

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: P212051

Luminaire Tested: **LE\_4B30D010 EC4B30509035 4LBCS1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212051  
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 EC4B30509035 4LBCS1MW  
Description: PORTFOLIO 4 INCH CYLINDER  
SHALLOW DISTRIBUTION WITH CAST 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: 3059.9 lumens  
Efficiency: N/A  
Efficacy: 109.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.33  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

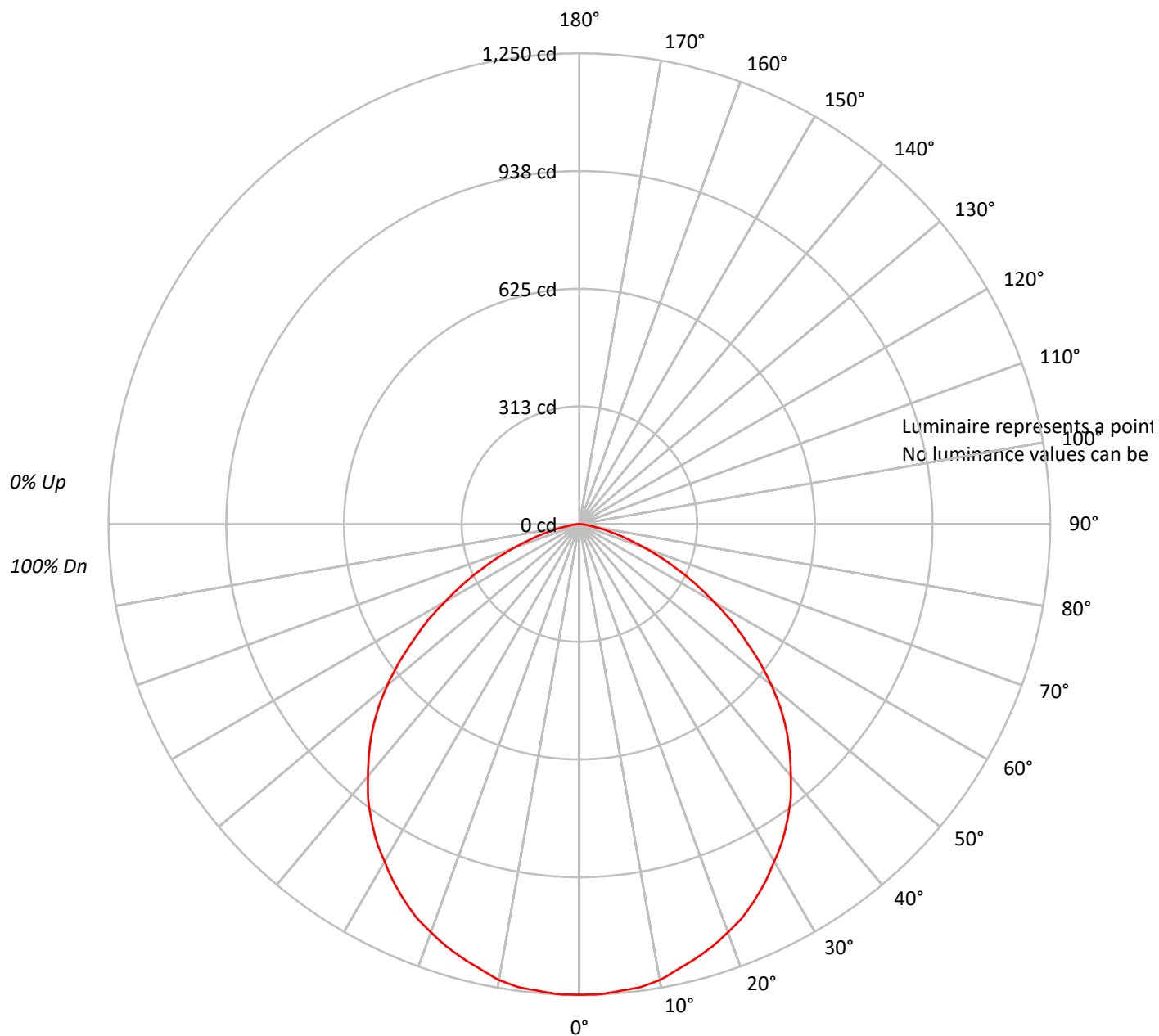
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





