

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: P210809

Luminaire Tested: **LE\_4B10D010 EC4B10208030 4LBM1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P210809  
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: LE\_4B10D010 EC4B10208030 4LBM1MW  
Description: PORTFOLIO 4 INCH CYLINDER  
MEDIUM DISTRIBUTION WITH MATTE WHITE 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: 974.8 lumens  
Efficiency: N/A  
Efficacy: 98.5 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

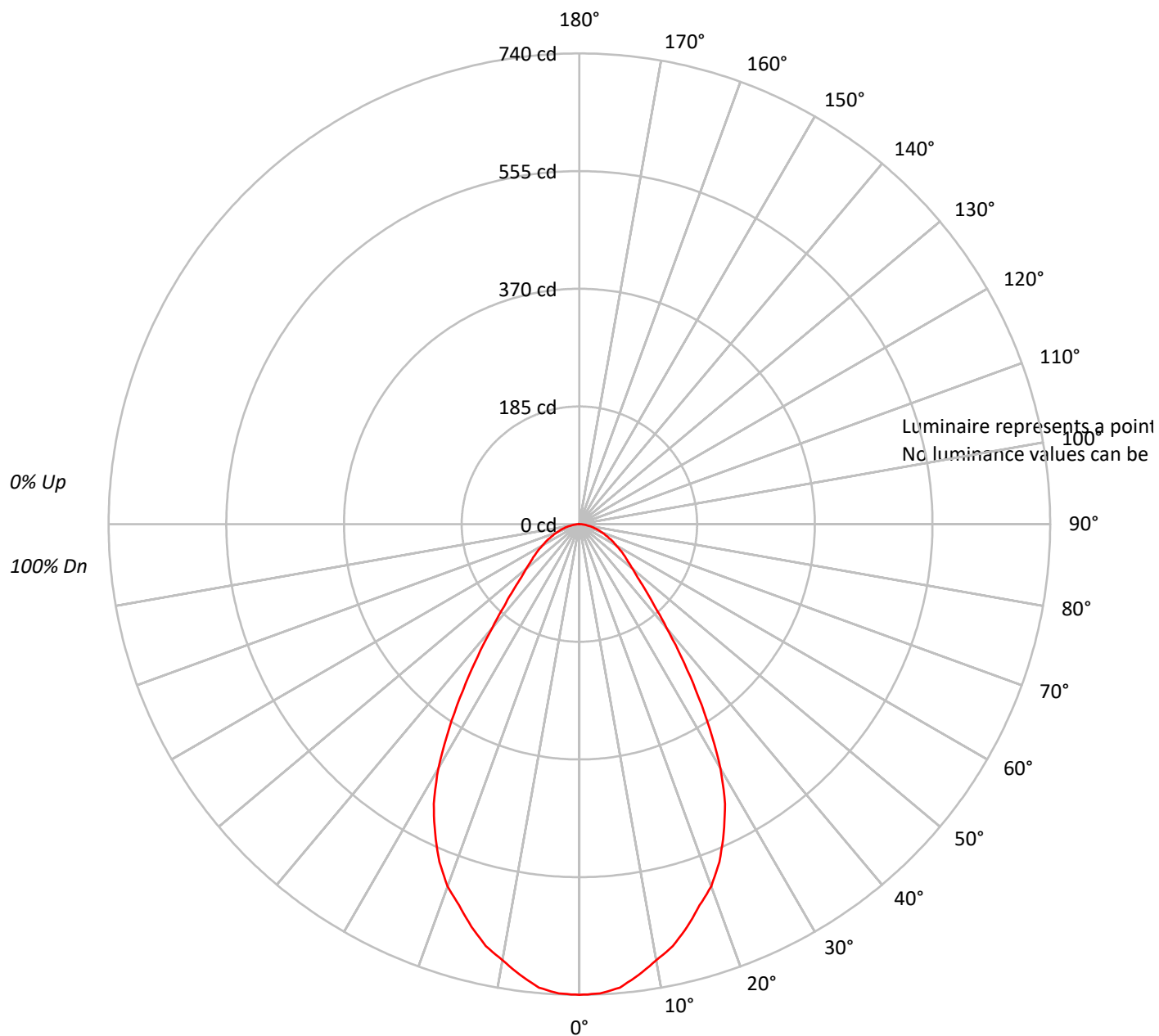
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°    | 68.6   | 7.0       |
| 10°-20°   | 183.9  | 18.9      |
| 20°-30°   | 244.5  | 25.1      |
| 30°-40°   | 200.0  | 20.5      |
| 40°-50°   | 116.5  | 11.9      |
| 50°-60°   | 77.2   | 7.9       |
| 60°-70°   | 50.8   | 5.2       |
| 70°-80°   | 26.8   | 2.8       |
| 80°-90°   | 6.6    | 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°    | 497.0  | 51.0      |
| 0°-40°    | 696.9  | 71.5      |
| 0°-60°    | 890.6  | 91.4      |
| 0°-90°    | 974.8  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 974.8  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 740 |      |
| 5°  | 732 | 69   |
| 15° | 655 | 184  |
| 25° | 537 | 245  |
| 35° | 319 | 200  |
| 45° | 147 | 116  |
| 55° | 86  | 77   |
| 65° | 51  | 51   |
| 75° | 25  | 27   |
| 85° | 6   | 7    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 740.0 |
| 2.5°  | 738.6 |
| 5°    | 731.5 |
| 7.5°  | 714.6 |
| 10°   | 696.2 |
| 12.5° | 679.3 |
| 15°   | 655.3 |
| 17.5° | 628.4 |
| 20°   | 605.9 |
| 22.5° | 574.8 |
| 25°   | 536.6 |
| 27.5° | 495.7 |
| 30°   | 443.5 |
| 32.5° | 381.3 |
| 35°   | 319.1 |
| 37.5° | 262.6 |
| 40°   | 213.2 |
| 42.5° | 175.2 |
| 45°   | 146.9 |
| 47.5° | 124.2 |
| 50°   | 108.7 |
| 52.5° | 96.0  |
| 55°   | 86.2  |
| 57.5° | 76.2  |
| 60°   | 66.4  |
| 62.5° | 59.3  |
| 65°   | 50.8  |
| 67.5° | 43.7  |
| 70°   | 36.8  |
| 72.5° | 31.1  |
| 75°   | 25.4  |
| 77.5° | 19.7  |
| 80°   | 14.2  |
| 82.5° | 9.9   |
| 85°   | 5.7   |
| 87.5° | 1.4   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)