

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P835041

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-5HI-50-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835041  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 5/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ORLG-24-4-INS-OPL-LD4-5HI-50-120-EDD  
Description: 2FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

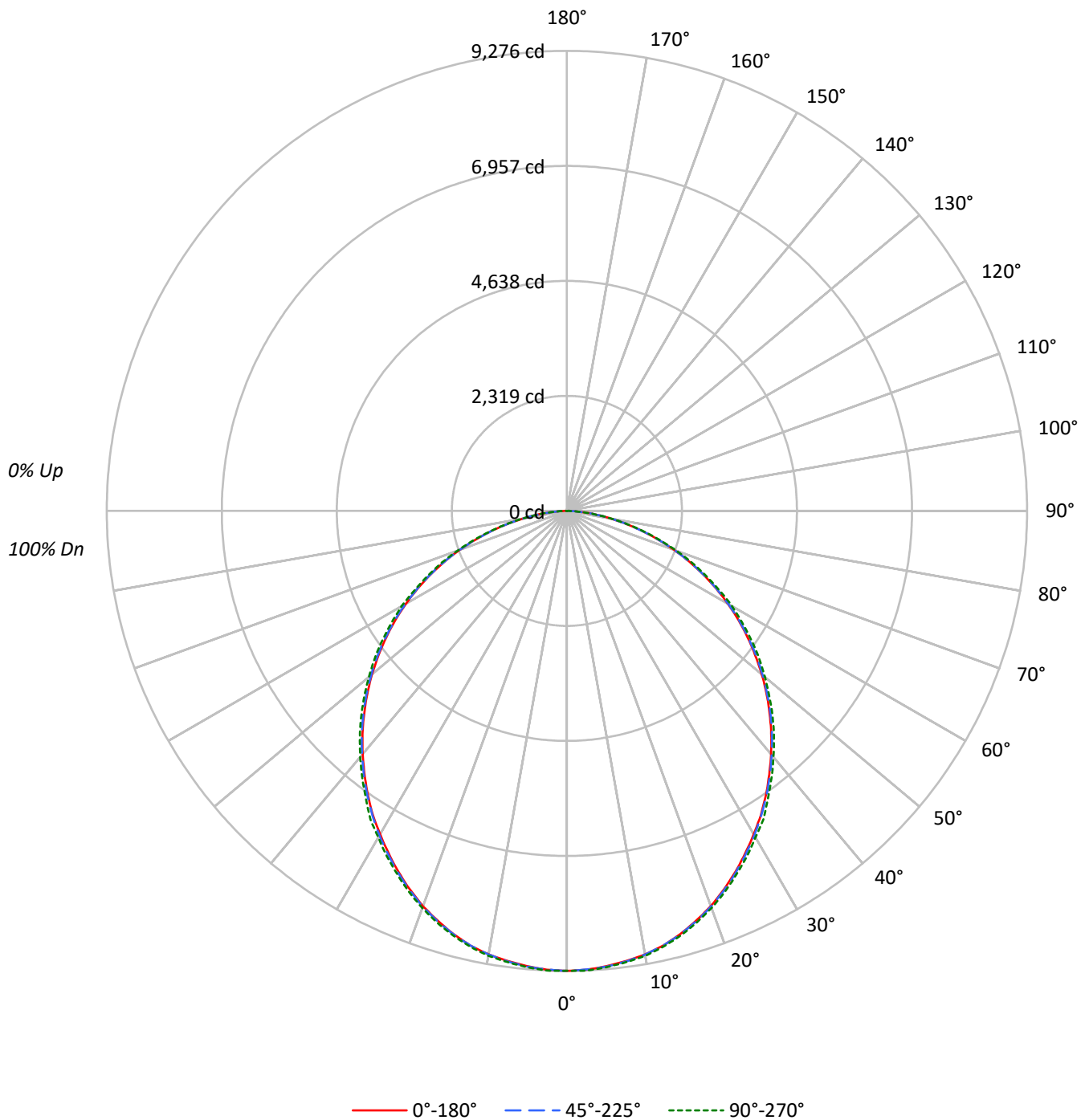
Lumens per Lamp: N/A  
Luminaire Lumens: 25061.1 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 220  
Input Voltage (V): 120  
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: 28.75 FT

