

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: P212011

Luminaire Tested: **LE\_4B30D010 EC4B30509730 4LBS1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212011  
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\_4B30D010 EC4B30509730 4LBS1MW  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW 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: 3625.2 lumens  
Efficiency: N/A  
Efficacy: 129.5 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

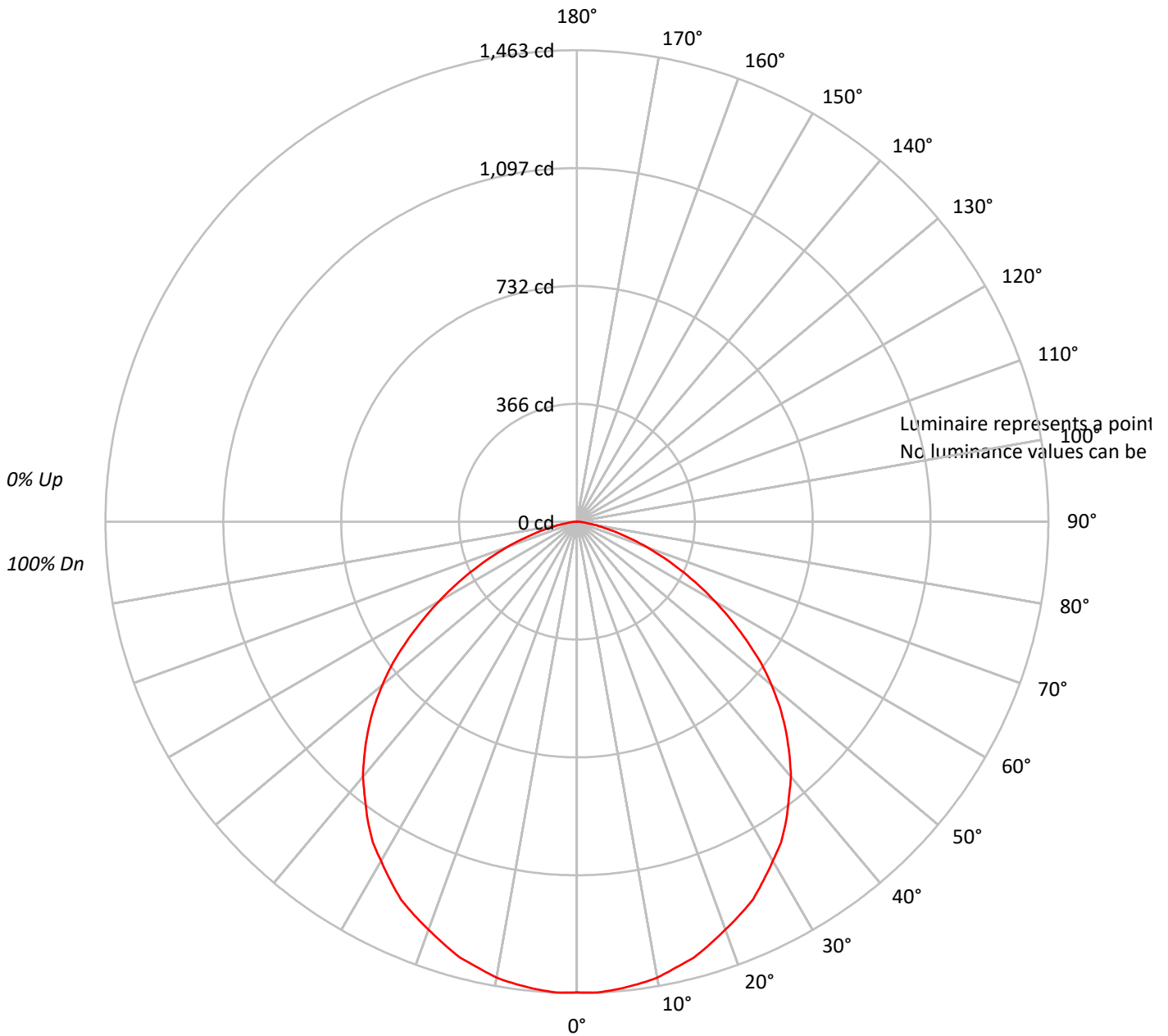
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 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 |    |    |    | 100 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 86  |    |    |    | 86  |
| 2   | 101 | 93  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  | 85  | 81  | 77  | 82  | 79  | 76  | 74  |    |    |    | 74  |
| 3   | 93  | 83  | 75  | 69  | 90  | 81  | 74  | 69  | 78  | 72  | 67  | 76  | 70  | 66  | 73  | 69  | 65  | 63  |    |    |    | 63  |
| 4   | 85  | 74  | 66  | 59  | 83  | 72  | 65  | 59  | 70  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 56  | 54  |    |    |    | 54  |
| 5   | 78  | 66  | 58  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 51  | 61  | 55  | 50  | 59  | 54  | 49  | 47  |    |    |    | 47  |
| 6   | 73  | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 44  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |    |    |    | 42  |
| 7   | 67  | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 51  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    | 37  |
| 8   | 63  | 50  | 41  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 35  | 46  | 40  | 35  | 45  | 39  | 35  | 33  |    |    |    | 33  |
| 9   | 59  | 46  | 38  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 32  | 30  |    |    |    | 30  |
| 10  | 55  | 42  | 34  | 29  | 54  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 27  |    |    |    | 27  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 138.4  | 3.8       |
| 10°-20°   | 394.5  | 10.9      |
| 20°-30°   | 594.1  | 16.4      |
| 30°-40°   | 706.9  | 19.5      |
| 40°-50°   | 705.7  | 19.5      |
| 50°-60°   | 573.9  | 15.8      |
| 60°-70°   | 353.1  | 9.7       |
| 70°-80°   | 136.8  | 3.8       |
| 80°-90°   | 21.9   | 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°    | 1127.0 | 31.1      |
| 0°-40°    | 1834.0 | 50.6      |
| 0°-60°    | 3113.5 | 85.9      |
| 0°-90°    | 3625.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3625.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1461 |      |
| 5°  | 1456 | 138  |
| 15° | 1400 | 394  |
| 25° | 1293 | 594  |
| 35° | 1132 | 707  |
| 45° | 917  | 706  |
| 55° | 642  | 574  |
| 65° | 354  | 353  |
| 75° | 125  | 137  |
| 85° | 17   | 22   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1460.7 |
| 2.5°  | 1462.8 |
| 5°    | 1456.4 |
| 7.5°  | 1447.7 |
| 10°   | 1437.0 |
| 12.5° | 1417.6 |
| 15°   | 1400.5 |
| 17.5° | 1374.7 |
| 20°   | 1346.8 |
| 22.5° | 1321.0 |
| 25°   | 1293.1 |
| 27.5° | 1254.4 |
| 30°   | 1215.8 |
| 32.5° | 1179.3 |
| 35°   | 1131.9 |
| 37.5° | 1080.4 |
| 40°   | 1033.2 |
| 42.5° | 975.2  |
| 45°   | 917.2  |
| 47.5° | 854.9  |
| 50°   | 788.3  |
| 52.5° | 719.5  |
| 55°   | 642.3  |
| 57.5° | 567.0  |
| 60°   | 494.0  |
| 62.5° | 423.2  |
| 65°   | 354.4  |
| 67.5° | 290.0  |
| 70°   | 229.8  |
| 72.5° | 174.0  |
| 75°   | 124.6  |
| 77.5° | 81.7   |
| 80°   | 49.4   |
| 82.5° | 30.0   |
| 85°   | 17.2   |
| 87.5° | 8.6    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)