

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: P208362

Luminaire Tested: **LD4B10D010 EU4B10209030 4LBSLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208362
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: LD4B10D010 EU4B10209030 4LBSLI1
Description: PORTFOLIO 4 INCH SHALLOW RECESSED DOWNLIGHT
SHALLOW DISTRIBUTION WITH SPECULAR CLEAR TRIM
WATTAGE D010TR-10.05W DE010-10.58W D5LT-10.2W DMX-10.6W DL2-11.8W
DL3-11.1W DLE-11.39W
Light Source: HIGH LUMEN LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 939.2 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 1
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

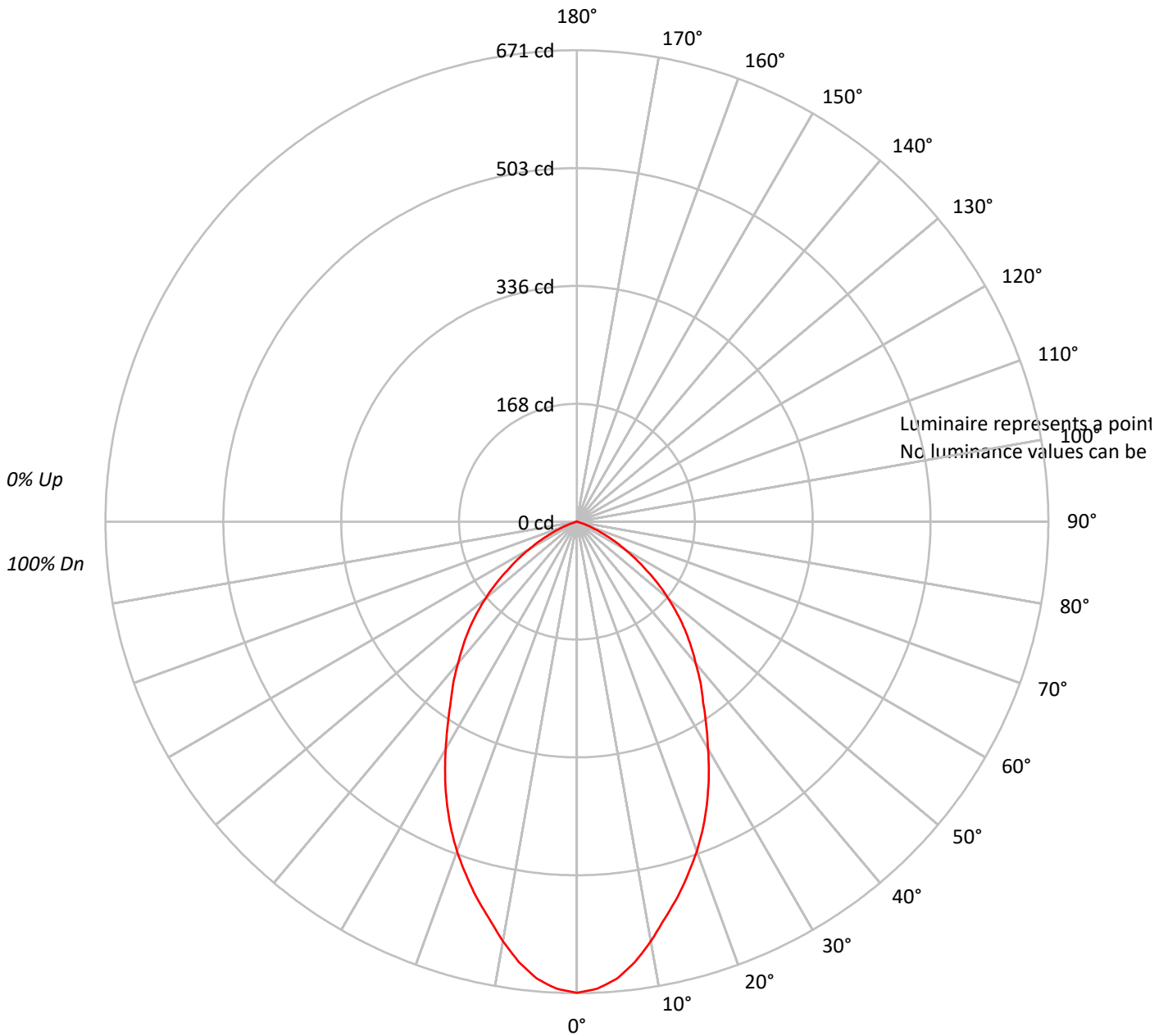
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 84 | 87 | 84 | 82 | 80 | | | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 77 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 | | | |
| 4 | 90 | 81 | 73 | 68 | 88 | 79 | 73 | 68 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | |
| 5 | 84 | 73 | 66 | 61 | 82 | 72 | 65 | 60 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 | | | |
| 6 | 79 | 67 | 60 | 54 | 77 | 66 | 59 | 54 | 65 | 58 | 54 | 63 | 58 | 53 | 62 | 57 | 53 | 51 | | | |
| 7 | 74 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 39 | | | |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 46 | 41 | 37 | 36 | | | |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 60.8 | 6.5 |
| 10°-20° | 155.1 | 16.5 |
| 20°-30° | 201.0 | 21.4 |
| 30°-40° | 196.9 | 21.0 |
| 40°-50° | 166.9 | 17.8 |
| 50°-60° | 109.4 | 11.6 |
| 60°-70° | 44.0 | 4.7 |
| 70°-80° | 5.0 | 0.5 |
| 80°-90° | 0.1 | 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° | 416.9 | 44.4 |
| 0°-40° | 613.8 | 65.3 |
| 0°-60° | 890.1 | 94.8 |
| 0°-90° | 939.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 939.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 671 | |
| 5° | 653 | 61 |
| 15° | 553 | 155 |
| 25° | 439 | 201 |
| 35° | 313 | 197 |
| 45° | 217 | 167 |
| 55° | 122 | 109 |
| 65° | 43 | 44 |
| 75° | 2 | 5 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 670.6 |
| 2.5° | 665.4 |
| 5° | 653.0 |
| 7.5° | 632.2 |
| 10° | 606.2 |
| 12.5° | 578.1 |
| 15° | 553.1 |
| 17.5° | 526.1 |
| 20° | 499.1 |
| 22.5° | 470.0 |
| 25° | 438.8 |
| 27.5° | 406.5 |
| 30° | 373.3 |
| 32.5° | 342.1 |
| 35° | 313.0 |
| 37.5° | 289.0 |
| 40° | 263.1 |
| 42.5° | 240.2 |
| 45° | 217.3 |
| 47.5° | 193.4 |
| 50° | 169.5 |
| 52.5° | 145.6 |
| 55° | 121.6 |
| 57.5° | 99.8 |
| 60° | 79.0 |
| 62.5° | 60.3 |
| 65° | 42.6 |
| 67.5° | 28.1 |
| 70° | 16.6 |
| 72.5° | 7.3 |
| 75° | 2.1 |
| 77.5° | 1.0 |
| 80° | 1.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)