



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP LAB
CODE 100402-0.

REPORT

3933 US ROUTE 11, CORTLAND, NEW YORK 13045

Project No. G102154719

Date: August 24, 2015

REPORT NO. 102154719CRT-011

TEST OF ONE LED TRACK LIGHT

MODEL NO. LX2060-T1910-9827M9-00-TE120W
LED MODEL NO. XICATO 19MM XIM LED MODULE
DRIVER MODEL NO. MAGTECH M18-U24-0520-XP

RENDERED TO:

LIGHTING SERVICES INC
2 HOLT DRIVE
STONY POINT, NY 10980

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

STATEMENT OF LIMITATION: 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 500600671.

STANDARDS USED:

ENERGY STAR® Program Requirements for Luminaires Version 1.2 and 2.0
IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number LX2060-T1910-9827M9-00-TE120W. The sample was received by Intertek on July 28, 2015 in undamaged condition and one sample was tested as received. The sample designation was CRT1507281212-001-2.

DATE OF TESTS: August 19, 2015

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SUMMARY:

MODEL NO. LX2060-T1910-9827M9-00-TE120W
DESCRIPTION: LED Track Light

Criteria	Results	V1.2 Status	V2.0 Status
Light Output (Lumens)	758	Complies	Complies
Zonal Lumen Output To Category 0-40 (%)	97.4	Complies	--
Zonal Lumen Output To Category 0-60 (%)	98.7	--	Complies
Total Power (W)	13.04	--	--
Lumen Efficacy (Lm/W)	58.1	Complies	Complies
Power Factor ()	0.993	--	Complies

EQUIPMENT LIST

Equipment Used	Model No.	Control No.	Last Cal.	Cal. Due
LSI High Speed Mirror Goniometer	6440	---	8/10/2015	9/10/2015
Elgar AC Power Supply	CW1251	---	VBU	VBU
Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
Yokogawa Power Analyzer	WT210	E464	4/20/2015	4/20/2016
ExTech Hygro Thermometer	445703	T1357	12/10/2014	12/10/2015
Fisher Scientific Stopwatch	14-649-9	N1405	8/25/2014	8/25/2015
M-D Building Products Digital Level	Smart Tool	L112	3/25/2015	3/25/2016
NIST Luminous Intensity Standard Source	NBS10322	N1427	12/12/2014	12/12/2015
NIST Luminous Intensity Standard Source	NBS10215	N1432	12/12/2014	12/12/2015
NIST Luminous Intensity Standard Source	H754	N1433	12/12/2014	12/12/2015
NIST Luminous Flux Standard Source	NBS10428	N1424	12/17/2014	12/17/2015



ENERGY STAR REQUIREMENTS:

CLASSIFICATION: DIRECTIONAL
USE: BOTH RESIDENTIAL AND COMMERCIAL
CATEGORY: ACCENT LIGHT, TRACK LIGHTING
SOURCE TYPE: SSL

Property	Requirements
Source Luminous Output (Lumens) V1.2	35 lm/W minimum 200 lumens per head minimum 80% minimum in 0-40° zone (axially symmetric about the center of the beam)
Source Luminous Output (Lumens) V2.0	55 lm/W minimum 200 lumens per head minimum 80% minimum in 0-60° zone (axially symmetric about the center of the beam)
Power Factor (V1.2)	Input Power \leq 5W: PF \geq 0.5 Residential : PF \geq 0.7 Commercial: PF \geq 0.9 \geq 3 samples of each model combination shall be tested. All samples shall pass.
Power Factor V2.0	Total luminaire input power \leq 5 watts: PF \geq 0.5 Total luminaire input power $>$ 5 watts: PF \geq 0.7 \geq 1 samples of each model combination shall be tested. All samples shall pass.

TEST METHODS:

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

Photometric and Electrical measurements – Distribution Method

A LSI Type C High Speed Model 6440 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.



