

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



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P1499046

Luminaire Tested: MAE-G-4-120-1LO-LO-40-90

Issue Date: 6/26/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1499046  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27581)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/26/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: MAE-G-4-120-1LO-LO-40-90  
Description: Patient Room Recessed Ceiling Ambient, Exam LED luminaire with, no door frame, 1 LO ambient , LO exam illumination levels  
Light Source: -  
Ballast/Driver: -

**Summary**

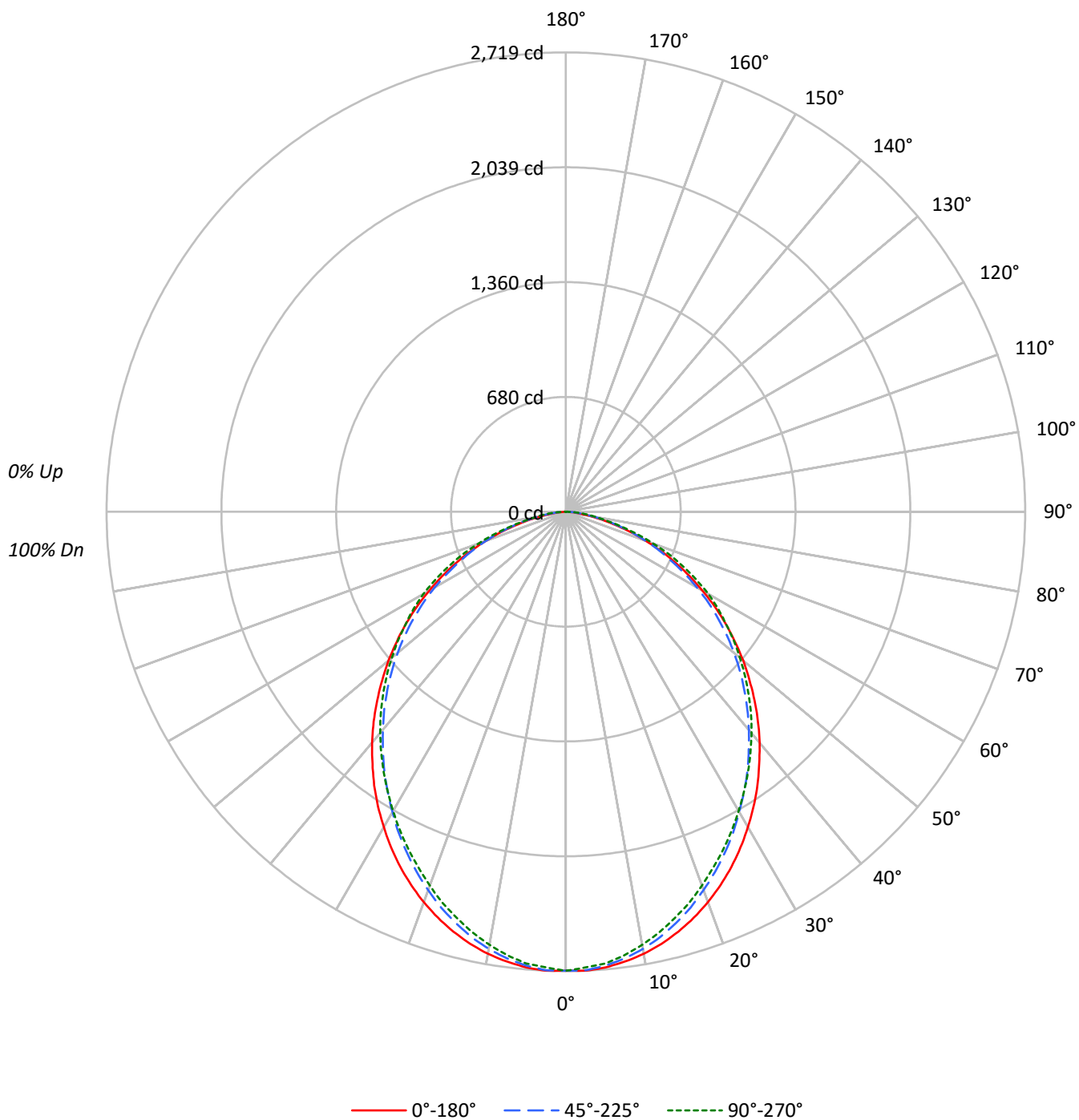
Lumens per Lamp: N/A  
Luminaire Lumens: 6499.9 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.13 / 1.26  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 72.2  
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: 24 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  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 110 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |    |    |
| 2   | 100 | 92  | 86  | 80  | 97  | 90  | 84  | 79  | 87  | 82  | 78  | 84  | 79  | 76  | 81  | 77  | 74  | 72  |    |    |
| 3   | 92  | 82  | 74  | 67  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 67  | 63  | 61  |    |    |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 63  | 57  | 69  | 62  | 56  | 66  | 61  | 56  | 64  | 59  | 55  | 53  |    |    |
| 5   | 78  | 65  | 56  | 50  | 75  | 64  | 56  | 50  | 62  | 55  | 49  | 60  | 54  | 49  | 58  | 53  | 48  | 46  |    |    |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 41  |    |    |
| 7   | 67  | 53  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 38  | 48  | 42  | 38  | 36  |    |    |
| 8   | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 32  |    |    |
| 9   | 58  | 45  | 37  | 32  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 29  |    |    |
| 10  | 55  | 42  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 28  | 38  | 32  | 28  | 27  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3655 | 3655 | 3655 |
| 5°  | 3656 | 3642 | 3624 |
| 10° | 3630 | 3590 | 3556 |
| 15° | 3584 | 3510 | 3468 |
| 20° | 3521 | 3412 | 3372 |
| 25° | 3443 | 3306 | 3273 |
| 30° | 3349 | 3188 | 3177 |
| 35° | 3249 | 3077 | 3087 |
| 40° | 3133 | 2960 | 3003 |
| 45° | 3005 | 2844 | 2911 |
| 50° | 2868 | 2721 | 2815 |
| 55° | 2709 | 2577 | 2713 |
| 60° | 2514 | 2411 | 2623 |
| 65° | 2287 | 2197 | 2438 |
| 70° | 1985 | 1976 | 2173 |
| 75° | 1584 | 1681 | 1784 |
| 80° | 1096 | 1299 | 1416 |
| 85° | 611  | 990  | 1289 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3005 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 255.0  | 3.9       |
