

# PUREEDGE LIGHTING

## TEST REPORT

### SCOPE OF WORK

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

### MODEL NUMBER

NCWG-10W-36-30K-SN

### REPORT NUMBER

103597691CHI-028

### ISSUE DATE

July 9, 2019

### REVISION DATE

None

### DOCUMENT CONTROL NUMBER

TBD

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**REPORT DATE: July 9, 2019**

**TEST REPORT**

**TEST OF ONE LINEAR LED LIGHTING**

MODEL NO. NCWG-10W-36-30K-SN  
LED MODEL NO. LUMILEDS 2835C  
DRIVER MODEL NO. HUARI/DR-24V-2000-60D

**RENDERED TO:**

PUREEDGE LIGHTING  
1718 W. FULLERTON AVE,  
CHICAGO, IL 60614

**AUTHORIZATION**

The testing performed was authorized by signed quote number Qu-00901421.

**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 NCWG-10W-36-30K-SN. The sample was received by Intertek on June 24, 2019 in undamaged condition and one sample was tested as received. The sample designation was AH06242019024015-028.

**DATE OF TESTS**

July 3, 2019 through July 8, 2019.

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**SUMMARY**

<b>MODEL NO:</b>	NCWG-10W-36-30K-SN
<b>DESCRIPTION:</b>	Linear LED lighting

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1945.2	1938.5
Input Power (W) @ 120 (VAC)	30.53	30.45
Lumen Efficacy (lm/W)	63.7	63.7
Input Power Factor @ 120 (VAC)	0.990	0.990

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	12.89
Correlated Color Temperature (K)	2990
Color Rendering Index - Ra	95.1
Color Rendering - R9	77.2
DUV	0.0028
Chromaticity Coordinate (x)	0.434
Chromaticity Coordinate (y)	0.396
Chromaticity Coordinate (u')	0.252
Chromaticity Coordinate (v')	0.518

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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	10/4/2018	10/4/2019
LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
Newport Thermohygrometer	iServer	146957	12/11/2018	12/11/2019
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	4/3/2019	4/3/2020
Omega Temperature	MDSi8	146873	7/2/2019	7/2/2020
Newport Thermohygrometer	iTHX-M	146961	7/23/2018	7/23/2019

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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

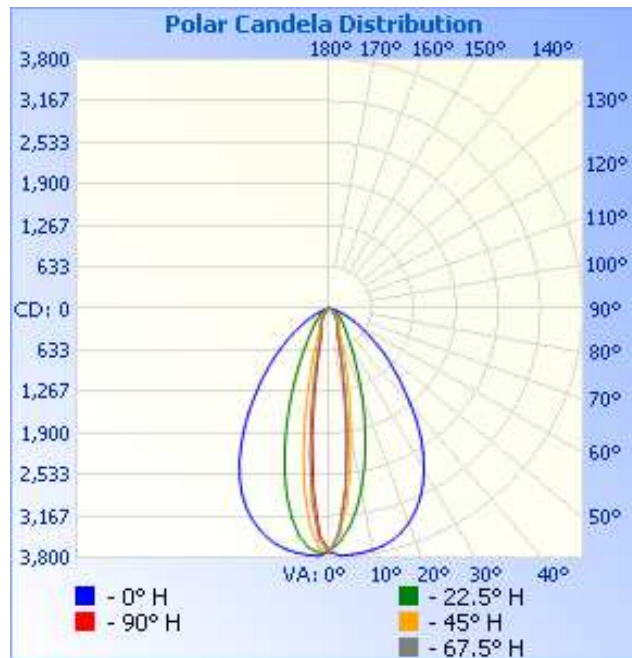
RESULTS OF TESTS

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)
AH06242019024015-028	Base Up	120.1	256.3	30.45	0.990	1938.5	63.7

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	3714	3714	3714	3714	3714
5	3770	3360	2980	2754	2776
10	3738	2781	1853	1390	1311
15	3656	2085	972	590	529
20	3480	1432	498	342	329
25	3213	945	330	282	276
30	2836	626	271	240	233
35	2393	441	221	172	151
40	1884	333	172	121	108
45	1436	262	132	88	84
50	1068	201	96	72	68
55	750	154	70	55	52
60	503	115	51	39	34
65	322	78	36	26	25
70	185	48	25	24	23
75	96	26	19	16	12
80	39	11	4	1	1
85	11	2	0	0	0
90	0	0	0	0	0



