

# LIGHTING SERVICES INC.

## TEST REPORT

**SCOPE OF WORK**

LED Performance Testing

**MODEL NUMBER**

LZ-C0619-8030ZM-PT2-TE120W

**PROJECT NUMBER**

G104404589

**REPORT NUMBER**

104404589CRT-004

**ISSUE DATE**

8/4/2020

**REVISED DATE**

None

**TEST DATES**

8/3/2020

**DOCUMENT CONTROL NUMBER**

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104404589CRT-004

**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  
Senior Associate Engineer  
Lighting Division



Kristie Ray  
Team Lead, Engineering  
Lighting Division

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## SAMPLE INFORMATION

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### 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.           |
|--------|----------------------------|
| 50°    | LZ-C0619-8030ZM-PT2-TE120W |

### SAMPLE PHOTOS - TESTED CONFIGURATIONS



**SUMMARY****REPORT NO. 104404589CRT-004**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)             | 828.8   |
| Input Power (W) @ 120 (Vac)       | 19.40   |
| Lumen Efficacy (lm/W)             | 42.72   |
| 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.

## TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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| Test Configuration | Tested Model No.           | Pass/Fail/NA |
|--------------------|----------------------------|--------------|
| 50°                | LZ-C0619-8030ZM-PT2-TE120W | NA           |

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

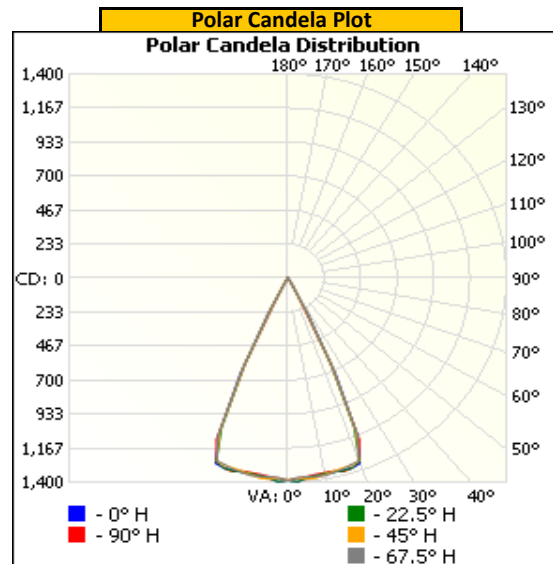
| Base Orientation | Input Voltage (Vac) | Input Current (mA) | Input Power (W) | Input Power Factor ( ) |
|------------------|---------------------|--------------------|-----------------|------------------------|
| Up               | 120.08              | 162.6              | 19.40           | 0.994                  |

| Light Output (lm) | Lumen Efficacy (lm/W) |
|-------------------|-----------------------|
| 828.8             | 42.7                  |

