

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: P1499530

Luminaire Tested: MAE-G-4-120-3HI-LO-50-90-VRDCPH

Issue Date: 6/26/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1499530  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189188)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/26/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: MAE-G-4-120-3HI-LO-50-90-VRDCPH  
Description: Patient Room Recessed Ceiling Ambient, Exam LED luminaire with, VRDCPH frame, 3 HI ambient , LO exam illumination levels  
Light Source: -  
Ballast/Driver: -

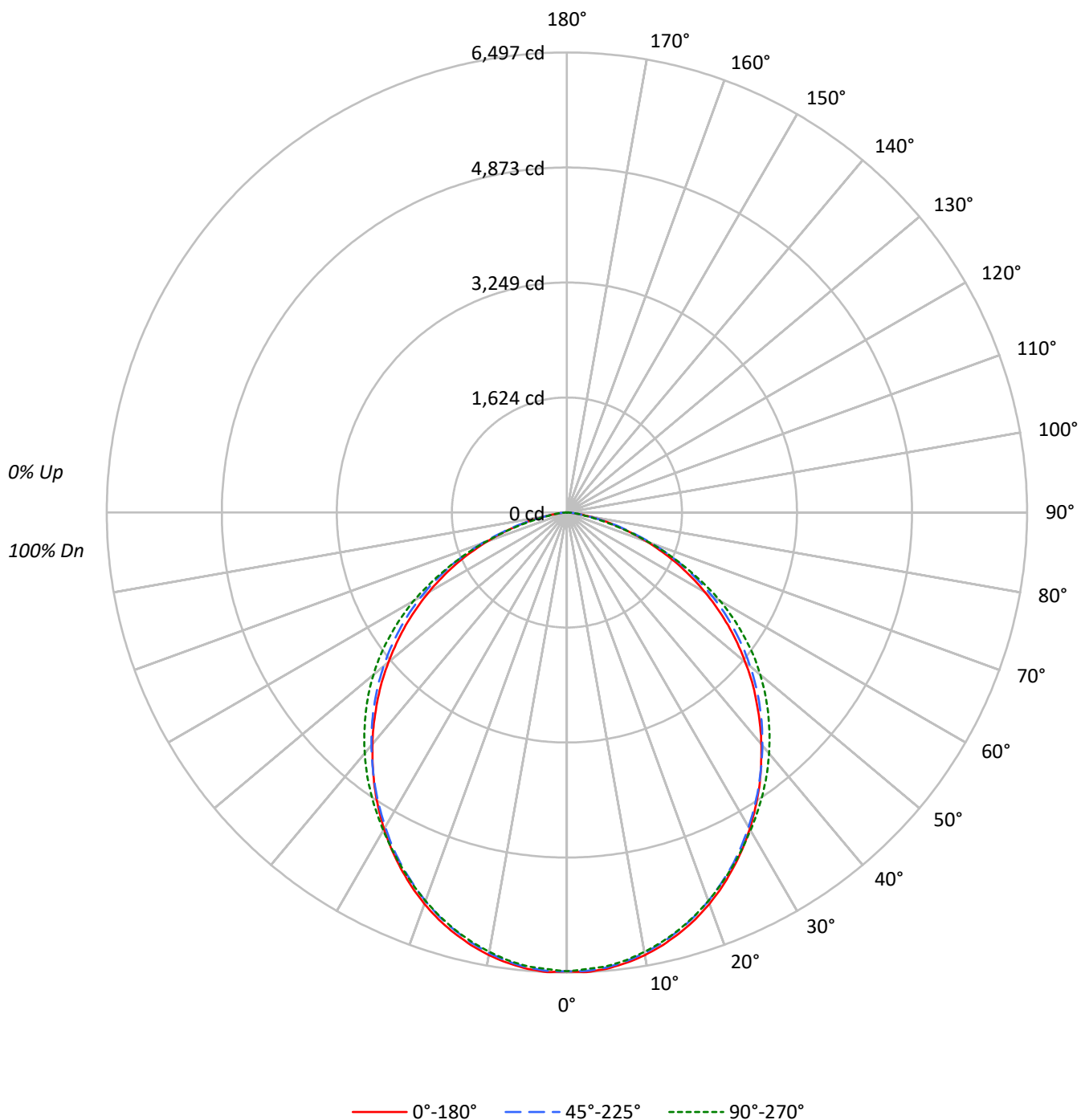
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16095.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.3  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 181.1  
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 | 102 | 102 | 100 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 93  | 90  | 91  | 89  | 88  | 88  | 88  | 86  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 74  | 74  | 74  | 72  |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 67  | 64  | 64  | 64  | 62  |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 63  | 57  | 69  | 62  | 57  | 67  | 61  | 56  | 64  | 59  | 55  | 55  | 55  | 53  |
| 5   | 78  | 65  | 56  | 50  | 75  | 64  | 56  | 50  | 62  | 55  | 49  | 60  | 54  | 49  | 58  | 53  | 48  | 48  | 48  | 46  |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 43  | 43  | 40  |
| 7   | 67  | 53  | 45  | 39  | 65  | 53  | 44  | 39  | 51  | 44  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 38  | 38  | 36  |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 35  | 47  | 40  | 34  | 46  | 39  | 34  | 44  | 38  | 34  | 34  | 34  | 32  |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 31  | 31  | 29  |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 28  | 28  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8718 | 8718 | 8718 |
| 5°  | 8735 | 8710 | 8689 |
| 10° | 8673 | 8632 | 8609 |
| 15° | 8566 | 8511 | 8500 |
| 20° | 8423 | 8362 | 8359 |
| 25° | 8235 | 8180 | 8200 |
| 30° | 8020 | 7970 | 8053 |
| 35° | 7777 | 7752 | 7932 |
| 40° | 7503 | 7541 | 7800 |
| 45° | 7206 | 7322 | 7649 |
| 50° | 6881 | 7069 | 7464 |
| 55° | 6518 | 6772 | 7164 |
| 60° | 6064 | 6384 | 6731 |
| 65° | 5498 | 5839 | 5934 |
| 70° | 4722 | 5017 | 4877 |
| 75° | 3739 | 3879 | 3446 |
| 80° | 2493 | 2375 | 1999 |
| 85° | 1254 | 1348 | 1536 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 7649 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 610.7   | 3.8       |
| 10°-20°   | 1721.6  | 10.7      |
| 20°-30°   | 2538.5  | 15.8      |
| 30°-40°   | 2966.9  | 18.4      |
| 40°-50°   | 2984.6  | 18.5      |