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### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  |  | 73  | 67  | 62  |  | 70  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  |  | 65  | 58  | 53  |  | 62  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  |  | 58  | 52  | 46  |  | 56  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 51  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  |  | 48  | 41  | 36  |  | 47  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  |  | 44  | 37  | 32  |  | 43  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  |  | 41  | 34  | 29  |  | 40  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  |  | 38  | 31  | 27  |  | 37  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 12479 | 12479 | 12479 |
| 5°  | 12446 | 12457 | 12472 |
| 10° | 12406 | 12409 | 12446 |
| 15° | 12304 | 12312 | 12347 |
| 20° | 12144 | 12158 | 12202 |
| 25° | 11924 | 11953 | 12007 |
| 30° | 11701 | 11739 | 11811 |
| 35° | 11487 | 11515 | 11607 |
| 40° | 11245 | 11282 | 11383 |
| 45° | 10998 | 11045 | 11159 |
| 50° | 10732 | 10780 | 10905 |
| 55° | 10428 | 10477 | 10648 |
| 60° | 10081 | 10123 | 10350 |
| 65° | 9641  | 9671  | 9855  |
| 70° | 9050  | 9057  | 9254  |
| 75° | 8226  | 8196  | 8385  |
| 80° | 7067  | 7038  | 7156  |
| 85° | 5483  | 5395  | 5425  |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 876.4   | 3.5       |
| 10°-20°   | 2493.0  | 9.9       |
| 20°-30°   | 3711.3  | 14.8      |
| 30°-40°   | 4389.0  | 17.5      |
| 40°-50°   | 4480.5  | 17.9      |
| 50°-60°   | 3998.6  | 16.0      |
| 60°-70°   | 3011.8  | 12.0      |
| 70°-80°   | 1679.6  | 6.7       |
| 80°-90°   | 420.8   | 1.7       |
| 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°    | 7080.7  | 28.3      |
| 0°-40°    | 11469.7 | 45.8      |
| 0°-60°    | 19948.9 | 79.6      |
| 0°-90°    | 25061.1 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 25061.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 9275 | 9275  | 9275 | 9275  | 9275 |      |
| 5°  | 9215 | 9232  | 9223 | 9225  | 9234 | 875  |
| 15° | 8833 | 8843  | 8839 | 8846  | 8864 | 2490 |
| 25° | 8032 | 8042  | 8051 | 8073  | 8088 | 3700 |
| 35° | 6993 | 6986  | 7011 | 7038  | 7066 | 4373 |
| 45° | 5780 | 5778  | 5805 | 5834  | 5864 | 4459 |
| 55° | 4445 | 4440  | 4466 | 4497  | 4539 | 3974 |
| 65° | 3028 | 3017  | 3038 | 3065  | 3095 | 2995 |
| 75° | 1582 | 1569  | 1576 | 1584  | 1613 | 1677 |
| 85° | 355  | 346   | 350  | 346   | 351  | 426  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 9274.6 | 9274.6 | 9274.6 | 9274.6 | 9274.6 |
| 2.5°  | 9259.3 | 9274.6 | 9255.4 | 9259.3 | 9276.5 |
| 5°    | 9215.1 | 9232.4 | 9222.8 | 9224.7 | 9234.3 |
| 7.5°  | 9153.6 | 9176.7 | 9163.2 | 9167.1 | 9176.7 |
| 10°   | 9080.7 | 9098.0 | 9082.6 | 9092.2 | 9109.5 |
| 12.5° | 8977.0 | 8984.7 | 8977.0 | 8980.8 | 9000.0 |
| 15°   | 8833.0 | 8842.6 | 8838.7 | 8846.4 | 8863.7 |
| 17.5° | 8664.0 | 8675.5 | 8673.6 | 8689.0 | 8702.4 |
| 20°   | 8481.6 | 8483.5 | 8491.2 | 8506.5 | 8521.9 |
| 22.5° | 8266.5 | 8272.3 | 8279.9 | 8301.1 | 8316.4 |
| 25°   | 8032.2 | 8041.8 | 8051.4 | 8072.6 | 8087.9 |
| 27.5° | 7784.5 | 7794.1 | 7807.6 | 7830.6 | 7855.6 |
| 30°   | 7531.1 | 7531.1 | 7556.0 | 7579.1 | 7602.1 |
| 32.5° | 7275.7 | 7266.1 | 7289.1 | 7317.9 | 7373.6 |
| 35°   | 6993.4 | 6985.7 | 7010.7 | 7037.6 | 7066.4 |
| 37.5° | 6699.6 | 6693.9 | 6722.7 | 6751.5 | 6778.3 |
| 40°   | 6402.0 | 6394.3 | 6423.1 | 6451.9 | 6480.7 |
| 42.5° | 6096.7 | 6092.8 | 6119.7 | 6148.5 | 6179.2 |
| 45°   | 5779.8 | 5777.9 | 5804.8 | 5833.6 | 5864.3 |
| 47.5° | 5457.2 | 5453.4 | 5480.3 | 5511.0 | 5537.9 |
| 50°   | 5127.0 | 5123.1 | 5150.0 | 5180.7 | 5209.5 |
| 52.5° | 4787.1 | 4787.1 | 4812.0 | 4838.9 | 4883.1 |
| 55°   | 4445.3 | 4439.5 | 4466.4 | 4497.1 | 4539.4 |
| 57.5° | 4099.6 | 4092.0 | 4116.9 | 4147.7 | 4186.1 |
| 60°   | 3746.3 | 3738.7 | 3761.7 | 3792.4 | 3846.2 |
| 62.5° | 3389.2 | 3377.7 | 3400.7 | 3429.5 | 3462.1 |
| 65°   | 3028.2 | 3016.7 | 3037.8 | 3064.7 | 3095.4 |
| 67.5° | 2665.3 | 2651.8 | 2672.9 | 2696.0 | 2724.8 |
| 70°   | 2300.4 | 2287.0 | 2302.3 | 2325.4 | 2352.3 |
| 72.5° | 1937.5 | 1924.1 | 1937.5 | 1947.1 | 1979.7 |
| 75°   | 1582.3 | 1568.8 | 1576.5 | 1584.2 | 1613.0 |
| 77.5° | 1236.6 | 1223.2 | 1238.5 | 1242.4 | 1259.7 |
| 80°   | 912.1  | 898.7  | 908.3  | 910.2  | 923.6  |
| 82.5° | 616.4  | 604.9  | 618.3  | 608.7  | 620.2  |
| 85°   | 355.2  | 345.6  | 349.5  | 345.6  | 351.4  |
| 87.5° | 140.2  | 132.5  | 134.4  | 126.7  | 126.7  |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)