Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P223630

Luminaire Tested: **LSRWM2B10SP159727D010 2LBDL*H**

Issue Date: 3/3/2020

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**Test Information**

| | |
|---|---|
| Test Method: | LM-41-14 |
| Report Number: | P223630 |
| | 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: | LSRWM2B10SP159727D010 2LBDL*H |
| Description: | 1000 Lumen, 2inch Portfolio LED Cylinder |
| | SPOT OPTIC |
| | LENSED SPUN ROUND TRIM WITH HAZE FINISH |
| Light Source: | - |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 377.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 36.7 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): | 10.3 |
| 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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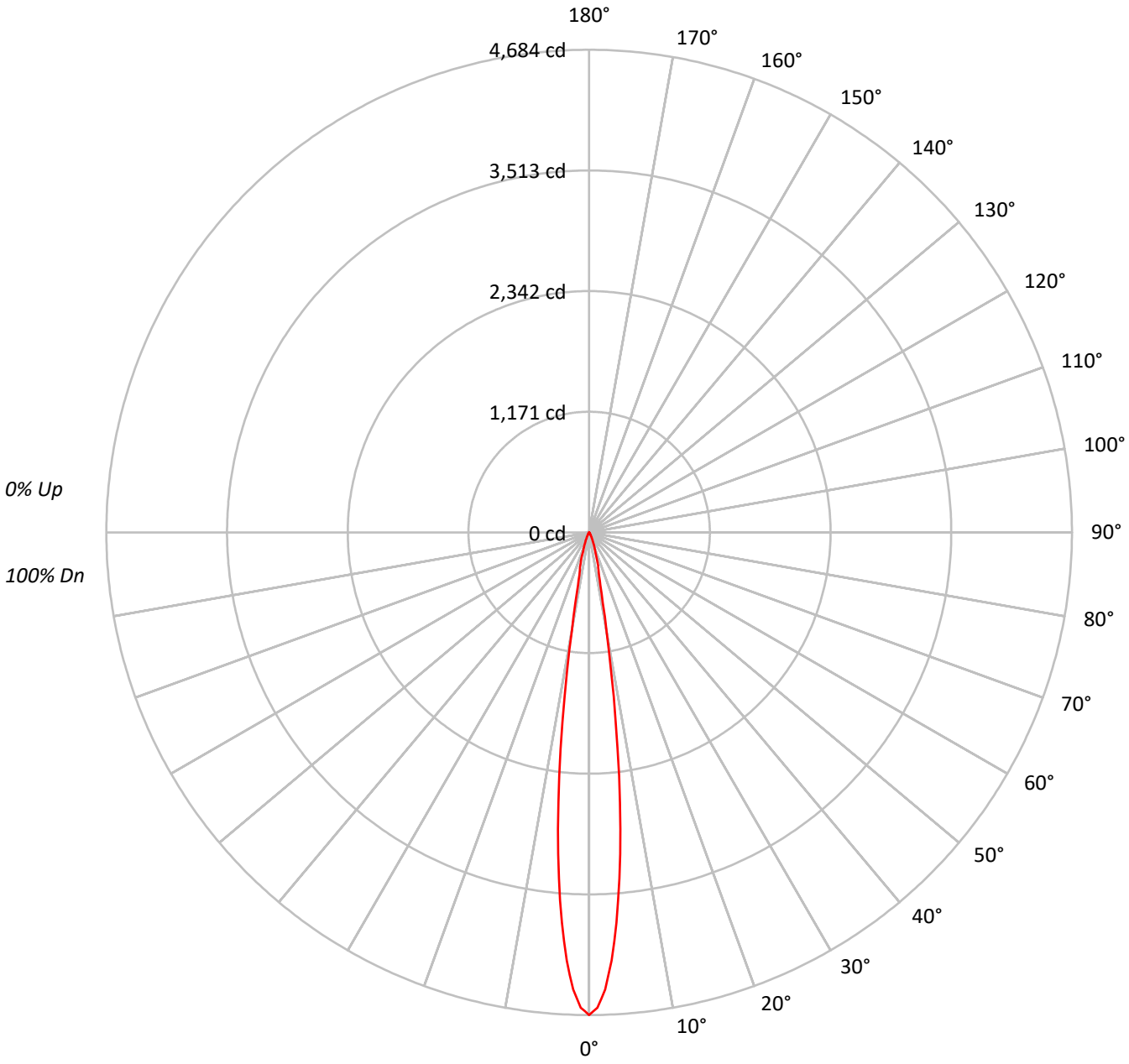
## Luminous Intensity Polar Plot



