

Coronet

TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

MAG-LIN-4-LTG1-35-UNV-BLK

PROJECT NUMBER

G103413122

REPORT NUMBER

103413122CRT-001

ISSUE DATE

December 28, 2018

REVISION DATE

None

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

© 2018 INTERTEK



TEST REPORT**REPORT NO.: 103413122CRT-001****REPORT DATE: December 28, 2018**

TEST OF (1) MAGNETO LINEAR MODULE

MODEL NO. MAG-LIN-4-LTG1-35-UNV-BLK

RENDERED TO:

CORONET
55 SHEPHERD LANE
TOTOWA, NEW JERSEY 07512**STATEMENT OF LIMITATION**

NVLAP Lab Code 100402-0. 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-00885541.

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

SAMPLE INFORMATION

CONTROL NO.	MODEL/SERIAL NO.	DESCRIPTION	TYPE	RECEIVED
CRT1812121240-001	MAG-LIN-4-LTG1-35-UNV-BLK	Magneto Linear Module	Production	12/12/2018

DATE OF TESTS

December 18, 2018 through December 28, 2018.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT

REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

SUMMARY

MODEL NO:	MAG-LIN-4-LTG1-35-UNV-BLK
DESCRIPTION:	Magneto Linear Module
LED MODEL NO:	Samsung 281B+
DRIVER MODEL NO:	Magnitude CVD60R24DC

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	1984.0	1985.0
Input Power (W) @ 120 (VAC)	32.07	31.84
Lumen Efficacy (lm/W)	61.9	62.4
Input Power Factor () @ 120 (VAC)	0.996	0.996

CRITERIA	RESULTS
Correlated Color Temperature (K)	3080
Color Rendering Index - Ra ()	92.2
Color Rendering - R9 ()	55.9
DUV ()	0.0032
Chromaticity Coordinate (x)	0.428
Chromaticity Coordinate (y)	0.394
Chromaticity Coordinate (u')	0.249
Chromaticity Coordinate (v')	0.516
Input Current ATHD (%) @ 120 (VAC)	6.2

TEST REPORT

REPORT NO.: 103413122CRT-001
 REPORT DATE: December 28, 2018

EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	CAL DUE DATE	DATE USED
LSI High Speed Mirror Goniometer	6440	---	1/7/2019	12/18/2018
Elgar AC Power Supply	CW1251	---	VBU	12/18/2018
Sorenson DC Power Supply	XG 150-10	---	VBU	12/18/2018
Yokogawa Power Analyzer	WT210	E464	5/3/2019	12/18/2018
Omega Thermometer	DPI8-C24	M263	5/3/2019	12/18/2018
M-D Building Products Digital Level	Smart Tool	L112	4/21/2019	12/18/2018
NIST Luminous Intensity Standard Source	NBS10322	N1427	1/9/2019	12/18/2018
NIST Luminous Intensity Standard Source	NBS10332	N1435	1/9/2019	12/18/2018
NIST Luminous Intensity Standard Source	NBS10265	N1437	1/9/2019	12/18/2018
NIST Luminous Flux Standard Source	NBS10428	N1424	1/11/2019	12/18/2018
Elgar AC Power Supply	CW1251	---	VBU	12/28/2018
Sorenson DC Power Supply	XFR 150-8	---	VBU	12/28/2018
Yokogawa Power Analyzer	WT1600	E537	1/22/2019	12/28/2018
Fluke Thermometer	53 II	T1318	4/9/2019	12/28/2018
Fluke Multimeter	87V	D590	6/1/2019	12/28/2018
3M Integrating Sphere Spectrometer System	CDS 1100	---	1/3/2019	12/28/2018
Fisher Scientific Stopwatch	14-649-9	N1132	2/15/2019	12/28/2018
Secondary Spectral Intensity Standard Source	BS5186	RF5186	1/28/2019	12/28/2018
Secondary Luminous Flux Standard Source	BS3616	--	1/28/2019	12/28/2018
Secondary Luminous Flux Standard Source	BS4116	--	1/28/2019	12/28/2018
Secondary Luminous Flux Standard Source	6836	--	1/28/2019	12/28/2018

TEST REPORT**REPORT NO.: 103413122CRT-001****REPORT DATE: December 28, 2018****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 were used to measure light output, correlated color temperature, chromaticity coordinates, color rendering index, and the spectral distribution 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 (candela) 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.

