

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: P223751

Luminaire Tested: **LSR2B05SP159040D010 2LBDDELETELC\*MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P223751  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( 150)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSR2B05SP159040D010 2LBDDELETELC\*MB  
Description: 500 Lumen, 2inch Portfolio LED Cylinder  
SPOT OPTIC  
LENSED SQUARE CAST TRIM WITH MATTE BLACK FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 349.0 lumens  
Efficiency: N/A  
Efficacy: 47.8 lumens/watt  
Spacing Criteria (0/90/45): 0.24 / 0.24 / 0.23  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

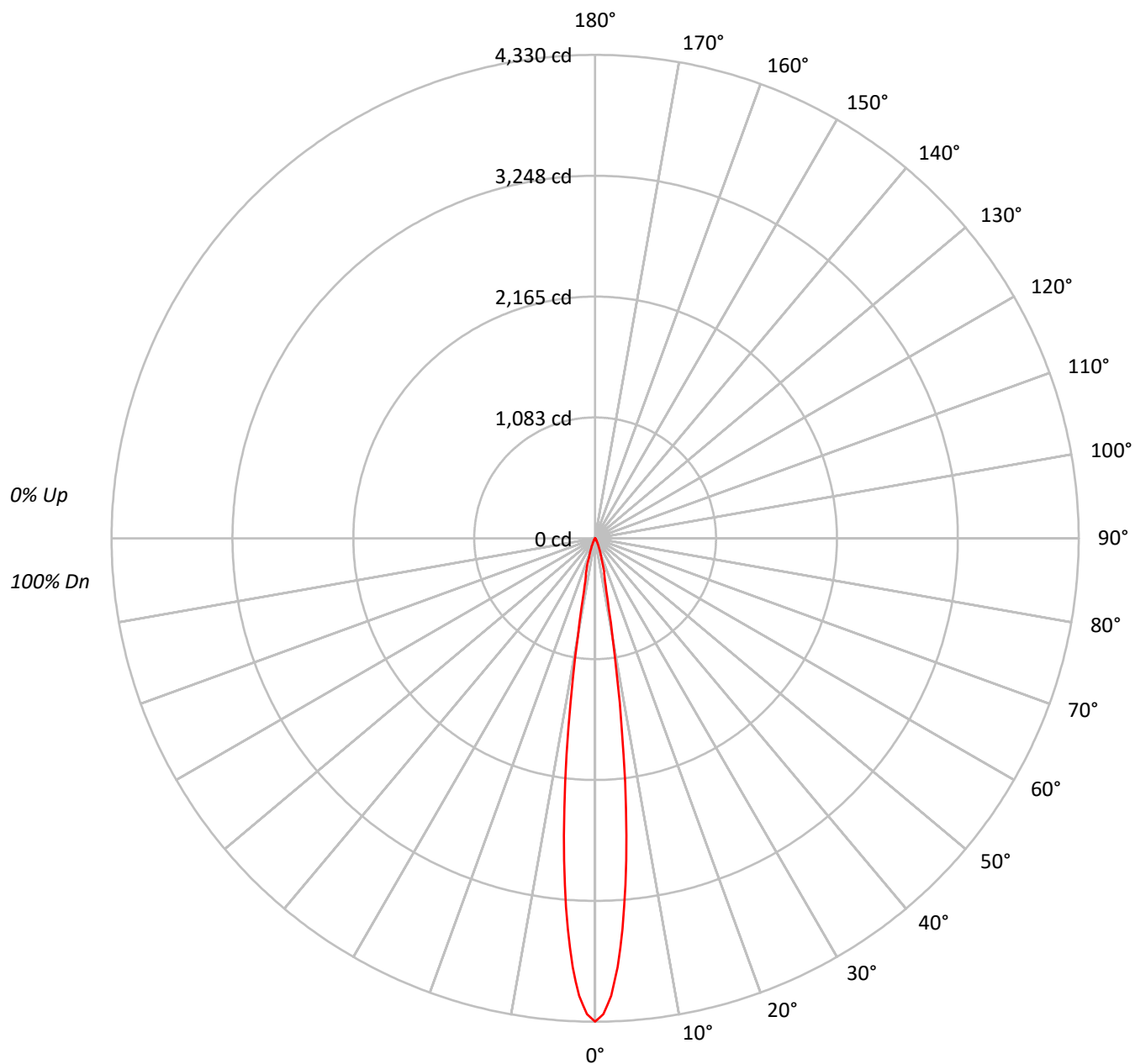
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 |  | 108 | 107 | 106 |  |  | 104 | 103 | 103 |  |  | 98  |
| 2   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 |  | 105 | 103 | 102 |  |  | 102 | 101 | 100 |  |  | 96  |
| 3   | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 |  | 102 | 100 | 98  |  |  | 100 | 99  | 97  |  |  | 94  |
| 4   | 108 | 103 | 100 | 97  | 106 | 102 | 99  | 97  |  | 100 | 98  | 96  |  |  | 98  | 96  | 95  |  |  | 93  |
| 5   | 105 | 101 | 97  | 95  | 104 | 100 | 97  | 94  |  | 98  | 96  | 94  |  |  | 97  | 95  | 93  |  |  | 91  |
| 6   | 103 | 98  | 95  | 93  | 102 | 98  | 95  | 92  |  | 96  | 94  | 92  |  |  | 95  | 93  | 91  |  |  | 90  |
| 7   | 101 | 96  | 93  | 91  | 100 | 96  | 93  | 90  |  | 95  | 92  | 90  |  |  | 94  | 91  | 90  |  |  | 88  |
| 8   | 100 | 94  | 91  | 89  | 99  | 94  | 91  | 89  |  | 93  | 90  | 89  |  |  | 92  | 90  | 88  |  |  | 87  |
| 9   | 98  | 93  | 90  | 88  | 97  | 92  | 89  | 87  |  | 92  | 89  | 87  |  |  | 91  | 89  | 87  |  |  | 86  |
