Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P206933

Luminaire Tested: **LD4B15D010 EU4B10208030 4LBWB1**

Issue Date: 3/3/2020

**Test Information**

| | |
|---|---|
| Test Method: | LM-41-14 |
| Report Number: | P206933 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35319) |
| Test Lab: | INNOVATION CENTER-P3 |
| Issue Date: | 3/3/2020 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | io LED |
| Catalog Number: | LD4B15D010 EU4B10208030 4LBWB1 |
| Description: | PORTFOLIO 4 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT WIDE DISTRIBUTION WITH SPECULAR BLACK TRIM WATTAGE D010TR-14.39W DE010-14.29W D5LT-14.34W DMX-14.46W DL2-15.8W DL3-15.28W DLE-15.432W |
| Light Source: | HIGH LUMEN LED |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 730.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 51.1 lumens/watt |
| Spacing Criteria (0/90/45): | 1.08 / 1.08 / 1.03 |
| Luminous Opening: | Point Source (0' x 0' x 0') |
| CIE Type: | Direct |

| | |
|---|---|
| Input Watts (W): | 14.3 |
| Input Voltage (V): | NR |
| Input Current (Ain): | 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 |

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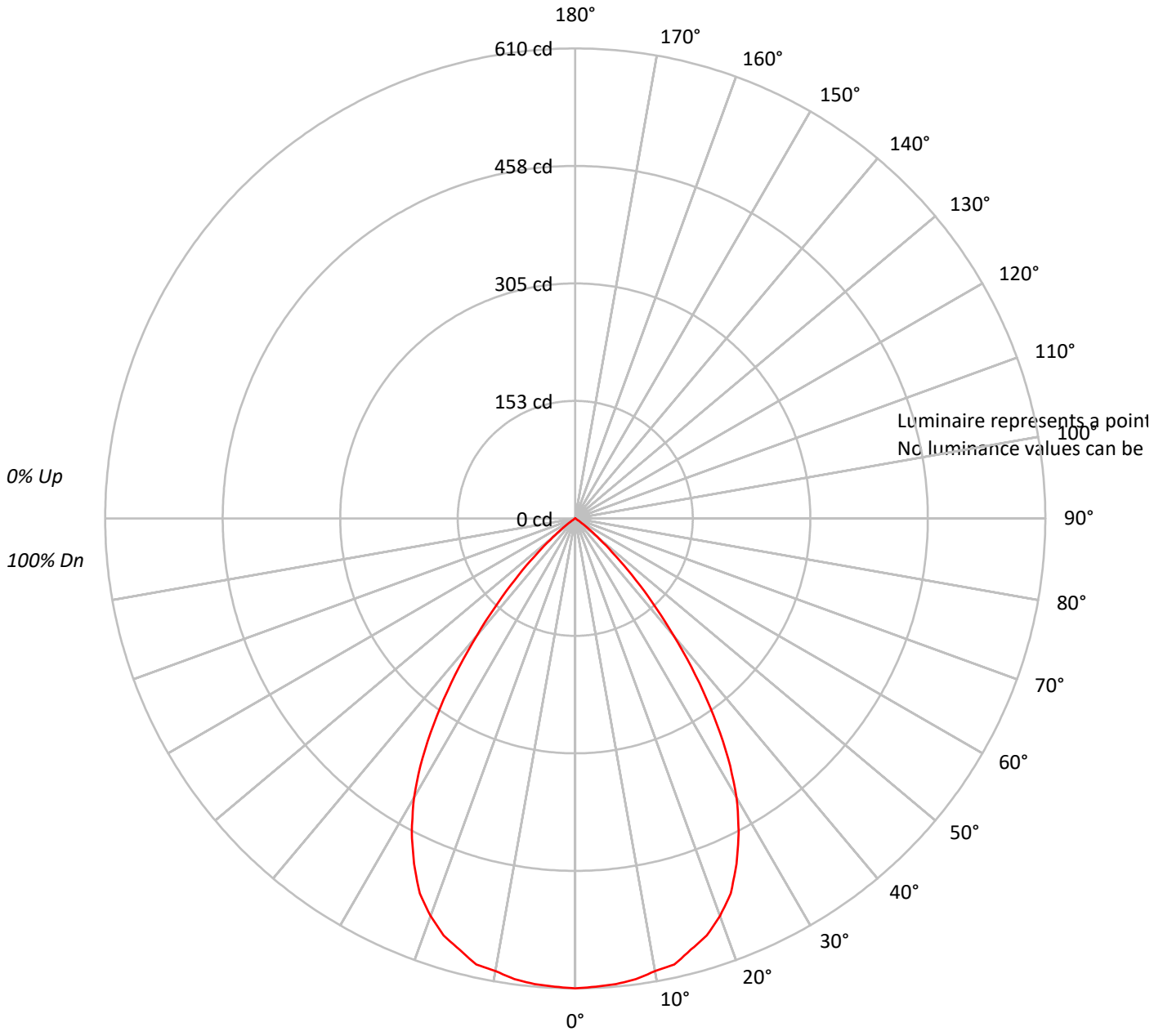
## Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

