

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: P252020

Luminaire Tested: **LD4B30D010 EU4B30509040 4LBBA1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252020  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-3)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B30D010 EU4B30509040 4LBBA1MW  
Description: PORTFOLIO 4 INCH BAFFLE RECESSED DOWNLIGHT, WITH MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3032.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1.01 / 0.99  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

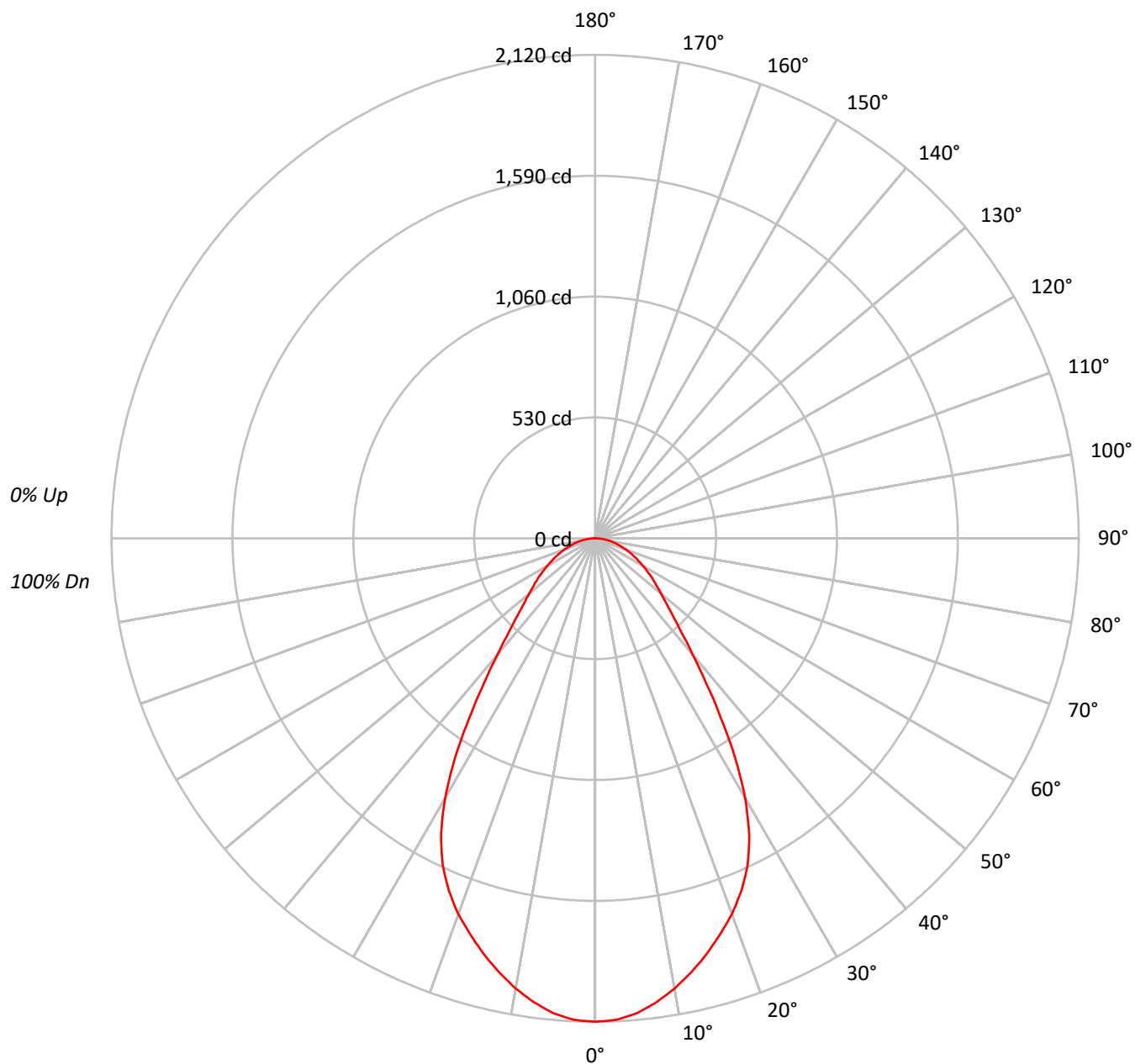
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  |  | 97  | 95  | 93  |  | 93  |
| 2   | 103 | 96  | 91  | 86  | 101 | 95  | 90  | 85  | 91  | 87  | 83  |  | 88  | 85  | 82  |  | 85  |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 73  |  | 80  | 76  | 72  |  | 78  |
| 4   | 89  | 80  | 72  | 67  | 87  | 78  | 72  | 66  | 76  | 70  | 65  |  | 74  | 69  | 65  |  | 72  |
| 5   | 84  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 64  | 59  |  | 68  | 63  | 58  |  | 66  |
| 6   | 78  | 67  | 59  | 54  | 77  | 66  | 59  | 54  | 64  | 58  | 53  |  | 63  | 57  | 53  |  | 61  |
| 7   | 74  | 62  | 54  | 49  | 72  | 61  | 54  | 49  | 60  | 53  | 49  |  | 58  | 53  | 48  |  | 57  |
| 8   | 69  | 58  | 50  | 45  | 68  | 57  | 50  | 45  | 56  | 49  | 45  |  | 54  | 49  | 45  |  | 53  |
| 9   | 65  | 54  | 46  | 42  | 64  | 53  | 46  | 42  | 52  | 46  | 41  |  | 51  | 45  | 41  |  | 50  |
| 10  | 62  | 50  | 43  | 39  | 61  | 50  | 43  | 38  | 49  | 43  | 38  |  | 48  | 42  | 38  |  | 47  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 206650 |
| 5°  | 204534 |
| 10° | 198388 |
| 15° | 190431 |
| 20° | 181860 |
| 25° | 170074 |
| 30° | 148051 |
| 35° | 114239 |
