

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: P835043

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-6STD-50-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835043  
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-LD4-6STD-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**

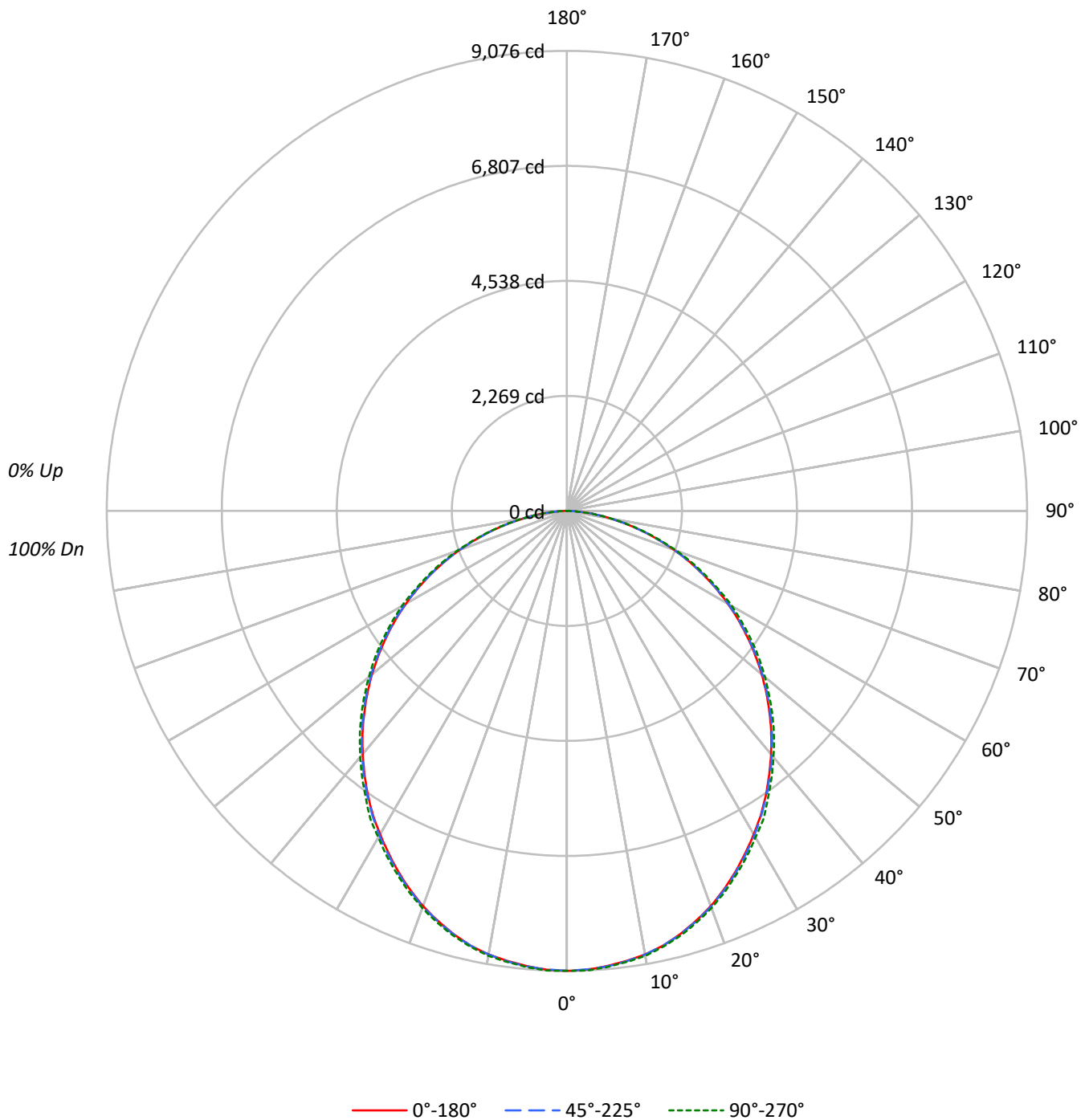
Lumens per Lamp: N/A  
Luminaire Lumens: 24518.5 lumens  
Efficiency: N/A  
Efficacy: 122.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 199.8  
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

TEST NUMBER: P835043

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6STD-50-120-EDD

### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835043

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6STD-50-120-EDD

**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°  | 12209 | 12209 | 12209 |
| 5°  | 12177 | 12187 | 12202 |
| 10° | 12138 | 12140 | 12176 |
| 15° | 12037 | 12045 | 12079 |
| 20° | 11881 | 11895 | 11938 |
| 25° | 11666 | 11694 | 11747 |
| 30° | 11447 | 11485 | 11555 |
| 35° | 11238 | 11266 | 11356 |
| 40° | 11001 | 11037 | 11136 |
| 45° | 10760 | 10806 | 10917 |
| 50° | 10500 | 10547 | 10668 |
| 55° | 10202 | 10250 | 10418 |
| 60° | 9863  | 9904  | 10126 |
| 65° | 9432  | 9462  | 9642  |
| 70° | 8854  | 8861  | 9053  |
| 75° | 8047  | 8018  | 8204  |
| 80° | 6915  | 6885  | 7001  |
| 85° | 5365  | 5278  | 5308  |



