

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: P210846

Luminaire Tested: **LE\_4B10D010 EC4B10209030 4LBPS1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P210846  
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 EC4B10209030 4LBPS1MW  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH PLASTIC 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: 1134.1 lumens  
Efficiency: N/A  
Efficacy: 114.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.34  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

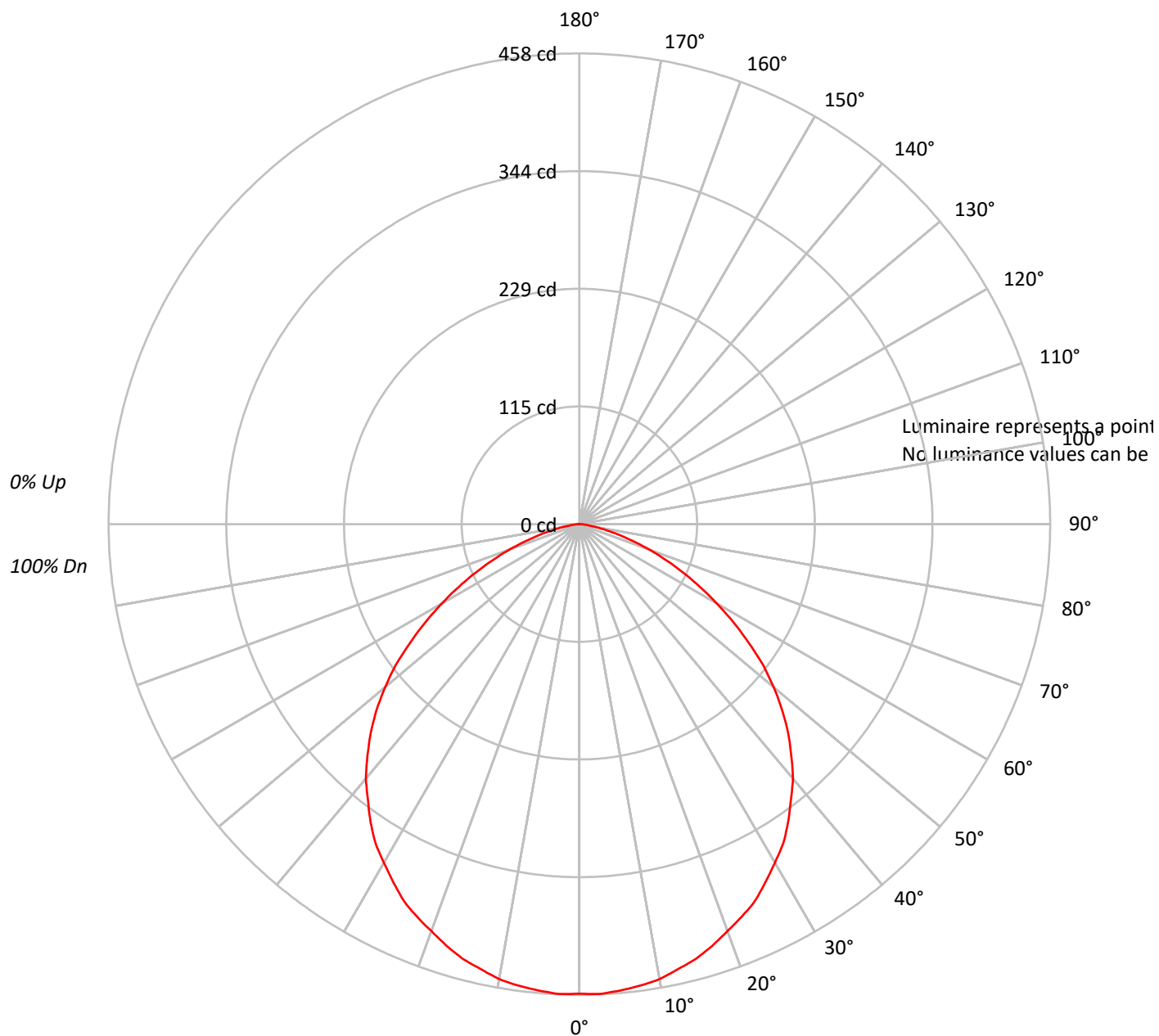
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 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   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 101 | 93  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  |  | 85  | 81  | 77  |  | 82  |
| 3   | 93  | 83  | 75  | 69  | 90  | 81  | 74  | 69  | 78  | 72  | 67  |  | 76  | 70  | 66  |  | 73  |
| 4   | 85  | 74  | 66  | 59  | 83  | 72  | 65  | 59  | 70  | 63  | 58  |  | 68  | 62  | 57  |  | 66  |
| 5   | 78  | 66  | 58  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 51  |  | 61  | 55  | 50  |  | 59  |
| 6   | 73  | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 44  |  | 55  | 49  | 44  |  | 54  |
| 7   | 67  | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  |  | 51  | 44  | 39  |  | 49  |
| 8   | 63  | 50  | 41  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 35  |  | 46  | 40  | 35  |  | 45  |
| 9   | 59  | 46  | 38  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  |  | 43  | 36  | 32  |  | 42  |
| 10  | 55  | 42  | 34  | 29  | 54  | 42  | 34  | 29  | 41  | 34  | 29  |  | 40  | 33  | 29  |  | 39  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.3   | 3.8       |
| 10°-20°   | 123.4  | 10.9      |
| 20°-30°   | 185.9  | 16.4      |
| 30°-40°   | 221.2  | 19.5      |
| 40°-50°   | 220.8  | 19.5      |
| 50°-60°   | 179.5  | 15.8      |
| 60°-70°   | 110.5  | 9.7       |
| 70°-80°   | 42.8   | 3.8       |
| 80°-90°   | 6.8    | 0.6       |
| 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°    | 352.6  | 31.1      |
| 0°-40°    | 573.7  | 50.6      |
| 0°-60°    | 974.1  | 85.9      |
| 0°-90°    | 1134.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1134.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 457 |      |
| 5°  | 456 | 43   |
| 15° | 438 | 123  |
| 25° | 404 | 186  |
| 35° | 354 | 221  |
| 45° | 287 | 221  |
| 55° | 201 | 180  |
| 65° | 111 | 110  |
| 75° | 39  | 43   |
| 85° | 5   | 7    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 456.9 |
| 2.5°  | 457.6 |
| 5°    | 455.6 |
| 7.5°  | 453.0 |
| 10°   | 449.6 |
| 12.5° | 443.5 |
| 15°   | 438.1 |
| 17.5° | 430.1 |
| 20°   | 421.3 |
| 22.5° | 413.3 |
| 25°   | 404.5 |
| 27.5° | 392.4 |
| 30°   | 380.4 |
| 32.5° | 368.9 |
| 35°   | 354.1 |
| 37.5° | 338.0 |
| 40°   | 323.2 |
| 42.5° | 305.1 |
| 45°   | 287.0 |
| 47.5° | 267.5 |
| 50°   | 246.6 |
| 52.5° | 225.2 |
| 55°   | 200.9 |
| 57.5° | 177.4 |
| 60°   | 154.5 |
| 62.5° | 132.4 |
| 65°   | 110.9 |
| 67.5° | 90.7  |
| 70°   | 71.9  |
| 72.5° | 54.4  |
| 75°   | 39.0  |
| 77.5° | 25.5  |
| 80°   | 15.4  |
| 82.5° | 9.4   |
| 85°   | 5.3   |
| 87.5° | 2.7   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)