| 10  | 96  | 91  | 88  | 86  | 96  | 91  | 88  | 86  |  | 90  | 88  | 86  |  |  | 90  | 87  | 86  |  |  | 85  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1677014 |
| 5°  | 1212319 |
| 10° | 352927  |
| 15° | 123832  |
| 20° | 53010   |
| 25° | 23848   |
| 30° | 9214    |
| 35° | 4587    |
| 40° | 3084    |
| 45° | 1972    |
| 50° | 1085    |
| 55° | 810     |
| 60° | 465     |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 220.6  | 63.2      |
| 10°-20°   | 89.8   | 25.7      |
| 20°-30°   | 27.6   | 7.9       |
| 30°-40°   | 6.8    | 1.9       |
| 40°-50°   | 2.8    | 0.8       |
| 50°-60°   | 1.2    | 0.3       |
| 60°-70°   | 0.2    | 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°    | 337.9  | 96.8      |
| 0°-40°    | 344.7  | 98.8      |
| 0°-60°    | 348.8  | 99.9      |
| 0°-90°    | 349.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 349.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4330 |      |
| 5°  | 3118 | 221  |
| 15° | 309  | 90   |
| 25° | 56   | 28   |
| 35° | 10   | 7    |
| 45° | 4    | 3    |
| 55° | 1    | 1    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 4329.5 |
| 1°    | 4263.4 |
| 2°    | 4102.0 |
| 3°    | 3844.7 |
| 4°    | 3508.6 |
| 5°    | 3117.9 |
| 6°    | 2677.4 |
| 7°    | 2199.3 |
| 8°    | 1714.6 |
| 9°    | 1261.4 |
| 10°   | 897.3  |
| 11°   | 643.1  |
| 12°   | 483.6  |
| 13°   | 393.8  |
| 14°   | 344.6  |
| 15°   | 308.8  |
| 17.5° | 190.5  |
| 20°   | 128.6  |
| 22.5° | 86.2   |
| 25°   | 55.8   |
| 27.5° | 34.0   |
| 30°   | 20.6   |
| 32.5° | 13.3   |
| 35°   | 9.7    |
| 37.5° | 7.9    |
| 40°   | 6.1    |
| 42.5° | 4.9    |
| 45°   | 3.6    |
| 47.5° | 2.4    |
| 50°   | 1.8    |
| 52.5° | 1.8    |
| 55°   | 1.2    |
| 57.5° | 1.2    |
| 60°   | 0.6    |
| 62.5° | 0.6    |
| 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)