

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: P251990

Luminaire Tested: **LD4B15D010 EU4B10209024 4LBBA1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251990  
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: LD4B15D010 EU4B10209024 4LBBA1MW  
Description: PORTFOLIO 4 INCH BAFFLE RECESSED DOWNLIGHT, WITH MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1294.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 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

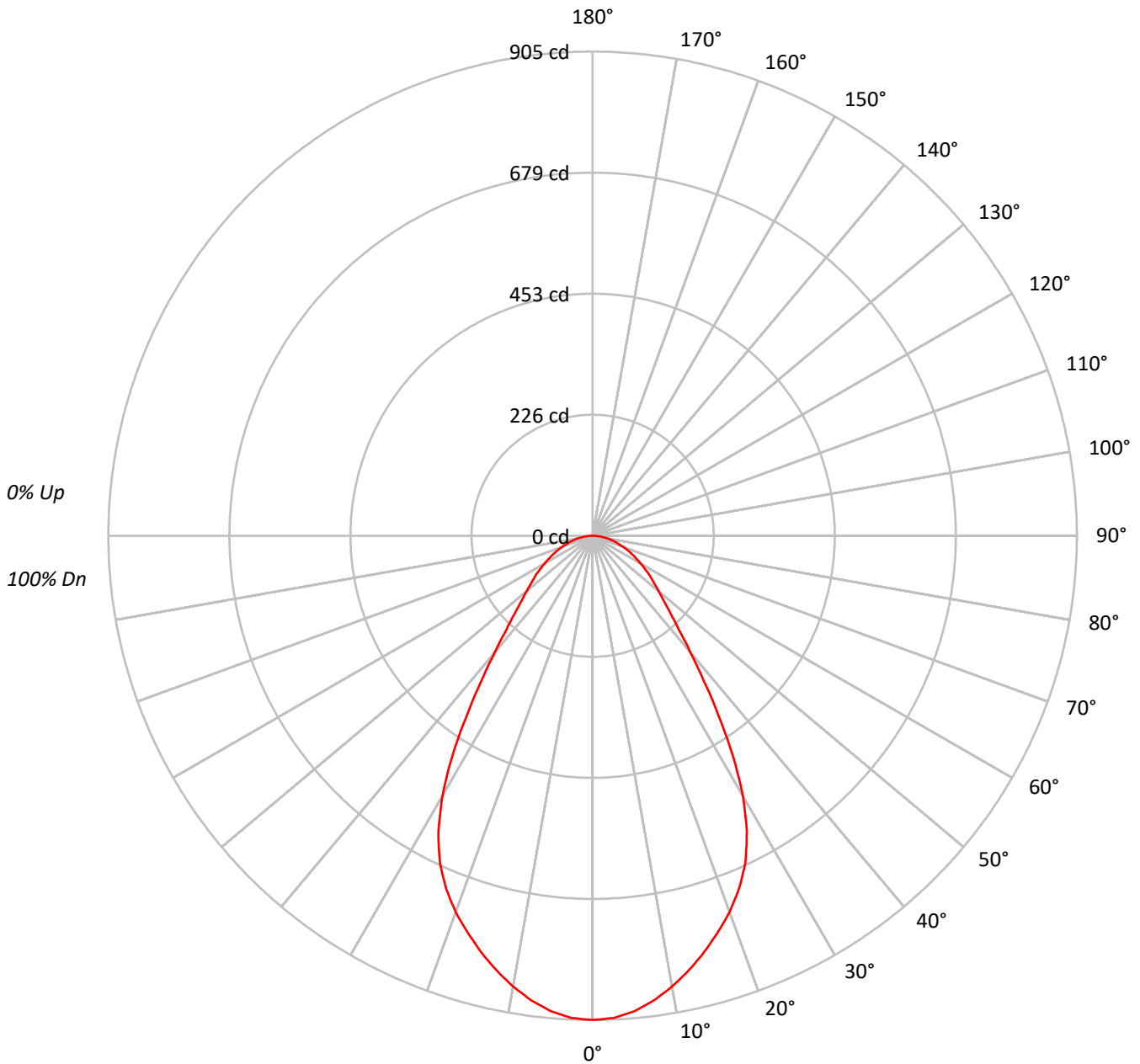
Input Watts (W): 14.39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    | 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   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |    | 88  |
| 2   | 103 | 96  | 91  | 86  | 101 | 95  | 90  | 85  | 91  | 87  | 83  | 88  | 85  | 82  | 85  | 82  | 80  | 78  |    |    |    | 78  |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |    | 69  |
| 4   | 89  | 80  | 72  | 67  | 87  | 78  | 72  | 66  | 76  | 70  | 65  | 74  | 69  | 65  | 72  | 67  | 64  | 62  |    |    |    | 62  |
| 5   | 84  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 64  | 59  | 68  | 63  | 58  | 66  | 62  | 58  | 56  |    |    |    | 56  |
| 6   | 78  | 67  | 59  | 54  | 77  | 66  | 59  | 54  | 64  | 58  | 53  | 63  | 57  | 53  | 61  | 56  | 53  | 51  |    |    |    | 51  |
| 7   | 74  | 62  | 54  | 49  | 72  | 61  | 54  | 49  | 60  | 53  | 49  | 58  | 53  | 48  | 57  | 52  | 48  | 46  |    |    |    | 46  |
| 8   | 69  | 58  | 50  | 45  | 68  | 57  | 50  | 45  | 56  | 49  | 45  | 55  | 49  | 45  | 53  | 48  | 44  | 43  |    |    |    | 43  |
| 9   | 65  | 54  | 46  | 42  | 64  | 53  | 46  | 42  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |    |    |    | 39  |
| 10  | 62  | 50  | 43  | 39  | 61  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 37  |    |    |    | 37  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 88200 |
