

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: P222884

Luminaire Tested: **LD2B20D010 EU2B20NFL259027 2LBDSQC\*MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P222884  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (155)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD2B20D010 EU2B20NFL259027 2LBDSQC\*MW  
Description: 2000 Lumen, 2inch Portfolio LED Downlight  
NARROW FLOOD OPTIC  
SQUARE CAST TRIM WITH MATTE WHITE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1366.4 lumens  
Efficiency: N/A  
Efficacy: 65.4 lumens/watt  
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.35  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

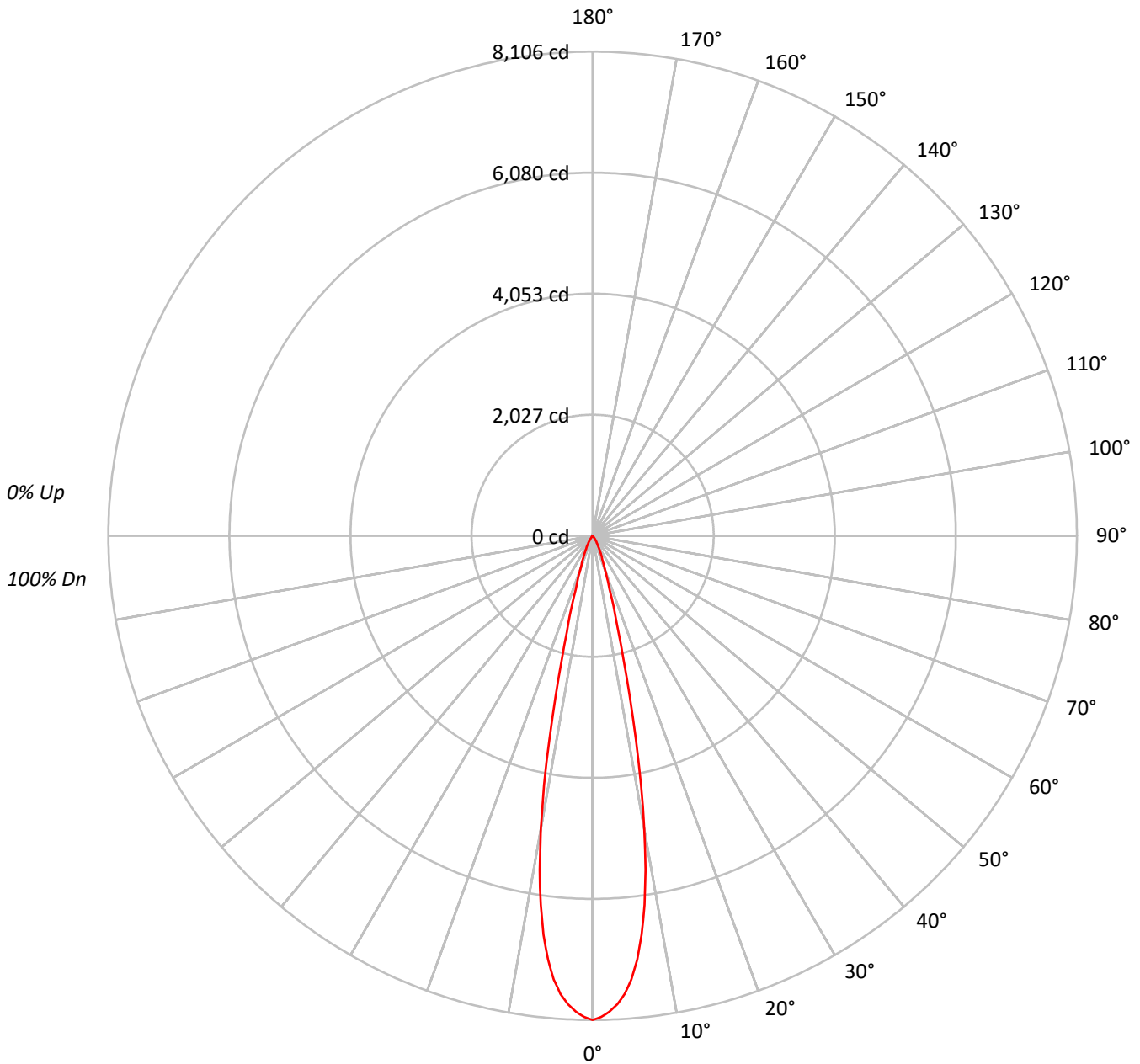
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |    | 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 | 99 | 97 |
| 1   | 115 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99  | 97  | 97  | 96 | 95 |
| 2   | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99  | 98  | 98  | 97  | 96  | 95  | 95  | 93 | 92 |
| 3   | 109 | 105 | 101 | 99  | 107 | 103 | 100 | 98  | 101 | 98  | 96  | 99  | 97  | 95  | 96  | 95  | 93  | 92  | 92  | 91 | 90 |
| 4   | 106 | 101 | 97  | 95  | 104 | 100 | 97  | 94  | 98  | 95  | 93  | 96  | 94  | 92  | 95  | 93  | 91  | 90  | 89  | 88 | 88 |
| 5   | 103 | 98  | 94  | 91  | 102 | 97  | 94  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 93  | 90  | 89  | 88  | 87  | 86 | 86 |
| 6   | 101 | 95  | 91  | 89  | 99  | 94  | 91  | 88  | 93  | 90  | 88  | 92  | 89  | 87  | 91  | 88  | 87  | 86  | 85  | 84 | 84 |
| 7   | 98  | 92  | 89  | 86  | 97  | 92  | 88  | 86  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 84  | 83  | 82 | 82 |
| 8   | 96  | 90  | 86  | 84  | 95  | 90  | 86  | 84  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 83  | 82  | 81  | 80 | 80 |
| 9   | 94  | 88  | 84  | 82  | 93  | 88  | 84  | 82  | 87  | 84  | 82  | 86  | 83  | 81  | 85  | 83  | 81  | 80  | 79  | 79 | 79 |