| RF | 20 | | | | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 96 | 95 | 93 |
| 2 | 107 | 102 | 98 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 86 |
| 3 | 101 | 94 | 89 | 85 | 99 | 93 | 88 | 84 | 90 | 86 | 83 | 88 | 84 | 82 | 86 | 83 | 80 | 79 |
| 4 | 96 | 88 | 82 | 77 | 94 | 86 | 81 | 77 | 84 | 79 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 72 |
| 5 | 90 | 81 | 75 | 70 | 89 | 80 | 74 | 70 | 79 | 73 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 67 |
| 6 | 85 | 76 | 69 | 65 | 84 | 75 | 69 | 64 | 73 | 68 | 64 | 72 | 67 | 64 | 70 | 66 | 63 | 62 |
| 7 | 80 | 71 | 64 | 60 | 79 | 70 | 64 | 59 | 69 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 58 | 57 |
| 8 | 76 | 66 | 60 | 55 | 75 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 62 | 58 | 54 | 53 |
| 9 | 72 | 62 | 55 | 51 | 71 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 58 | 54 | 50 | 49 |
| 10 | 68 | 58 | 52 | 48 | 67 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 46 |

**AVERAGE LUMINANCE (cd/sqm):**

| | 0° |
|---|---|
| 0° | |
| 5° | |
| 10° | |
| 15° | |
| 20° | |
| 25° | |
| 30° | |
| 35° | |
| 40° | |
| 45° | |
| 50° | |
| 55° | |
| 60° | |
| 65° | |
| 70° | |
| 75° | |
| 80° | |
| 85° | |

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 57.6 | 7.9 |
| 10°-20° | 163.2 | 22.3 |
| 20°-30° | 225.6 | 30.9 |
| 30°-40° | 193.2 | 26.4 |
| 40°-50° | 82.1 | 11.2 |
| 50°-60° | 9.2 | 1.3 |
| 60°-70° | 0.0 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 446.4 | 61.1 |
| 0°-40° | 639.6 | 87.5 |
| 0°-60° | 730.9 | 100.0 |
| 0°-90° | 730.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 730.9 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | Flux |
|---|---|---|
| 0° | 610 | |
| 5° | 607 | 58 |
| 15° | 580 | 163 |
| 25° | 495 | 226 |
| 35° | 314 | 193 |
| 45° | 103 | 82 |
| 55° | 5 | 9 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |

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**CANDELA DISTRIBUTION (FULL):**

| | 0° |
|---|---|
| 0° | 610.1 |
| 2.5° | 608.4 |
| 5° | 606.7 |
| 7.5° | 603.3 |
| 10° | 596.5 |
| 12.5° | 593.1 |
| 15° | 579.6 |
| 17.5° | 567.7 |
| 20° | 549.1 |
| 22.5° | 527.0 |
| 25° | 494.8 |
| 27.5° | 459.3 |
| 30° | 418.6 |
| 32.5° | 369.4 |
| 35° | 313.5 |
| 37.5° | 255.9 |
| 40° | 198.3 |
| 42.5° | 147.4 |
| 45° | 103.4 |
| 47.5° | 64.4 |
| 50° | 37.3 |
| 52.5° | 18.6 |
| 55° | 5.1 |
| 57.5° | 0.0 |
| 60° | 0.0 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

Report Generated By E9808895 / USPTCWHP6082093

0°-180°

(END OF REPORT)