

# REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G104013131

Date: July 22, 2019

REPORT NO. 104013131LAX-003D

TEST OF ONE LED LUMINAIRE

MODEL NO. BPRO4-FLSH-LED35-HO-4-TMW-BTW-SC-UNV-X1-DM01

LED MODEL NO. LUMILEDS 2835E 9V

DRIVER MODEL NO. OSRAM OTI50W G2

RENDERED TO

PRUDENTIAL LIGHTING

1774 E 21ST STREET

LOS ANGELES, CA 90058

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

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-00978421-1 .

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 BPRO4-FLSH-LED35-HO-4-TMW-BTW-SC-UNV-X1-DM01. The sample was received by Intertek on July 18, 2019, in undamaged condition and one sample was tested as received. The sample designation was LAN1907191346-003.

DATES OF TESTS: July 19, 2019

## SUMMARY

|              |  |
|--------------|--|
| Model No.:   | BPRO4-FLSH-LED35-HO-4-TMW-BTW-SC-UNV-X1-DM01 |
| Description: | LED Luminaire                                |

| Criteria                    | Result |
|-----------------------------|--------|
| Total Lumen Output (Lumens) | 4992   |
| Total Power (W)             | 41.76  |
| Luminaire Efficacy (LPW)    | 119.5  |
| Power Factor                | 0.986  |

## EQUIPMENT LIST

| Equipment Used   | Model Number | Control Number | Last Date Calibrated | Calibration Due Date | Date Used |
|------------------|--------------|----------------|----------------------|----------------------|-----------|
| Goniophotometer  | 6440T        | 000943         | VBU                  | VBU                  | 07/19/19  |
| AC Source        | CW1251P      | 000944         | VBU                  | VBU                  | 07/19/19  |
| Power Analyzer   | WT210        | 000945         | 11/28/18             | 11/28/19             | 07/19/19  |
| Tape Measure     | 33-428       | 001491         | VBU                  | VBU                  | 07/19/19  |
| Magnetic Level   | 581-9        | 001610         | 10/31/18             | 10/31/19             | 07/19/19  |
| Thermometer      | DPI8-C24     | 001782         | 09/21/18             | 09/21/19             | 07/19/19  |
| Temp. & RH Meter | 971          | 001177         | 01/29/19             | 01/29/20             | 07/19/19  |

## 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.

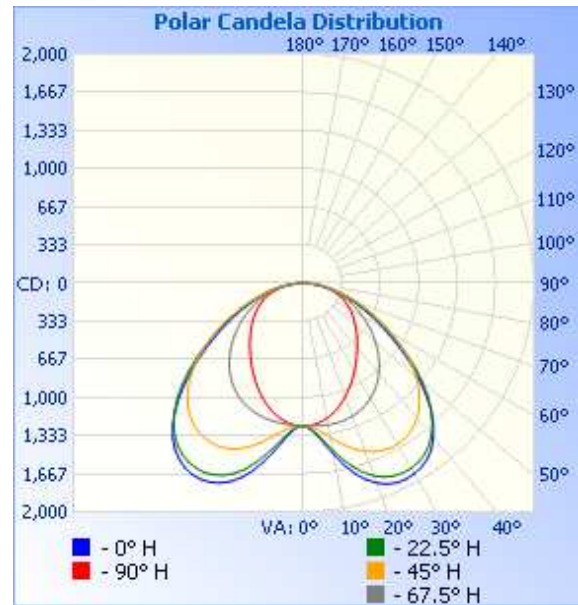
## RESULTS OF TEST

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

| Intertek<br>Sample No. | Base<br>Orientation | Input<br>Voltage<br>{Vac} | Input<br>Current<br>(mA) | Input<br>Power<br>(Watts) | Input<br>Power<br>Factor | Absolute<br>Luminous Flux<br>(Lumens) | Lumen<br>Efficacy<br>(LPW) |
|------------------------|---------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------------------|----------------------------|
| LAN1907191346-003      | Up                  | 120.0                     | 352.8                    | 41.76                     | 0.986                    | 4992                                  | 119.5                      |

### Intensity (Candlepower) Summary at 25°C - Candelas

| Angle | 0    | 22.5 | 45   | 67.5 | 90   |
|-------|------|------|------|------|------|
| 0     | 1246 | 1246 | 1246 | 1246 | 1246 |
| 5     | 1334 | 1324 | 1282 | 1252 | 1236 |
| 10    | 1523 | 1488 | 1374 | 1257 | 1197 |
| 15    | 1723 | 1664 | 1478 | 1253 | 1134 |
| 20    | 1859 | 1792 | 1564 | 1237 | 1056 |
| 25    | 1923 | 1858 | 1614 | 1208 | 972  |
| 30    | 1923 | 1868 | 1627 | 1162 | 885  |
| 35    | 1875 | 1829 | 1600 | 1099 | 802  |
| 40    | 1754 | 1730 | 1534 | 1018 | 725  |
| 45    | 1566 | 1569 | 1424 | 926  | 655  |
| 50    | 1314 | 1349 | 1277 | 821  | 591  |
| 55    | 1058 | 1104 | 1096 | 713  | 530  |
| 60    | 820  | 865  | 893  | 602  | 470  |
| 65    | 620  | 656  | 691  | 496  | 407  |
| 70    | 455  | 479  | 507  | 393  | 340  |
| 75    | 314  | 332  | 350  | 293  | 266  |
| 80    | 193  | 202  | 214  | 194  | 184  |
| 85    | 81   | 85   | 93   | 95   | 94   |
| 90    | 0    | 0    | 0    | 0    | 0    |