TEST REPORT

REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

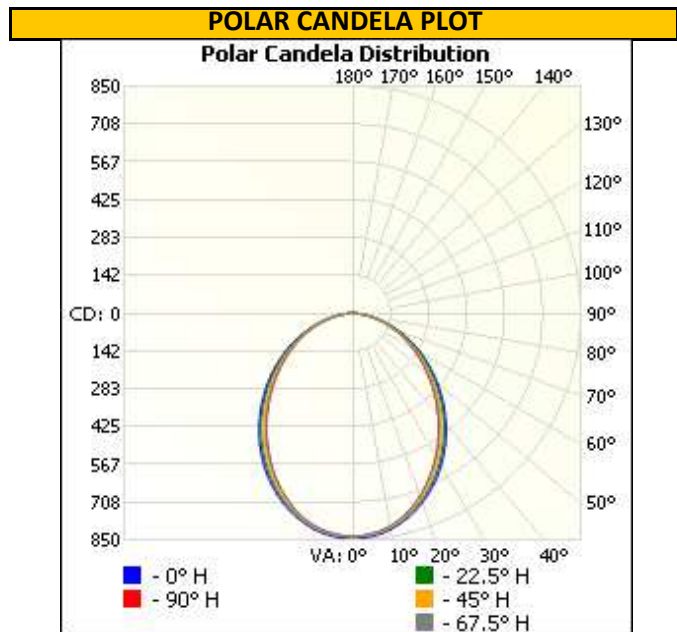
RESULTS OF TESTS

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)
CRT1812121240-001	Base Up	120.02	266.4	31.84	0.996	1985.0	62.4

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	838	838	838	838	838
5	839	830	833	829	831
10	822	813	815	810	811
15	794	785	784	776	778
20	757	748	742	732	732
25	711	701	692	681	679
30	659	648	636	623	620
35	602	590	575	562	558
40	541	529	513	499	495
45	478	466	450	437	432
50	415	404	388	376	372
55	352	342	328	318	313
60	290	282	270	261	256
65	229	223	214	207	204
70	171	168	161	155	153
75	116	115	111	108	104
80	67	69	66	63	63
85	26	28	27	26	26
90	0	0	0	0	0

