

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: PORTFOLIO

Report Number: P496143

Luminaire Tested: **LDA2B109035R30D010 2LBD1H-30DEG TILT**

Issue Date: 3/8/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P496143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-037-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LDA2B109035R30D010 2LBD1H-30DEG TILT
Description: 1000 LUMEN 2IN ADJUSTABLE LED LUMINAIRE WITH 90 CRI LEDS AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

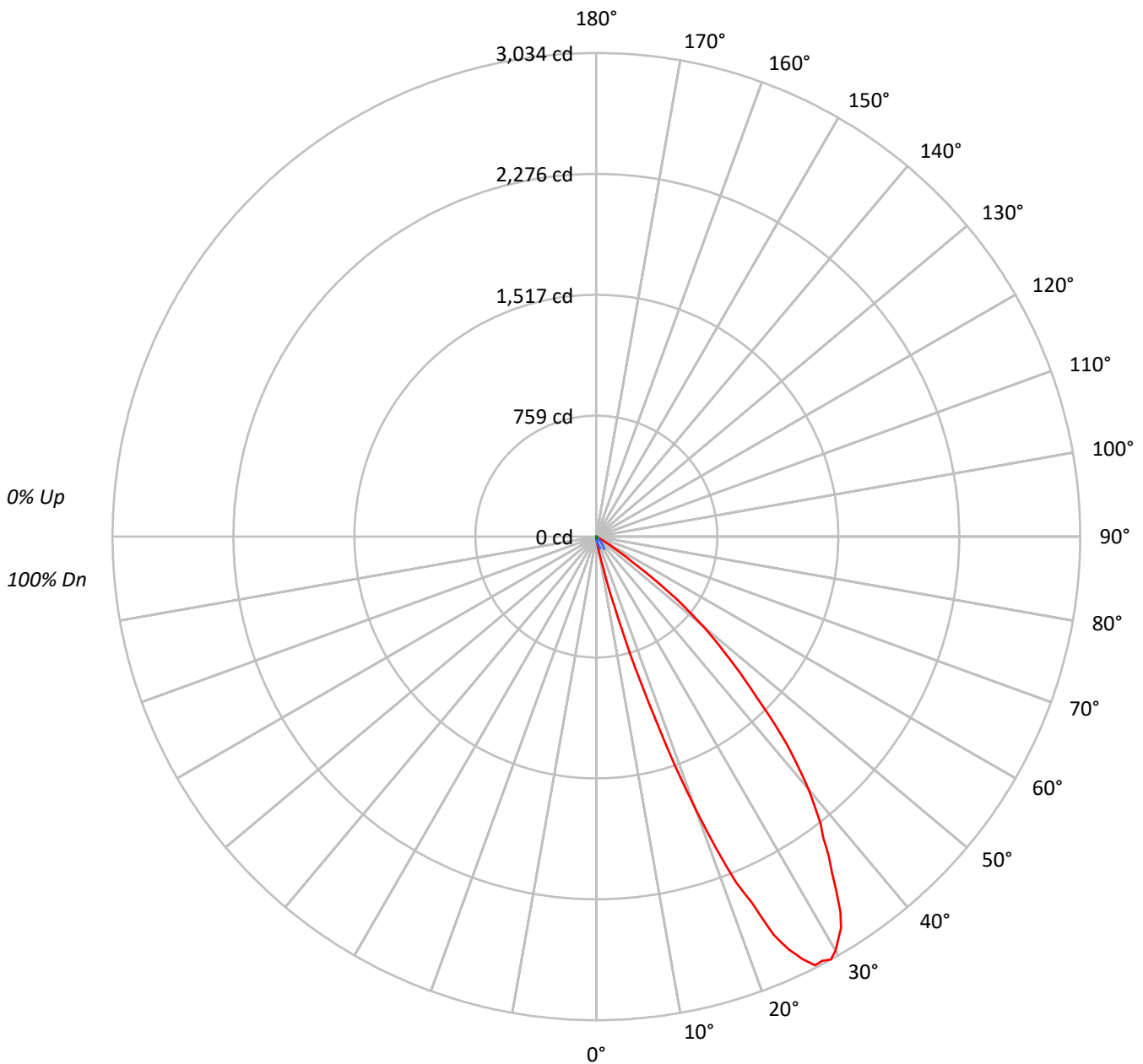
Lumens per Lamp: N/A
Luminaire Lumens: 610.2 lumens
Efficiency: N/A
Efficacy: 61.0 lumens/watt
Spacing Criteria (0/90/45): 3.2 / 0.53 / 1.4
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P496143

