

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: P208083

Luminaire Tested: **LD4B20D010 EU4B10209027 4LBWLI1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P208083  
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 EU4B10209027 4LBWLI1  
Description: PORTFOLIO 4 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT  
WIDE DISTRIBUTION WITH SPECULAR CLEAR 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: 1646.6 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.18  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

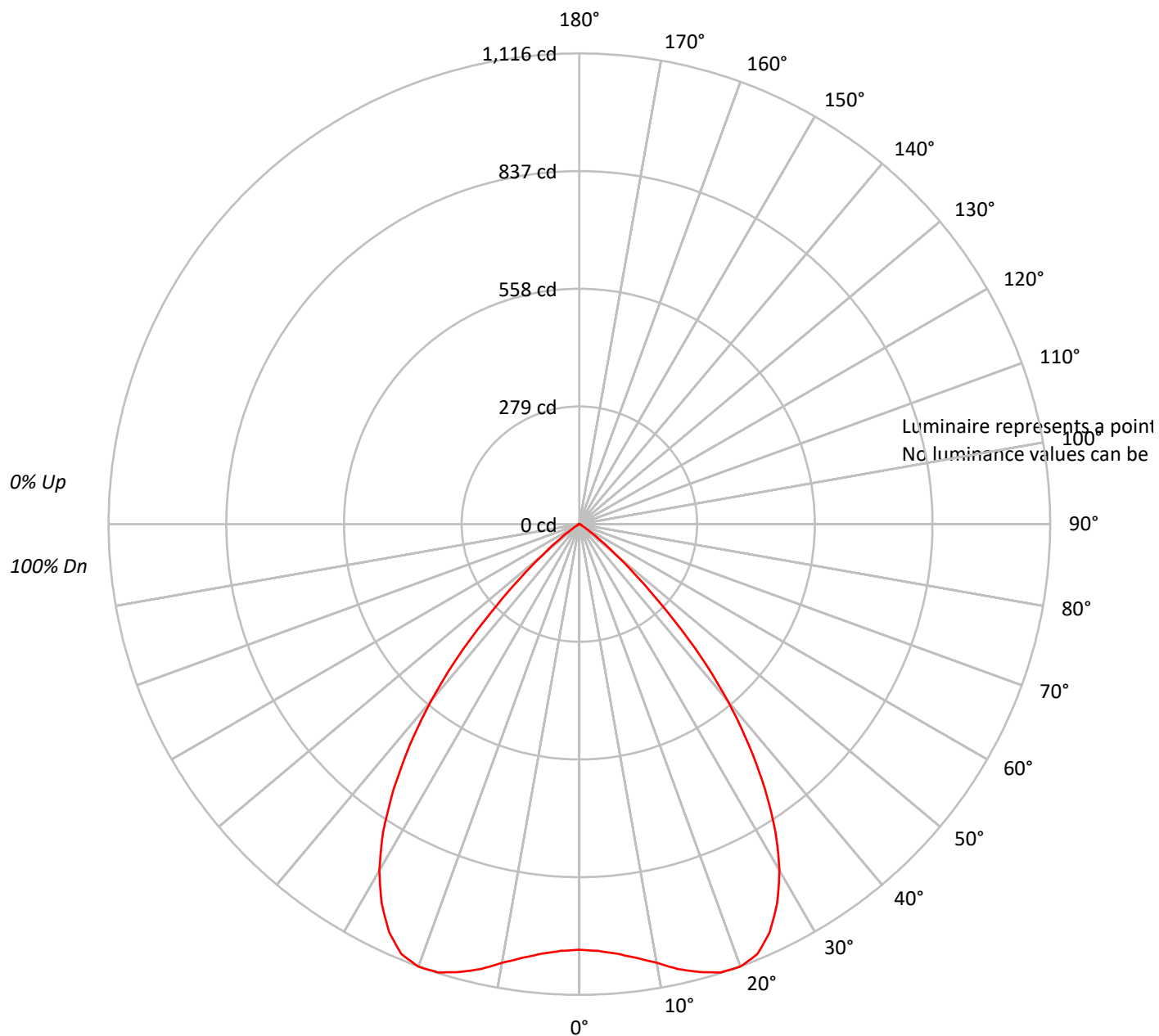
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