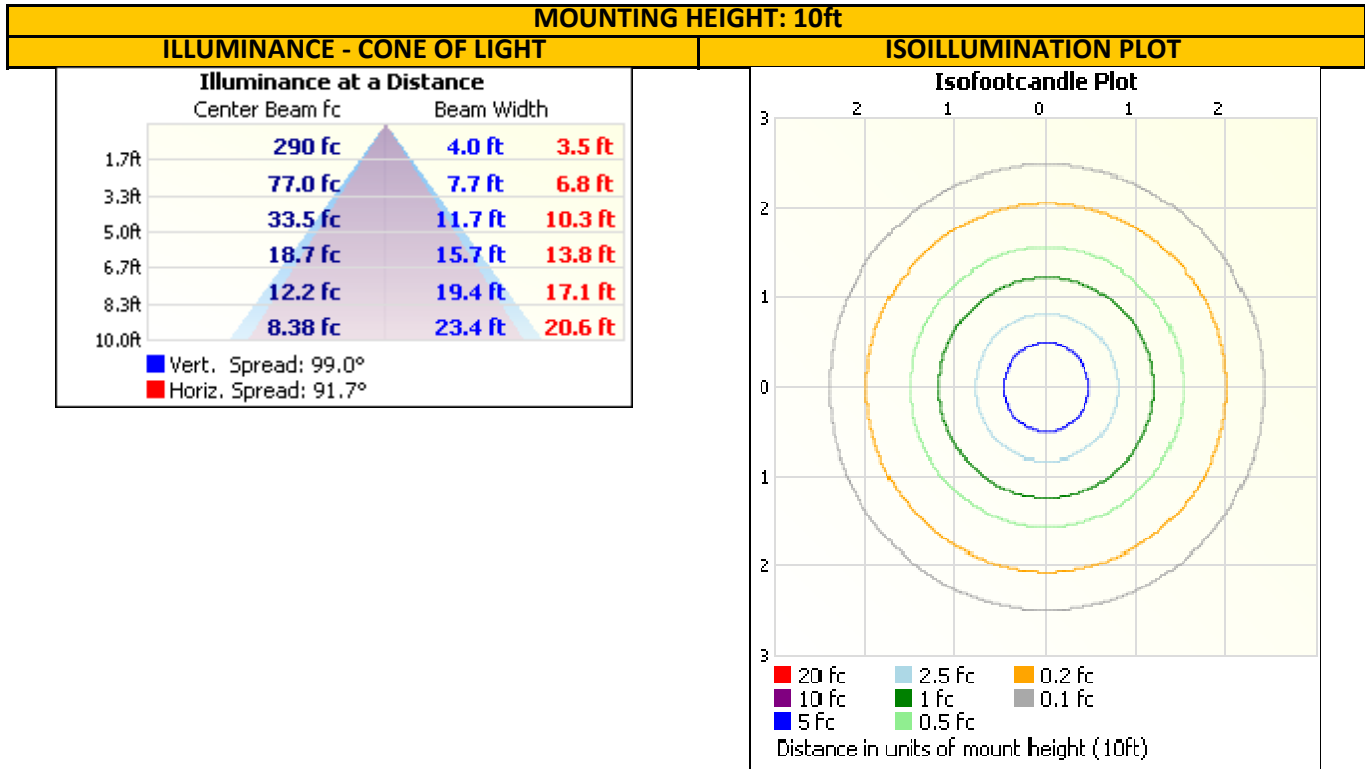


TEST REPORT

REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

RESULTS OF TESTS

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



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	617.3	31.1
0-40	977.7	49.3
0-60	1622.1	81.7
60-90	362.8	18.3
0-90	1985.0	100.0
90-180	0.0	0.0
0-180	1985.0	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	78.8	4.0
10-20	220.2	11.1
20-30	318.3	16.0
30-40	360.4	18.2
40-50	349.0	17.6
50-60	295.4	14.9
60-70	213.4	10.8
70-80	118.3	6.0
80-90	31.2	1.6

TEST REPORT

REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

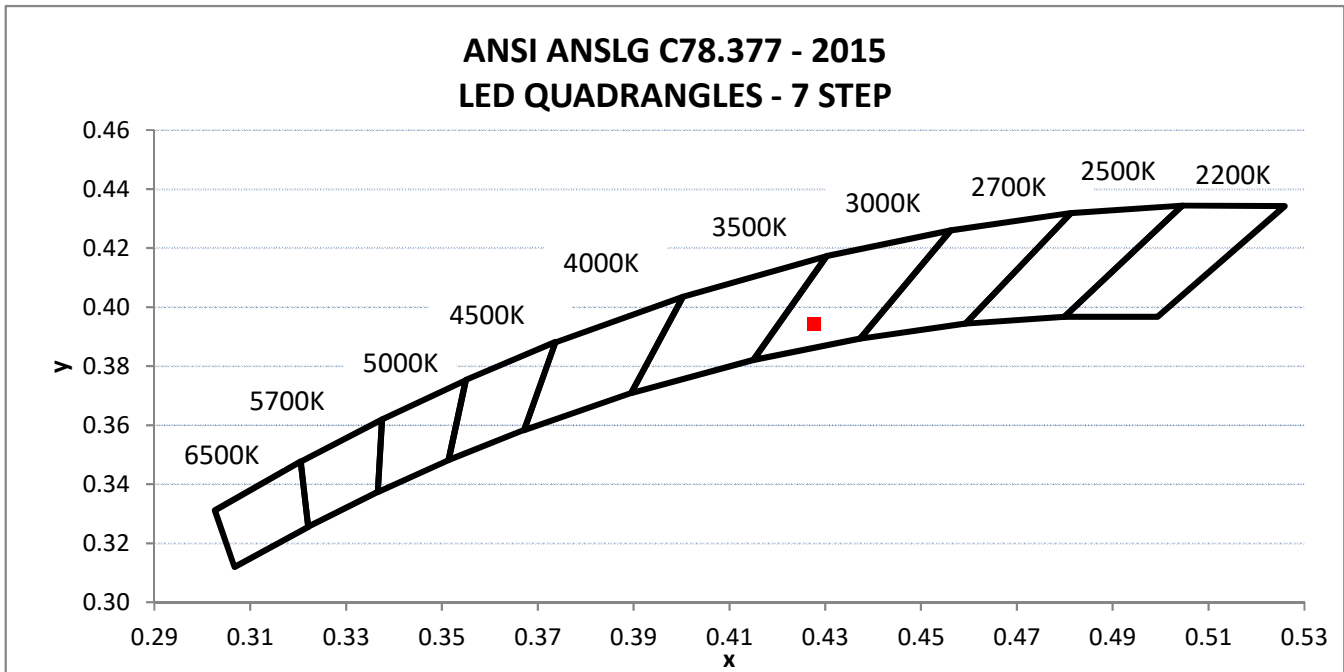
RESULTS OF TESTS

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 (%)
CRT1812121240-001	Base Up	120.01	268.2	32.07	0.996	6.22

