LIGHTING SERVICES INC.

TEST REPORT

SCOPE OF WORK
LED Performance Testing

MODEL NUMBER
LZ-C0619-8030ZM-PT2-TE120W

PROJECT NUMBER
G104404589

REPORT NUMBER
104404589CRT-002

ISSUE DATE
8/4/2020

REVISED DATE
None

TEST DATES
8/4/2020

DOCUMENT CONTROL NUMBER
RTTDS-R-AMER-Test-3407

PAGES
7

REPORT NUMBER
104404589CRT-002

MODEL NUMBER(s)
LZ-C0619-8030ZM-PT2-TE120W

REPORT RENDERED TO:
LIGHTING SERVICES INC.
2 HOLT DR
STONY POINT, NY 10980-1920

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-01095858-0.

TEST STANDARDS

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:	Reviewer:
Melanie Brittain	Jacki Swiernik
Senior Associate Engineer	Staff Engineer
Lighting Division	Lighting Division

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SAMPLE INFORMATION **REPORT NO. 104404589CRT-002**

ITEMS RECEIVED

Control No.	Model No.	Description	Type	Received
CRT2007291011-001	LZ-C0619-8030ZM-PT2-TE120W	LED Track Light	Production	7/29/2020

TESTED SAMPLE CONFIGURATIONS

Config	Tested Model No.
20°	LZ-C0619-8030ZM-PT2-TE120W

SAMPLE PHOTOS - TESTED CONFIGURATIONS

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SUMMARY **REPORT NO. 104404589CRT-002**

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	LZ-C0619-8030ZM-PT2-TE120W
Product Description:	LED Track Light
LED Model No.:	Cree CXB1310
Driver Model No.:	Magtech MD22
Light Source:	LED

Criteria	Results
Light Output (lumens)	609.1
Input Power (W) @ 120 (Vac)	19.42
Lumen Efficacy (lm/W)	31.37
Input Power Factor () @ 120 (Vac)	0.994

TEST METHODS

SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

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

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

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TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

REPORT NO. 104404589CRT-002

Test Configuration	Tested Model No.	Pass/Fail/NA
20°	LZ-C0619-8030ZM-PT2-TE120W	NA

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

Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.08	162.7	19.42	0.994

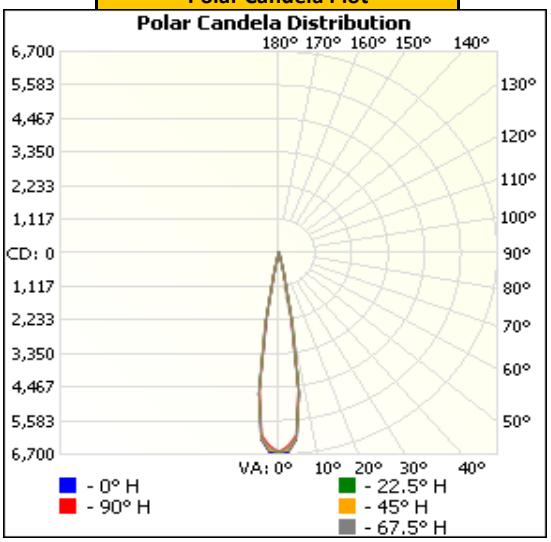
Light Output (lm)	Lumen Efficacy (lm/W)
609.1	31.4

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	6613	6613	6613	6613	6613
5	6228	6160	6192	6134	6077
10	2290	2436	2377	2275	2123
15	227	236	238	232	211
20	66	68	70	72	69
25	35	35	35	36	35
30	20	20	20	20	20
35	9	9	10	10	10
40	3	3	4	3	3
45	0	0	0	0	0
50	0	0	0	0	0
55	0	0	0	0	0
60	0	0	0	0	0
65	0	0	0	0	0
70	0	0	0	0	0
75	0	0	0	0	0
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file

Polar Candela Plot



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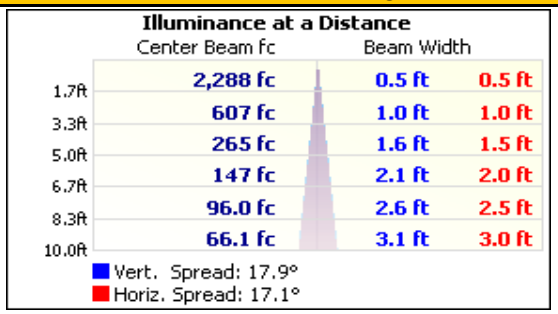
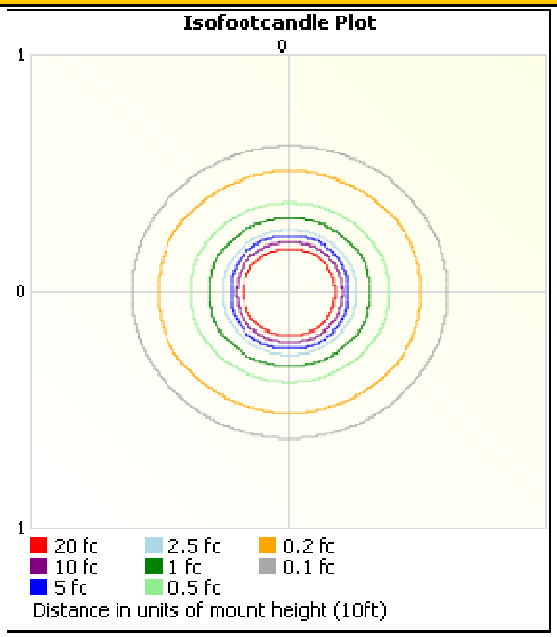
ILLUMINANCE SUMMARY

Mounting Height: 10ft

Illuminance - Cone Of Light



Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	602.3	98.9%
0-40	608.6	99.9%
0-60	609.1	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
0-90	609.1	100.0%
90-180	0.0	0.0%
0-180	609.1	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	454.9	74.7%	90-100	0.0	0.0%
10-20	130.1	21.4%	100-110	0.0	0.0%
20-30	17.2	2.8%	110-120	0.0	0.0%
30-40	6.3	1.0%	120-130	0.0	0.0%
40-50	0.5	0.1%	130-140	0.0	0.0%
50-60	0.0	0.0%	140-150	0.0	0.0%
60-70	0.0	0.0%	150-160	0.0	0.0%
70-80	0.0	0.0%	160-170	0.0	0.0%
80-90	0.0	0.0%	170-180	0.0	0.0%

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Total Quality. Assured.

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EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	LSI High Speed Mirror Goniometer	6440	---	7/21/2020	8/21/2020
2	Elgar AC Power Supply	CW1251	---	VBU	VBU
3	Yokogawa Power Analyzer	WT210	E464	5/11/2020	5/11/2021
4	Traceable Hygrothermometer	4800	L203	2/17/2020	2/17/2021
5	M-D Building Products Digital Level	Smart Tool	307-L112	5/14/2020	5/14/2021
6	NIST Luminous Intensity Standard Source	NBS10322	N1427	2/11/2019	2/11/2021
7	NIST Luminous Intensity Standard Source	NBS10332	N1435	2/11/2019	2/11/2021
8	NIST Luminous Intensity Standard Source	NBS10265	N1437	2/11/2019	2/11/2021
9	NIST Luminous Flux Standard Source	NBS10428	N1424	1/3/2019	1/3/2021
10	Sorenson DC Power Supply	XG 150-10	---	VBU	VBU
11	Omega Thermometer	DPi8-C24	M263	2/27/2020	2/27/2021

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
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