

VISUAL COMFORT GROUP TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER
700NYR42xx-LED930

REPORT NUMBER
104206403CHI-001

ISSUE DATE
February 7, 2020

REVISION DATE
None

DOCUMENT CONTROL NUMBER
TBD
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REPORT DATE: February 7, 2020

TEST REPORT

TEST OF ONE NYRA 42 CHANDELIER

MODEL NO. 700NYR42XX-LED930
LED MODEL NO. SAMSUNG SPMWH1228FD5WWS2
DRIVER MODEL NO. MACRON MDR-608-24-100-LC

RENDERED TO:

VISUAL COMFORT GROUP
7400 LINDER AVE.
SKOKIE IL 60077

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-01040682-0.

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 700NYR42xx-LED930 . The sample was received by Intertek on January 9, 2020 in undamaged condition and one sample was tested as received. The sample designation was AH01092020032954-001.

DATE OF TESTS

February 7, 2020

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SUMMARY

MODEL NO.:	700NYR42xx-LED930
DESCRIPTION:	Nyra 42 Chandelier

CRITERIA	RESULTS
Lumen Output (lumens)	6806.4
Input Power (W) @ 120 (VAC)	80.82
Lumen Efficacy (lm/W)	84.2
Input Power Factor (W) @ 120 (VAC)	0.987
Input Current ATHD (%) @ 120 (VAC)	8.57
Correlated Color Temperature (K)	2937
Color Rendering Index - Ra	93.2
Color Rendering - R9	62.5
DUV	-0.0035
Chromaticity Coordinate (x)	0.436
Chromaticity Coordinate (y)	0.395
Chromaticity Coordinate (u')	0.254
Chromaticity Coordinate (v')	0.518

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Labsphere Spectroradiometer	CDS1100	CHI0091	VBU	VBU
3 Meter Sphere	SPR600	CHI0088	VBU	VBU
Elgar AC Power Supply	CW1251	146112	VBU	VBU
Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU
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.

TEST REPORT

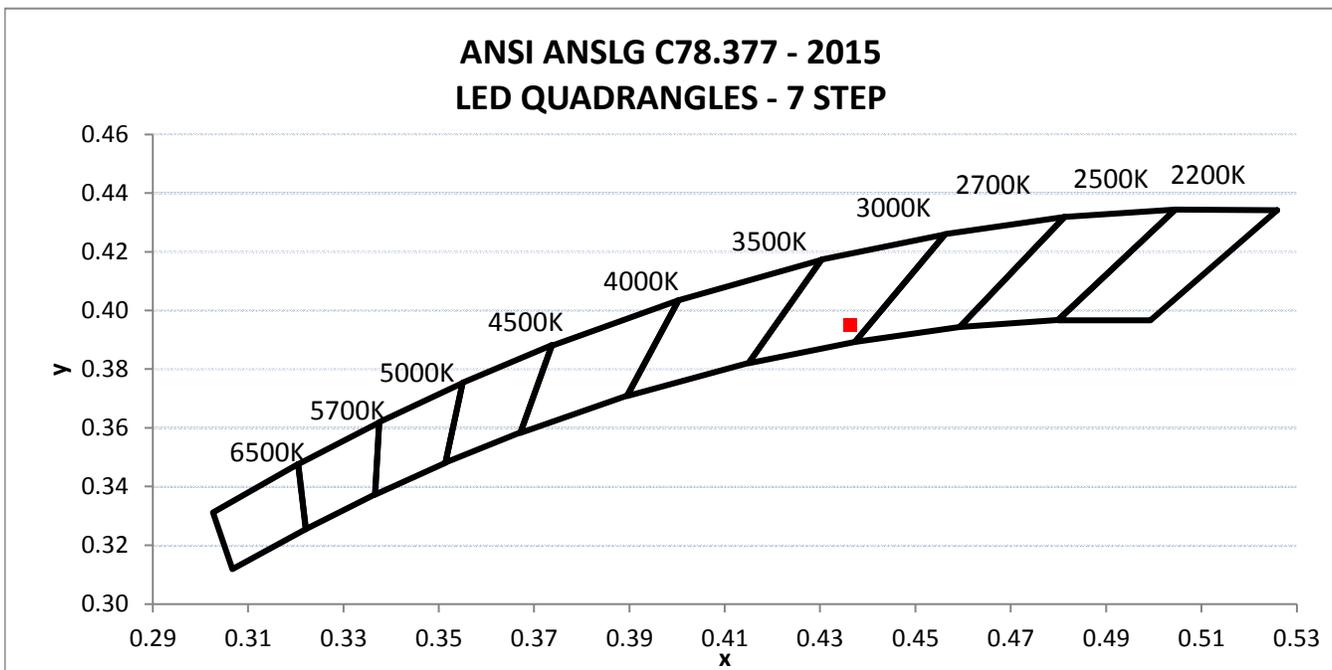
RESULTS OF TESTS

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 (%)
AH01092020032954-001	Horizontal	120.00	0.68	80.82	0.99	8.57