## RESULTS OF TEST (cont'd)

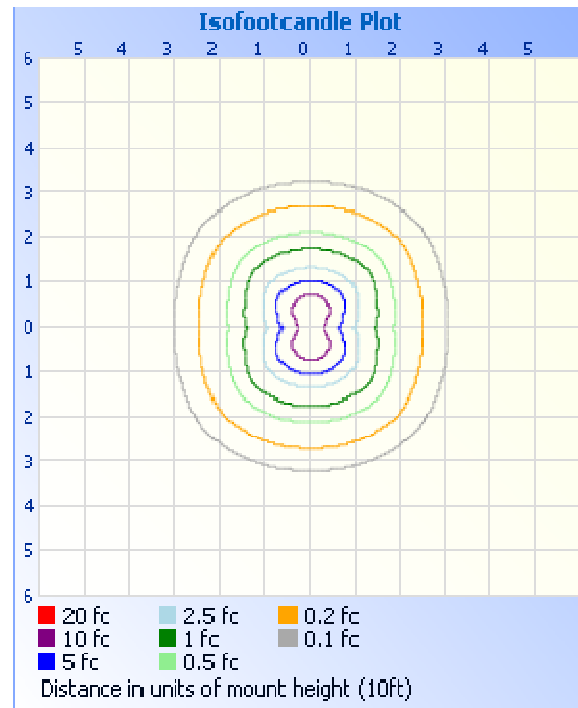
### Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

| Zone   | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30   | 1237   | 24.8        |
| 0-40   | 2150   | 43.1        |
| 0-60   | 3950   | 79.1        |
| 60-90  | 1042   | 20.9        |
| 0-90   | 4992   | 100.0       |
| 90-180 | 0.0    | 0.0         |
| 0-180  | 4992   | 100.0       |

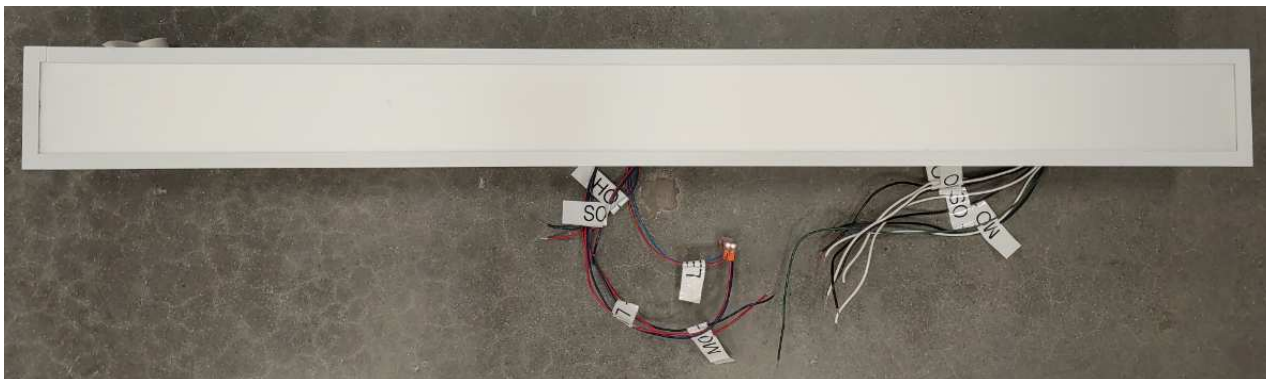
Zonal Lumens and Percentages at 25°C

| Zone  | Lumens | % Luminaire |
|-------|--------|-------------|
| 0-10  | 124.7  | 2.5         |
| 10-20 | 409.7  | 8.2         |
| 20-30 | 702.5  | 14.1        |
| 30-40 | 913.1  | 18.3        |
| 40-50 | 966.9  | 19.4        |
| 50-60 | 832.6  | 16.7        |
| 60-70 | 592.7  | 11.9        |
| 70-80 | 342.6  | 6.9         |
| 80-90 | 106.6  | 2.1         |

Spacing Criterion at 25°C

|                              |      |
|------------------------------|------|
| Spacing Criterion (0-180)    | 1.90 |
| Spacing Criterion (90-270)   | 1.08 |
| Spacing Criterion (Diagonal) | 1.76 |

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:

Gregory V. Rosandich  
Technician  
Lighting Division

Attachment: None

Report Reviewed By:

Vladimir Kozak  
Engineering Supervisor  
Lighting Division