

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: P207365

Luminaire Tested: **LD4B20D010 EU4B10209035 4LBMGPH1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P207365  
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: LD4B20D010 EU4B10209035 4LBMGPH1  
Description: PORTFOLIO 4 INCH 50 DEGREE CUTOFF RECESSED DOWNLIGHT  
MEDIUM DISTRIBUTION WITH GRAPHITE HAZE TRIM  
WATTAGE D010TR-21.86W DE010-20.46W D5LT-21.24W DMX-20.89W DL2-22.5W  
DL3-21.8 6W DLE-22.46W  
Light Source: HIGH LUMEN LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 947.3 lumens  
Efficiency: N/A  
Efficacy: 45.5 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 0.92  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

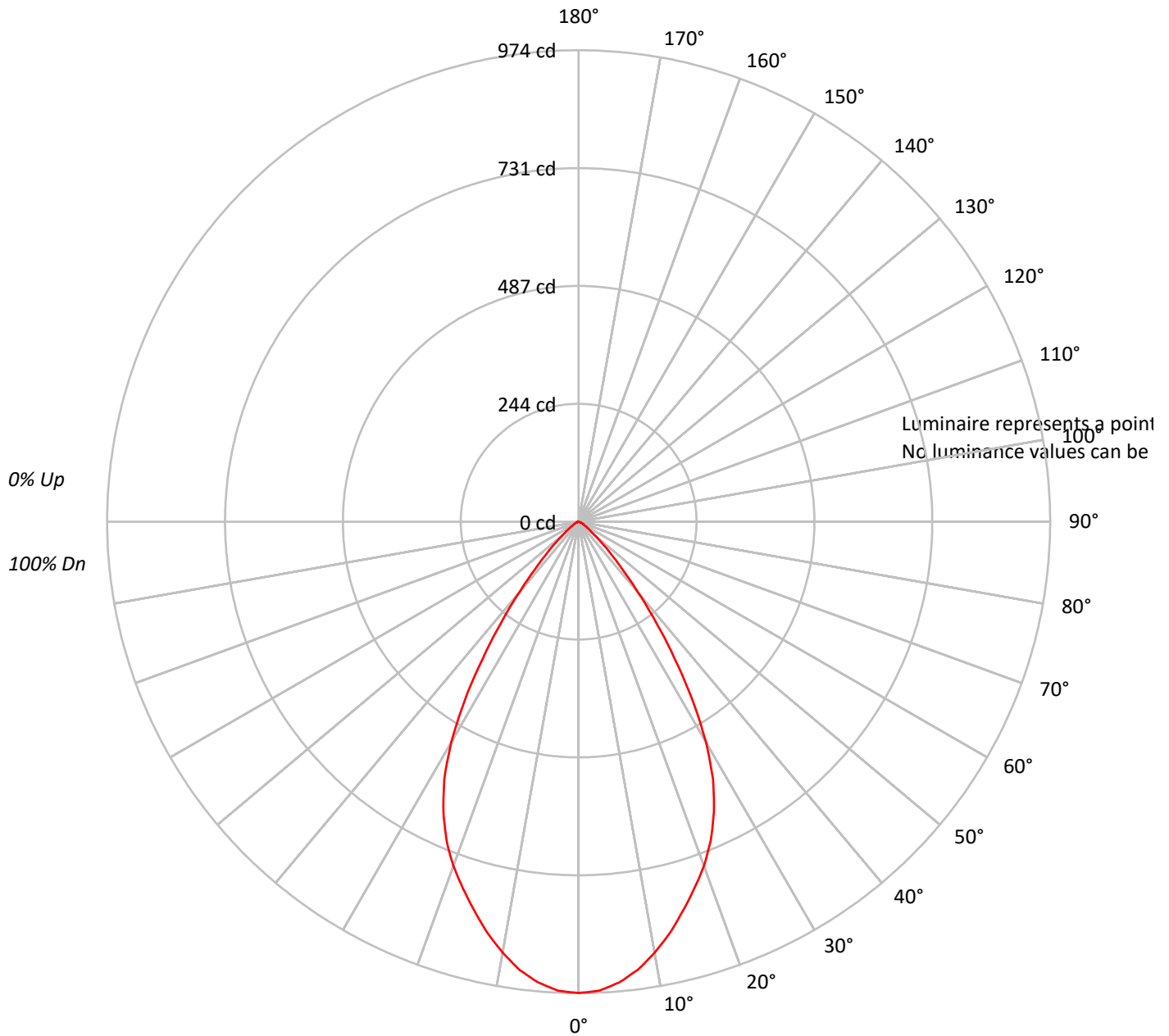
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| 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   | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 101 |  | 100 | 99  | 98  |  | 97  |
| 2   | 107 | 102 | 98  | 94  | 105 | 100 | 97  | 93  | 97  | 94  | 91  |  | 94  | 92  | 89  |  | 91  |
| 3   | 102 | 95  | 90  | 85  | 100 | 93  | 89  | 85  | 91  | 87  | 83  |  | 88  | 85  | 82  |  | 86  |
| 4   | 96  | 88  | 82  | 78  | 94  | 87  | 82  | 78  | 85  | 80  | 77  |  | 83  | 79  | 76  |  | 81  |
| 5   | 91  | 82  | 76  | 72  | 89  | 81  | 76  | 71  | 79  | 74  | 71  |  | 78  | 73  | 70  |  | 76  |
| 6   | 86  | 77  | 71  | 66  | 85  | 76  | 70  | 66  | 74  | 69  | 65  |  | 73  | 68  | 65  |  | 72  |
| 7   | 82  | 72  | 66  | 61  | 80  | 71  | 65  | 61  | 70  | 65  | 61  |  | 69  | 64  | 60  |  | 68  |
| 8   | 77  | 67  | 61  | 57  | 76  | 67  | 61  | 57  | 66  | 60  | 57  |  | 65  | 60  | 56  |  | 64  |