| 50°-60°   | 2586.3  | 16.1      |
| 60°-70°   | 1789.5  | 11.1      |
| 70°-80°   | 776.0   | 4.8       |
| 80°-90°   | 121.0   | 0.8       |
| 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°    | 4870.7  | 30.3      |
| 0°-40°    | 7837.5  | 48.7      |
| 0°-60°    | 13408.4 | 83.3      |
| 0°-90°    | 16095.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 16095.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 6480 | 6480  | 6480 | 6480  | 6480 |      |
| 5°  | 6467 | 6436  | 6449 | 6426  | 6433 | 613  |
| 15° | 6150 | 6114  | 6110 | 6089  | 6102 | 1733 |
| 25° | 5547 | 5514  | 5510 | 5494  | 5524 | 2554 |
| 35° | 4735 | 4700  | 4720 | 4772  | 4829 | 2958 |
| 45° | 3787 | 3774  | 3848 | 3956  | 4020 | 2922 |
| 55° | 2778 | 2776  | 2887 | 3012  | 3054 | 2480 |
| 65° | 1727 | 1748  | 1834 | 1861  | 1864 | 1707 |
| 75° | 719  | 738   | 746  | 694   | 663  | 773  |
| 85° | 81   | 83    | 87   | 96    | 100  | 122  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 6479.5 | 6479.5 | 6479.5 | 6479.5 | 6479.5 |
| 2.5°  | 6497.1 | 6465.1 | 6479.5 | 6462.0 | 6453.8 |
| 5°    | 6467.3 | 6436.0 | 6448.8 | 6425.9 | 6433.3 |
| 7.5°  | 6416.8 | 6385.4 | 6393.5 | 6370.6 | 6378.3 |
| 10°   | 6348.0 | 6313.0 | 6318.1 | 6294.5 | 6301.5 |
| 12.5° | 6256.6 | 6222.8 | 6224.2 | 6198.8 | 6211.6 |
| 15°   | 6149.6 | 6114.2 | 6109.9 | 6089.3 | 6101.8 |
| 17.5° | 6025.5 | 5988.6 | 5984.6 | 5958.9 | 5977.9 |
| 20°   | 5882.6 | 5845.5 | 5840.2 | 5811.9 | 5838.0 |
| 22.5° | 5723.0 | 5686.5 | 5678.2 | 5657.4 | 5685.4 |
| 25°   | 5547.1 | 5513.6 | 5510.1 | 5494.0 | 5523.5 |
| 27.5° | 5362.3 | 5325.2 | 5325.5 | 5322.6 | 5354.7 |
| 30°   | 5162.3 | 5125.9 | 5129.9 | 5139.2 | 5183.4 |
| 32.5° | 4950.9 | 4917.8 | 4928.1 | 4958.7 | 5008.8 |
| 35°   | 4734.8 | 4700.5 | 4719.8 | 4771.5 | 4829.3 |
| 37.5° | 4501.9 | 4478.4 | 4509.5 | 4581.9 | 4641.0 |
| 40°   | 4271.7 | 4246.8 | 4293.4 | 4379.3 | 4440.8 |
| 42.5° | 4033.8 | 4015.9 | 4073.4 | 4175.4 | 4233.6 |
| 45°   | 3787.0 | 3773.6 | 3848.1 | 3956.2 | 4019.6 |
| 47.5° | 3546.2 | 3530.3 | 3616.9 | 3732.3 | 3799.3 |
| 50°   | 3287.5 | 3281.0 | 3377.3 | 3502.3 | 3565.9 |
| 52.5° | 3033.8 | 3026.8 | 3133.8 | 3263.9 | 3323.3 |
| 55°   | 2778.5 | 2775.6 | 2886.8 | 3011.6 | 3054.1 |
| 57.5° | 2515.2 | 2525.2 | 2635.6 | 2742.5 | 2785.0 |
| 60°   | 2253.4 | 2265.1 | 2372.2 | 2465.9 | 2501.2 |
| 62.5° | 1991.6 | 2009.3 | 2106.6 | 2176.5 | 2183.7 |
| 65°   | 1727.0 | 1747.5 | 1833.9 | 1861.4 | 1864.0 |
| 67.5° | 1460.3 | 1486.0 | 1557.9 | 1560.9 | 1554.8 |
| 70°   | 1200.4 | 1220.5 | 1275.2 | 1262.4 | 1239.6 |
| 72.5° | 948.0  | 972.4  | 997.8  | 969.8  | 937.6  |
| 75°   | 719.2  | 738.1  | 746.1  | 694.5  | 662.8  |
