	695	8.870
370	0.155	480	6.860	590	28.614	700	7.723
375	0.153	485	7.659	595	30.190	705	6.736
380	0.139	490	9.030	600	31.462	710	5.844
385	0.127	495	10.815	605	32.421	715	5.054
390	0.134	500	12.967	610	32.998	720	4.384
395	0.133	505	14.886	615	33.146	725	3.784
400	0.139	510	16.426	620	32.858	730	3.268
405	0.173	515	17.547	625	32.148	735	2.811
410	0.251	520	18.191	630	30.989	740	2.417
415	0.393	525	18.569	635	29.623	745	2.079
420	0.673	530	18.749	640	27.973	750	1.788
425	1.215	535	18.773	645	26.121	755	1.533
430	2.233	540	18.854	650	24.159	760	1.328
435	4.094	545	18.882	655	22.178	765	1.141
440	7.215	550	19.139	660	20.204	770	0.979
445	12.766	555	19.590	665	18.282	775	0.844
450	21.422	560	20.267	670	16.365	780	0.725
455	24.226	565	21.137	675	14.627		

*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:

Timothy Quigley
Project Engineer
Lighting Division

Report Reviewed By:

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				