| 5°  | 87294 |
| 10° | 84671 |
| 15° | 81272 |
| 20° | 77619 |
| 25° | 72585 |
| 30° | 63188 |
| 35° | 48756 |
| 40° | 36068 |
| 45° | 28392 |
| 50° | 24380 |
| 55° | 22174 |
| 60° | 20213 |
| 65° | 18702 |
| 70° | 17296 |
| 75° | 16192 |
| 80° | 15041 |
| 85° | 14201 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.0   | 6.5       |
| 10°-20°   | 226.4  | 17.5      |
| 20°-30°   | 306.3  | 23.7      |
| 30°-40°   | 257.4  | 19.9      |
| 40°-50°   | 162.9  | 12.6      |
| 50°-60°   | 117.0  | 9.0       |
| 60°-70°   | 80.5   | 6.2       |
| 70°-80°   | 45.6   | 3.5       |
| 80°-90°   | 14.0   | 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°    | 616.7  | 47.7      |
| 0°-40°    | 874.1  | 67.5      |
| 0°-60°    | 1153.9 | 89.2      |
| 0°-90°    | 1294.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1294.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 905 |      |
| 5°  | 892 | 84   |
| 15° | 806 | 226  |
| 25° | 675 | 306  |
| 35° | 410 | 257  |
| 45° | 206 | 163  |
| 55° | 130 | 117  |
| 65° | 81  | 81   |
| 75° | 43  | 46   |
| 85° | 13  | 14   |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 905.0 |
| 2.5°  | 902.1 |
| 5°    | 892.3 |
| 7.5°  | 876.0 |
| 10°   | 855.6 |
| 12.5° | 831.6 |
| 15°   | 805.5 |
| 17.5° | 777.3 |
| 20°   | 748.4 |
| 22.5° | 714.5 |
| 25°   | 675.0 |
| 27.5° | 624.2 |
| 30°   | 561.5 |
| 32.5° | 488.1 |
| 35°   | 409.8 |
| 37.5° | 340.7 |
| 40°   | 283.5 |
| 42.5° | 239.1 |
| 45°   | 206.0 |
| 47.5° | 180.6 |
| 50°   | 160.8 |
| 52.5° | 144.6 |
| 55°   | 130.5 |
| 57.5° | 116.4 |
| 60°   | 103.7 |
| 62.5° | 91.7  |
| 65°   | 81.1  |
| 67.5° | 70.5  |
| 70°   | 60.7  |
| 72.5° | 51.5  |
| 75°   | 43.0  |
| 77.5° | 34.6  |
| 80°   | 26.8  |
| 82.5° | 19.7  |
| 85°   | 12.7  |
| 87.5° | 5.6   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)