TEST NUMBER: P835043

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6STD-50-120-EDD

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 857.4   | 3.5       |
| 10°-20°   | 2439.0  | 9.9       |
| 20°-30°   | 3631.0  | 14.8      |
| 30°-40°   | 4294.0  | 17.5      |
| 40°-50°   | 4383.5  | 17.9      |
| 50°-60°   | 3912.1  | 16.0      |
| 60°-70°   | 2946.5  | 12.0      |
| 70°-80°   | 1643.2  | 6.7       |
| 80°-90°   | 411.7   | 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°    | 6927.4  | 28.3      |
| 0°-40°    | 11221.4 | 45.8      |
| 0°-60°    | 19517.0 | 79.6      |
| 0°-90°    | 24518.5 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 24518.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 9074 | 9074  | 9074 | 9074  | 9074 |      |
| 5°  | 9016 | 9032  | 9023 | 9025  | 9034 | 856  |
| 15° | 8642 | 8651  | 8647 | 8655  | 8672 | 2436 |
| 25° | 7858 | 7868  | 7877 | 7898  | 7913 | 3620 |
| 35° | 6842 | 6834  | 6859 | 6885  | 6913 | 4279 |
| 45° | 5655 | 5653  | 5679 | 5707  | 5737 | 4362 |
| 55° | 4349 | 4343  | 4370 | 4400  | 4441 | 3887 |
| 65° | 2963 | 2951  | 2972 | 2998  | 3028 | 2930 |
| 75° | 1548 | 1535  | 1542 | 1550  | 1578 | 1641 |
| 85° | 348  | 338   | 342  | 338   | 344  | 417  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835043

CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-6STD-50-120-EDD

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 9073.8 | 9073.8 | 9073.8 | 9073.8 | 9073.8 |
| 2.5°  | 9058.8 | 9073.8 | 9055.0 | 9058.8 | 9075.7 |
| 5°    | 9015.6 | 9032.5 | 9023.1 | 9025.0 | 9034.4 |
| 7.5°  | 8955.5 | 8978.0 | 8964.9 | 8968.6 | 8978.0 |
| 10°   | 8884.1 | 8901.0 | 8886.0 | 8895.3 | 8912.3 |
| 12.5° | 8782.6 | 8790.1 | 8782.6 | 8786.4 | 8805.2 |
| 15°   | 8641.7 | 8651.1 | 8647.4 | 8654.9 | 8671.8 |
| 17.5° | 8476.4 | 8487.7 | 8485.8 | 8500.8 | 8514.0 |
| 20°   | 8297.9 | 8299.8 | 8307.3 | 8322.4 | 8337.4 |
| 22.5° | 8087.5 | 8093.2 | 8100.7 | 8121.3 | 8136.4 |
| 25°   | 7858.3 | 7867.7 | 7877.1 | 7897.8 | 7912.8 |
| 27.5° | 7616.0 | 7625.4 | 7638.5 | 7661.1 | 7685.5 |
| 30°   | 7368.0 | 7368.0 | 7392.4 | 7415.0 | 7437.5 |
| 32.5° | 7118.2 | 7108.8 | 7131.3 | 7159.5 | 7214.0 |
| 35°   | 6842.0 | 6834.5 | 6858.9 | 6885.2 | 6913.4 |
| 37.5° | 6554.6 | 6548.9 | 6577.1 | 6605.3 | 6631.6 |
| 40°   | 6263.4 | 6255.9 | 6284.0 | 6312.2 | 6340.4 |
| 42.5° | 5964.7 | 5960.9 | 5987.2 | 6015.4 | 6045.5 |
| 45°   | 5654.7 | 5652.8 | 5679.1 | 5707.3 | 5737.4 |
| 47.5° | 5339.1 | 5335.3 | 5361.6 | 5391.7 | 5418.0 |
| 50°   | 5016.0 | 5012.2 | 5038.5 | 5068.6 | 5096.7 |
| 52.5° | 4683.4 | 4683.4 | 4707.9 | 4734.2 | 4777.4 |
| 55°   | 4349.0 | 4343.4 | 4369.7 | 4399.8 | 4441.1 |
| 57.5° | 4010.9 | 4003.4 | 4027.8 | 4057.9 | 4095.4 |
| 60°   | 3665.2 | 3657.7 | 3680.3 | 3710.3 | 3762.9 |
| 62.5° | 3315.8 | 3304.5 | 3327.1 | 3355.2 | 3387.2 |
| 65°   | 2962.6 | 2951.3 | 2972.0 | 2998.3 | 3028.4 |
| 67.5° | 2607.5 | 2594.4 | 2615.1 | 2637.6 | 2665.8 |
| 70°   | 2250.6 | 2237.5 | 2252.5 | 2275.0 | 2301.3 |
| 72.5° | 1895.5 | 1882.4 | 1895.5 | 1904.9 | 1936.9 |
| 75°   | 1548.0 | 1534.8 | 1542.4 | 1549.9 | 1578.1 |
| 77.5° | 1209.8 | 1196.7 | 1211.7 | 1215.5 | 1232.4 |
| 80°   | 892.4  | 879.2  | 888.6  | 890.5  | 903.6  |
| 82.5° | 603.0  | 591.8  | 604.9  | 595.5  | 606.8  |
| 85°   | 347.5  | 338.2  | 341.9  | 338.2  | 343.8  |
| 87.5° | 137.1  | 129.6  | 131.5  | 124.0  | 124.0  |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)