

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: P274309

Luminaire Tested: **LD4B20DE010W2N2765 EU4B1020W2N902765 4LBCS0MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P274309  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35142)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B20DE010W2N2765 EU4B1020W2N902765 4LBCS0MW  
Description: PORTFOLIO 4" W2N RN DOWNLIGHT, CAST SHALLOW WITH MATTE WHITE FINISH  
Light Source: W2N 2700K-6500K CCT TUNING RANGE  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1714.6 lumens  
Efficiency: N/A  
Efficacy: 61.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.33  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

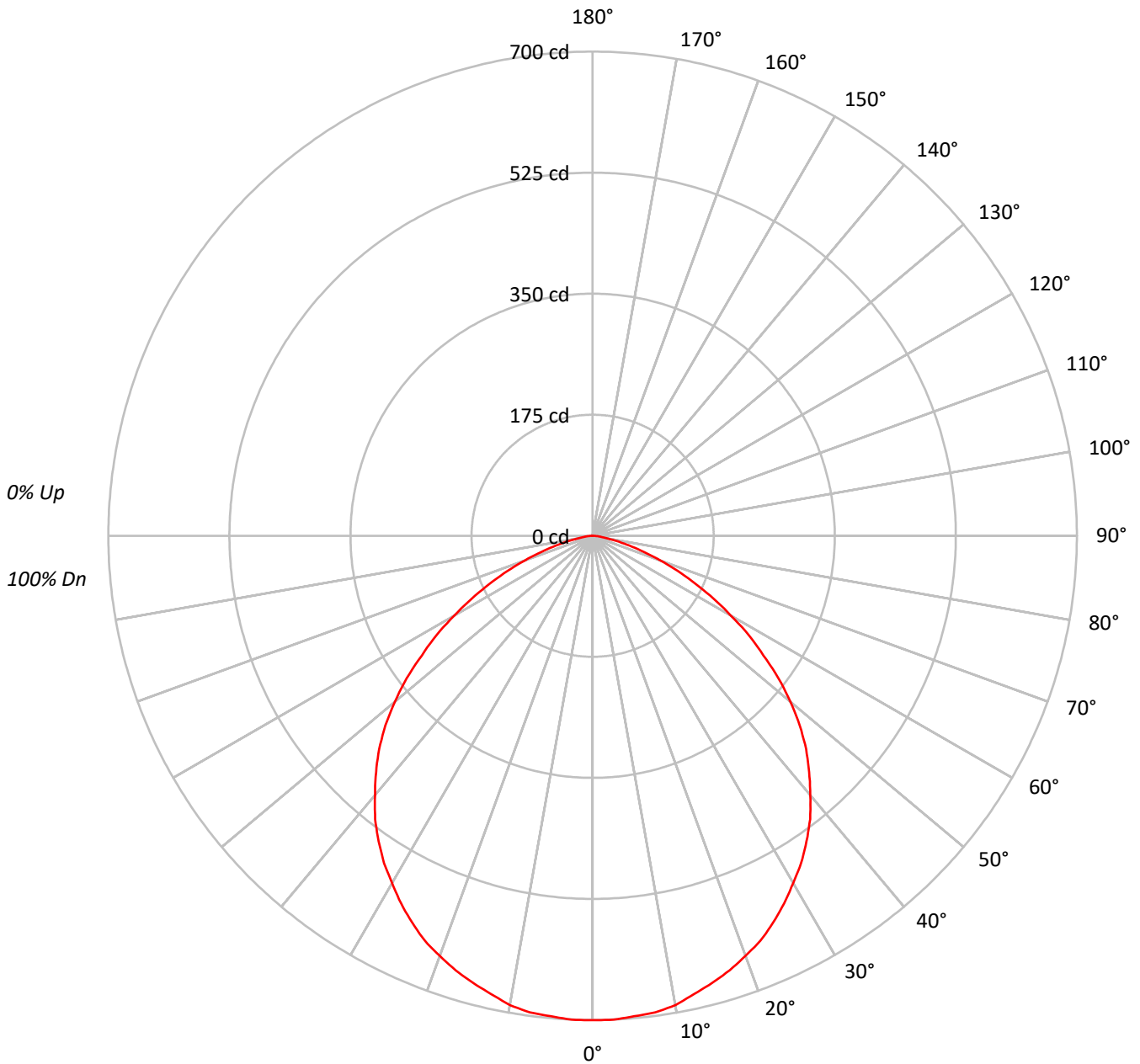
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 110 | 106 | 102 | 99  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 87  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 101 | 94  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 93  | 83  | 75  | 70  | 90  | 81  | 74  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 73  | 69  | 65  | 63  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 85  | 74  | 66  | 60  | 83  | 73  | 65  | 59  | 70  | 64  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 55  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 79  | 66  | 58  | 52  | 77  | 65  | 57  | 51  | 63  | 56  | 51  | 61  | 55  | 50  | 60  | 54  | 50  | 48  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 73  | 60  | 52  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 45  | 56  | 49  | 44  | 54  | 49  | 44  | 42  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 68  | 55  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 39  | 37  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  | 33  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 59  | 46  | 38  | 33  | 57  | 45  | 38  | 32  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 55  | 42  | 35  | 30  | 54  | 42  | 34  | 30  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 27  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°    |