| 77.5° | 505.6  | 517.8  | 508.6  | 454.5  | 431.7  |
| 80°   | 321.7  | 332.4  | 306.5  | 273.2  | 258.0  |
| 82.5° | 177.9  | 185.4  | 163.4  | 167.1  | 169.6  |
| 85°   | 81.2   | 83.2   | 87.3   | 96.4   | 99.5   |
| 87.5° | 27.8   | 30.8   | 35.0   | 36.6   | 33.5   |
| 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 | 18.45            | 20.04 | 18.82 | 20.35 | 20.66 | 19.05          | 20.64 | 19.42 | 20.95 | 21.26 |
|                 | 3H   | 19.89            | 21.31 | 20.27 | 21.64 | 22.00 | 20.39          | 21.81 | 20.77 | 22.14 | 22.50 |
|                 | 4H   | 20.30            | 21.63 | 20.70 | 21.98 | 22.36 | 20.71          | 22.04 | 21.10 | 22.39 | 22.77 |
|                 | 6H   | 20.49            | 21.73 | 20.90 | 22.09 | 22.48 | 20.81          | 22.04 | 21.22 | 22.41 | 22.80 |
|                 | 8H   | 20.51            | 21.69 | 20.94 | 22.08 | 22.48 | 20.81          | 21.99 | 21.24 | 22.38 | 22.78 |
|                 | 12H  | 20.51            | 21.63 | 20.94 | 22.02 | 22.44 | 20.81          | 21.94 | 21.24 | 22.32 | 22.75 |
| 4H              | 2H   | 19.07            | 20.40 | 19.47 | 20.75 | 21.13 | 19.55          | 20.89 | 19.95 | 21.23 | 21.61 |
|                 | 3H   | 20.67            | 21.78 | 21.08 | 22.18 | 22.58 | 21.07          | 22.18 | 21.48 | 22.58 | 22.98 |
|                 | 4H   | 21.17            | 22.16 | 21.60 | 22.58 | 23.02 | 21.46          | 22.45 | 21.89 | 22.87 | 23.31 |
|                 | 6H   | 21.43            | 22.30 | 21.88 | 22.74 | 23.20 | 21.62          | 22.48 | 22.07 | 22.92 | 23.38 |
|                 | 8H   | 21.46            | 22.27 | 21.93 | 22.72 | 23.18 | 21.63          | 22.44 | 22.09 | 22.88 | 23.35 |
|                 | 12H  | 21.47            | 22.19 | 21.95 | 22.67 | 23.14 | 21.64          | 22.36 | 22.12 | 22.84 | 23.31 |
| 8H              | 4H   | 21.34            | 22.15 | 21.80 | 22.59 | 23.06 | 21.60          | 22.41 | 22.07 | 22.86 | 23.32 |
|                 | 6H   | 21.65            | 22.31 | 22.14 | 22.80 | 23.28 | 21.79          | 22.46 | 22.29 | 22.95 | 23.43 |
|                 | 8H   | 21.70            | 22.30 | 22.21 | 22.81 | 23.29 | 21.83          | 22.42 | 22.34 | 22.93 | 23.42 |
|                 | 12H  | 21.73            | 22.25 | 22.24 | 22.75 | 23.31 | 21.86          | 22.38 | 22.37 | 22.88 | 23.44 |
| 12H             | 4H   | 21.33            | 22.05 | 21.81 | 22.53 | 23.00 | 21.60          | 22.32 | 22.08 | 22.80 | 23.27 |
|                 | 6H   | 21.63            | 22.23 | 22.14 | 22.74 | 23.22 | 21.78          | 22.38 | 22.29 | 22.89 | 23.38 |
|                 | 8H   | 21.72            | 22.24 | 22.23 | 22.73 | 23.30 | 21.84          | 22.37 | 22.35 | 22.86 | 23.43 |