CATALOG NUMBER: LDA2B109035R30D010 2LBD1H-30DEG TILT

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270°



TEST NUMBER: P496143

CATALOG NUMBER: LDA2B109035R30D010 2LBD1H-30DEG TILT

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 50 | | | | | 30 | | | | | 10 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 112 | 109 | 106 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 94 | 92 | | | | | 90 | | | | |
| 2 | 104 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | | | | | 80 | | | | |
| 3 | 97 | 89 | 83 | 77 | 95 | 87 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 80 | 76 | 73 | | | | | 71 | | | | |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 72 | 67 | 77 | 71 | 66 | 75 | 70 | 66 | 73 | 68 | 65 | | | | | 63 | | | | |
| 5 | 83 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 63 | 59 | 68 | 62 | 58 | 66 | 61 | 58 | | | | | 56 | | | | |
| 6 | 77 | 66 | 58 | 52 | 76 | 65 | 58 | 52 | 63 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | | | | | 49 | | | | |
| 7 | 72 | 60 | 52 | 46 | 70 | 59 | 51 | 46 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 49 | 45 | | | | | 44 | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 54 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 44 | 40 | | | | | 39 | | | | |
| 9 | 62 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | | | | | 34 | | | | |
| 10 | 57 | 45 | 38 | 33 | 56 | 45 | 37 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | | | | | 31 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|---------|------|------|
| 0° | 6759 | 6759 | 6759 |
| 5° | 14659 | 6141 | 4358 |
| 10° | 44086 | 5310 | 2906 |
| 15° | 267539 | 3831 | 2247 |
| 20° | 957855 | 2100 | 945 |
| 25° | 1556665 | 708 | 0 |
| 30° | 1708429 | 228 | 0 |
| 35° | 1552566 | 0 | 0 |
| 40° | 1332515 | 0 | 0 |
| 45° | 987691 | 0 | 0 |
| 50° | 667909 | 0 | 0 |
| 55° | 225617 | 344 | 0 |
| 60° | 32266 | 888 | 0 |
| 65° | 2568 | 1051 | 0 |
| 70° | 0 | 1298 | 0 |
| 75° | 0 | 2478 | 0 |
| 80° | 0 | 2557 | 0 |
| 85° | 0 | 5095 | 0 |



TEST NUMBER: P496143

CATALOG NUMBER: LDA2B109035R30D010 2LBD1H-30DEG TILT

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1.8 | 0.3 |
| 10°-20° | 31.4 | 5.2 |
| 20°-30° | 178.4 | 29.2 |
| 30°-40° | 232.5 | 38.1 |
| 40°-50° | 136.2 | 22.3 |
| 50°-60° | 27.5 | 4.5 |
| 60°-70° | 1.0 | 0.2 |
| 70°-80° | 0.7 | 0.1 |
| 80°-90° | 0.6 | 0.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 211.7 | 34.7 |
| 0°-40° | 444.2 | 72.8 |
| 0°-60° | 607.8 | 99.6 |
| 0°-90° | 610.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 610.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0° | 14 | 14 | 14 | 14 | 14 | |
| 5° | 30 | 21 | 12 | 10 | 9 | 5 |
| 15° | 524 | 60 | 8 | 5 | 4 | 222 |
| 25° | 2860 | 100 | 1 | 1 | 0 | 1265 |
| 35° | 2578 | 73 | 0 | 0 | 0 | 1605 |
| 45° | 1416 | 18 | 0 | 0 | 0 | 1106 |
| 55° | 262 | 2 | 0 | 0 | 0 | 306 |
| 65° | 2 | 0 | 1 | 1 | 0 | 6 |
| 75° | 0 | 1 | 1 | 1 | 0 | 0 |
| 85° | 0 | 1 | 1 | 1 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P496143