|-----|-------|
| 0°  | 68250 |
| 5°  | 68207 |
| 10° | 68175 |
| 15° | 67510 |
| 20° | 67030 |
| 25° | 66369 |
| 30° | 65248 |
| 35° | 64151 |
| 40° | 62263 |
| 45° | 60148 |
| 50° | 56553 |
| 55° | 51195 |
| 60° | 44967 |
| 65° | 37865 |
| 70° | 29606 |
| 75° | 20748 |
| 80° | 11674 |
| 85° | 8163  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.3   | 3.9       |
| 10°-20°   | 188.9  | 11.0      |
| 20°-30°   | 284.2  | 16.6      |
| 30°-40°   | 336.8  | 19.6      |
| 40°-50°   | 335.1  | 19.5      |
| 50°-60°   | 270.2  | 15.8      |
| 60°-70°   | 163.4  | 9.5       |
| 70°-80°   | 60.7   | 3.5       |
| 80°-90°   | 9.1    | 0.5       |
| 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°    | 539.4  | 31.5      |
| 0°-40°    | 876.2  | 51.1      |
| 0°-60°    | 1481.4 | 86.4      |
| 0°-90°    | 1714.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1714.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 700 |      |
| 5°  | 697 | 66   |
| 15° | 669 | 189  |
| 25° | 617 | 284  |
| 35° | 539 | 337  |
| 45° | 436 | 335  |
| 55° | 301 | 270  |
| 65° | 164 | 163  |
| 75° | 55  | 61   |
| 85° | 7   | 9    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 700.3 |
| 2.5°  | 700.3 |
| 5°    | 697.2 |
| 7.5°  | 695.1 |
| 10°   | 688.9 |
| 12.5° | 678.5 |
| 15°   | 669.1 |
| 17.5° | 658.7 |
| 20°   | 646.3 |
| 22.5° | 633.8 |
| 25°   | 617.2 |
| 27.5° | 599.5 |
| 30°   | 579.8 |
| 32.5° | 561.1 |
| 35°   | 539.2 |
| 37.5° | 516.4 |
| 40°   | 489.4 |
| 42.5° | 463.4 |
| 45°   | 436.4 |
| 47.5° | 406.2 |
| 50°   | 373.0 |
| 52.5° | 338.7 |
| 55°   | 301.3 |
| 57.5° | 268.1 |
| 60°   | 230.7 |
| 62.5° | 197.4 |
| 65°   | 164.2 |
| 67.5° | 133.0 |
| 70°   | 103.9 |
| 72.5° | 77.9  |
| 75°   | 55.1  |
| 77.5° | 35.3  |
| 80°   | 20.8  |
| 82.5° | 12.5  |
| 85°   | 7.3   |
| 87.5° | 3.1   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)