

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: P211128

Luminaire Tested: **LSR4B15D010BZ EC4B10209027 4LBMMW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P211128  
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: LSR4B15D010BZ EC4B10209027 4LBMMW1  
Description: PORTFOLIO 4 INCH CYLINDER  
MEDIUM DISTRIBUTION WITH MATTE WHITE 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: 961.3 lumens  
Efficiency: N/A  
Efficacy: 67.2 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 0.99 / 0.97  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

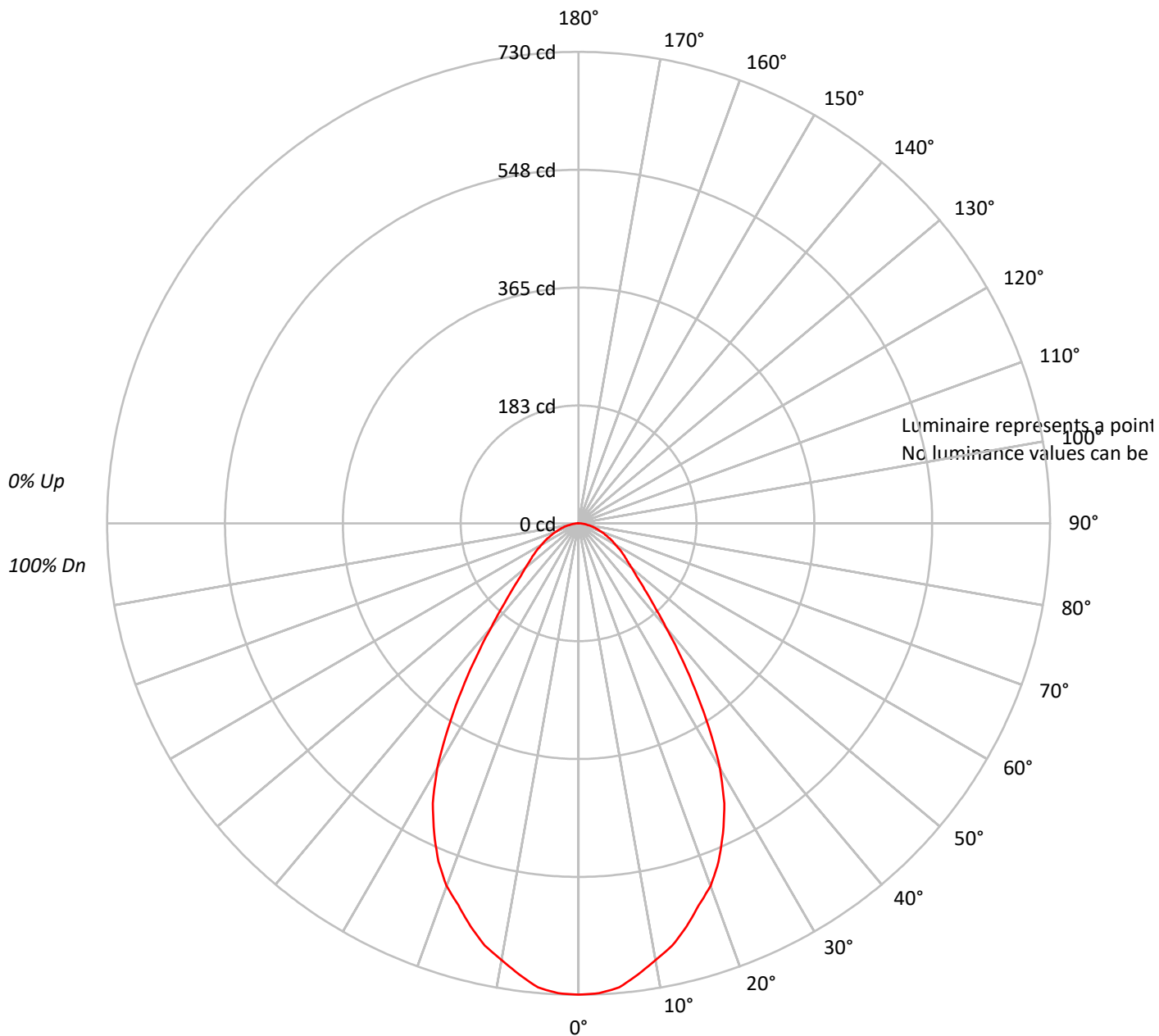
Input Watts (W): 14.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  |  | 98  | 96  | 94  |  | 94  |
| 2   | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  |  | 89  | 86  | 83  |  | 87  |
| 3   | 97  | 89  | 83  | 77  | 95  | 87  | 82  | 77  | 85  | 80  | 76  |  | 82  | 78  | 74  |  | 80  |
| 4   | 91  | 81  | 74  | 69  | 89  | 80  | 74  | 69  | 78  | 72  | 68  |  | 76  | 71  | 67  |  | 74  |
| 5   | 85  | 75  | 67  | 62  | 83  | 74  | 67  | 62  | 72  | 66  | 61  |  | 70  | 65  | 61  |  | 68  |
| 6   | 80  | 69  | 62  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 56  |  | 65  | 59  | 55  |  | 63  |
| 7   | 75  | 64  | 57  | 52  | 74  | 63  | 56  | 51  | 62  | 56  | 51  |  | 60  | 55  | 51  |  | 59  |
| 8   | 71  | 59  | 52  | 47  | 69  | 59  | 52  | 47  | 58  | 51  | 47  |  | 56  | 51  | 47  |  | 55  |
| 9   | 67  | 55  | 48  | 44  | 66  | 55  | 48  | 44  | 54  | 48  | 44  |  | 53  | 47  | 43  |  | 52  |