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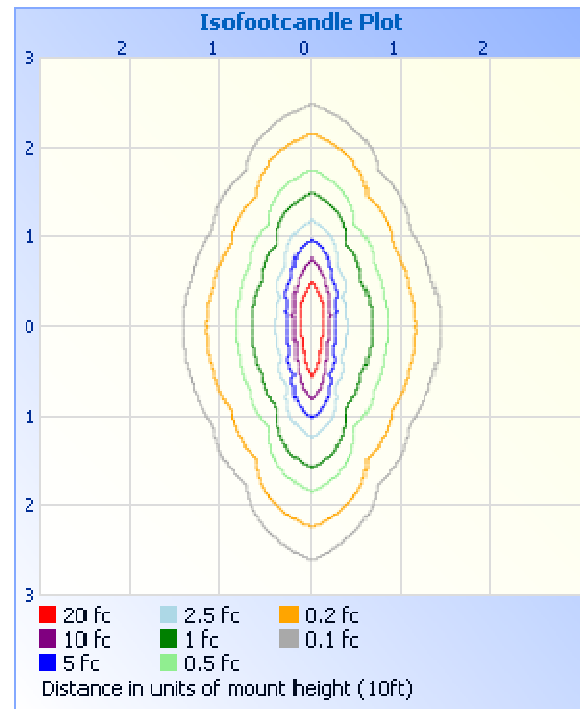
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RESULTS OF TESTS

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	1105.5	57.0
0-40	1438.6	74.2
0-60	1828.6	94.3
60-90	109.9	5.7
70-100	32.5	1.7
90-120	0.0	0.0
0-90	1938.5	100.0
90-180	0.0	0.0
0-180	1938.5	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	273.2	14.1
10-20	433.6	22.4
20-30	398.7	20.6
30-40	333.2	17.2
40-50	239.3	12.3
50-60	150.6	7.8
60-70	77.4	4.0
70-80	29.3	1.5
80-90	3.2	0.2

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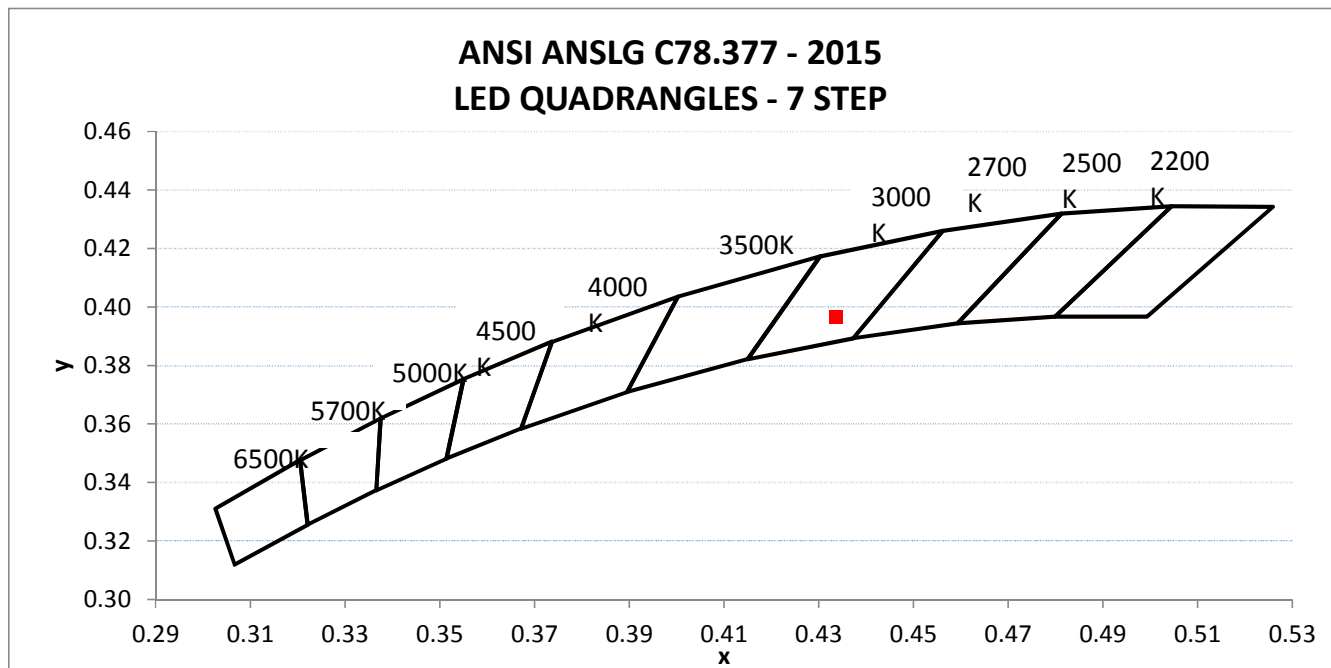
RESULTS OF TESTS

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 (%)
AH06242019024015-028	Base Up	120.01	257.03	30.53	0.990	12.89

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
1945.2	63.7	2990	95.1	77.2	0.0028

