

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: P224467

Luminaire Tested: **LSR2B20FL408035D010 2LBDL\*WH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P224467  
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: LSR2B20FL408035D010 2LBDL\*WH  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
FLOOD OPTIC  
LENSED SPUN ROUND TRIM WITH WHEAT HAZE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1806.4 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 0.6 / 0.6 / 0.59  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

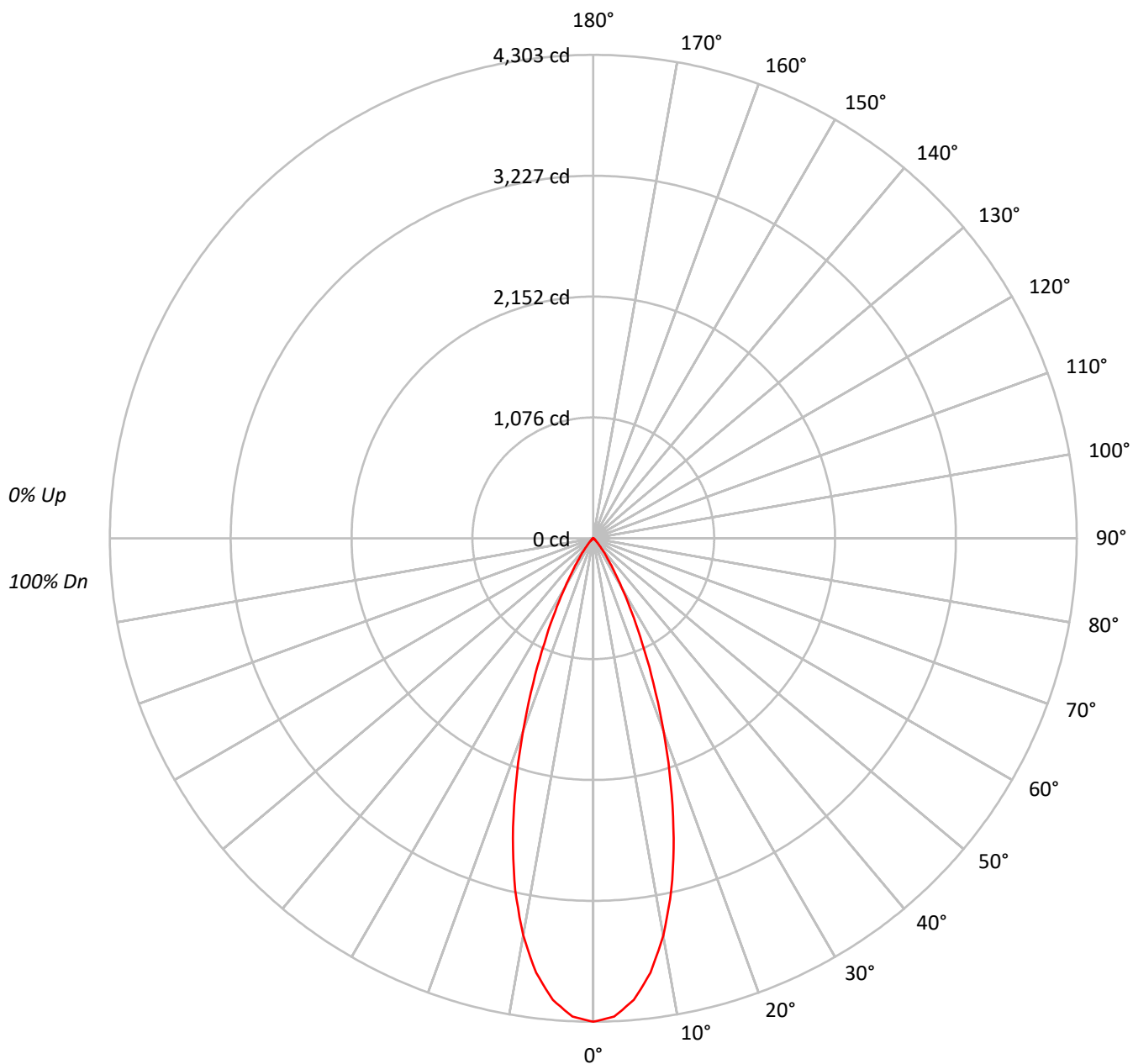
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 30  | 10  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 114 | 112 | 110 | 108 |  | 112 | 110 | 108 | 106 |  | 106 | 104 | 103 |  | 102 | 101 | 100 |  | 99  | 98  | 97  |
| 2   | 110 | 106 | 102 | 100 |  | 108 | 104 | 101 | 98  |  | 101 | 98  | 96  |  | 98  | 96  | 94  |  | 95  | 94  | 92  |
| 3   | 106 | 100 | 96  | 93  |  | 104 | 99  | 95  | 92  |  | 96  | 93  | 91  |  | 94  | 91  | 89  |  | 92  | 90  | 88  |
| 4   | 102 | 95  | 91  | 87  |  | 100 | 94  | 90  | 87  |  | 92  | 89  | 86  |  | 90  | 87  | 85  |  | 88  | 86  | 84  |
| 5   | 98  | 91  | 86  | 82  |  | 96  | 90  | 85  | 82  |  | 88  | 84  | 81  |  | 87  | 83  | 81  |  | 85  | 82  | 80  |
| 6   | 94  | 87  | 82  | 78  |  | 93  | 86  | 81  | 78  |  | 85  | 80  | 77  |  | 83  | 80  | 77  |  | 82  | 79  | 76  |
| 7   | 91  | 83  | 78  | 75  |  | 89  | 82  | 78  | 74  |  | 81  | 77  | 74  |  | 80  | 76  | 74  |  | 79  | 76  | 73  |
| 8   | 87  | 79  | 75  | 71  |  | 86  | 79  | 74  | 71  |  | 78  | 74  | 71  |  | 77  | 73  | 70  |  | 76  | 73  | 70  |
| 9   | 84  | 76  | 71  | 68  |  | 83  | 76  | 71  | 68  |  | 75  | 71  | 68  |  | 74  | 70  | 68  |  | 73  | 70  | 67  |