| 10  | 63  | 52  | 45  | 41  | 62  | 51  | 45  | 41  | 51  | 45  | 40  |  | 50  | 44  | 40  |  | 49  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 67.6   | 7.0       |
| 10°-20°   | 181.3  | 18.9      |
| 20°-30°   | 241.1  | 25.1      |
| 30°-40°   | 197.2  | 20.5      |
| 40°-50°   | 114.9  | 11.9      |
| 50°-60°   | 76.2   | 7.9       |
| 60°-70°   | 50.1   | 5.2       |
| 70°-80°   | 26.4   | 2.7       |
| 80°-90°   | 6.4    | 0.7       |
| 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°    | 490.1  | 51.0      |
| 0°-40°    | 687.3  | 71.5      |
| 0°-60°    | 878.3  | 91.4      |
| 0°-90°    | 961.3  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 961.3  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 730 |      |
| 5°  | 721 | 68   |
| 15° | 646 | 181  |
| 25° | 529 | 241  |
| 35° | 315 | 197  |
| 45° | 145 | 115  |
| 55° | 85  | 76   |
| 65° | 50  | 50   |
| 75° | 25  | 26   |
| 85° | 6   | 6    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 729.8 |
| 2.5°  | 728.4 |
| 5°    | 721.4 |
| 7.5°  | 704.7 |
| 10°   | 686.6 |
| 12.5° | 669.9 |
| 15°   | 646.2 |
| 17.5° | 619.7 |
| 20°   | 597.5 |
| 22.5° | 566.8 |
| 25°   | 529.2 |
| 27.5° | 488.8 |
| 30°   | 437.3 |
| 32.5° | 376.0 |
| 35°   | 314.7 |
| 37.5° | 259.0 |
| 40°   | 210.3 |
| 42.5° | 172.7 |
| 45°   | 144.8 |
| 47.5° | 122.6 |
| 50°   | 107.2 |
| 52.5° | 94.7  |
| 55°   | 85.0  |
| 57.5° | 75.2  |
| 60°   | 65.5  |
| 62.5° | 58.5  |
| 65°   | 50.1  |
| 67.5° | 43.2  |
| 70°   | 36.2  |
| 72.5° | 30.6  |
| 75°   | 25.1  |
| 77.5° | 19.5  |
| 80°   | 13.9  |
| 82.5° | 9.7   |
| 85°   | 5.6   |
| 87.5° | 1.4   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)