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra ()	CRI - R9 ()	DUV ()
1984.0	61.9	3080	92.2	55.9	0.0032

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.428	0.394	0.249	0.516



TEST REPORT

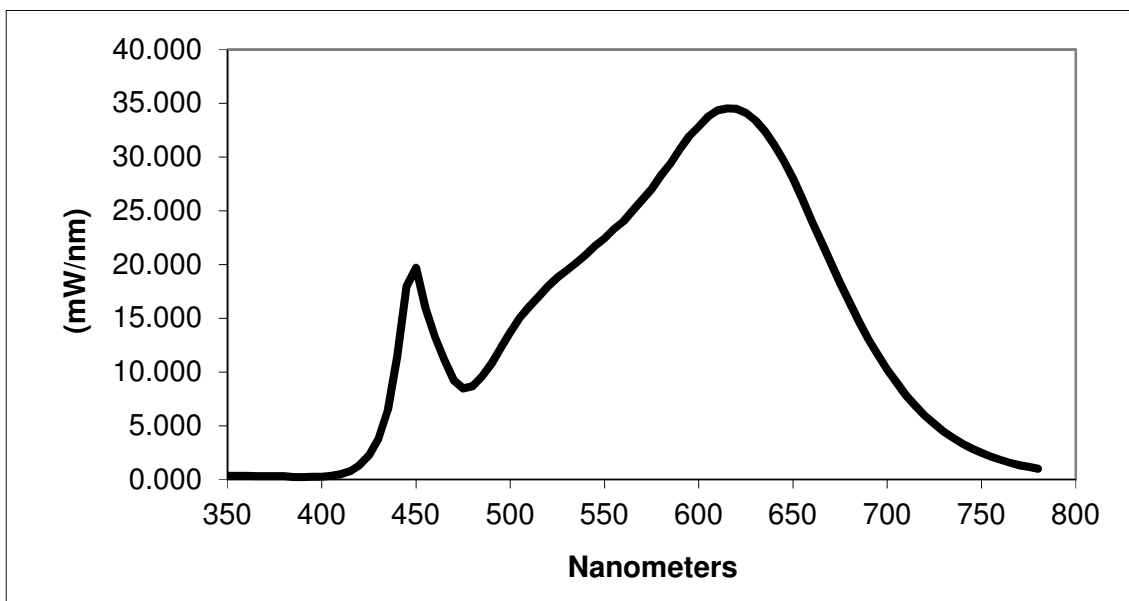
REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

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	0.363	460	13.261	570	26.039	680	16.462
355	0.351	465	11.173	575	27.025	685	14.711
360	0.349	470	9.220	580	28.348	690	13.097
365	0.327	475	8.473	585	29.412	695	11.595
370	0.319	480	8.686	590	30.766	700	10.236
375	0.319	485	9.573	595	31.957	705	9.020
380	0.321	490	10.793	600	32.839	710	7.828
385	0.236	495	12.246	605	33.775	715	6.839
390	0.243	500	13.702	610	34.345	720	5.940
395	0.254	505	15.054	615	34.526	725	5.185
400	0.276	510	16.074	620	34.509	730	4.455
405	0.343	515	17.015	625	34.117	735	3.864
410	0.510	520	17.987	630	33.425	740	3.328
415	0.780	525	18.794	635	32.417	745	2.879
420	1.330	530	19.464	640	31.144	750	2.485
425	2.255	535	20.186	645	29.713	755	2.127
430	3.791	540	20.894	650	28.006	760	1.840
435	6.522	545	21.736	655	26.104	765	1.585
440	11.456	550	22.447	660	24.013	770	1.348
445	17.979	555	23.306	665	22.145	775	1.179
450	19.712	560	24.024	670	20.175	780	1.012
455	15.985	565	25.022	675	18.263		

*Without correction of sample absorption.



End Of Test Results

TEST REPORT

REPORT NO.: 103413122CRT-001
REPORT DATE: December 28, 2018

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:

Kristie Ray

Kristie Ray
Engineer
Lighting Division

Report Reviewed By:

Jacki Swiernik

Jacki Swiernik
Staff Engineer
Lighting Division

Attachments: .IES File

REVISION HISTORY

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