

PRUDENTIAL

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

BPRO2-PER-REG1-LED35-SO-4-WWG

PROJECT NUMBER

G104824537

REPORT NUMBER

104824537LAX-007

ISSUE DATE

September 28, 2021

REVISED DATE

None

TEST DATES

9/28/2021

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104824537LAX-007

MODEL NUMBER(s)

BPRO2-PER-REG1-LED35-SO-4-WWG

REPORT RENDERED TO:

PRUDENTIAL

1774 EAST 21ST STREET

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.

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-01205890.

TEST STANDARDS

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

In Charge of Testing:



Bryan Cubillo
Technician III
Lighting Division

Reviewer:



Vladimir Kozak
Engineering Supervisor
Lighting Division

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SAMPLE INFORMATION

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ITEMS RECEIVED

| Item No. | Control No. | Model No. | Description | Type | Received |
|----------|---------------------|-------------|---------------|------------|----------|
| 1 | LAN2109231103-001 | BRO2 SERIES | LED Fixture | Production | 09/21/21 |
| 2 | LAN2109231103-001-B | REG1 | Regress Frame | Production | 09/21/21 |
| 3 | LAN2109231103-001-3 | WWG | Lens | Production | 09/21/21 |
| | | | | | |

TESTED SAMPLE CONFIGURATIONS

| Config No. | Tested Model No. | Item Nos. Utilized |
|------------|-------------------------------|--------------------|
| 1 | BPRO2-PER-REG1-LED35-SO-4-WWG | 1-3 |

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

| | |
|----------------------|----------------------------------|
| Product Model No.: | BPRO2-PER-REG1-LED35-SO-4-WWG |
| Product Description: | Focal Glow Wall Wash LED Fixture |
| LED Model No.: | Lumileds 2835e 9V 3500K 80 CRI |
| Driver Model No.: | Osram OTI 50W G2 (832mA) |
| Light Source: | LED |

| Criteria | Results |
|-------------------------------------|---------|
| Light Output (lumens) | 2790.6 |
| Input Power (W) @ 120 (Vac) | 31.09 |
| Lumen Efficacy (lm/W) | 89.8 |
| Input Power Factor (PF) @ 120 (Vac) | 0.979 |

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 |
|--------------------|-------------------------------|--------------|
| 1 | BPRO2-PER-REG1-LED35-SO-4-WWG | NA |

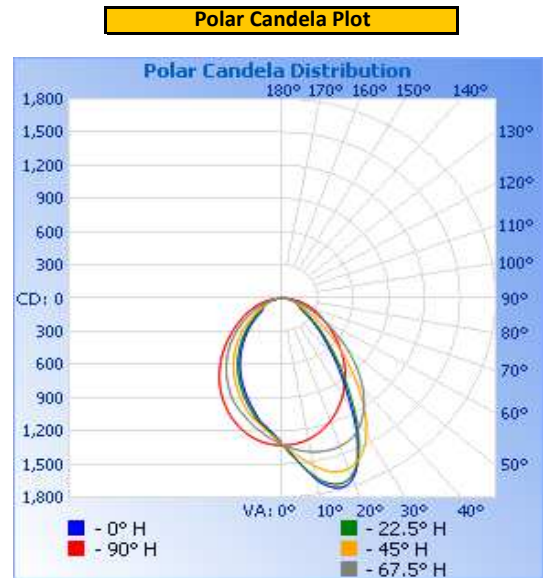
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

| Base Orientation | Input Voltage (Vac) | Input Current (mA) | Input Power (W) | Input Power Factor (I) | Input ATHD(%) |
|------------------|---------------------|--------------------|-----------------|------------------------|---------------|
| Up | 119.89 | 264.8 | 31.09 | 0.979 | 9.4 |

| Light Output (lm) | Lumen Efficacy (lm/W) |
|-------------------|-----------------------|
| 2790.6 | 89.8 |

