

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: P225498

Luminaire Tested: **LSR2WM2B20FL409727D010 2LBDL\*H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P225498  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14832)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSR2WM2B20FL409727D010 2LBDL\*H  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
FLOOD OPTIC  
LENSED SPUN ROUND TRIM WITH HAZE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1211.3 lumens  
Efficiency: N/A  
Efficacy: 58.0 lumens/watt  
Spacing Criteria (0/90/45): 0.6 / 0.6 / 0.6  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

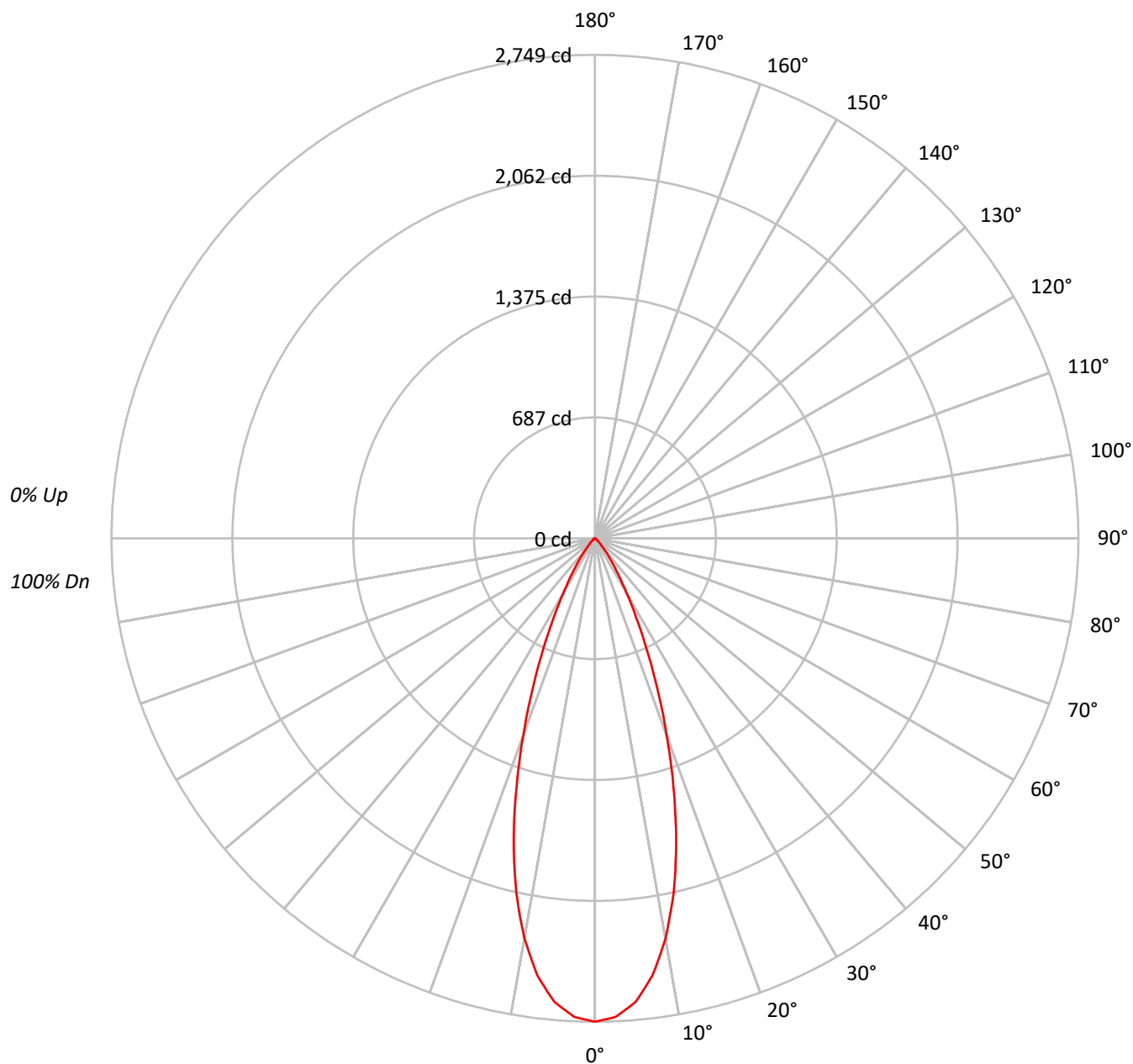
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |  |  | 0   |
| RW  | 70  | 50  | 30  | 10  |  | 70  | 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 |  |  | 100 |
| 1   | 114 | 112 | 110 | 108 |  | 112 | 110 | 108 | 106 |  | 106 | 104 | 103 |  |  | 102 | 101 | 100 |  |  | 95  |
| 2   | 110 | 105 | 102 | 99  |  | 108 | 104 | 101 | 98  |  | 101 | 98  | 96  |  |  | 98  | 96  | 94  |  |  | 90  |
| 3   | 105 | 100 | 96  | 92  |  | 103 | 98  | 95  | 91  |  | 96  | 93  | 90  |  |  | 94  | 91  | 89  |  |  | 86  |
| 4   | 101 | 95  | 90  | 86  |  | 99  | 94  | 89  | 86  |  | 91  | 88  | 85  |  |  | 90  | 86  | 84  |  |  | 82  |
| 5   | 97  | 90  | 85  | 81  |  | 96  | 89  | 84  | 81  |  | 87  | 83  | 80  |  |  | 86  | 82  | 80  |  |  | 78  |
| 6   | 93  | 86  | 81  | 77  |  | 92  | 85  | 80  | 77  |  | 84  | 79  | 76  |  |  | 82  | 79  | 76  |  |  | 74  |
| 7   | 90  | 82  | 77  | 73  |  | 88  | 81  | 76  | 73  |  | 80  | 76  | 73  |  |  | 79  | 75  | 72  |  |  | 71  |
| 8   | 86  | 78  | 73  | 70  |  | 85  | 78  | 73  | 70  |  | 77  | 72  | 69  |  |  | 76  | 72  | 69  |  |  | 68  |
| 9   | 83  | 75  | 70  | 67  |  | 82  | 75  | 70  | 67  |  | 74  | 69  | 66  |  |  | 73  | 69  | 66  |  |  | 65  |
