

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: P224990

Luminaire Tested: **LSSQWM2B20FL409035D010 2LBDL\*LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P224990  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (152)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LSSQWM2B20FL409035D010 2LBDL\*LI  
Description: 2000 Lumen, 2inch Portfolio LED Cylinder  
FLOOD OPTIC  
LENSED SPUN ROUND TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1470.5 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 0.59 / 0.59 / 0.58  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

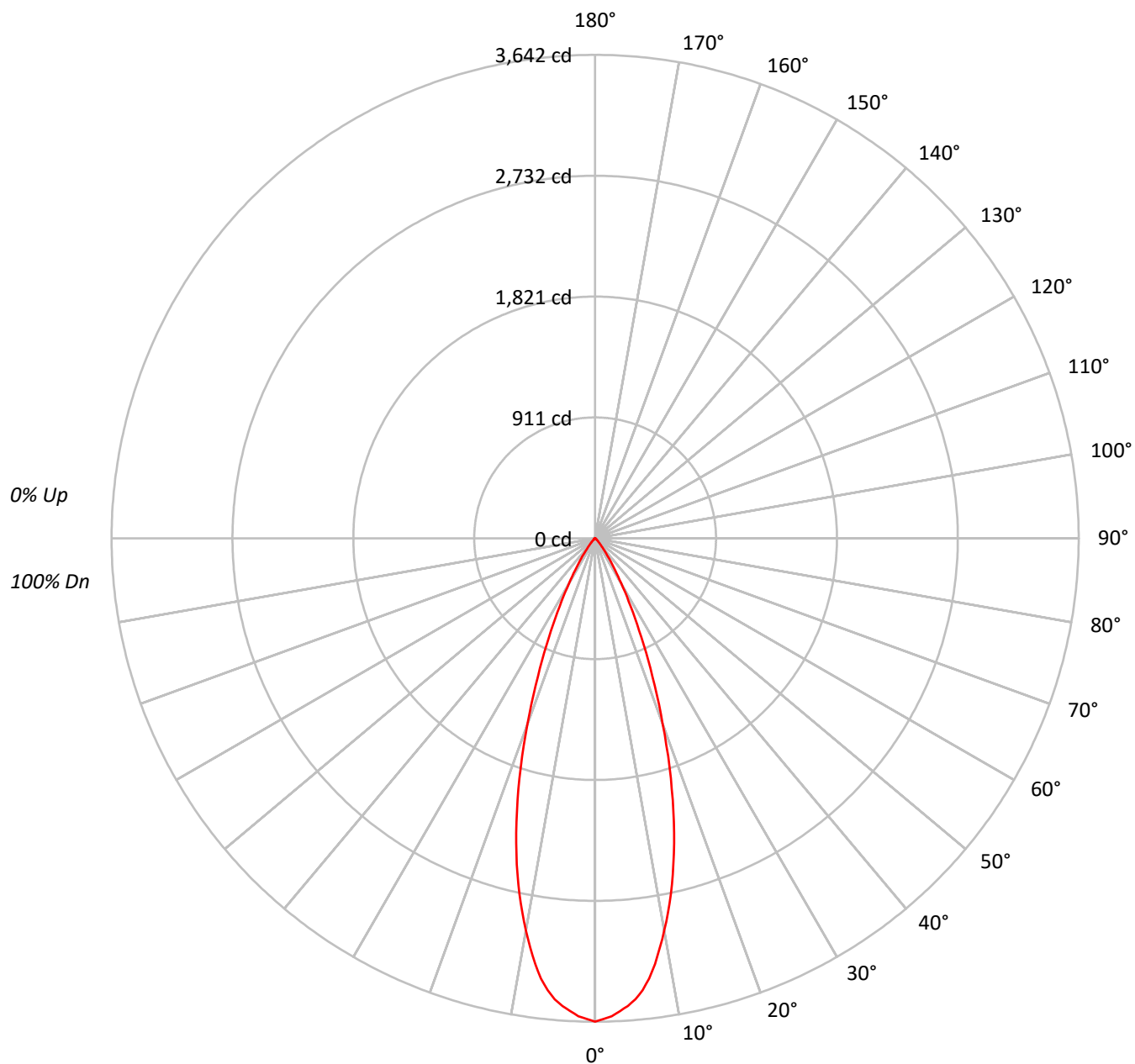
Input Watts (W): 20.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 105 | 103 |  |  | 102 | 101 | 100 |  |  | 99  |
| 2   | 110 | 106 | 103 | 100 |  | 108 | 104 | 101 | 99  |  | 101 | 99  | 97  |  |  | 98  | 96  | 95  |  |  | 96  |
| 3   | 106 | 101 | 96  | 93  |  | 104 | 99  | 95  | 92  |  | 97  | 94  | 91  |  |  | 94  | 92  | 90  |  |  | 92  |
| 4   | 102 | 96  | 91  | 88  |  | 100 | 95  | 90  | 87  |  | 93  | 89  | 86  |  |  | 91  | 88  | 85  |  |  | 89  |
| 5   | 98  | 91  | 86  | 83  |  | 97  | 90  | 86  | 83  |  | 89  | 85  | 82  |  |  | 87  | 84  | 81  |  |  | 86  |
| 6   | 94  | 87  | 82  | 79  |  | 93  | 86  | 82  | 79  |  | 85  | 81  | 78  |  |  | 84  | 80  | 78  |  |  | 83  |
| 7   | 91  | 83  | 79  | 75  |  | 90  | 83  | 78  | 75  |  | 82  | 78  | 75  |  |  | 81  | 77  | 74  |  |  | 80  |
| 8   | 88  | 80  | 75  | 72  |  | 87  | 80  | 75  | 72  |  | 79  | 74  | 71  |  |  | 78  | 74  | 71  |  |  | 77  |
| 9   | 85  | 77  | 72  | 69  |  | 84  | 76  | 72  | 69  |  | 76  | 71  | 69  |  |  | 75  | 71  | 68  |  |  | 74  |
