

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: P208401

Luminaire Tested: **LD4B30D010 EU4B30509030 4LBSLI1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P208401  
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: LD4B30D010 EU4B30509030 4LBSLI1  
Description: PORTFOLIO 4 INCH SHALLOW RECESSED DOWNLIGHT  
SHALLOW DISTRIBUTION WITH SPECULAR CLEAR 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: 2552.6 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.91 / 1  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

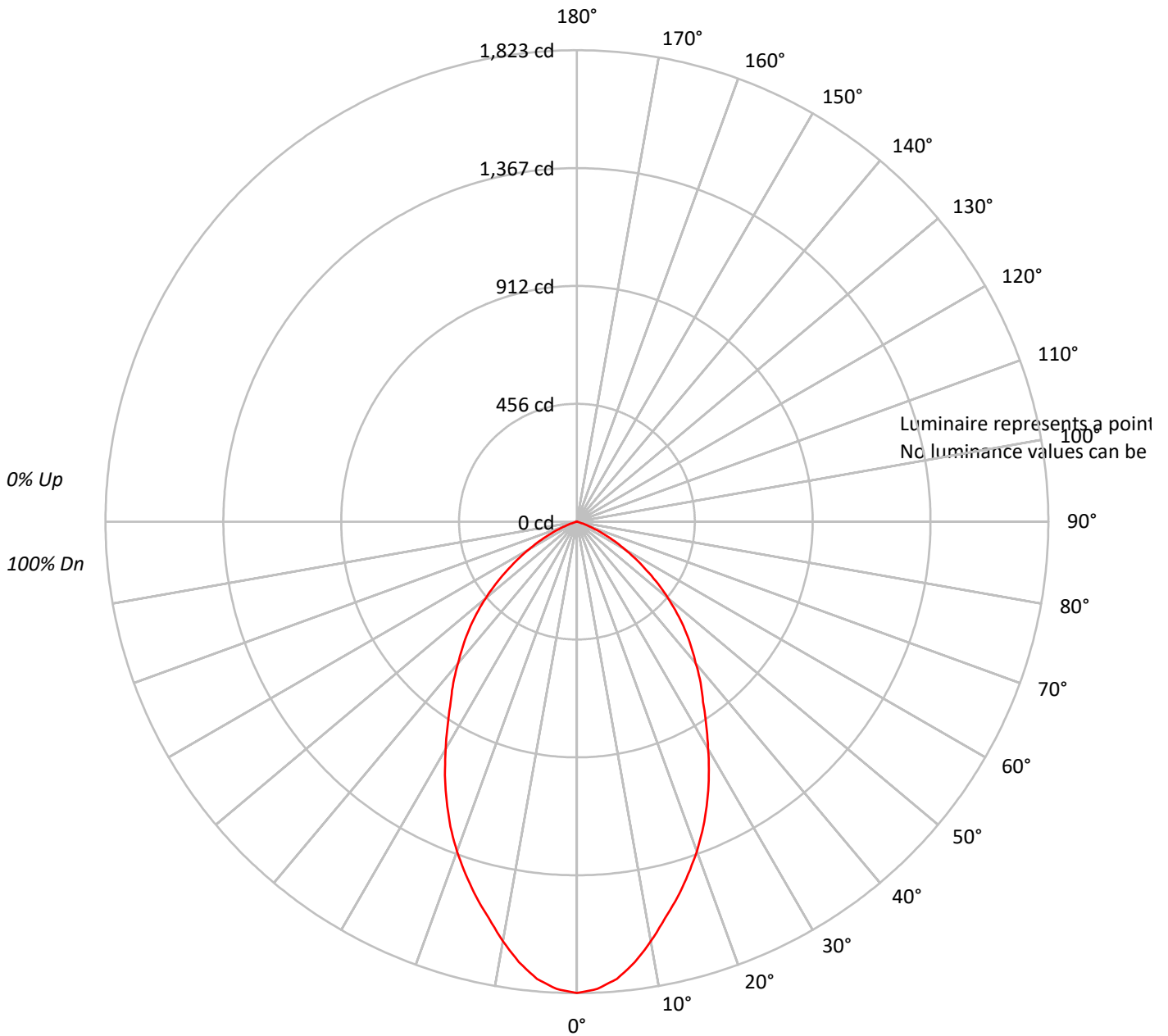
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    |   |
| 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 |    |    |   |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |   |
| 2   | 104 | 98  | 93  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  | 90  | 86  | 84  | 87  | 84  | 82  | 80  |    |    |   |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 77  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |    |    |   |
| 4   | 90  | 81  | 73  | 68  | 88  | 79  | 73  | 68  | 77  | 71  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |    |    |   |
| 5   | 84  | 73  | 66  | 61  | 82  | 72  | 65  | 60  | 70  | 64  | 60  | 69  | 63  | 59  | 67  | 62  | 59  | 57  |    |    |   |
| 6   | 79  | 67  | 60  | 54  | 77  | 66  | 59  | 54  | 65  | 58  | 54  | 63  | 58  | 53  | 62  | 57  | 53  | 51  |    |    |   |
| 7   | 74  | 62  | 54  | 49  | 72  | 61  | 54  | 49  | 60  | 53  | 49  | 58  | 53  | 48  | 57  | 52  | 48  | 46  |    |    |   |
| 8   | 69  | 57  | 50  | 45  | 68  | 57  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |   |
| 9   | 65  | 53  | 46  | 41  | 64  | 53  | 46  | 41  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 44  | 41  | 39  |    |    |   |
