

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: P224522

Luminaire Tested: **LSR2WM2B20FL409035D010 2LBDL\*WMH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P224522  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14831)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSR2WM2B20FL409035D010 2LBDL\*WMH  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
FLOOD OPTIC  
LENSED SPUN ROUND TRIM WITH WHEAT METALLIC HAZE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1496.0 lumens  
Efficiency: N/A  
Efficacy: 71.6 lumens/watt  
Spacing Criteria (0/90/45): 0.61 / 0.61 / 0.59  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

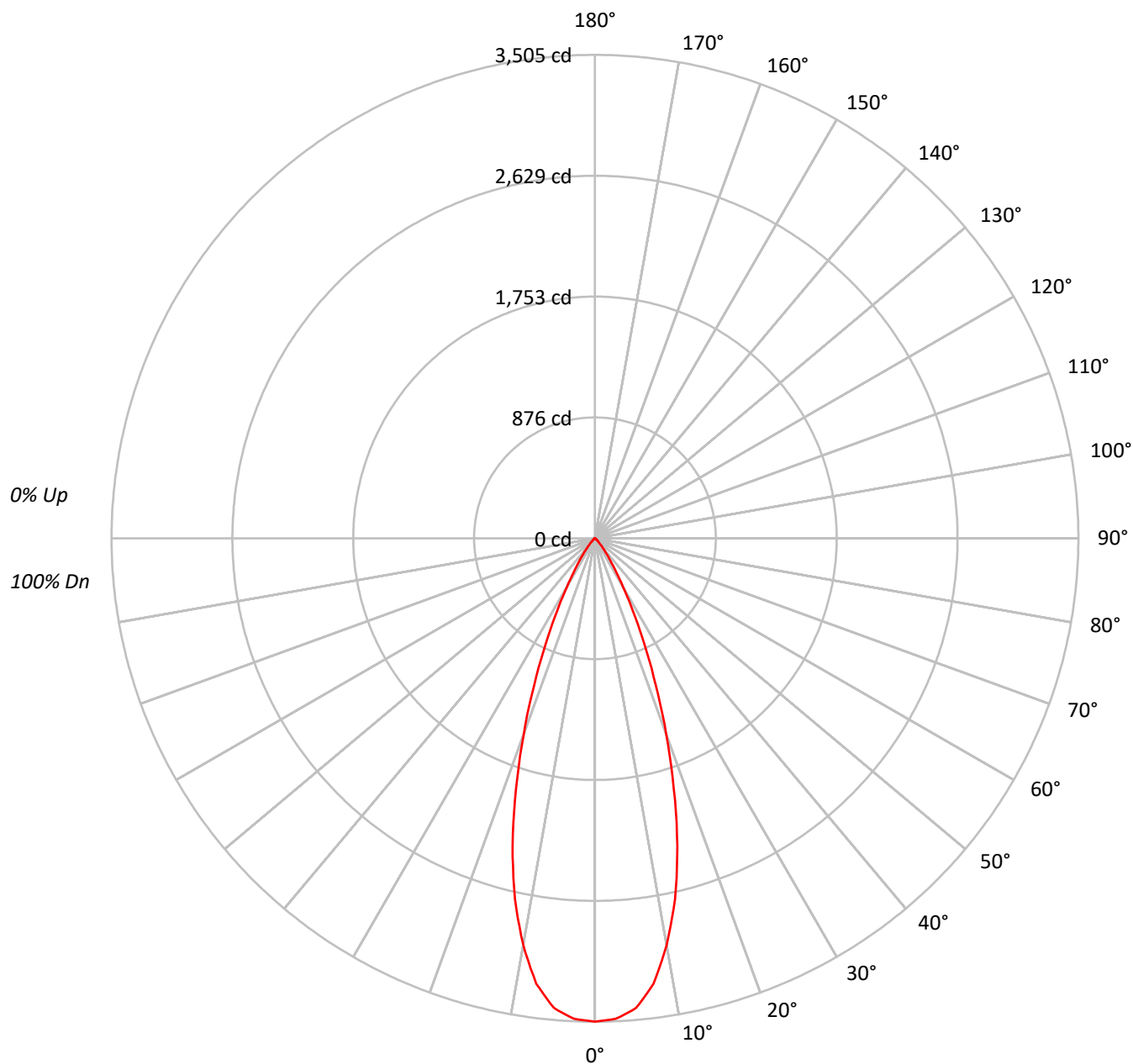
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1357493 |
| 5°  | 1329472 |
| 10° | 1177762 |
| 15° | 925491  |
| 20° | 622223  |
| 25° | 361486  |
| 30° | 180652  |
| 35° | 85210   |
| 40° | 40249   |
| 45° | 17639   |
| 50° | 9160    |
| 55° | 5132    |
| 60° | 2944    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 312.8  | 20.9      |
| 10°-20°   | 626.0  | 41.8      |
| 20°-30°   | 395.7  | 26.5      |
| 30°-40°   | 123.8  | 8.3       |
| 40°-50°   | 28.7   | 1.9       |
| 50°-60°   | 7.6    | 0.5       |
| 60°-70°   | 1.4    | 0.1       |
| 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°    | 1334.5 | 89.2      |
| 0°-40°    | 1458.3 | 97.5      |
| 0°-60°    | 1494.6 | 99.9      |
| 0°-90°    | 1496.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1496.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3505 |      |
| 5°  | 3419 | 313  |
| 15° | 2308 | 626  |
| 25° | 846  | 396  |
| 35° | 180  | 124  |
| 45° | 32   | 29   |
| 55° | 8    | 8    |
| 65° | 0    | 1    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 3504.6 |
| 2.5°  | 3487.5 |
| 5°    | 3419.2 |
| 7.5°  | 3258.0 |
| 10°   | 2994.4 |
| 12.5° | 2681.5 |
| 15°   | 2307.9 |
| 17.5° | 1900.2 |
| 20°   | 1509.5 |
| 22.5° | 1149.2 |
| 25°   | 845.8  |
| 27.5° | 597.4  |
| 30°   | 403.9  |
| 32.5° | 269.3  |
| 35°   | 180.2  |
| 37.5° | 121.4  |
| 40°   | 79.6   |
| 42.5° | 49.3   |
| 45°   | 32.2   |
| 47.5° | 22.8   |
| 50°   | 15.2   |
| 52.5° | 11.4   |
| 55°   | 7.6    |
| 57.5° | 5.7    |
| 60°   | 3.8    |
| 62.5° | 3.8    |
| 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    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)