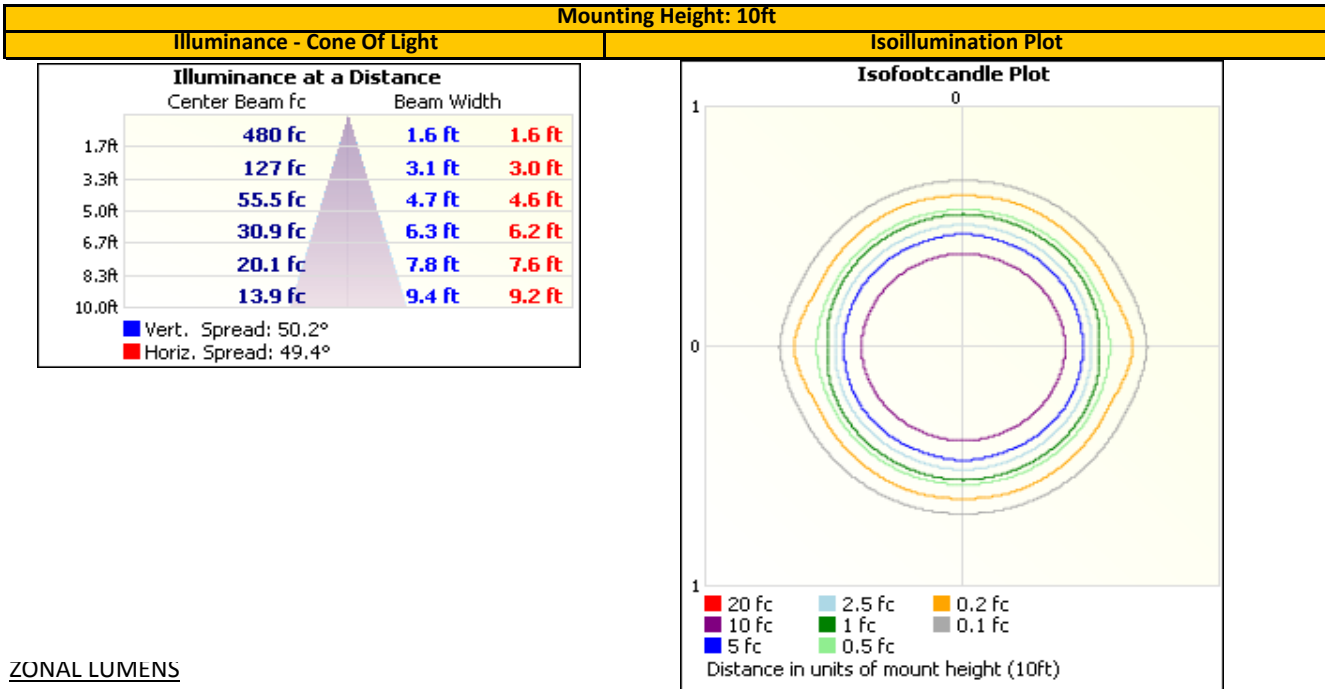
### INTENSITY SUMMARY - CANDELA

| Angle | 0    | 22.5 | 45   | 67.5 | 90   |
|-------|------|------|------|------|------|
| 0     | 1386 | 1386 | 1386 | 1386 | 1386 |
| 5     | 1380 | 1376 | 1384 | 1366 | 1366 |
| 10    | 1368 | 1360 | 1367 | 1375 | 1355 |
| 15    | 1362 | 1368 | 1348 | 1357 | 1374 |
| 20    | 1352 | 1340 | 1335 | 1333 | 1341 |
| 25    | 721  | 667  | 685  | 683  | 651  |
| 30    | 64   | 61   | 53   | 47   | 67   |
| 35    | 17   | 17   | 16   | 16   | 21   |
| 40    | 8    | 7    | 7    | 7    | 6    |
| 45    | 5    | 5    | 4    | 4    | 4    |
| 50    | 3    | 3    | 3    | 2    | 2    |
| 55    | 0    | 1    | 1    | 1    | 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



ILLUMINANCE SUMMARY



ZONAL LUMENS

| Zonal Lumen Summary |        |           |         |        |       |
|---------------------|--------|-----------|---------|--------|-------|
| Zone                | Lumens | Luminaire |         |        |       |
| 0-30                | 811.2  | 97.9%     |         |        |       |
| 0-40                | 824.6  | 99.5%     |         |        |       |
| 0-60                | 828.8  | 100.0%    |         |        |       |
| 60-90               | 0.0    | 0.0%      |         |        |       |
| 70-100              | 0.0    | 0.0%      |         |        |       |
| 90-120              | 0.0    | 0.0%      |         |        |       |
| 0-90                | 828.8  | 100.0%    |         |        |       |
| 90-180              | 0.0    | 0.0%      |         |        |       |
| 0-180               | 828.8  | 100.0%    |         |        |       |
| Zone                | Lumens | Total     | Zone    | Lumens | Total |
| 0-10                | 131.0  | 15.8%     | 90-100  | 0.0    | 0.0%  |
| 10-20               | 384.2  | 46.4%     | 100-110 | 0.0    | 0.0%  |
| 20-30               | 296.0  | 35.7%     | 110-120 | 0.0    | 0.0%  |
| 30-40               | 13.3   | 1.6%      | 120-130 | 0.0    | 0.0%  |
| 40-50               | 3.3    | 0.4%      | 130-140 | 0.0    | 0.0%  |
| 50-60               | 0.9    | 0.1%      | 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%  |

**EQUIPMENT LIST**

**REPORT NO. 104404589CRT-004**

| #  | 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 |
|-----|---------------|------------|-------------|-----------------------|
| --- | None          | ---        | ---         | ---                   |
| --- | ---           | ---        | ---         | ---                   |
| --- | ---           | ---        | ---         | ---                   |