

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: P224539

Luminaire Tested: **LSR2B20FL408030D010 2LBDL\*WMH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P224539  
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: LSR2B20FL408030D010 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: 1785.9 lumens  
Efficiency: N/A  
Efficacy: 85.5 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

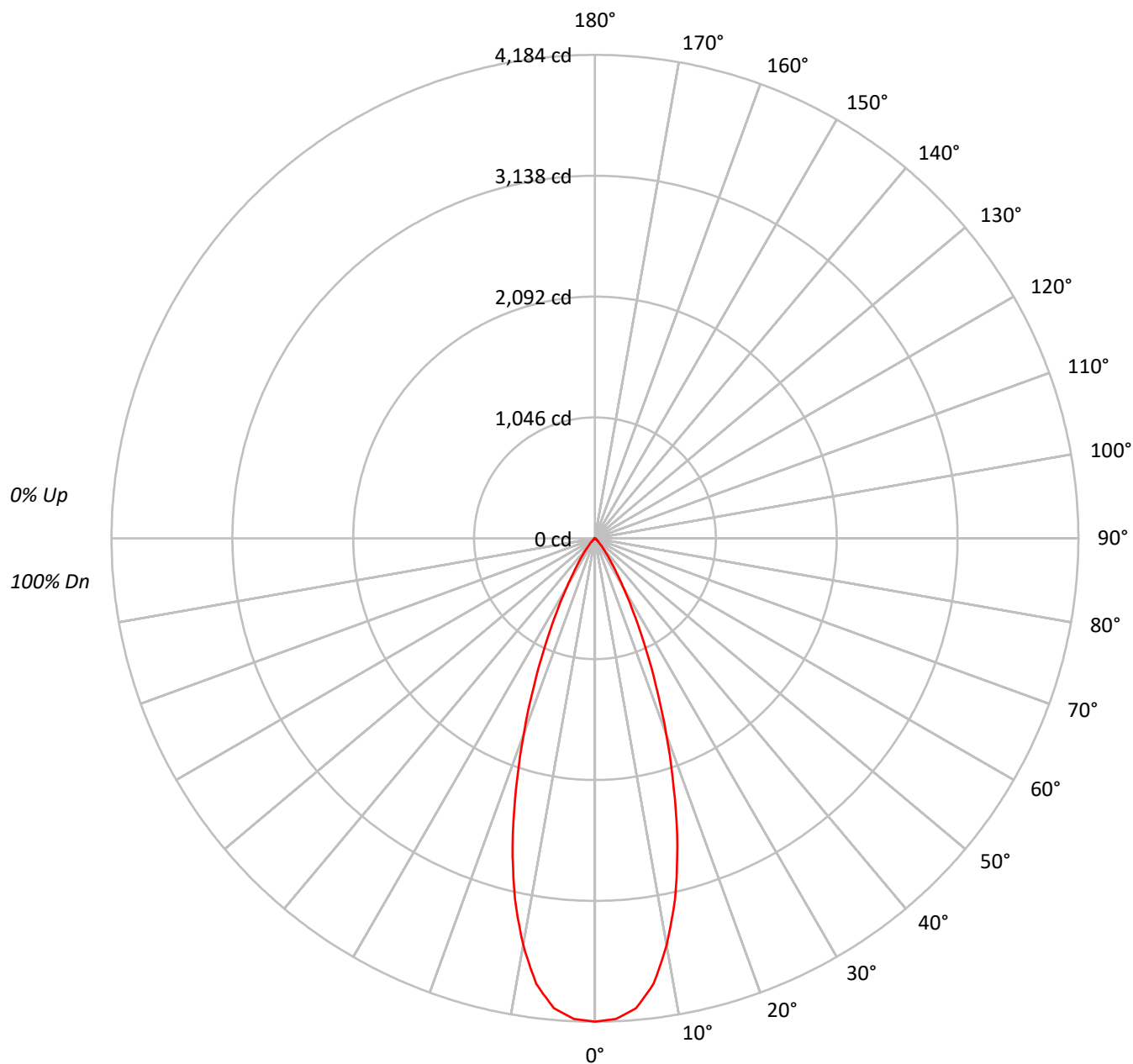
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1620578 |
| 5°  | 1587147 |
| 10° | 1406045 |
| 15° | 1104903 |
| 20° | 742835  |
| 25° | 431535  |
| 30° | 215673  |
| 35° | 101713  |
| 40° | 48087   |
| 45° | 21090   |
| 50° | 10907   |
| 55° | 6145    |
| 60° | 3486    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 373.5  | 20.9      |
| 10°-20°   | 747.3  | 41.8      |
| 20°-30°   | 472.4  | 26.5      |
| 30°-40°   | 147.8  | 8.3       |
| 40°-50°   | 34.3   | 1.9       |
| 50°-60°   | 9.0    | 0.5       |
| 60°-70°   | 1.6    | 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°    | 1593.2 | 89.2      |
| 0°-40°    | 1741.0 | 97.5      |
| 0°-60°    | 1784.3 | 99.9      |
| 0°-90°    | 1785.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1785.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4184 |      |
| 5°  | 4082 | 373  |
| 15° | 2755 | 747  |
| 25° | 1010 | 472  |
| 35° | 215  | 148  |
| 45° | 38   | 34   |
| 55° | 9    | 9    |
| 65° | 0    | 2    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 4183.8 |
| 2.5°  | 4163.4 |
| 5°    | 4081.9 |
| 7.5°  | 3889.5 |
| 10°   | 3574.8 |
| 12.5° | 3201.3 |
| 15°   | 2755.3 |
| 17.5° | 2268.5 |
| 20°   | 1802.1 |
| 22.5° | 1372.0 |
| 25°   | 1009.7 |
| 27.5° | 713.2  |
| 30°   | 482.2  |
| 32.5° | 321.5  |
| 35°   | 215.1  |
| 37.5° | 144.9  |
| 40°   | 95.1   |
| 42.5° | 58.9   |
| 45°   | 38.5   |
| 47.5° | 27.2   |
| 50°   | 18.1   |
| 52.5° | 13.6   |
| 55°   | 9.1    |
| 57.5° | 6.8    |
| 60°   | 4.5    |
| 62.5° | 4.5    |
| 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)