

REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G104359650

Date: June 17, 2020

REPORT NO. 104361023LAX-003C

TEST OF ONE LED LUMINAIRE

MODEL NO. BPRO3-FLSH-LED35-MO-4-WWF

LED MODEL NO. LUMILEDS 2835E 9V

DRIVER MODEL NO. MO - OSRAM OTI30G2 - 613MAMP

RENDERED TO

PRUDENTIAL LIGHTING

1774 EAST 21ST

LOS ANGELES, CA 90058

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.

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

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-01069292-0.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

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

DESCRIPTION OF SAMPLE: The client submitted one Prototype sample of model number BPRO3-FLSH-LED35-MO-4-WWF. The sample was received by Intertek on June 1, 2020, in undamaged condition and one sample was tested as received. The sample designation was LAN2006021315-003.

DATES OF TESTS: June 17, 2020

SUMMARY

| | |
|--------------|---------------------------|
| Model No.: | BPRO3-FLSH-LED35-MO-4-WWF |
| Description: | LED Luminaire |

| Criteria | Result |
|-----------------------------|--------|
| Total Lumen Output (Lumens) | 2818 |
| Total Power (W) | 22.59 |
| Luminaire Efficacy (LPW) | 124.7 |
| Power Factor | 0.984 |

EQUIPMENT LIST

| Equipment Used | Model Number | Control Number | Last Date Calibrated | Calibration Due Date | Date Used |
|------------------|--------------|----------------|----------------------|----------------------|-----------|
| Goniophotometer | 6440T | 000943 | VBU | VBU | 06/17/20 |
| AC Source | CW1251P | 000944 | VBU | VBU | 06/17/20 |
| Power Analyzer | WT210 | 000945 | 10/02/19 | 10/02/20 | 06/17/20 |
| Tape Measure | 33-428 | 001491 | VBU | VBU | 06/17/20 |
| Magnetic Level | 581-9 | 001610 | 10/11/19 | 10/11/20 | 06/17/20 |
| Temp. & RH Meter | Testo 622 | 001910 | 04/15/20 | 04/15/21 | 06/17/20 |
| Thermometer | DPI8-C24 | 001782 | 10/15/19 | 10/15/20 | 06/17/20 |

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 each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

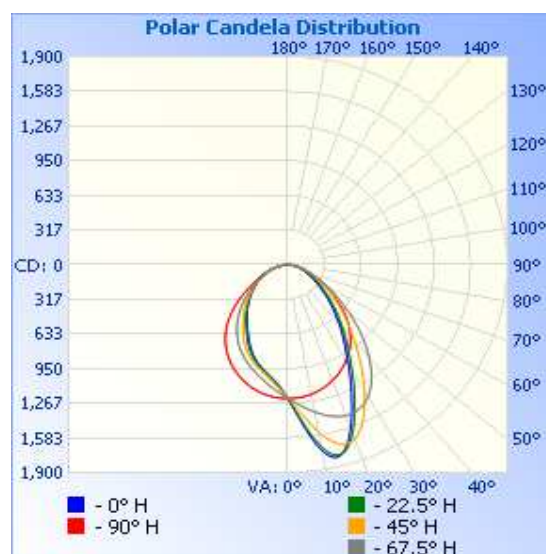
RESULTS OF TEST

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

| Intertek Sample No. | Base Orientation | Input Voltage {Vac} | Input Current (mA) | Input Power (Watts) | Input Power Factor | Absolute Luminous Flux (Lumens) | Lumen Efficacy (LPW) |
|------------------------|---------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------------------|----------------------------|
| LAN2006021315-003 | Up | 120.0 | 191.4 | 22.59 | 0.984 | 2818 | 124.7 |

