



REPORT

3933 US ROUTE 11, CORTLAND, NEW YORK 13045

Project No. G102125122

Date: May 15, 2015

REPORT NO. 102125122CRT-011

TEST OF ONE INDOOR SPOT LIGHT WITH LX-M80-REF-CLR REFLECTOR

MODEL NO. LX2044-T1920-8327RR-FF-DDVVVC
LED MODEL NO. XICATO XTM19802720CCA
DRIVER MODEL NO. MAGTECH M28-U36-0700-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 500597082.

STANARDS USED:

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

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number LX2044-T1920-8327RR-FF-DDVVVC. The sample was received by Intertek on May 7, 2015 in undamaged condition and one sample was tested as received. The sample designation was CRT1505071059-001-002.

DATE OF TESTS: May 15, 2015

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SUMMARY:

| |
|--|
| MODEL NO. LX2044-T1920-8327RR-FF-DDVVVC |
| DESCRIPTION: Indoor Spot Light with LX-M80-REF-CLR Reflector |

| Criteria | Results |
|-----------------------|---------|
| Light Output (Lumens) | 1604 |
| Total Power (W) | 21.83 |
| Lumen Efficacy (Lm/W) | 73.5 |
| Power Factor () | 0.992 |

EQUIPMENT LIST

| Equipment Used | Model No. | Control No. | Last Cal. | Cal. Due |
|-------------------------------------|------------|-------------|------------|------------|
| LSI High Speed Mirror Goniometer | 6440 | --- | 5/11/2015 | 6/11/2015 |
| Elgar Power Supply | CW1251 | --- | 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 |

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.



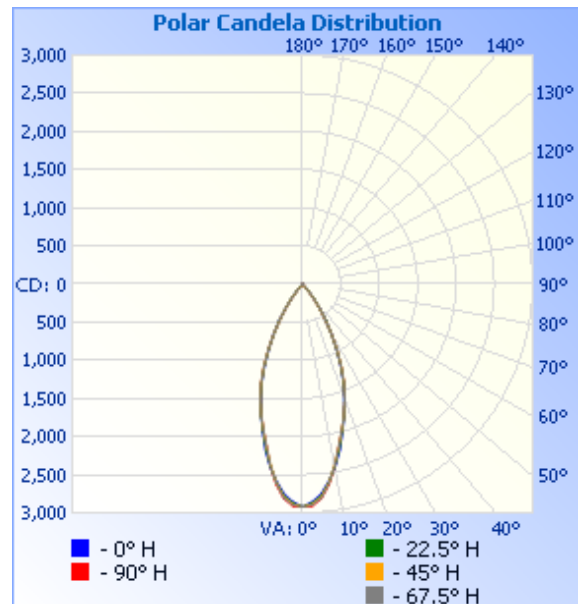
RESULTS:

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

| Intertek Control No. | Base Orientation | Input Voltage (VAC) | Input Current (mA) | Input Power (W) | Input Power Factor () | Light Output (Lumens) | Lumen Efficacy (lm/W) |
|-----------------------|------------------|---------------------|--------------------|-----------------|------------------------|-----------------------|-----------------------|
| CRT1505071059-001-002 | Base Up | 120.1 | 183.4 | 21.83 | 0.992 | 1604.0 | 73.46 |

Intensity (Candlepower) Summary at 25°C - Candelas

| Angle | 0 | 22.5 | 45 | 67.5 | 90 |
|-------|------|------|------|------|------|
| 0 | 2919 | 2919 | 2919 | 2919 | 2919 |
| 5 | 2761 | 2783 | 2799 | 2814 | 2822 |
| 10 | 2432 | 2421 | 2408 | 2413 | 2425 |
| 15 | 2007 | 1992 | 1978 | 1975 | 1978 |
| 20 | 1595 | 1606 | 1610 | 1611 | 1614 |
| 25 | 1172 | 1183 | 1193 | 1192 | 1192 |
| 30 | 756 | 746 | 744 | 744 | 744 |
| 35 | 390 | 387 | 382 | 380 | 381 |
| 40 | 136 | 130 | 112 | 101 | 104 |
| 45 | 13 | 10 | 3 | 1 | 1 |
| 50 | 1 | 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 |

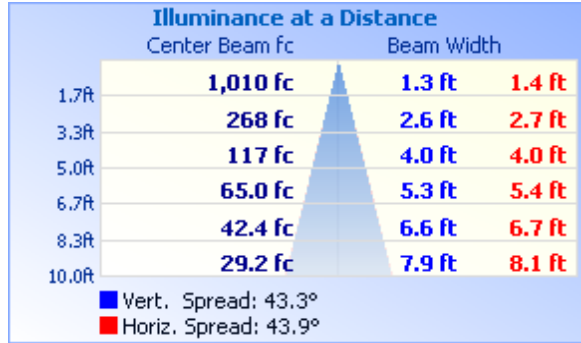


RESULTS:

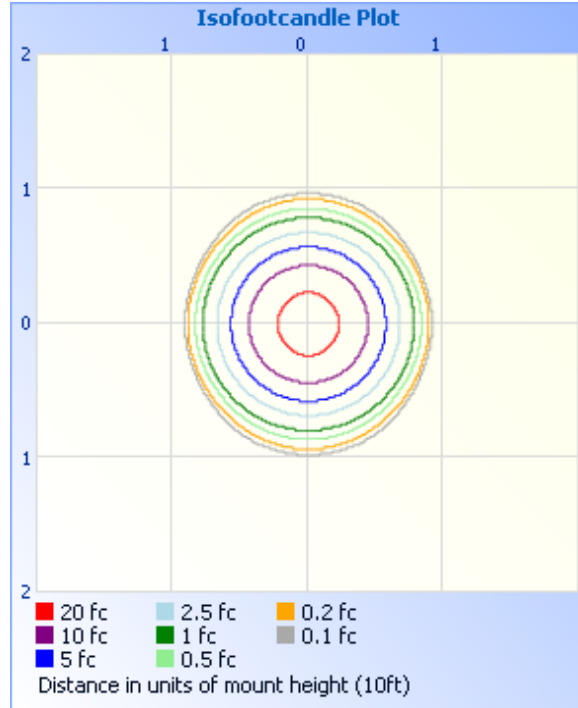
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1341.9 | 83.7 |
| 0-40 | 1585.3 | 98.9 |
| 0-60 | 1603.7 | 100.0 |
| 60-90 | 0.0 | 0.0 |
| 70-100 | 0.0 | 0.0 |
| 90-120 | 0.0 | 0.0 |
| 0-90 | 1603.7 | 100.0 |
| 90-180 | 0.0 | 0.0 |
| 0-180 | 1603.7 | 100.0 |

Zonal Lumens and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|-------|--------|-------------|
| 0-10 | 253.6 | 15.8 |
| 10-20 | 553.4 | 34.5 |
| 20-30 | 534.9 | 33.4 |
| 30-40 | 243.4 | 15.2 |
| 40-50 | 18.4 | 1.1 |
| 50-60 | 0.0 | 0.0 |
| 60-70 | 0.0 | 0.0 |
| 70-80 | 0.0 | 0.0 |
| 80-90 | 0.0 | 0.0 |

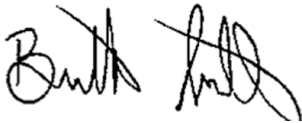
PRODUCT PICTURE:



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. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:



Brittanie Stull
Project Engineer
Lighting Division

Report Reviewed By:



Jeffrey Davis
Engineering Supervisor
Lighting Division

Attachments: IES File - 1505071059-001-002-5