| 10°-20°   | 710.8  | 10.9      |
| 20°-30°   | 1032.5 | 15.9      |
| 30°-40°   | 1188.3 | 18.3      |
| 40°-50°   | 1176.1 | 18.1      |
| 50°-60°   | 1007.0 | 15.5      |
| 60°-70°   | 710.2  | 10.9      |
| 70°-80°   | 345.0  | 5.3       |
| 80°-90°   | 75.1   | 1.2       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 1998.2 | 30.7      |
| 0°-40°    | 3186.5 | 49.0      |
| 0°-60°    | 5369.6 | 82.6      |
| 0°-90°    | 6499.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6499.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2716 | 2716  | 2716 | 2716  | 2716 |      |
| 5°  | 2707 | 2705  | 2696 | 2677  | 2684 | 257  |
| 15° | 2573 | 2558  | 2520 | 2486  | 2490 | 725  |
| 25° | 2319 | 2285  | 2227 | 2198  | 2205 | 1067 |
| 35° | 1978 | 1931  | 1873 | 1866  | 1880 | 1236 |
| 45° | 1579 | 1537  | 1495 | 1513  | 1530 | 1218 |
| 55° | 1155 | 1116  | 1098 | 1131  | 1156 | 1031 |
| 65° | 718  | 688   | 690  | 743   | 766  | 711  |
| 75° | 305  | 292   | 323  | 343   | 343  | 329  |
| 85° | 40   | 48    | 64   | 78    | 84   | 56   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2716.3 | 2716.3 | 2716.3 | 2716.3 | 2716.3 |
| 2.5°  | 2719.3 | 2721.6 | 2716.3 | 2695.9 | 2699.4 |
| 5°    | 2706.9 | 2704.6 | 2696.5 | 2677.4 | 2683.5 |
| 7.5°  | 2685.3 | 2681.5 | 2667.0 | 2644.3 | 2648.3 |
| 10°   | 2656.6 | 2649.2 | 2627.5 | 2599.4 | 2602.7 |
| 12.5° | 2619.4 | 2609.4 | 2579.0 | 2547.0 | 2550.6 |
| 15°   | 2572.9 | 2558.5 | 2519.8 | 2486.1 | 2489.7 |
| 17.5° | 2519.4 | 2503.1 | 2456.2 | 2419.7 | 2427.5 |
| 20°   | 2459.0 | 2436.8 | 2382.9 | 2348.3 | 2354.9 |
| 22.5° | 2392.3 | 2364.5 | 2307.9 | 2274.6 | 2279.8 |
| 25°   | 2318.9 | 2285.1 | 2227.1 | 2198.5 | 2204.8 |
| 27.5° | 2239.8 | 2202.7 | 2143.0 | 2116.9 | 2126.5 |
| 30°   | 2155.4 | 2115.4 | 2052.2 | 2034.3 | 2044.7 |
| 32.5° | 2068.8 | 2026.3 | 1963.9 | 1952.4 | 1962.9 |
| 35°   | 1977.8 | 1931.4 | 1873.4 | 1866.4 | 1879.5 |
| 37.5° | 1880.4 | 1835.7 | 1778.4 | 1782.9 | 1795.2 |
| 40°   | 1784.0 | 1737.7 | 1685.3 | 1695.2 | 1710.0 |
| 42.5° | 1683.6 | 1639.0 | 1591.2 | 1605.0 | 1622.3 |
| 45°   | 1579.1 | 1536.6 | 1494.8 | 1513.2 | 1529.7 |
| 47.5° | 1474.2 | 1432.1 | 1398.1 | 1419.7 | 1439.3 |
| 50°   | 1370.1 | 1329.7 | 1300.0 | 1326.0 | 1344.6 |
| 52.5° | 1260.8 | 1222.3 | 1201.0 | 1228.6 | 1252.3 |
| 55°   | 1154.9 | 1115.7 | 1098.5 | 1131.4 | 1156.5 |
| 57.5° | 1045.4 | 1013.2 | 998.4  | 1037.0 | 1068.4 |
| 60°   | 934.2  | 902.5  | 896.1  | 944.9  | 974.7  |
| 62.5° | 825.5  | 794.4  | 791.7  | 848.7  | 870.1  |
| 65°   | 718.5  | 687.9  | 690.2  | 742.8  | 765.9  |
| 67.5° | 612.6  | 584.5  | 597.4  | 647.9  | 663.2  |
| 70°   | 504.6  | 479.5  | 502.2  | 544.7  | 552.4  |
| 72.5° | 403.3  | 382.1  | 412.8  | 442.6  | 444.5  |
