

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: P222970

Luminaire Tested: **LSR2WM2B20NFL259024D010 2LBDL\*WMH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P222970  
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: LSR2WM2B20NFL259024D010 2LBDL\*WMH  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
NARROW FLOOD OPTIC  
LENSED SPUN ROUND TRIM WITH WHEAT METALLIC HAZE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1247.7 lumens  
Efficiency: N/A  
Efficacy: 59.7 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

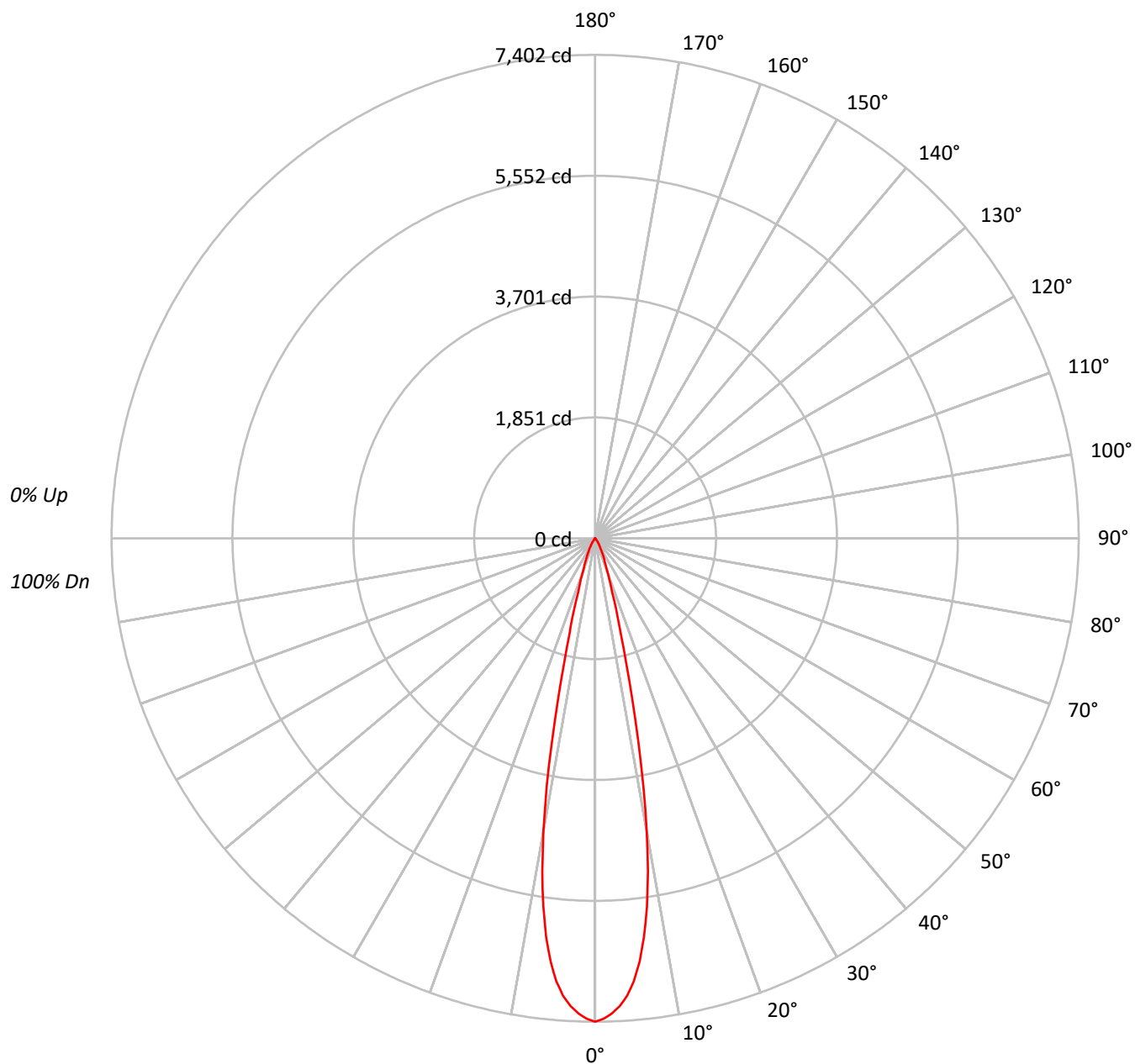
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

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

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 2867174 |
| 5°  | 2647319 |
| 10° | 1791894 |
| 15° | 609616  |
| 20° | 223910  |
| 25° | 118686  |
| 30° | 61007   |
| 35° | 28466   |
| 40° | 9304    |
| 45° | 4711    |
| 50° | 2230    |
| 55° | 810     |
| 60° | 930     |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 579.2  | 46.4      |
| 10°-20°   | 486.9  | 39.0      |
| 20°-30°   | 133.6  | 10.7      |
| 30°-40°   | 39.0   | 3.1       |
| 40°-50°   | 7.2    | 0.6       |
| 50°-60°   | 1.6    | 0.1       |
| 60°-70°   | 0.1    | 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°    | 1199.7 | 96.2      |
| 0°-40°    | 1238.7 | 99.3      |
| 0°-60°    | 1247.5 | 100.0     |
| 0°-90°    | 1247.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1247.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 7402 |      |
| 5°  | 6808 | 579  |
| 15° | 1520 | 487  |
| 25° | 278  | 134  |
| 35° | 60   | 39   |
| 45° | 9    | 7    |
| 55° | 1    | 2    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 7402.1 |
| 1°    | 7359.1 |
| 2°    | 7282.9 |
| 3°    | 7173.5 |
| 4°    | 7023.6 |
| 5°    | 6808.5 |
| 6°    | 6514.8 |
| 7°    | 6147.3 |
| 8°    | 5698.8 |
| 9°    | 5169.1 |
| 10°   | 4555.8 |
| 11°   | 3883.6 |
| 12°   | 3184.3 |
| 13°   | 2516.9 |
| 14°   | 1947.9 |
| 15°   | 1520.2 |
| 17.5° | 857.8  |
| 20°   | 543.2  |
| 22.5° | 387.1  |
| 25°   | 277.7  |
| 27.5° | 196.6  |
| 30°   | 136.4  |
| 32.5° | 95.9   |
| 35°   | 60.2   |
| 37.5° | 24.6   |
| 40°   | 18.4   |
| 42.5° | 13.5   |
| 45°   | 8.6    |
| 47.5° | 4.9    |
| 50°   | 3.7    |
| 52.5° | 2.5    |
| 55°   | 1.2    |
| 57.5° | 1.2    |
| 60°   | 1.2    |
| 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)