

PRUDENTIAL LIGHTING TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

BPRO4-2R-LED35-90-WDE

PROJECT NUMBER

G104933496

REPORT NUMBER

104933496LAX-001

ISSUE DATE

December 28, 2021

REVISED DATE

None

TEST DATES

December 28, 2021

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104933496LAX-001

MODEL NUMBER(s)

BPRO4-2R-LED35-90-WDE

REPORT RENDERED TO:

PRUDENTIAL LIGHTING
1774 EAST 21ST
LOS ANGELES, CA 90058

STATEMENT OF LIMITATION

NVLAP Lab Code 600221-0. 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-01205890.

TEST STANDARDS

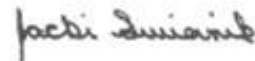
IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:

Reviewer:



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Jacki Swiernik
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SAMPLE INFORMATION

REPORT NO. 104933496LAX-001

ITEMS RECEIVED

| Item No. | Control No. | Model No. | Description | Type | Received |
|----------|-------------------|-----------------------|------------------------|-----------|------------|
| 1 | LAN2112271338-002 | BPRO4-2R-LED35-90-WDE | BPRO 2R Downlight Wide | Prototype | 12/27/2021 |

TESTED SAMPLE CONFIGURATIONS

| Config No. | Tested Model No. | Item Nos. Utilized |
|------------|-----------------------|--------------------|
| 1 | BPRO4-2R-LED35-90-WDE | 1 |

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

REPORT NO. 104933496LAX-001

PRODUCT INFORMATION AND SUMMARY OF DATA

| | |
|----------------------|------------------------|
| Product Model No.: | BPRO4-2R-LED35-90-WDE |
| Product Description: | BPRO 2R Downlight Wide |
| LED Model No.: | Cree XHP35B |
| Driver Model No.: | Osram OTI30G2 - 210mA |
| Light Source: | LED |

| Criteria | Results |
|-------------------------------------|---------|
| Light Output (lumens) | 427.9 |
| Input Power (W) @ 120 (Vac) | 8.72 |
| Lumen Efficacy (lm/W) | 49.1 |
| Input Power Factor (PF) @ 120 (Vac) | 0.934 |

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

REPORT NO. 104933496LAX-001

| Test Configuration | Tested Model No. | Pass/Fail/NA |
|--------------------|-----------------------|--------------|
| 1 | BPRO4-2R-LED35-90-WDE | NA |

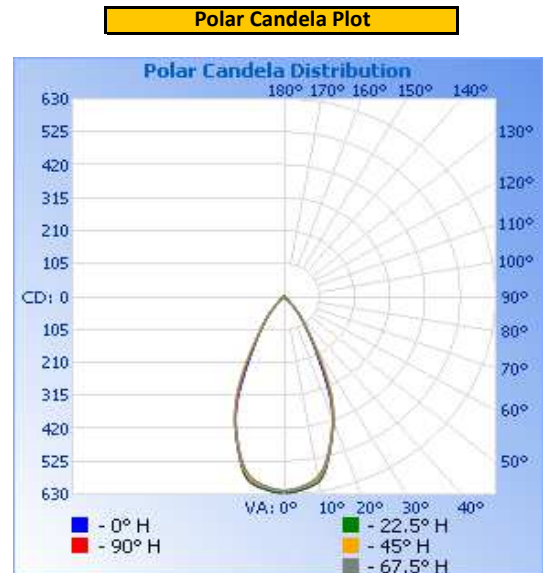
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

| Base Orientation | Input Voltage (Vac) | Input Current (mA) | Input Power (W) | Input Power Factor (I) | Input ATHD(%) |
|------------------|---------------------|--------------------|-----------------|------------------------|---------------|
| Up | 119.96 | 77.9 | 8.72 | 0.934 | 13.5 |

| Light Output (lm) | Lumen Efficacy (lm/W) |
|-------------------|-----------------------|
| 427.9 | 49.1 |