CATALOG NUMBER: LDA2B109035R30D010 2LBD1H-30DEG TILT

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|-------|-------|------|--------|------|--------|------|
| 0° | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 |
| 2.5° | 18.6 | 17.3 | 16.4 | 14.2 | 12.8 | 11.9 | 11.5 | 11.1 | 10.6 |
| 5° | 29.6 | 27.4 | 21.2 | 15.5 | 12.4 | 10.6 | 9.7 | 8.8 | 8.8 |
| 7.5° | 50.9 | 41.1 | 27.9 | 16.4 | 11.5 | 9.3 | 8.4 | 7.1 | 6.6 |
| 10° | 88.0 | 68.6 | 38.0 | 17.3 | 10.6 | 8.4 | 6.6 | 6.2 | 5.8 |
| 12.5° | 206.6 | 125.2 | 48.2 | 17.3 | 9.3 | 7.1 | 5.8 | 5.3 | 4.9 |
| 15° | 523.8 | 255.3 | 59.7 | 16.4 | 7.5 | 5.3 | 4.9 | 4.4 | 4.4 |
| 17.5° | 1086.5 | 524.2 | 72.6 | 15.0 | 6.2 | 4.0 | 3.5 | 3.1 | 3.1 |
| 20° | 1824.4 | 939.6 | 84.9 | 12.8 | 4.0 | 2.7 | 2.2 | 1.8 | 1.8 |
| 21° | 2096.0 | 1090.5 | 91.1 | 11.9 | 3.5 | 2.2 | 1.8 | 1.8 | 1.3 |
| 22° | 2340.2 | 1228.9 | 94.7 | 11.5 | 2.7 | 1.8 | 1.8 | 1.3 | 1.3 |
| 23° | 2497.7 | 1404.6 | 97.8 | 10.2 | 2.2 | 1.3 | 1.3 | 0.9 | 0.4 |
| 24° | 2735.2 | 1542.1 | 99.1 | 9.3 | 1.8 | 1.3 | 0.9 | 0.4 | 0.4 |
| 25° | 2859.6 | 1666.9 | 100.4 | 8.4 | 1.3 | 1.3 | 0.9 | 0.4 | 0.0 |
| 26° | 2948.9 | 1765.5 | 105.3 | 8.0 | 1.3 | 0.9 | 0.9 | 0.4 | 0.0 |
| 27° | 3018.8 | 1828.4 | 107.9 | 7.1 | 0.9 | 0.9 | 0.9 | 0.0 | 0.0 |
| 28° | 3014.8 | 1873.9 | 105.7 | 6.2 | 0.9 | 0.9 | 0.4 | 0.0 | 0.0 |
| 29° | 3033.8 | 1904.9 | 104.4 | 5.3 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 30° | 2998.9 | 1907.5 | 99.5 | 4.9 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 31° | 2945.8 | 1875.3 | 97.8 | 4.4 | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 |
| 32° | 2895.8 | 1860.7 | 92.0 | 3.5 | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 |
| 33° | 2810.0 | 1795.2 | 86.3 | 3.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 34° | 2695.0 | 1731.0 | 81.0 | 2.7 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 35° | 2577.8 | 1678.0 | 73.4 | 2.7 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 36° | 2480.4 | 1581.5 | 68.1 | 2.2 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 37° | 2362.3 | 1498.8 | 61.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 38° | 2281.8 | 1382.4 | 55.7 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 39° | 2173.4 | 1284.2 | 49.1 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40° | 2069.0 | 1182.5 | 42.5 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 42.5° | 1769.5 | 912.2 | 29.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 45° | 1415.6 | 668.9 | 18.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 47.5° | 1124.1 | 451.7 | 11.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50° | 870.2 | 232.7 | 6.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 52.5° | 578.6 | 98.7 | 4.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| 55° | 262.3 | 51.3 | 1.8 | 0.0 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 57.5° | 105.7 | 22.1 | 0.9 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 60° | 32.7 | 6.2 | 0.4 | 0.4 | 0.9 | 0.9 | 0.4 | 0.0 | 0.0 |
| 62.5° | 6.6 | 1.3 | 0.4 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 | 0.0 |
| 65° | 2.2 | 0.4 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.0 | 0.0 |
| 67.5° | 0.4 | 0.4 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 |
| 70° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 1.3 | 0.9 | 0.4 | 0.0 |
| 72.5° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 |
| 75° | 0.0 | 0.4 | 0.9 | 0.9 | 1.3 | 1.3 | 0.9 | 0.4 | 0.0 |
| 77.5° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 |
| 80° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 |



TEST NUMBER: P496143

CATALOG NUMBER: LDA2B109035R30D010 2LBD1H-30DEG TILT

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|
| 82.5° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 |
| 85° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)