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## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | 20 | | | 20 | | | 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 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 103 | 101 | 100 | 100 | 98 |
| 2 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 | 105 | 103 | 102 | 102 | 101 | 100 | 100 | 99 | 98 | 96 |
| 3 | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 | 102 | 100 | 98 | 100 | 98 | 97 | 98 | 97 | 96 | 94 |
| 4 | 108 | 103 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 98 | 96 | 98 | 96 | 95 | 97 | 95 | 94 | 93 |
| 5 | 105 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 96 | 94 | 97 | 95 | 93 | 95 | 94 | 92 | 91 |
| 6 | 103 | 98 | 95 | 93 | 102 | 98 | 95 | 92 | 96 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 91 | 90 |
| 7 | 101 | 96 | 93 | 91 | 100 | 96 | 93 | 90 | 95 | 92 | 90 | 94 | 91 | 90 | 93 | 91 | 89 | 88 |
| 8 | 100 | 94 | 91 | 89 | 99 | 94 | 91 | 89 | 93 | 90 | 89 | 92 | 90 | 88 | 92 | 89 | 88 | 87 |
| 9 | 98 | 93 | 90 | 88 | 97 | 92 | 89 | 87 | 92 | 89 | 87 | 91 | 89 | 87 | 90 | 88 | 87 | 86 |
| 10 | 96 | 91 | 88 | 86 | 96 | 91 | 88 | 86 | 90 | 88 | 86 | 90 | 87 | 86 | 89 | 87 | 86 | 85 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° |
|---|---|
| 0° | 1814445 |
| 5° | 1311664 |
| 10° | 381876 |
| 15° | 133977 |
| 20° | 57379 |
| 25° | 25814 |
| 30° | 9974 |
| 35° | 4965 |
| 40° | 3337 |
| 45° | 2136 |
| 50° | 1205 |
| 55° | 878 |
| 60° | 542 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 238.7 | 63.2 |
| 10°-20° | 97.1 | 25.7 |
| 20°-30° | 29.8 | 7.9 |
| 30°-40° | 7.3 | 1.9 |
| 40°-50° | 3.1 | 0.8 |
| 50°-60° | 1.3 | 0.4 |
| 60°-70° | 0.3 | 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° | 365.6 | 96.8 |
| 0°-40° | 373.0 | 98.8 |
| 0°-60° | 377.4 | 99.9 |
| 0°-90° | 377.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 377.6 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | Flux |
|---|---|---|
| 0° | 4684 | |
| 5° | 3373 | 239 |
| 15° | 334 | 97 |
| 25° | 60 | 30 |
| 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° | 4684.3 |
| 1° | 4612.8 |
| 2° | 4438.1 |
| 3° | 4159.8 |
| 4° | 3796.1 |
| 5° | 3373.4 |
| 6° | 2896.8 |
| 7° | 2379.6 |
| 8° | 1855.1 |
| 9° | 1364.7 |
| 10° | 970.9 |
| 11° | 695.8 |
| 12° | 523.2 |
| 13° | 426.0 |
| 14° | 372.9 |
| 15° | 334.1 |
| 17.5° | 206.1 |
| 20° | 139.2 |
| 22.5° | 93.2 |
| 25° | 60.4 |
| 27.5° | 36.8 |
| 30° | 22.3 |
| 32.5° | 14.4 |
| 35° | 10.5 |
| 37.5° | 8.5 |
| 40° | 6.6 |
| 42.5° | 5.3 |
| 45° | 3.9 |
| 47.5° | 2.6 |
| 50° | 2.0 |
| 52.5° | 2.0 |
| 55° | 1.3 |
| 57.5° | 1.3 |
| 60° | 0.7 |
| 62.5° | 0.7 |
| 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)