| 75°   | 304.7  | 291.7  | 323.4  | 343.1  | 343.2  |
| 77.5° | 218.1  | 211.2  | 240.5  | 253.9  | 254.7  |
| 80°   | 141.4  | 144.5  | 167.6  | 178.1  | 182.7  |
| 82.5° | 82.4   | 89.7   | 107.8  | 125.5  | 130.3  |
| 85°   | 39.6   | 48.4   | 64.1   | 77.8   | 83.5   |
| 87.5° | 13.7   | 19.5   | 26.7   | 29.6   | 28.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 15.30            | 16.88 | 15.67 | 17.20 | 17.51 | 15.47          | 17.05 | 15.84 | 17.37 | 17.68 |
|                 | 3H   | 16.75            | 18.17 | 17.13 | 18.50 | 18.86 | 17.11          | 18.54 | 17.49 | 18.87 | 19.23 |
|                 | 4H   | 17.18            | 18.52 | 17.58 | 18.86 | 19.24 | 17.62          | 18.95 | 18.02 | 19.30 | 19.68 |
|                 | 6H   | 17.40            | 18.64 | 17.81 | 19.00 | 19.39 | 17.91          | 19.15 | 18.32 | 19.52 | 19.91 |
|                 | 8H   | 17.43            | 18.61 | 17.86 | 19.00 | 19.40 | 18.00          | 19.18 | 18.42 | 19.57 | 19.97 |
|                 | 12H  | 17.44            | 18.57 | 17.87 | 18.95 | 19.38 | 18.06          | 19.19 | 18.49 | 19.57 | 20.00 |
| 4H              | 2H   | 15.82            | 17.15 | 16.21 | 17.50 | 17.88 | 15.95          | 17.29 | 16.35 | 17.64 | 18.02 |
|                 | 3H   | 17.45            | 18.57 | 17.86 | 18.96 | 19.36 | 17.80          | 18.92 | 18.21 | 19.32 | 19.72 |
|                 | 4H   | 17.96            | 18.97 | 18.40 | 19.38 | 19.82 | 18.42          | 19.42 | 18.85 | 19.84 | 20.27 |
|                 | 6H   | 18.26            | 19.14 | 18.72 | 19.58 | 20.04 | 18.82          | 19.69 | 19.27 | 20.13 | 20.59 |
|                 | 8H   | 18.32            | 19.14 | 18.78 | 19.58 | 20.05 | 18.94          | 19.76 | 19.40 | 20.20 | 20.66 |
|                 | 12H  | 18.34            | 19.07 | 18.82 | 19.55 | 20.02 | 19.04          | 19.77 | 19.52 | 20.24 | 20.71 |
| 8H              | 4H   | 18.19            | 19.01 | 18.65 | 19.45 | 19.91 | 18.60          | 19.42 | 19.06 | 19.86 | 20.33 |
|                 | 6H   | 18.56            | 19.23 | 19.05 | 19.72 | 20.20 | 19.08          | 19.75 | 19.57 | 20.24 | 20.72 |
|                 | 8H   | 18.64            | 19.25 | 19.15 | 19.76 | 20.24 | 19.25          | 19.86 | 19.77 | 20.37 | 20.85 |
|                 | 12H  | 18.70            | 19.23 | 19.20 | 19.72 | 20.28 | 19.41          | 19.95 | 19.92 | 20.44 | 21.00 |
| 12H             | 4H   | 18.20            | 18.93 | 18.68 | 19.41 | 19.88 | 18.60          | 19.33 | 19.08 | 19.81 | 20.28 |
|                 | 6H   | 18.58            | 19.18 | 19.09 | 19.69 | 20.18 | 19.08          | 19.69 | 19.59 | 20.20 | 20.68 |
|                 | 8H   | 18.70            | 19.24 | 19.21 | 19.73 | 20.29 | 19.30          | 19.84 | 19.81 | 20.33 | 20.89 |