

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: P252009

Luminaire Tested: **LD4B20D010 EU4B10209727 4LBBA1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252009  
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: LD4B20D010 EU4B10209727 4LBBA1MW  
Description: PORTFOLIO 4 INCH BAFFLE RECESSED DOWNLIGHT, WITH MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1732.0 lumens  
Efficiency: N/A  
Efficacy: 83.3 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

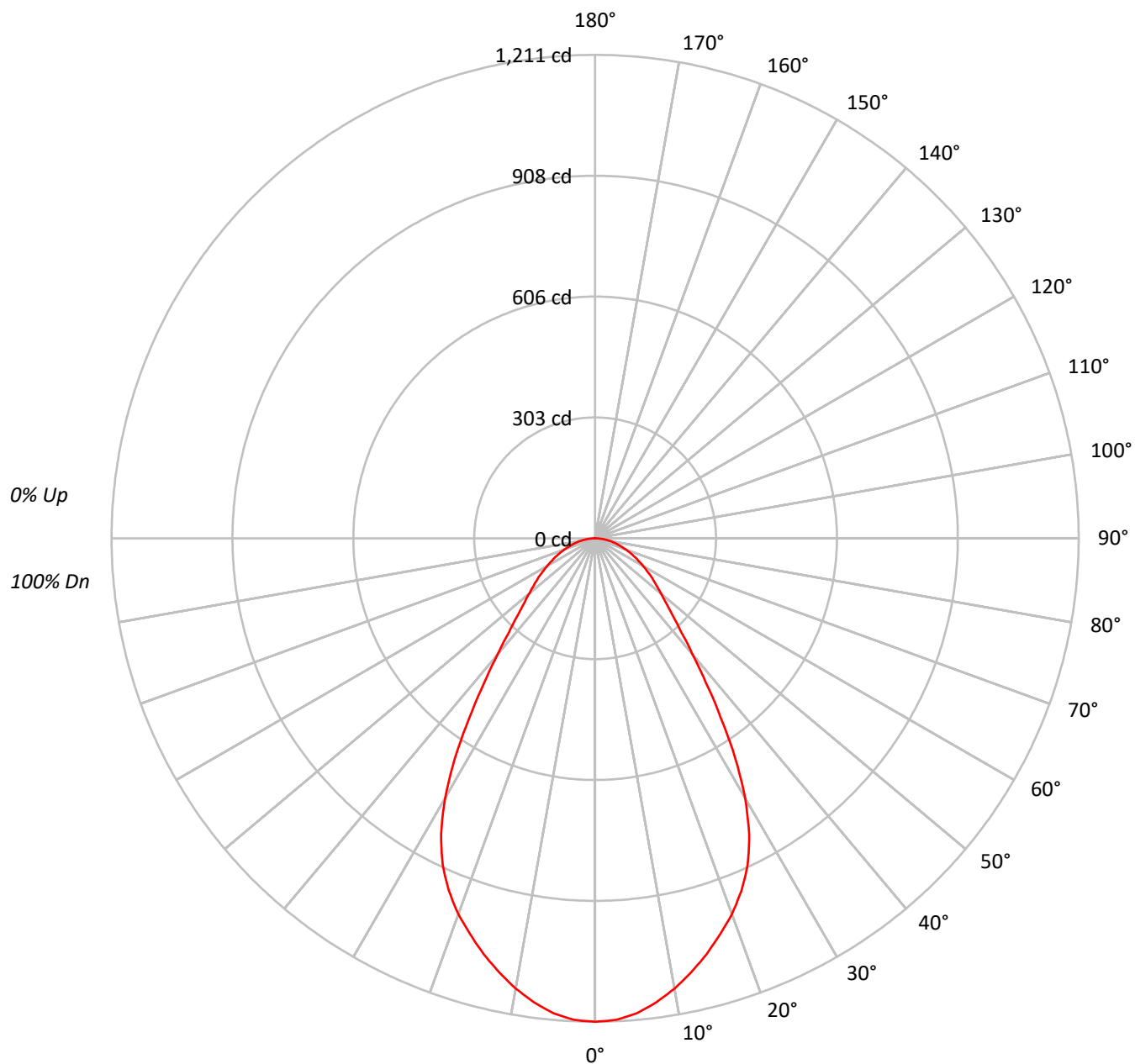
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 30  | 10  | 50  | 30 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |
| 1   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |
| 2   | 103 | 96  | 91  | 86  | 101 | 95  | 90  | 85  | 91  | 87  | 83  | 88  | 85  | 82  | 85  | 82  | 80  | 78  |    |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |
| 4   | 89  | 80  | 72  | 67  | 87  | 78  | 72  | 66  | 76  | 70  | 65  | 74  | 69  | 65  | 72  | 67  | 64  | 62  |    |
| 5   | 84  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 64  | 59  | 68  | 63  | 58  | 66  | 62  | 58  | 56  |    |
| 6   | 78  | 67  | 59  | 54  | 77  | 66  | 59  | 54  | 64  | 58  | 53  | 63  | 57  | 53  | 61  | 56  | 53  | 51  |    |
| 7   | 74  | 62  | 54  | 49  | 72  | 61  | 54  | 49  | 60  | 53  | 49  | 58  | 53  | 48  | 57  | 52  | 48  | 46  |    |
| 8   | 69  | 58  | 50  | 45  | 68  | 57  | 50  | 45  | 56  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 44  | 43  |    |
| 9   | 65  | 54  | 46  | 42  | 64  | 53  | 46  | 42  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |    |
| 10  | 62  | 50  | 43  | 39  | 61  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 37  |    |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 118051 |
| 5°  | 116839 |
| 10° | 113331 |
| 15° | 108786 |