| 10  | 92  | 86  | 82  | 80  | 91  | 86  | 82  | 80  | 85  | 82  | 80  | 84  | 82  | 80  | 84  | 81  | 79  | 79  | 79  | 79 | 79 |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 3139943 |
| 5°  | 2899200 |
| 10° | 1962359 |
| 15° | 667642  |
| 20° | 245221  |
| 25° | 130012  |
| 30° | 66822   |
| 35° | 31162   |
| 40° | 10214   |
| 45° | 5149    |
| 50° | 2410    |
| 55° | 878     |
| 60° | 1007    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 634.3  | 46.4      |
| 10°-20°   | 533.3  | 39.0      |
| 20°-30°   | 146.4  | 10.7      |
| 30°-40°   | 42.7   | 3.1       |
| 40°-50°   | 7.9    | 0.6       |
| 50°-60°   | 1.8    | 0.1       |
| 60°-70°   | 0.2    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 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°    | 1313.9 | 96.2      |
| 0°-40°    | 1356.5 | 99.3      |
| 0°-60°    | 1366.2 | 100.0     |
| 0°-90°    | 1366.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1366.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 8106 |      |
| 5°  | 7456 | 634  |
| 15° | 1665 | 533  |
| 25° | 304  | 146  |
| 35° | 66   | 43   |
| 45° | 9    | 8    |
| 55° | 1    | 2    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 8106.3 |
| 1°    | 8059.2 |
| 2°    | 7975.8 |
| 3°    | 7856.0 |
| 4°    | 7691.8 |
| 5°    | 7456.3 |
| 6°    | 7134.6 |
| 7°    | 6732.2 |
| 8°    | 6240.9 |
| 9°    | 5660.8 |
| 10°   | 4989.2 |
| 11°   | 4253.0 |
| 12°   | 3487.2 |
| 13°   | 2756.4 |
| 14°   | 2133.2 |
| 15°   | 1664.9 |
| 17.5° | 939.4  |
| 20°   | 594.9  |
| 22.5° | 424.0  |
| 25°   | 304.2  |
| 27.5° | 215.3  |
| 30°   | 149.4  |
| 32.5° | 105.0  |
| 35°   | 65.9   |
| 37.5° | 26.9   |
| 40°   | 20.2   |
| 42.5° | 14.8   |
| 45°   | 9.4    |
| 47.5° | 5.4    |
| 50°   | 4.0    |
| 52.5° | 2.7    |
| 55°   | 1.3    |
| 57.5° | 1.3    |
| 60°   | 1.3    |
| 62.5° | 0.0    |
| 65°   | 0.0    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

0°  
90° | 0.0



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— 0°-180°







|       |  |     |
|-------|--|-----|
| 85°   |  | 0.0 |
| 87.5° |  | 0.0 |



(END OF REPORT)