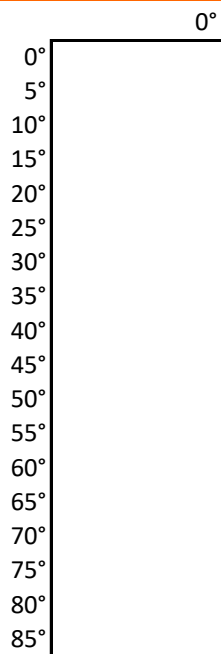
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| 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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 |  | 100 | 98  | 97  |  | 96  |
| 2   | 106 | 101 | 97  | 93  | 104 | 99  | 95  | 92  | 96  | 93  | 90  |  | 93  | 90  | 88  |  | 90  |
| 3   | 100 | 93  | 87  | 83  | 98  | 92  | 86  | 82  | 89  | 85  | 81  |  | 86  | 83  | 80  |  | 84  |
| 4   | 94  | 86  | 79  | 75  | 92  | 84  | 79  | 74  | 82  | 77  | 73  |  | 80  | 76  | 72  |  | 78  |
| 5   | 88  | 79  | 72  | 68  | 87  | 78  | 72  | 67  | 76  | 71  | 67  |  | 74  | 70  | 66  |  | 73  |
| 6   | 83  | 73  | 66  | 62  | 82  | 72  | 66  | 61  | 71  | 65  | 61  |  | 69  | 64  | 60  |  | 68  |
| 7   | 78  | 68  | 61  | 56  | 77  | 67  | 61  | 56  | 66  | 60  | 56  |  | 64  | 59  | 55  |  | 63  |
| 8   | 74  | 63  | 56  | 52  | 72  | 62  | 56  | 51  | 61  | 55  | 51  |  | 60  | 55  | 51  |  | 59  |
| 9   | 69  | 59  | 52  | 48  | 68  | 58  | 52  | 47  | 57  | 51  | 47  |  | 56  | 51  | 47  |  | 55  |
| 10  | 66  | 55  | 48  | 44  | 65  | 54  | 48  | 44  | 53  | 48  | 44  |  | 53  | 47  | 44  |  | 52  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 98.7   | 6.0       |
| 10°-20°   | 311.4  | 18.9      |
| 20°-30°   | 485.7  | 29.5      |
| 30°-40°   | 472.6  | 28.7      |
| 40°-50°   | 236.1  | 14.3      |
| 50°-60°   | 36.5   | 2.2       |
| 60°-70°   | 4.4    | 0.3       |
| 70°-80°   | 1.2    | 0.1       |
| 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°    | 895.8  | 54.4      |
| 0°-40°    | 1368.4 | 83.1      |
| 0°-60°    | 1641.0 | 99.7      |
| 0°-90°    | 1646.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1646.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1009 |      |
| 5°  | 1022 | 99   |
| 15° | 1099 | 311  |
| 25° | 1067 | 486  |
| 35° | 768  | 473  |
| 45° | 296  | 236  |
| 55° | 30   | 37   |
| 65° | 4    | 4    |
| 75° | 2    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1008.9 |
| 2.5°  | 1012.7 |
| 5°    | 1022.1 |
| 7.5°  | 1037.2 |
| 10°   | 1056.1 |
| 12.5° | 1080.6 |
| 15°   | 1099.4 |
| 17.5° | 1114.5 |
| 20°   | 1116.4 |
| 22.5° | 1103.2 |
| 25°   | 1067.4 |
| 27.5° | 1014.6 |
| 30°   | 948.6  |
| 32.5° | 865.6  |
| 35°   | 767.5  |
| 37.5° | 660.0  |
| 40°   | 546.9  |
| 42.5° | 426.2  |
| 45°   | 296.1  |
| 47.5° | 190.5  |
| 50°   | 115.0  |
| 52.5° | 62.2   |
| 55°   | 30.2   |
| 57.5° | 13.2   |
| 60°   | 7.5    |
| 62.5° | 5.7    |
| 65°   | 3.8    |
| 67.5° | 3.8    |
| 70°   | 1.9    |
| 72.5° | 1.9    |
| 75°   | 1.9    |
| 77.5° | 0.0    |
| 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)