| 10  | 61  | 50  | 43  | 38  | 60  | 49  | 42  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 46  | 41  | 37  | 36  |    |    |   |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 165.3  | 6.5       |
| 10°-20°   | 421.5  | 16.5      |
| 20°-30°   | 546.2  | 21.4      |
| 30°-40°   | 535.1  | 21.0      |
| 40°-50°   | 453.6  | 17.8      |
| 50°-60°   | 297.4  | 11.6      |
| 60°-70°   | 119.5  | 4.7       |
| 70°-80°   | 13.7   | 0.5       |
| 80°-90°   | 0.4    | 0.0       |
| 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°    | 1132.9 | 44.4      |
| 0°-40°    | 1668.0 | 65.3      |
| 0°-60°    | 2419.0 | 94.8      |
| 0°-90°    | 2552.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2552.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1823 |      |
| 5°  | 1775 | 165  |
| 15° | 1503 | 421  |
| 25° | 1192 | 546  |
| 35° | 850  | 535  |
| 45° | 591  | 454  |
| 55° | 331  | 297  |
| 65° | 116  | 120  |
| 75° | 6    | 14   |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1822.6 |
| 2.5°  | 1808.5 |
| 5°    | 1774.6 |
| 7.5°  | 1718.0 |
| 10°   | 1647.4 |
| 12.5° | 1571.1 |
| 15°   | 1503.3 |
| 17.5° | 1429.8 |
| 20°   | 1356.3 |
| 22.5° | 1277.2 |
| 25°   | 1192.5 |
| 27.5° | 1104.9 |
| 30°   | 1014.4 |
| 32.5° | 929.7  |
| 35°   | 850.5  |
| 37.5° | 785.6  |
| 40°   | 714.9  |
| 42.5° | 652.7  |
| 45°   | 590.6  |
| 47.5° | 525.6  |
| 50°   | 460.6  |
| 52.5° | 395.6  |
| 55°   | 330.6  |
| 57.5° | 271.3  |
| 60°   | 214.8  |
| 62.5° | 163.9  |
| 65°   | 115.9  |
| 67.5° | 76.3   |
| 70°   | 45.2   |
| 72.5° | 19.8   |
| 75°   | 5.7    |
| 77.5° | 2.8    |
| 80°   | 2.8    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)