| 10  | 81  | 73  | 69  | 65  |  | 80  | 73  | 68  | 65  |  | 72  | 68  | 65  |  | 71  | 68  | 65  |  | 71  | 67  | 65  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1666672 |
| 5°  | 1603594 |
| 10° | 1411513 |
| 15° | 1108713 |
| 20° | 753799  |
| 25° | 440168  |
| 30° | 224171  |
| 35° | 106063  |
| 40° | 46266   |
| 45° | 20049   |
| 50° | 9642    |
| 55° | 6213    |
| 60° | 3564    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 376.7  | 20.9      |
| 10°-20°   | 751.8  | 41.6      |
| 20°-30°   | 482.6  | 26.7      |
| 30°-40°   | 153.1  | 8.5       |
| 40°-50°   | 32.7   | 1.8       |
| 50°-60°   | 8.4    | 0.5       |
| 60°-70°   | 1.1    | 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°    | 1611.1 | 89.2      |
| 0°-40°    | 1764.2 | 97.7      |
| 0°-60°    | 1805.3 | 99.9      |
| 0°-90°    | 1806.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1806.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4303 |      |
| 5°  | 4124 | 377  |
| 15° | 2765 | 752  |
| 25° | 1030 | 483  |
| 35° | 224  | 153  |
| 45° | 37   | 33   |
| 55° | 9    | 8    |
| 65° | 0    | 1    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 4302.8 |
| 2.5°  | 4261.6 |
| 5°    | 4124.2 |
| 7.5°  | 3900.0 |
| 10°   | 3588.7 |
| 12.5° | 3208.8 |
| 15°   | 2764.8 |
| 17.5° | 2291.0 |
| 20°   | 1828.7 |
| 22.5° | 1396.1 |
| 25°   | 1029.9 |
| 27.5° | 734.7  |
| 30°   | 501.2  |
| 32.5° | 336.4  |
| 35°   | 224.3  |
| 37.5° | 148.8  |
| 40°   | 91.5   |
| 42.5° | 57.2   |
| 45°   | 36.6   |
| 47.5° | 25.2   |
| 50°   | 16.0   |
| 52.5° | 11.4   |
| 55°   | 9.2    |
| 57.5° | 6.9    |
| 60°   | 4.6    |
| 62.5° | 2.3    |
| 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)