

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: P1499215

Luminaire Tested: MAE-G-4-120-2HI-HI-40-VRDCPH

Issue Date: 6/26/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1499215  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189185)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/26/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: MAE-G-4-120-2HI-HI-40-VRDCPH  
Description: Patient Room Recessed Ceiling Ambient, Exam LED luminaire with, VRDCPH frame, 2 HI ambient , HI exam illumination levels  
Light Source: -  
Ballast/Driver: -

**Summary**

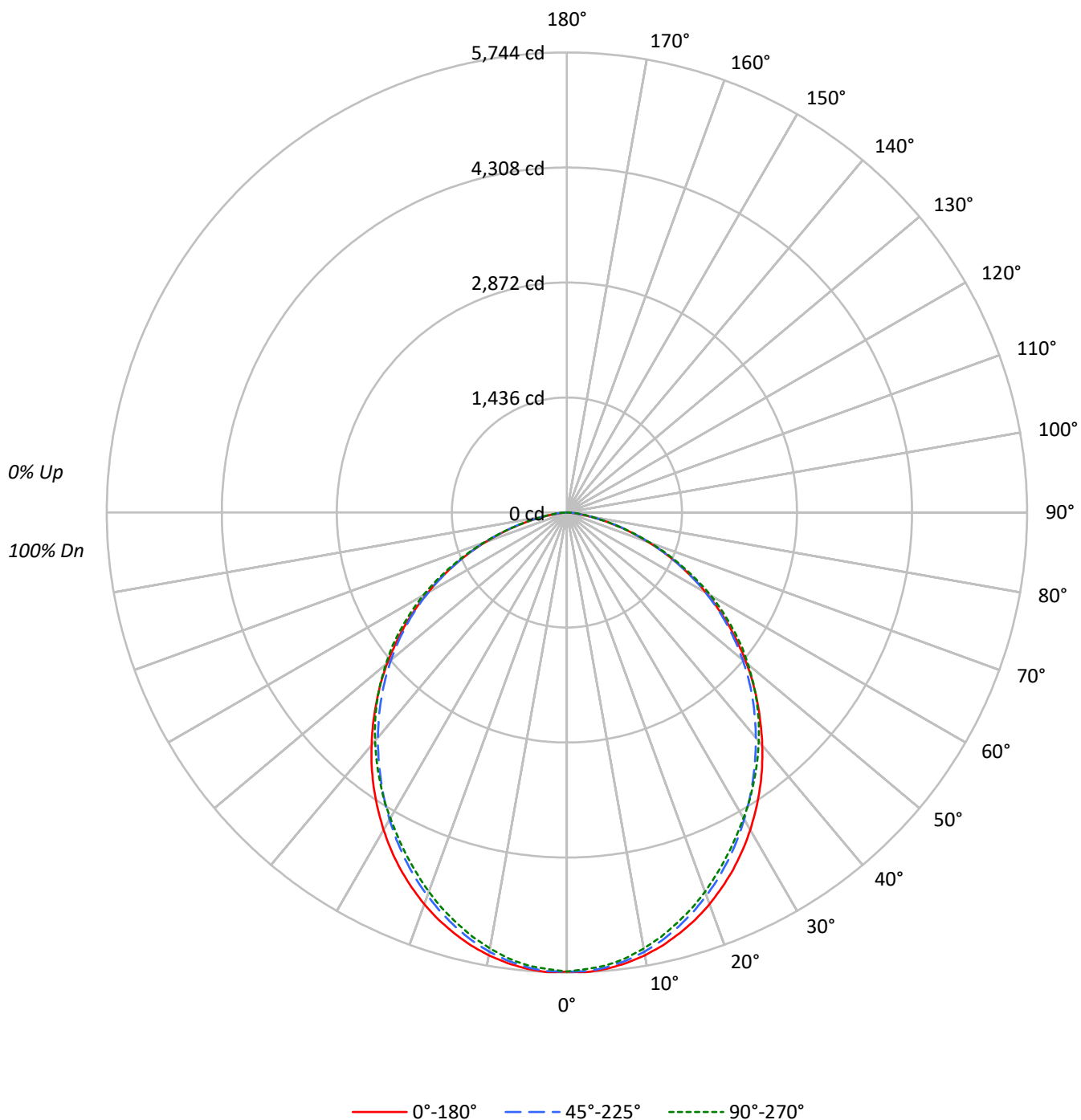
Lumens per Lamp: N/A  
Luminaire Lumens: 13953.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.15 / 1.28  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 177.5  
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 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 88  | 85  |    |    |
| 2   | 100 | 92  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 77  | 74  | 72  |    |    |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 67  | 64  | 61  |    |    |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 63  | 57  | 69  | 62  | 57  | 67  | 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  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 36  |    |    |
| 8   | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 34  | 44  | 39  | 34  | 32  |    |    |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 29  |    |    |
| 10  | 54  | 42  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7713 | 7713 | 7713 |
| 5°  | 7724 | 7699 | 7665 |
| 10° | 7670 | 7608 | 7550 |
| 15° | 7576 | 7465 | 7393 |
| 20° | 7452 | 7288 | 7215 |
| 25° | 7296 | 7092 | 7020 |
| 30° | 7110 | 6878 | 6846 |
| 35° | 6900 | 6655 | 6696 |
| 40° | 6661 | 6445 | 6543 |
| 45° | 6403 | 6231 | 6382 |
| 50° | 6122 | 5998 | 6178 |
| 55° | 5799 | 5722 | 5923 |
| 60° | 5410 | 5378 | 5584 |
| 65° | 4919 | 4921 | 5061 |
| 70° | 4248 | 4297 | 4358 |
| 75° | 3385 | 3482 | 3441 |
| 80° | 2292 | 2419 | 2426 |
| 85° | 1178 | 1616 | 2062 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 6403 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 539.1   | 3.9       |
| 10°-20°   | 1509.7  | 10.8      |
| 20°-30°   | 2207.5  | 15.8      |
| 30°-40°   | 2560.2  | 18.3      |
| 40°-50°   | 2555.8  | 18.3      |
| 50°-60°   | 2201.5  | 15.8      |
| 60°-70°   | 1536.4  | 11.0      |
| 70°-80°   | 709.7   | 5.1       |
| 80°-90°   | 133.0   | 1.0       |
| 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°    | 4256.3  | 30.5      |