| 40° | 84527  |
| 45° | 66515  |
| 50° | 57130  |
| 55° | 51959  |
| 60° | 47345  |
| 65° | 43838  |
| 70° | 40491  |
| 75° | 37956  |
| 80° | 35246  |
| 85° | 33211  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 196.8  | 6.5       |
| 10°-20°   | 530.4  | 17.5      |
| 20°-30°   | 717.7  | 23.7      |
| 30°-40°   | 603.1  | 19.9      |
| 40°-50°   | 381.6  | 12.6      |
| 50°-60°   | 274.1  | 9.0       |
| 60°-70°   | 188.7  | 6.2       |
| 70°-80°   | 106.8  | 3.5       |
| 80°-90°   | 32.8   | 1.1       |
| 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°    | 1444.9 | 47.7      |
| 0°-40°    | 2048.0 | 67.5      |
| 0°-60°    | 2703.8 | 89.2      |
| 0°-90°    | 3032.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3032.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2120 |      |
| 5°  | 2091 | 197  |
| 15° | 1887 | 530  |
| 25° | 1582 | 718  |
| 35° | 960  | 603  |
| 45° | 483  | 382  |
| 55° | 306  | 274  |
| 65° | 190  | 189  |
| 75° | 101  | 107  |
| 85° | 30   | 33   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2120.4 |
| 2.5°  | 2113.8 |
| 5°    | 2090.7 |
| 7.5°  | 2052.7 |
| 10°   | 2004.7 |
| 12.5° | 1948.5 |
| 15°   | 1887.4 |
| 17.5° | 1821.3 |
| 20°   | 1753.5 |
| 22.5° | 1674.2 |
| 25°   | 1581.6 |
| 27.5° | 1462.6 |
| 30°   | 1315.6 |
| 32.5° | 1143.7 |
| 35°   | 960.2  |
| 37.5° | 798.3  |
| 40°   | 664.4  |
| 42.5° | 560.3  |
| 45°   | 482.6  |
| 47.5° | 423.1  |
| 50°   | 376.8  |
| 52.5° | 338.8  |
| 55°   | 305.8  |
| 57.5° | 272.7  |
| 60°   | 242.9  |
| 62.5° | 214.9  |
| 65°   | 190.1  |
| 67.5° | 165.3  |
| 70°   | 142.1  |
| 72.5° | 120.6  |
| 75°   | 100.8  |
| 77.5° | 81.0   |
| 80°   | 62.8   |
| 82.5° | 46.3   |
| 85°   | 29.7   |
| 87.5° | 13.2   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)