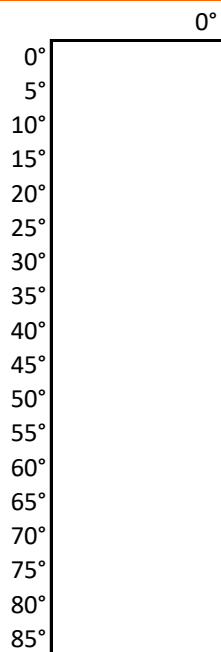
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| 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   | 110 | 106 | 102 | 99  | 108 | 104 | 100 | 97  | 100 | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 101 | 94  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  |  | 85  | 81  | 78  |  | 82  |
| 3   | 93  | 83  | 75  | 70  | 90  | 81  | 74  | 69  | 79  | 73  | 68  |  | 76  | 71  | 67  |  | 73  |
| 4   | 85  | 74  | 66  | 60  | 83  | 73  | 65  | 59  | 70  | 64  | 58  |  | 68  | 62  | 58  |  | 66  |
| 5   | 79  | 66  | 58  | 52  | 77  | 65  | 57  | 51  | 63  | 56  | 51  |  | 61  | 55  | 50  |  | 60  |
| 6   | 73  | 60  | 52  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 45  |  | 56  | 49  | 44  |  | 54  |
| 7   | 68  | 55  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  |  | 51  | 44  | 40  |  | 50  |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  |  | 47  | 40  | 36  |  | 46  |
| 9   | 59  | 46  | 38  | 33  | 57  | 45  | 38  | 32  | 44  | 37  | 32  |  | 43  | 37  | 32  |  | 42  |
| 10  | 55  | 42  | 35  | 30  | 54  | 42  | 34  | 30  | 41  | 34  | 29  |  | 40  | 34  | 29  |  | 39  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 118.4  | 3.9       |
| 10°-20°   | 337.1  | 11.0      |
| 20°-30°   | 507.1  | 16.6      |
| 30°-40°   | 601.0  | 19.6      |
| 40°-50°   | 598.1  | 19.5      |
| 50°-60°   | 482.1  | 15.8      |
| 60°-70°   | 291.7  | 9.5       |
| 70°-80°   | 108.3  | 3.5       |
| 80°-90°   | 16.2   | 0.5       |
| 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°    | 962.6  | 31.5      |
| 0°-40°    | 1563.6 | 51.1      |
| 0°-60°    | 2643.7 | 86.4      |
| 0°-90°    | 3059.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3059.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1250 |      |
| 5°  | 1244 | 118  |
| 15° | 1194 | 337  |
| 25° | 1101 | 507  |
| 35° | 962  | 601  |
| 45° | 779  | 598  |
| 55° | 538  | 482  |
| 65° | 293  | 292  |
| 75° | 98   | 108  |
| 85° | 13   | 16   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1249.7 |
| 2.5°  | 1249.7 |
| 5°    | 1244.1 |
| 7.5°  | 1240.4 |
| 10°   | 1229.4 |
| 12.5° | 1210.8 |
| 15°   | 1194.1 |
| 17.5° | 1175.5 |
| 20°   | 1153.3 |
| 22.5° | 1131.0 |
| 25°   | 1101.4 |
| 27.5° | 1069.9 |
| 30°   | 1034.6 |
| 32.5° | 1001.3 |
| 35°   | 962.3  |
| 37.5° | 921.5  |
| 40°   | 873.4  |
| 42.5° | 827.0  |
| 45°   | 778.7  |
| 47.5° | 725.0  |
| 50°   | 665.6  |
| 52.5° | 604.5  |
| 55°   | 537.7  |
| 57.5° | 478.4  |
| 60°   | 411.7  |
| 62.5° | 352.3  |
| 65°   | 293.0  |
| 67.5° | 237.3  |
| 70°   | 185.4  |
| 72.5° | 139.1  |
| 75°   | 98.3   |
| 77.5° | 63.0   |
| 80°   | 37.1   |
| 82.5° | 22.3   |
| 85°   | 13.0   |
| 87.5° | 5.6    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)