| 9   | 73  | 63  | 57  | 53  | 72  | 63  | 57  | 53  | 62  | 57  | 53  |  | 61  | 56  | 53  |  | 60  |
| 10  | 70  | 60  | 54  | 50  | 69  | 59  | 54  | 50  | 59  | 53  | 50  |  | 58  | 53  | 49  |  | 57  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 89.6   | 9.5       |
| 10°-20°   | 233.7  | 24.7      |
| 20°-30°   | 299.7  | 31.6      |
| 30°-40°   | 216.6  | 22.9      |
| 40°-50°   | 77.7   | 8.2       |
| 50°-60°   | 21.0   | 2.2       |
| 60°-70°   | 6.9    | 0.7       |
| 70°-80°   | 2.1    | 0.2       |
| 80°-90°   | 0.0    | 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°    | 623.0  | 65.8      |
| 0°-40°    | 839.7  | 88.6      |
| 0°-60°    | 938.3  | 99.1      |
| 0°-90°    | 947.3  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 947.3  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 974 |      |
| 5°  | 956 | 90   |
| 15° | 832 | 234  |
| 25° | 661 | 300  |
| 35° | 346 | 217  |
| 45° | 94  | 78   |
| 55° | 22  | 21   |
| 65° | 6   | 7    |
| 75° | 2   | 2    |
| 85° | 0   | 0    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 973.8 |
| 2.5°  | 969.9 |
| 5°    | 955.9 |
| 7.5°  | 934.0 |
| 10°   | 904.1 |
| 12.5° | 870.3 |
| 15°   | 832.4 |
| 17.5° | 794.6 |
| 20°   | 756.8 |
| 22.5° | 713.0 |
| 25°   | 661.2 |
| 27.5° | 601.4 |
| 30°   | 525.8 |
| 32.5° | 438.1 |
| 35°   | 346.5 |
| 37.5° | 262.9 |
| 40°   | 191.2 |
| 42.5° | 135.4 |
| 45°   | 93.6  |
| 47.5° | 63.7  |
| 50°   | 41.8  |
| 52.5° | 29.9  |
| 55°   | 21.9  |
| 57.5° | 15.9  |
| 60°   | 11.9  |
| 62.5° | 10.0  |
| 65°   | 6.0   |
| 67.5° | 4.0   |
| 70°   | 4.0   |
| 72.5° | 2.0   |
| 75°   | 2.0   |
| 77.5° | 2.0   |
| 80°   | 0.0   |
| 82.5° | 0.0   |
| 85°   | 0.0   |
| 87.5° | 0.0   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)