| 0°-40°    | 6816.6  | 48.9      |
| 0°-60°    | 11573.8 | 82.9      |
| 0°-90°    | 13953.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 13953.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 5732 | 5732  | 5732 | 5732  | 5732 |      |
| 5°  | 5719 | 5698  | 5700 | 5667  | 5675 | 542  |
| 15° | 5438 | 5401  | 5359 | 5304  | 5307 | 1533 |
| 25° | 4914 | 4858  | 4777 | 4722  | 4729 | 2262 |
| 35° | 4201 | 4129  | 4052 | 4050  | 4076 | 2626 |
| 45° | 3365 | 3302  | 3274 | 3319  | 3354 | 2596 |
| 55° | 2472 | 2423  | 2439 | 2499  | 2525 | 2208 |
| 65° | 1545 | 1522  | 1546 | 1573  | 1590 | 1529 |
| 75° | 651  | 644   | 670  | 664   | 662  | 701  |
| 85° | 76   | 86    | 105  | 125   | 134  | 113  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 5732.3 | 5732.3 | 5732.3 | 5732.3 | 5732.3 |
| 2.5°  | 5743.9 | 5725.3 | 5732.3 | 5707.2 | 5705.7 |
| 5°    | 5718.9 | 5698.1 | 5700.4 | 5667.4 | 5675.0 |
| 7.5°  | 5675.0 | 5650.9 | 5644.6 | 5607.3 | 5614.3 |
| 10°   | 5614.0 | 5584.5 | 5568.5 | 5522.7 | 5526.3 |
| 12.5° | 5535.8 | 5502.3 | 5474.3 | 5421.6 | 5427.8 |
| 15°   | 5438.5 | 5400.9 | 5359.0 | 5303.7 | 5307.1 |
| 17.5° | 5331.4 | 5290.5 | 5231.6 | 5172.9 | 5182.4 |
| 20°   | 5204.6 | 5159.7 | 5090.3 | 5029.3 | 5039.3 |
| 22.5° | 5064.2 | 5013.2 | 4940.9 | 4880.3 | 4885.8 |
| 25°   | 4914.2 | 4857.9 | 4777.0 | 4722.1 | 4728.9 |
| 27.5° | 4751.2 | 4688.7 | 4606.1 | 4557.0 | 4568.5 |
| 30°   | 4576.1 | 4510.4 | 4427.0 | 4390.6 | 4406.7 |
| 32.5° | 4391.8 | 4324.5 | 4243.5 | 4224.2 | 4248.4 |
| 35°   | 4201.0 | 4129.2 | 4051.8 | 4049.6 | 4076.4 |
| 37.5° | 4002.5 | 3931.9 | 3862.3 | 3876.4 | 3904.3 |
| 40°   | 3792.3 | 3726.0 | 3669.6 | 3694.9 | 3725.0 |
| 42.5° | 3580.9 | 3517.1 | 3474.3 | 3511.1 | 3543.7 |
| 45°   | 3365.1 | 3301.8 | 3274.5 | 3319.2 | 3353.8 |
| 47.5° | 3150.7 | 3086.9 | 3073.5 | 3124.9 | 3156.1 |
| 50°   | 2924.9 | 2868.0 | 2865.4 | 2921.2 | 2951.6 |
| 52.5° | 2697.1 | 2644.4 | 2654.2 | 2714.2 | 2751.4 |
| 55°   | 2472.0 | 2423.0 | 2439.1 | 2498.7 | 2525.1 |
| 57.5° | 2240.7 | 2201.8 | 2222.7 | 2275.8 | 2301.9 |
| 60°   | 2010.4 | 1974.6 | 1998.6 | 2049.4 | 2075.0 |
| 62.5° | 1777.5 | 1746.4 | 1774.0 | 1816.7 | 1833.3 |
| 65°   | 1545.1 | 1521.7 | 1545.7 | 1573.1 | 1589.7 |
| 67.5° | 1316.2 | 1294.3 | 1320.3 | 1346.7 | 1352.7 |
| 70°   | 1079.8 | 1066.0 | 1092.3 | 1107.9 | 1107.7 |
| 72.5° | 862.1  | 848.6  | 873.6  | 879.5  | 875.0  |
| 75°   | 651.1  | 643.9  | 669.8  | 664.2  | 661.9  |
| 77.5° | 459.3  | 462.7  | 476.3  | 472.1  | 471.0  |
| 80°   | 295.8  | 306.2  | 312.2  | 315.1  | 313.1  |