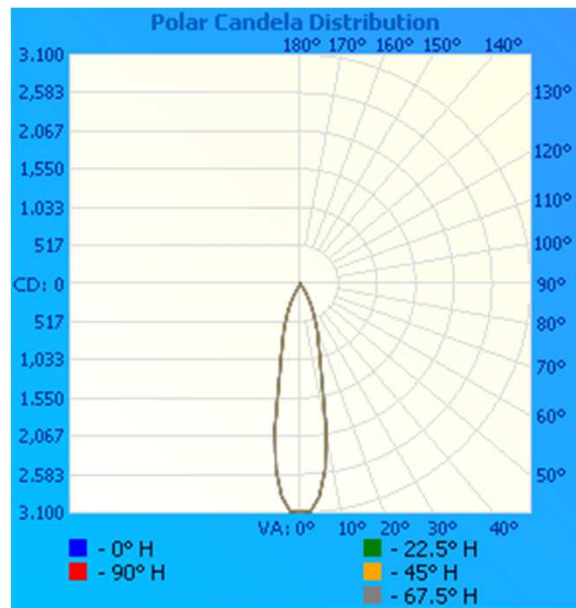
RESULTS:

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

Intertek Control No.	Base Orientation	Input Voltage Select One	Input Current (mA)	Input Power (W)	Input Power Factor ()	Light Output (Lumens)	Lumen Efficacy (lm/W)
CRT1507281212-001-2	Base Up	120.0	109.3	13.04	0.993	758	58.1

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	3076	3076	3076	3076	3076
5	2902	2893	2903	2892	2885
10	1991	1982	1978	1997	1997
15	990	1012	991	994	1006
20	647	646	647	643	648
25	374	374	375	374	376
30	158	159	159	164	160
35	17	17	16	23	16
40	10	10	9	13	9
45	8	8	8	9	7
50	6	6	6	7	5
55	4	5	4	4	4
60	4	4	5	5	4
65	4	5	4	5	3
70	4	5	4	4	3
75	4	4	4	3	3
80	3	4	3	4	3
85	1	2	1	1	1
90	0	0	0	0	0

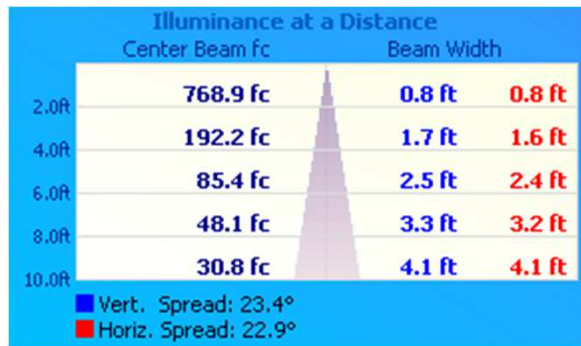


RESULTS:

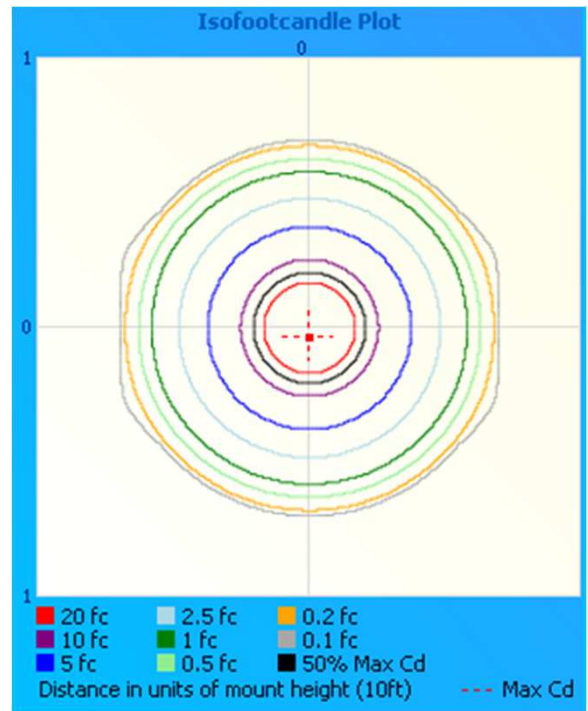
Illumination Plots

Mounting Height: 10

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	710.4	93.7
0-40	738.1	97.4
0-60	748.6	98.7
60-90	9.5	1.3
0-90	758.2	100.0
90-180	0.0	0.0
0-180	758.2	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	245.8	32.4
10-20	293.8	38.7
20-30	170.8	22.5
30-40	27.7	3.7
40-50	6.2	0.8
50-60	4.4	0.6
60-70	4.3	0.6
70-80	3.8	0.5
80-90	1.5	0.2

PRODUCT PICTURE:



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.

In Charge Of Tests:



Ryan Siddon
Engineer
Lighting Division

Report Reviewed By:



Jeffrey Davis
Engineering Supervisor
Lighting Division

Attachments: IES File - CRT1507281212-001-2-M9