

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: P224927

Luminaire Tested: **LSR2B20FL409027D010 2LBD\*H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P224927  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (156)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSR2B20FL409027D010 2LBD\*H  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
FLOOD OPTIC  
SPUN ROUND TRIM WITH HAZE FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1434.2 lumens  
Efficiency: N/A  
Efficacy: 68.6 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

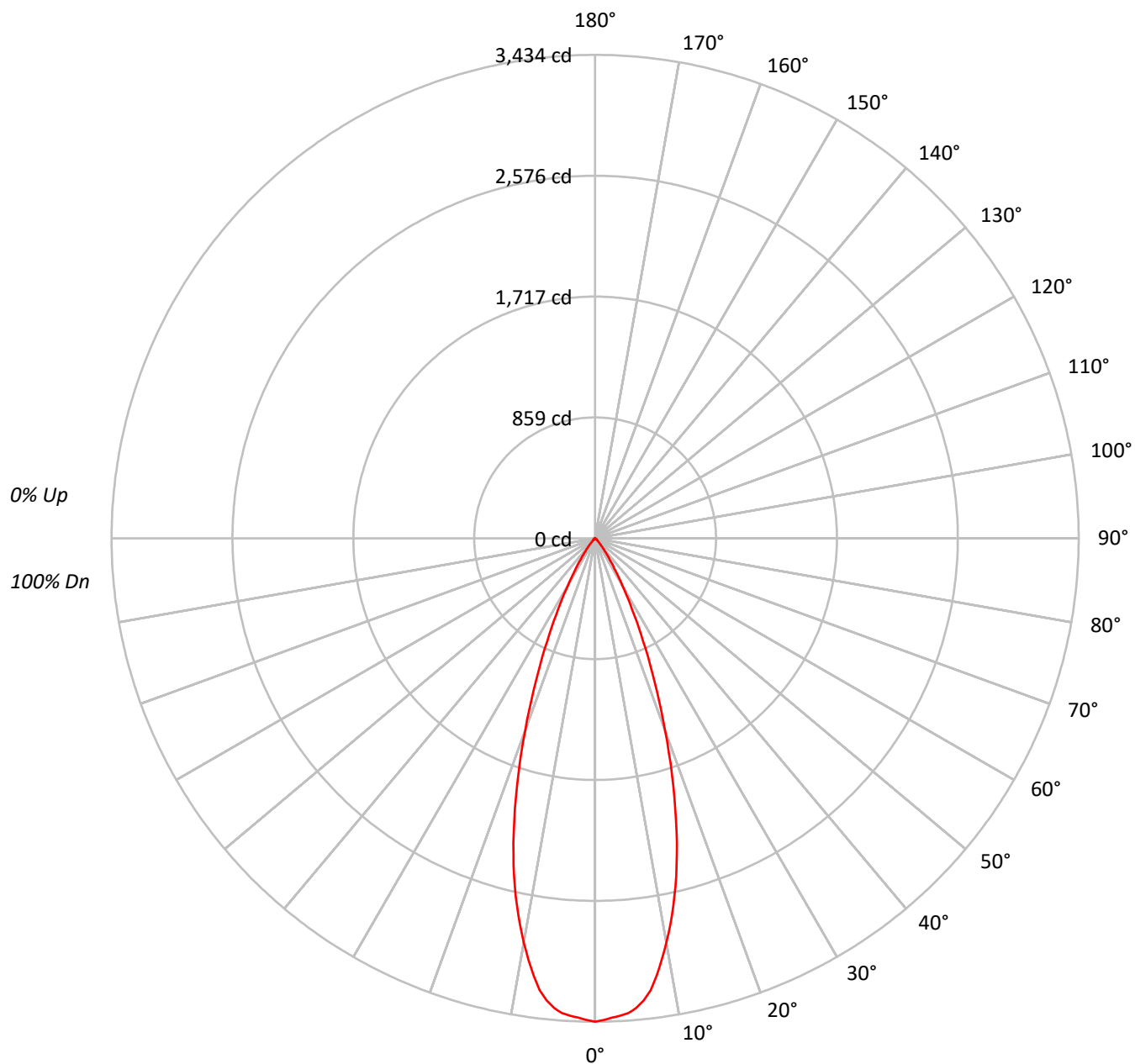
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1330262 |
| 5°  | 1302410 |
| 10° | 1147043 |
| 15° | 899947  |
| 20° | 597615  |
| 25° | 343065  |
| 30° | 172064  |
| 35° | 79441   |
| 40° | 32311   |
| 45° | 14462   |
| 50° | 7533    |
| 55° | 4660    |
| 60° | 2169    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 305.9  | 21.3      |
| 10°-20°   | 607.4  | 42.4      |
| 20°-30°   | 377.4  | 26.3      |
| 30°-40°   | 113.8  | 7.9       |
| 40°-50°   | 23.3   | 1.6       |
| 50°-60°   | 6.0    | 0.4       |
| 60°-70°   | 0.3    | 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°    | 1290.8 | 90.0      |
| 0°-40°    | 1404.6 | 97.9      |
| 0°-60°    | 1433.9 | 100.0     |
| 0°-90°    | 1434.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1434.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3434 |      |
| 5°  | 3350 | 306  |
| 15° | 2244 | 607  |
| 25° | 803  | 377  |
| 35° | 168  | 114  |
| 45° | 26   | 23   |
| 55° | 7    | 6    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3434.3 |
| 1°    | 3423.2 |
| 2°    | 3408.0 |
| 3°    | 3396.8 |
| 4°    | 3380.2 |
| 5°    | 3349.6 |
| 6°    | 3301.0 |
| 7°    | 3234.4 |
| 8°    | 3138.5 |
| 9°    | 3030.2 |
| 10°   | 2916.3 |
| 11°   | 2795.5 |
| 12°   | 2669.1 |
| 13°   | 2537.2 |
| 14°   | 2392.8 |
| 15°   | 2244.2 |
| 17.5° | 1845.6 |
| 20°   | 1449.8 |
| 22.5° | 1099.9 |
| 25°   | 802.7  |
| 27.5° | 566.6  |
| 30°   | 384.7  |
| 32.5° | 252.7  |
| 35°   | 168.0  |
| 37.5° | 104.2  |
| 40°   | 63.9   |
| 42.5° | 41.7   |
| 45°   | 26.4   |
| 47.5° | 16.7   |
| 50°   | 12.5   |
| 52.5° | 8.3    |
| 55°   | 6.9    |
| 57.5° | 4.2    |
| 60°   | 2.8    |
| 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)