| 10  | 82  | 74  | 69  | 66  |  | 81  | 74  | 69  | 66  |  | 73  | 69  | 66  |  |  | 72  | 68  | 66  |  |  | 72  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1410598 |
| 5°  | 1355524 |
| 10° | 1180004 |
| 15° | 921441  |
| 20° | 612784  |
| 25° | 350886  |
| 30° | 174435  |
| 35° | 80197   |
| 40° | 32159   |
| 45° | 14681   |
| 50° | 6809    |
| 55° | 3849    |
| 60° | 2169    |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 317.3  | 21.6      |
| 10°-20°   | 623.1  | 42.4      |
| 20°-30°   | 385.6  | 26.2      |
| 30°-40°   | 115.4  | 7.8       |
| 40°-50°   | 23.1   | 1.6       |
| 50°-60°   | 5.6    | 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°    | 1326.0 | 90.2      |
| 0°-40°    | 1441.4 | 98.0      |
| 0°-60°    | 1470.2 | 100.0     |
| 0°-90°    | 1470.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1470.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3642 |      |
| 5°  | 3486 | 317  |
| 15° | 2298 | 623  |
| 25° | 821  | 386  |
| 35° | 170  | 115  |
| 45° | 27   | 23   |
| 55° | 6    | 6    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3641.7 |
| 1°    | 3621.9 |
| 2°    | 3603.5 |
| 3°    | 3566.8 |
| 4°    | 3532.9 |
| 5°    | 3486.2 |
| 6°    | 3422.6 |
| 7°    | 3342.1 |
| 8°    | 3238.9 |
| 9°    | 3121.6 |
| 10°   | 3000.1 |
| 11°   | 2874.3 |
| 12°   | 2740.1 |
| 13°   | 2600.2 |
| 14°   | 2450.4 |
| 15°   | 2297.8 |
| 17.5° | 1895.0 |
| 20°   | 1486.6 |
| 22.5° | 1124.9 |
| 25°   | 821.0  |
| 27.5° | 576.6  |
| 30°   | 390.0  |
| 32.5° | 257.2  |
| 35°   | 169.6  |
| 37.5° | 106.0  |
| 40°   | 63.6   |
| 42.5° | 41.0   |
| 45°   | 26.8   |
| 47.5° | 17.0   |
| 50°   | 11.3   |
| 52.5° | 8.5    |
| 55°   | 5.7    |
| 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)