Intensity (Candlepower) Summary at 25°C - Candelas

| | Angle | 0 | 22.5 | 45 | 67.5 | 90 |
|--|-------|------|-------|------|-------|------|
| | 90 | 0 | 0 | 0 | 0 | 0 |
| W A L L S I D E | 85 | 29 | 29 | 35 | 38 | 38 |
| | 80 | 62 | 65 | 79 | 84 | 83 |
| | 75 | 101 | 105 | 129 | 134 | 129 |
| | 70 | 144 | 152 | 188 | 197 | 184 |
| | 65 | 196 | 207 | 261 | 279 | 255 |
| | 60 | 257 | 274 | 348 | 390 | 352 |
| | 55 | 333 | 356 | 453 | 532 | 473 |
| | 50 | 426 | 459 | 575 | 706 | 607 |
| | 45 | 543 | 583 | 719 | 899 | 733 |
| | 40 | 683 | 727 | 890 | 1093 | 842 |
| | 35 | 844 | 898 | 1097 | 1262 | 932 |
| | 30 | 1047 | 1111 | 1326 | 1390 | 1010 |
| | 25 | 1305 | 1371 | 1546 | 1456 | 1073 |
| | 20 | 1590 | 1637 | 1693 | 1466 | 1125 |
| | 15 | 1794 | 1789 | 1692 | 1430 | 1168 |
| | 10 | 1726 | 1689 | 1553 | 1367 | 1199 |
| | 5 | 1458 | 1440 | 1369 | 1293 | 1216 |
| | 0 | 1222 | 1222 | 1222 | 1222 | 1222 |
| R O O M S I D E | 5 | 1088 | 1094 | 1110 | 1154 | 1216 |
| | 10 | 1012 | 1016 | 1035 | 1092 | 1199 |
| | 15 | 952 | 959 | 977 | 1034 | 1168 |
| | 20 | 878 | 891 | 920 | 977 | 1125 |
| | 25 | 788 | 807 | 850 | 916 | 1073 |
| | 30 | 697 | 715 | 767 | 847 | 1010 |
| | 35 | 618 | 633 | 678 | 768 | 932 |
| | 40 | 548 | 560 | 594 | 679 | 842 |
| | 45 | 482 | 492 | 516 | 583 | 733 |
| | 50 | 418 | 424 | 439 | 484 | 607 |
| | 55 | 356 | 359 | 365 | 386 | 473 |
| | 60 | 299 | 298 | 296 | 300 | 352 |
| | 65 | 248 | 242 | 233 | 226 | 255 |
| | 70 | 196 | 190 | 177 | 168 | 184 |
| | 75 | 142 | 140 | 126 | 119 | 129 |
| | 80 | 87 | 88 | 79 | 76 | 83 |
| | 85 | 36 | 38 | 36 | 35 | 38 |
| | 90 | 0 | 0 | 0 | 0 | 0 |
| | Angle | 180 | 202.5 | 225 | 247.5 | 270 |

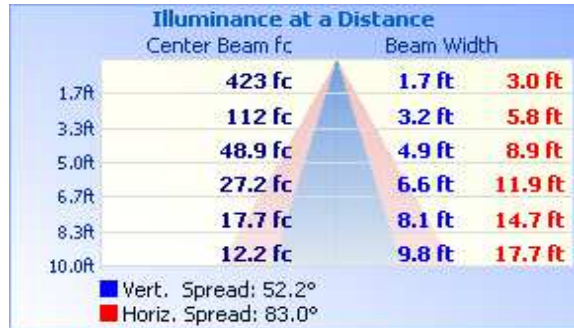


RESULTS OF TEST (cont'd)

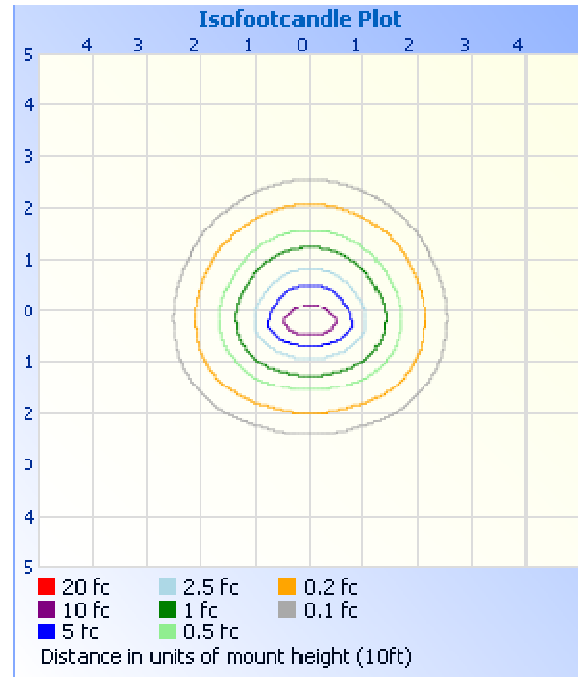
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1005 | 35.7 |
| 0-40 | 1552 | 55.1 |
| 0-60 | 2405 | 85.3 |
| 60-90 | 413.0 | 14.7 |
| 0-90 | 2818 | 100.0 |
| 90-180 | 0.0 | 0.0 |
| 0-180 | 2818 | 100.0 |

Zonal Lumens and Percentages at 25°C

| Zone | Lumens | % Luminaire |
|-------|--------|-------------|
| 0-10 | 120.3 | 4.3 |
| 10-20 | 365.0 | 13.0 |
| 20-30 | 519.6 | 18.4 |
| 30-40 | 546.9 | 19.4 |
| 40-50 | 485.7 | 17.2 |
| 50-60 | 367.0 | 13.0 |
| 60-70 | 240.2 | 8.5 |
| 70-80 | 133.3 | 4.7 |
| 80-90 | 39.4 | 1.4 |

Spacing Criterion at 25°C

| | |
|------------------------------|------|
| Spacing Criterion (0-180) | 1.24 |
| Spacing Criterion (90-270) | 1.24 |
| Spacing Criterion (Diagonal) | 1.24 |

PICTURES (not to scale)



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:

A handwritten signature in black ink, appearing to read "Kellen Murakami".

Kellen Murakami
Technician
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read "Vladimir Kozak".

Vladimir Kozak
Engineering Supervisor
Lighting Division