| 20° | 103889 |
| 25° | 97156  |
| 30° | 84570  |
| 35° | 65257  |
| 40° | 48281  |
| 45° | 37999  |
| 50° | 32643  |
| 55° | 29684  |
| 60° | 27054  |
| 65° | 25044  |
| 70° | 23138  |
| 75° | 21689  |
| 80° | 20148  |
| 85° | 19010  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 112.4  | 6.5       |
| 10°-20°   | 303.0  | 17.5      |
| 20°-30°   | 410.0  | 23.7      |
| 30°-40°   | 344.5  | 19.9      |
| 40°-50°   | 218.0  | 12.6      |
| 50°-60°   | 156.6  | 9.0       |
| 60°-70°   | 107.8  | 6.2       |
| 70°-80°   | 61.0   | 3.5       |
| 80°-90°   | 18.8   | 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°    | 825.4  | 47.7      |
| 0°-40°    | 1169.9 | 67.5      |
| 0°-60°    | 1544.5 | 89.2      |
| 0°-90°    | 1732.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1732.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1211 |      |
| 5°  | 1194 | 112  |
| 15° | 1078 | 303  |
| 25° | 904  | 410  |
| 35° | 548  | 345  |
| 45° | 276  | 218  |
| 55° | 175  | 157  |
| 65° | 109  | 108  |
| 75° | 58   | 61   |
| 85° | 17   | 19   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1211.3 |
| 2.5°  | 1207.5 |
| 5°    | 1194.3 |
| 7.5°  | 1172.6 |
| 10°   | 1145.2 |
| 12.5° | 1113.1 |
| 15°   | 1078.2 |
| 17.5° | 1040.4 |
| 20°   | 1001.7 |
| 22.5° | 956.4  |
| 25°   | 903.5  |
| 27.5° | 835.5  |
| 30°   | 751.5  |
| 32.5° | 653.3  |
| 35°   | 548.5  |
| 37.5° | 456.0  |
| 40°   | 379.5  |
| 42.5° | 320.0  |
| 45°   | 275.7  |
| 47.5° | 241.7  |
| 50°   | 215.3  |
| 52.5° | 193.5  |
| 55°   | 174.7  |
| 57.5° | 155.8  |
| 60°   | 138.8  |
| 62.5° | 122.7  |
| 65°   | 108.6  |
| 67.5° | 94.4   |
| 70°   | 81.2   |
| 72.5° | 68.9   |
| 75°   | 57.6   |
| 77.5° | 46.3   |
| 80°   | 35.9   |
| 82.5° | 26.4   |
| 85°   | 17.0   |
| 87.5° | 7.6    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)