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
6806.4	84.2	2937	93.2	62.5	-0.0035

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.436	0.395	0.254	0.518



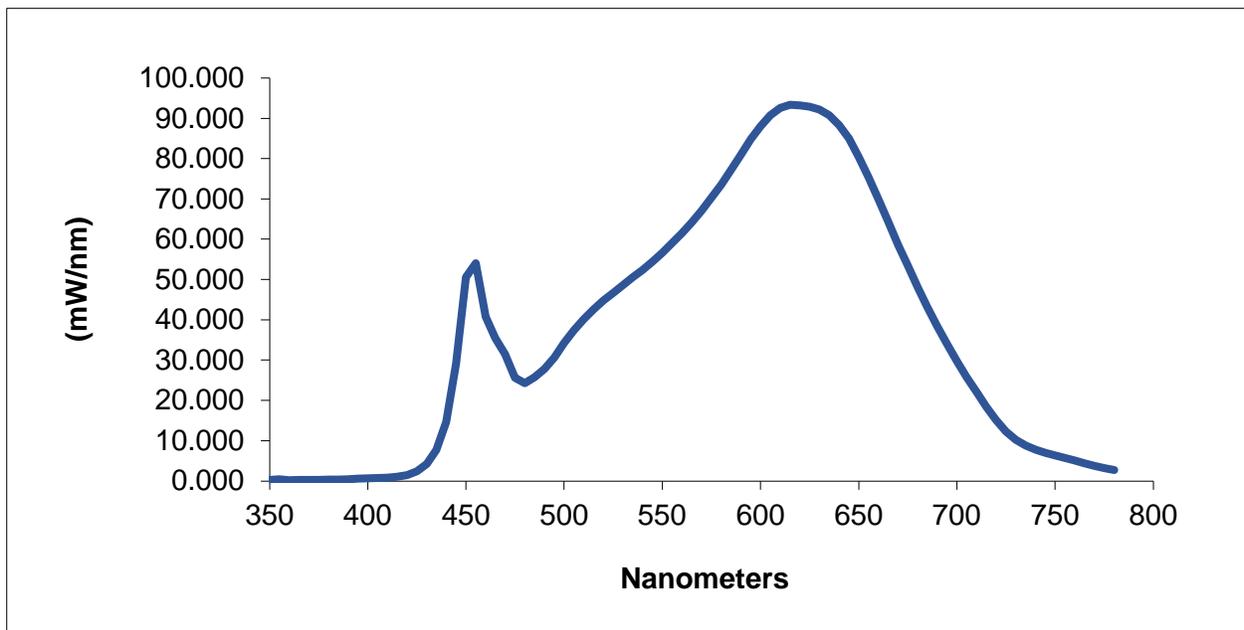
TEST REPORT

RESULTS OF TESTS

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

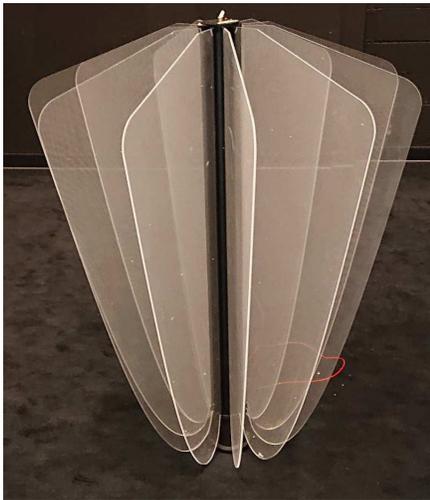
SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.257	460	40.795	570	67.066	680	48.070
355	0.393	465	35.505	575	70.301	685	43.147
360	0.213	470	31.483	580	73.505	690	38.427
365	0.256	475	25.638	585	77.235	695	33.964
370	0.233	480	24.265	590	80.889	700	29.727
375	0.221	485	25.792	595	84.780	705	25.685
380	0.299	490	27.830	600	88.007	710	22.024
385	0.323	495	30.696	605	90.751	715	18.450
390	0.412	500	34.227	610	92.608	720	15.127
395	0.535	505	37.364	615	93.408	725	12.290
400	0.615	510	40.136	620	93.179	730	10.175
405	0.705	515	42.573	625	92.932	735	8.762
410	0.819	520	44.807	630	92.164	740	7.718
415	1.047	525	46.729	635	90.754	745	7.006
420	1.463	530	48.590	640	88.321	750	6.364
425	2.395	535	50.551	645	84.961	755	5.727
430	4.234	540	52.404	650	80.369	760	5.084
435	7.697	545	54.420	655	75.405	765	4.388
440	14.634	550	56.674	660	69.970	770	3.734
445	29.115	555	59.063	665	64.362	775	3.152
450	50.542	560	61.496	670	58.634	780	2.673
455	54.010	565	64.108	675	53.388		

*Without correction of sample absorption



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:

Ian Smith
Engineer
Lighting Division

Report Reviewed By:

Jeff Davis
NA Technical Lead
Lighting Division

Attachments: None

REVISION HISTORY

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