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.434	0.396	0.252	0.518



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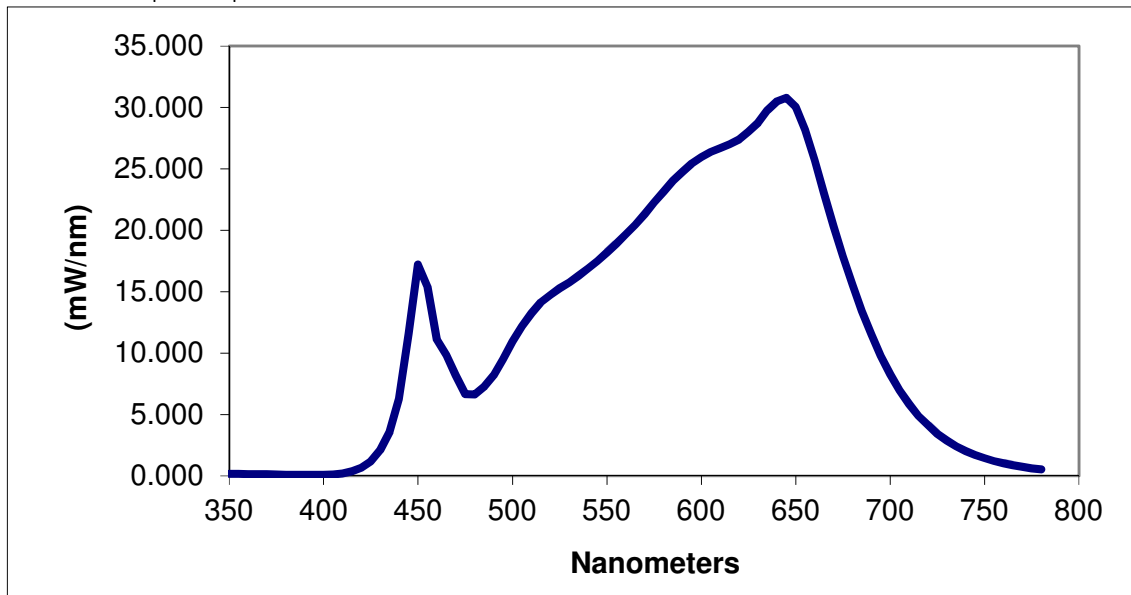
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RESULTS OF TESTS

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	0.183	460	11.109	570	21.333	680	15.565
355	0.170	465	9.844	575	22.278	685	13.445
360	0.155	470	8.194	580	23.161	690	11.525
365	0.152	475	6.661	585	24.036	695	9.794
370	0.145	480	6.634	590	24.757	700	8.267
375	0.129	485	7.276	595	25.450	705	6.965
380	0.107	490	8.202	600	25.957	710	5.855
385	0.102	495	9.494	605	26.389	715	4.906
390	0.094	500	10.931	610	26.688	720	4.128
395	0.094	505	12.176	615	26.998	725	3.447
400	0.102	510	13.266	620	27.387	730	2.879
405	0.132	515	14.133	625	28.010	735	2.414
410	0.215	520	14.748	630	28.755	740	2.036
415	0.378	525	15.277	635	29.767	745	1.724
420	0.673	530	15.758	640	30.494	750	1.452
425	1.197	535	16.298	645	30.782	755	1.230
430	2.099	540	16.906	650	30.027	760	1.046
435	3.616	545	17.505	655	28.166	765	0.880
440	6.281	550	18.208	660	25.700	770	0.745
445	11.587	555	18.909	665	23.036	775	0.625
450	17.225	560	19.696	670	20.371	780	0.534
455	15.384	565	20.435	675	17.887		

\*Without correction of sample absorption.



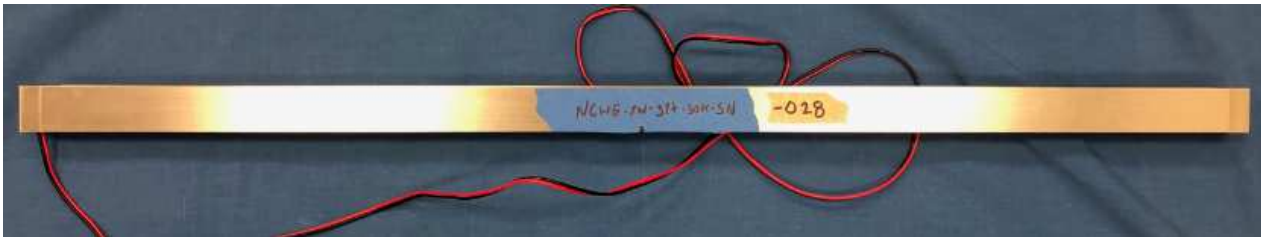
End Of Test Results

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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  
Engineer  
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Report Reviewed By:

*Tim Quigley*

Timothy Quigley  
Project Engineer  
Lighting Division

Attachments: IES File

**REVISION HISTORY**

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