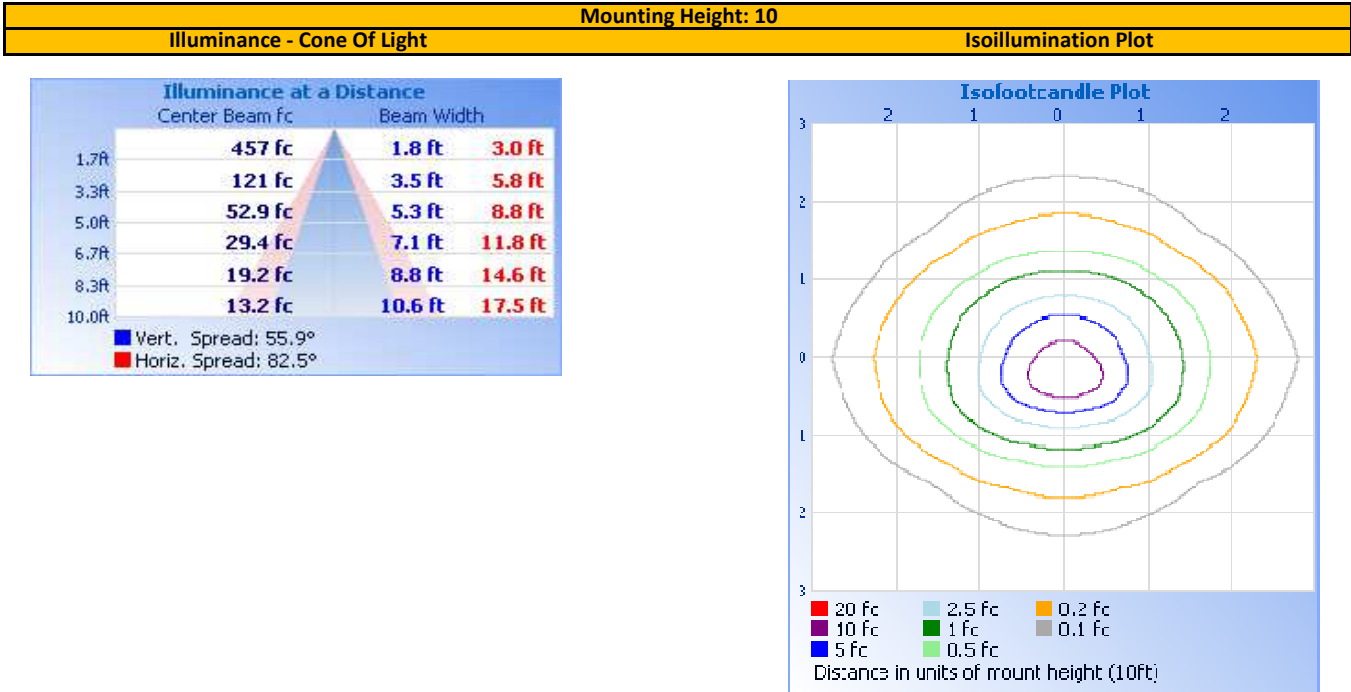
INTENSITY SUMMARY - CANDELA

| | Angle | 0 | 22.5 | 45 | 67.5 | 90 |
|--|-------|------|-------|------|-------|------|
| | 90 | 0 | 0 | 0 | 0 | 0 |
| W A L L S I D E | 85 | 32 | 28 | 28 | 31 | 54 |
| | 80 | 63 | 59 | 61 | 67 | 123 |
| | 75 | 97 | 94 | 98 | 111 | 192 |
| | 70 | 133 | 129 | 125 | 193 | 261 |
| | 65 | 160 | 153 | 166 | 291 | 334 |
| | 60 | 177 | 180 | 264 | 409 | 414 |
| | 55 | 243 | 261 | 390 | 551 | 505 |
| | 50 | 345 | 374 | 547 | 716 | 606 |
| | 45 | 482 | 519 | 738 | 890 | 713 |
| | 40 | 656 | 707 | 961 | 1057 | 820 |
| | 35 | 886 | 945 | 1201 | 1203 | 923 |
| | 30 | 1187 | 1239 | 1419 | 1317 | 1019 |
| | 25 | 1508 | 1526 | 1572 | 1393 | 1106 |
| | 20 | 1736 | 1711 | 1638 | 1424 | 1183 |
| | 15 | 1774 | 1740 | 1626 | 1428 | 1246 |
| | 10 | 1663 | 1643 | 1536 | 1410 | 1293 |
| | 5 | 1475 | 1477 | 1424 | 1373 | 1321 |
| R O O M S I D E | 0 | 1322 | 1322 | 1322 | 1322 | 1322 |
| | 5 | 1198 | 1214 | 1226 | 1265 | 1321 |
| | 10 | 1118 | 1135 | 1150 | 1201 | 1293 |
| | 15 | 1009 | 1038 | 1083 | 1135 | 1246 |
| | 20 | 911 | 942 | 990 | 1069 | 1183 |
| | 25 | 813 | 847 | 901 | 1000 | 1106 |
| | 30 | 714 | 750 | 809 | 912 | 1019 |
| | 35 | 612 | 649 | 715 | 821 | 923 |
| | 40 | 508 | 546 | 620 | 729 | 820 |
| | 45 | 408 | 446 | 522 | 632 | 713 |
| | 50 | 312 | 349 | 422 | 534 | 606 |
| | 55 | 229 | 261 | 326 | 435 | 505 |
| | 60 | 192 | 195 | 240 | 342 | 414 |
| | 65 | 174 | 174 | 171 | 256 | 334 |
| | 70 | 143 | 149 | 141 | 179 | 261 |
| | 75 | 101 | 109 | 113 | 111 | 192 |
| | 80 | 61 | 67 | 71 | 75 | 123 |
| | 85 | 24 | 30 | 31 | 35 | 54 |
| | 90 | 0 | 0 | 0 | 0 | 0 |
| | Angle | 180 | 202.5 | 225 | 247.5 | 270 |



