

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: P212143

Luminaire Tested: **LSR4B30D010BZ EC4B30508050 4LBMMW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212143  
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: LSR4B30D010BZ EC4B30508050 4LBMMW1  
Description: PORTFOLIO 4 INCH CYLINDER  
MEDIUM DISTRIBUTION WITH MATTE WHITE TRIM  
WATTAGE D010TR-27.4W DE010-27.95W D5LT-27.65W DMX-27.73W DL2-29.56W  
DL3-29.67W DLE-29.73W  
Light Source: HIGH LUMEN LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2364.4 lumens  
Efficiency: N/A  
Efficacy: 84.4 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

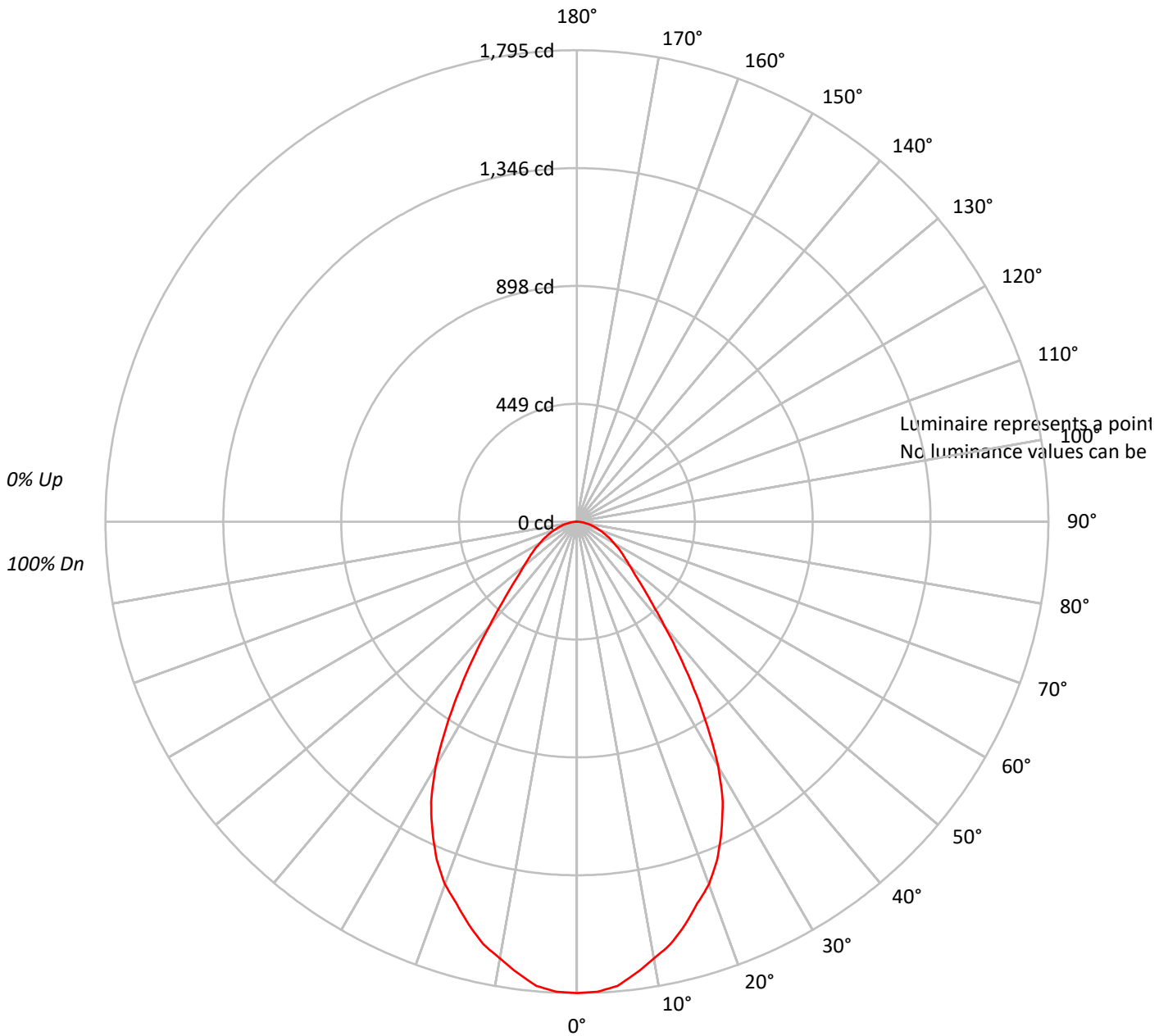
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  | 89  | 86  | 83  | 87  | 84  | 81  | 80  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 97  | 89  | 83  | 77  | 95  | 87  | 82  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 80  | 76  | 73  | 71  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 91  | 81  | 74  | 69  | 89  | 80  | 74  | 69  | 78  | 72  | 68  | 76  | 71  | 67  | 74  | 69  | 66  | 64  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 85  | 75  | 67  | 62  | 83  | 74  | 67  | 62  | 72  | 66  | 61  | 70  | 65  | 61  | 68  | 64  | 60  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 80  | 69  | 62  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 56  | 65  | 59  | 55  | 63  | 59  | 55  | 53  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 75  | 64  | 57  | 52  | 74  | 63  | 56  | 51  | 62  | 56  | 51  | 60  | 55  | 51  | 59  | 54  | 50  | 49  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 71  | 59  | 52  | 47  | 69  | 59  | 52  | 47  | 58  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 45  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 67  | 55  | 48  | 44  | 66  | 55  | 48  | 