| 82.5° | 166.3  | 175.8  | 184.8  | 206.7  | 215.3  |
| 85°   | 76.3   | 85.6   | 104.7  | 125.1  | 133.6  |
| 87.5° | 25.7   | 33.2   | 43.9   | 47.3   | 44.8   |
| 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 | 18.02            | 19.61 | 18.39 | 19.92 | 20.24 | 18.25          | 19.83 | 18.61 | 20.15 | 20.46 |
|                 | 3H   | 19.49            | 20.91 | 19.87 | 21.24 | 21.60 | 19.72          | 21.14 | 20.09 | 21.47 | 21.83 |
|                 | 4H   | 19.91            | 21.25 | 20.31 | 21.60 | 21.98 | 20.13          | 21.47 | 20.53 | 21.82 | 22.19 |
|                 | 6H   | 20.12            | 21.36 | 20.53 | 21.72 | 22.11 | 20.34          | 21.57 | 20.75 | 21.94 | 22.33 |
|                 | 8H   | 20.15            | 21.33 | 20.57 | 21.72 | 22.12 | 20.38          | 21.56 | 20.81 | 21.95 | 22.35 |
|                 | 12H  | 20.15            | 21.28 | 20.58 | 21.66 | 22.09 | 20.41          | 21.54 | 20.84 | 21.92 | 22.35 |
| 4H              | 2H   | 18.58            | 19.92 | 18.98 | 20.27 | 20.65 | 18.77          | 20.10 | 19.16 | 20.45 | 20.83 |
|                 | 3H   | 20.22            | 21.34 | 20.63 | 21.74 | 22.14 | 20.42          | 21.53 | 20.83 | 21.93 | 22.33 |
|                 | 4H   | 20.74            | 21.74 | 21.17 | 22.15 | 22.59 | 20.92          | 21.93 | 21.36 | 22.34 | 22.78 |
|                 | 6H   | 21.02            | 21.89 | 21.48 | 22.33 | 22.79 | 21.21          | 22.08 | 21.67 | 22.52 | 22.98 |
|                 | 8H   | 21.06            | 21.88 | 21.53 | 22.32 | 22.79 | 21.28          | 22.09 | 21.74 | 22.54 | 23.00 |
|                 | 12H  | 21.08            | 21.80 | 21.56 | 22.28 | 22.75 | 21.33          | 22.06 | 21.81 | 22.54 | 23.01 |
| 8H              | 4H   | 20.92            | 21.74 | 21.39 | 22.18 | 22.65 | 21.10          | 21.91 | 21.56 | 22.35 | 22.82 |
|                 | 6H   | 21.27            | 21.94 | 21.76 | 22.43 | 22.90 | 21.44          | 22.11 | 21.94 | 22.60 | 23.08 |
|                 | 8H   | 21.33            | 21.94 | 21.85 | 22.44 | 22.93 | 21.54          | 22.15 | 22.06 | 22.65 | 23.14 |
|                 | 12H  | 21.37            | 21.90 | 21.88 | 22.39 | 22.96 | 21.64          | 22.17 | 22.14 | 22.66 | 23.22 |
| 12H             | 4H   | 20.92            | 21.65 | 21.40 | 22.13 | 22.60 | 21.09          | 21.82 | 21.57 | 22.30 | 22.77 |
|                 | 6H   | 21.26            | 21.87 | 21.78 | 22.38 | 22.86 | 21.44          | 22.04 | 21.95 | 22.55 | 23.04 |
|                 | 8H   | 21.37            | 21.90 | 21.88 | 22.39 | 22.95 | 21.58          | 22.11 | 22.09 | 22.60 | 23.16 |