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ILLUMINANCE SUMMARY



ZONAL LUMENS

| Zonal Lumen Summary | | | | | |
|---------------------|--|--|--|--|--|
|---------------------|--|--|--|--|--|

| Zone | Lumens | Luminaire |
|--------|---------|-----------|
| 0-30 | 1,046.6 | 37.5% |
| 0-40 | 1,609.0 | 57.7% |
| 0-60 | 2,416.2 | 86.6% |
| 60-90 | 374.4 | 13.4% |
| 70-100 | 160.3 | 5.7% |
| 90-120 | 0.0 | 0.0% |
| 0-90 | 2,790.6 | 100.0% |
| 90-180 | 0.0 | 0.0% |
| 0-180 | 2,790.6 | 100.0% |

| Zone | Lumens | Total | Zone | Lumens | Total |
|-------|--------|-------|---------|--------|-------|
| 0-10 | 127.4 | 4.6% | 90-100 | 0.0 | 0.0% |
| 10-20 | 375.8 | 13.5% | 100-110 | 0.0 | 0.0% |
| 20-30 | 543.4 | 19.5% | 110-120 | 0.0 | 0.0% |
| 30-40 | 562.4 | 20.2% | 120-130 | 0.0 | 0.0% |
| 40-50 | 473.3 | 17.0% | 130-140 | 0.0 | 0.0% |
| 50-60 | 333.9 | 12.0% | 140-150 | 0.0 | 0.0% |
| 60-70 | 214.0 | 7.7% | 150-160 | 0.0 | 0.0% |
| 70-80 | 123.1 | 4.4% | 160-170 | 0.0 | 0.0% |
| 80-90 | 37.3 | 1.3% | 170-180 | 0.0 | 0.0% |

SPACING CRITERION

| | |
|------------------------------|------|
| Spacing Criterion (0-180) | 1.24 |
| Spacing Criterion (90-270) | 1.16 |
| Spacing Criterion (Diagonal) | 1.24 |

LUMINANCE DATA - AVERAGE LUMINANCE (cd/m²)

| Angle | 0 | 45 | 90 |
|-------|-------|-------|-------|
| 45 | 11348 | 17375 | 16787 |
| 55 | 7053 | 11320 | 14657 |
| 65 | 6303 | 6539 | 13157 |
| 75 | 6239 | 6304 | 12350 |
| 85 | 6112 | 5348 | 10315 |

EQUIPMENT LIST

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| # | Equipment | Model No | Control No. | Last Cal | Cal Due |
|----|------------------|-------------|-------------|----------|----------|
| 1 | Goniophotometer | 6440T | 000943 | VBV | VBV |
| 2 | AC Source | CW1251P | 000944 | VBV | VBV |
| 3 | Power Analyzer | WT210 | 000945 | 09/21/21 | 09/21/22 |
| 4 | Tape Measure | 33-428 | 002225 | 08/23/21 | 08/23/22 |
| 5 | Thermometer | DPI8-C24 | 001782 | 09/22/21 | 09/22/22 |
| 6 | Digital Level | 1435-1000D | 002231 | VBV | VBV |
| 7 | Temp. & RH Meter | Fluke 1620A | 002195 | 12/17/20 | 12/27/21 |
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REVISION HISTORY

| # | Revision Date | Updated By | Reviewed BY | Description of Change |
|-----|---------------|------------|-------------|-----------------------|
| --- | None | --- | --- | --- |
| --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- |