| 10  | 80  | 72  | 67  | 64  |  | 79  | 72  | 67  | 64  |  | 71  | 67  | 64  |  |  | 70  | 66  | 64  |  |  | 62  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1064775 |
| 5°  | 1029338 |
| 10° | 908219  |
| 15° | 715522  |
| 20° | 491719  |
| 25° | 296907  |
| 30° | 160972  |
| 35° | 82704   |
| 40° | 40452   |
| 45° | 19173   |
| 50° | 10063   |
| 55° | 6753    |
| 60° | 3873    |
| 65° | 1558    |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 241.9  | 20.0      |
| 10°-20°   | 485.8  | 40.1      |
| 20°-30°   | 324.5  | 26.8      |
| 30°-40°   | 117.5  | 9.7       |
| 40°-50°   | 30.3   | 2.5       |
| 50°-60°   | 9.1    | 0.7       |
| 60°-70°   | 2.3    | 0.2       |
| 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°    | 1052.1 | 86.9      |
| 0°-40°    | 1169.7 | 96.6      |
| 0°-60°    | 1209.1 | 99.8      |
| 0°-90°    | 1211.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1211.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2749 |      |
| 5°  | 2647 | 242  |
| 15° | 1784 | 486  |
| 25° | 695  | 325  |
| 35° | 175  | 118  |
| 45° | 35   | 30   |
| 55° | 10   | 9    |
| 65° | 2    | 2    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 2748.9 |
| 2.5°  | 2723.9 |
| 5°    | 2647.3 |
| 7.5°  | 2507.4 |
| 10°   | 2309.1 |
| 12.5° | 2065.9 |
| 15°   | 1784.3 |
| 17.5° | 1484.4 |
| 20°   | 1192.9 |
| 22.5° | 924.6  |
| 25°   | 694.7  |
| 27.5° | 506.5  |
| 30°   | 359.9  |
| 32.5° | 253.2  |
| 35°   | 174.9  |
| 37.5° | 121.6  |
| 40°   | 80.0   |
| 42.5° | 51.6   |
| 45°   | 35.0   |
| 47.5° | 25.0   |
| 50°   | 16.7   |
| 52.5° | 13.3   |
| 55°   | 10.0   |
| 57.5° | 6.7    |
| 60°   | 5.0    |
| 62.5° | 3.3    |
| 65°   | 1.7    |
| 67.5° | 1.7    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 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)