INTENSITY SUMMARY - CANDELA

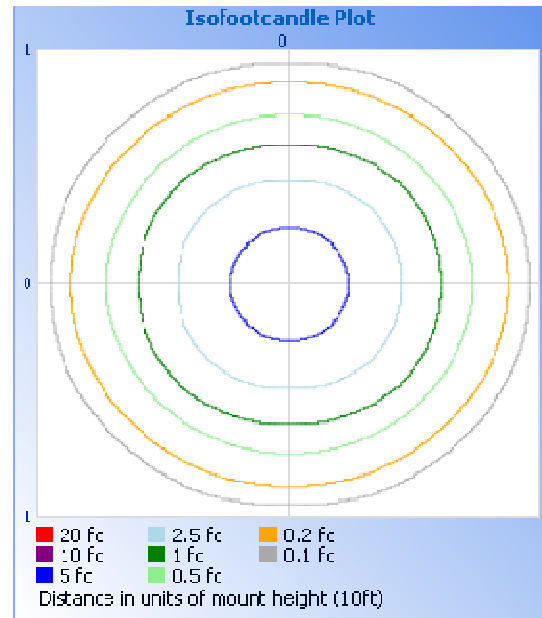
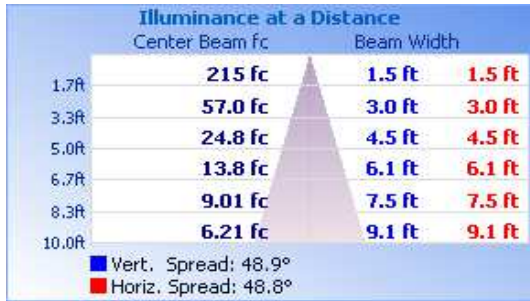
| Angle | 0 | 22.5 | 45 | 67.5 | 90 |
|-------|-----|------|-----|------|-----|
| 0 | 621 | 621 | 621 | 621 | 621 |
| 5 | 618 | 616 | 611 | 608 | 608 |
| 10 | 598 | 596 | 588 | 583 | 582 |
| 15 | 519 | 520 | 516 | 513 | 513 |
| 20 | 426 | 428 | 427 | 423 | 422 |
| 25 | 296 | 317 | 324 | 313 | 295 |
| 30 | 174 | 183 | 197 | 185 | 175 |
| 35 | 106 | 104 | 106 | 106 | 107 |
| 40 | 54 | 55 | 54 | 55 | 56 |
| 45 | 16 | 21 | 20 | 21 | 17 |
| 50 | 4 | 6 | 8 | 6 | 4 |
| 55 | 2 | 2 | 3 | 2 | 2 |
| 60 | 1 | 1 | 1 | 1 | 1 |
| 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 |



REPORT NO. 104933496LAX-001

ILLUMINANCE SUMMARY

| Illuminance - Cone Of Light | | Mounting Height: 10 | Isoillumination Plot | |
|-----------------------------|--|---------------------|----------------------|--|
|-----------------------------|--|---------------------|----------------------|--|



ZONAL LUMENS

Zonal Lumen Summary

| Zone | Lumens | Luminaire |
|--------|--------|-----------|
| 0-30 | 340.3 | 79.5% |
| 0-40 | 407.9 | 95.3% |
| 0-60 | 427.5 | 99.9% |
| 60-90 | 0.5 | 0.1% |
| 70-100 | 0.1 | 0.0% |
| 90-120 | 0.0 | 0.0% |
| 0-90 | 427.9 | 100.0% |
| 90-180 | 0.0 | 0.0% |
| 0-180 | 427.9 | 100.0% |

| Zone | Lumens | Total | Zone | Lumens | Total |
|-------|--------|-------|---------|--------|-------|
| 0-10 | 57.8 | 13.5% | 90-100 | 0.0 | 0.0% |
| 10-20 | 143.1 | 33.4% | 100-110 | 0.0 | 0.0% |
| 20-30 | 139.5 | 32.6% | 110-120 | 0.0 | 0.0% |
| 30-40 | 67.6 | 15.8% | 120-130 | 0.0 | 0.0% |
| 40-50 | 17.5 | 4.1% | 130-140 | 0.0 | 0.0% |
| 50-60 | 2.1 | 0.5% | 140-150 | 0.0 | 0.0% |
| 60-70 | 0.4 | 0.1% | 150-160 | 0.0 | 0.0% |
| 70-80 | 0.1 | 0.0% | 160-170 | 0.0 | 0.0% |
| 80-90 | 0.0 | 0.0% | 170-180 | 0.0 | 0.0% |

SPACING CRITERION

| | |
|------------------------------|------|
| Spacing Criterion (0-180) | 0.80 |
| Spacing Criterion (90-270) | 0.80 |
| Spacing Criterion (Diagonal) | 0.78 |

LUMINANCE DATA - AVERAGE LUMINANCE (cd/m²)

| Angle | 0 | 45 | 90 |
|-------|------|------|------|
| 45 | 6010 | 7358 | 6156 |
| 55 | 719 | 1212 | 719 |
| 65 | 244 | 244 | 244 |
| 75 | 0 | 0 | 100 |
| 85 | 0 | 0 | 0 |

EQUIPMENT LIST

REPORT NO. 104933496LAX-001

| # | Equipment | Model No | Control No. | Last Cal | Cal Due |
|---|------------------|----------|-------------|----------|----------|
| 1 | Goniophotometer | 6440T | 000943 | 11/19/21 | 01/31/22 |
| 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 | Magnetic Level | 581-9 | 001610 | 10/05/21 | 10/05/22 |
| 7 | Temp. & RH Meter | 971 | 002137 | 09/20/21 | 09/20/22 |

REVISION HISTORY

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