44  | 54  | 48  | 44  | 53  | 47  | 43  | 52  | 47  | 43  | 42  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 63  | 52  | 45  | 41  | 62  | 51  | 45  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 49  | 44  | 40  | 39  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 166.4  | 7.0       |
| 10°-20°   | 446.0  | 18.9      |
| 20°-30°   | 593.0  | 25.1      |
| 30°-40°   | 485.0  | 20.5      |
| 40°-50°   | 282.5  | 11.9      |
| 50°-60°   | 187.4  | 7.9       |
| 60°-70°   | 123.2  | 5.2       |
| 70°-80°   | 65.1   | 2.8       |
| 80°-90°   | 15.8   | 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°    | 1205.4 | 51.0      |
| 0°-40°    | 1690.4 | 71.5      |
| 0°-60°    | 2160.3 | 91.4      |
| 0°-90°    | 2364.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2364.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1795 |      |
| 5°  | 1774 | 166  |
| 15° | 1589 | 446  |
| 25° | 1302 | 593  |
| 35° | 774  | 485  |
| 45° | 356  | 282  |
| 55° | 209  | 187  |
| 65° | 123  | 123  |
| 75° | 62   | 65   |
| 85° | 14   | 16   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1794.9 |
| 2.5°  | 1791.4 |
| 5°    | 1774.3 |
| 7.5°  | 1733.2 |
| 10°   | 1688.7 |
| 12.5° | 1647.6 |
| 15°   | 1589.3 |
| 17.5° | 1524.3 |
| 20°   | 1469.5 |
| 22.5° | 1394.1 |
| 25°   | 1301.6 |
| 27.5° | 1202.3 |
| 30°   | 1075.5 |
| 32.5° | 924.8  |
| 35°   | 774.1  |
| 37.5° | 637.1  |
| 40°   | 517.2  |
| 42.5° | 424.7  |
| 45°   | 356.2  |
| 47.5° | 301.4  |
| 50°   | 263.7  |
| 52.5° | 232.9  |
| 55°   | 208.9  |
| 57.5° | 185.0  |
| 60°   | 161.0  |
| 62.5° | 143.9  |
| 65°   | 123.3  |
| 67.5° | 106.2  |
| 70°   | 89.1   |
| 72.5° | 75.4   |
| 75°   | 61.7   |
| 77.5° | 48.0   |
| 80°   | 34.3   |
| 82.5° | 24.0   |
| 85°   | 13.7   |
| 87.5° | 3.4    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)