

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: P580717

Luminaire Tested: **HVSL8-2-LD4-3LO-35-UNV-O-EDD-90**

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580717  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/16/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HVSL8-2-LD4-3LO-35-UNV-O-EDD-90  
Description: 2 FOOT, 8INCH WIDE, HVSL LED LUMINAIRE, WITH 3500K, 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

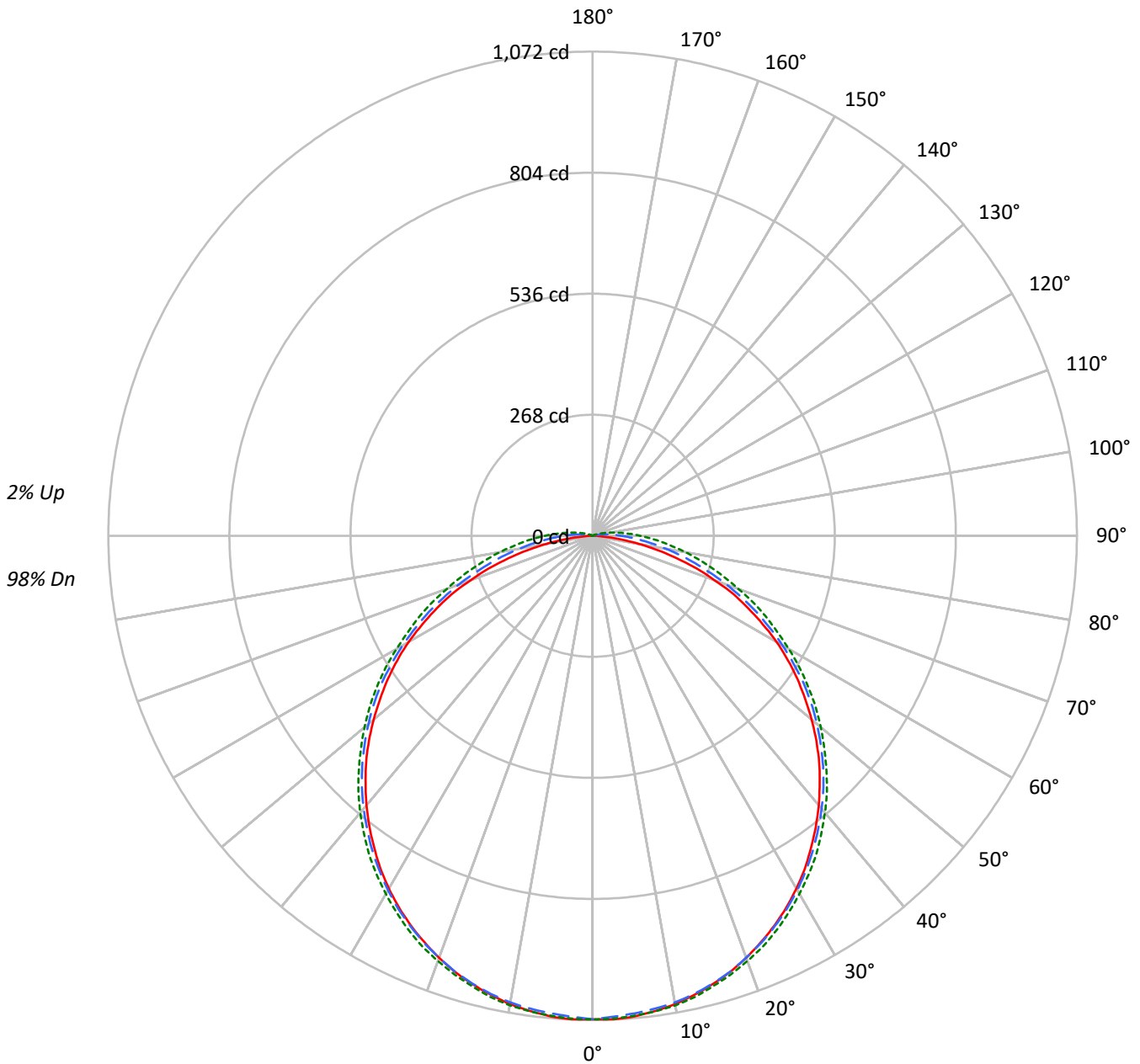
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3237.0 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 2' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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: 25 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  |    |    |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |    |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 | 0  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 101 | 101 | 101 |    |    |    | 98 |
| 1   | 108 | 102 | 98  | 94  | 105 | 100 | 96  | 92  | 95  | 92  | 89  | 91  | 88  | 86  | 87  | 85  | 83  |    |    |    | 81 |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 80  | 75  | 83  | 77  | 73  | 79  | 75  | 71  | 76  | 72  | 69  |    |    |    | 67 |
| 3   | 89  | 78  | 69  | 63  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 64  | 59  | 67  | 62  | 58  |    |    |    | 56 |
| 4   | 81  | 69  | 60  | 53  | 79  | 67  | 59  | 52  | 65  | 57  | 52  | 62  | 56  | 51  | 60  | 54  | 50  |    |    |    | 47 |
| 5   | 75  | 61  | 52  | 45  | 72  | 60  | 52  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  |    |    |    | 41 |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 52  | 45  | 39  | 50  | 44  | 38  | 49  | 43  | 38  |    |    |    | 36 |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 47  | 40  | 34  | 46  | 39  | 34  | 44  | 38  | 34  |    |    |    | 32 |
| 8   | 59  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 30  | 41  | 35  | 30  |    |    |    | 28 |
| 9   | 55  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  |    |    |    | 25 |
| 10  | 52  | 39  | 31  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 25  |    |    |    | 23 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8643 | 8643 | 8643 |
| 5°  | 8595 | 8428 | 8458 |
| 10° | 8506 | 8258 | 8289 |
| 15° | 8402 | 8071 | 8085 |
| 20° | 8291 | 7865 | 7888 |
| 25° | 8164 | 7656 | 7687 |
| 30° | 8022 | 7435 | 7458 |
| 35° | 7850 | 7193 | 7233 |
| 40° | 7669 | 6939 | 6970 |
| 45° | 7474 | 6664 | 6685 |
| 50° | 7228 | 6349 | 6378 |
| 55° | 6962 | 6006 | 6041 |
| 60° | 6644 | 5567 | 5647 |
| 65° | 6163 | 5079 | 5256 |
| 70° | 5497 | 4508 | 4802 |
| 75° | 4582 | 3886 | 4390 |
| 80° | 3283 | 3274 | 4012 |
| 85° | 1580 | 2650 | 3654 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 101.3  | 3.1       |
| 10°-20°   | 290.6  | 9.0       |
| 20°-30°   | 440.9  | 13.6      |
| 30°-40°   | 533.2  | 16.5      |
| 40°-50°   | 556.3  | 17.2      |
| 50°-60°   | 508.7  | 15.7      |
| 60°-70°   | 396.5  | 12.2      |
| 70°-80°   | 248.0  | 7.7       |
| 80°-90°   | 112.7  | 3.5       |
| 90°-100°  | 37.8   | 1.2       |
| 100°-110° | 9.5    | 0.3       |
| 110°-120° | 1.5    | 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°    | 832.9  | 25.7      |
| 0°-40°    | 1366.1 | 42.2      |
| 0°-60°    | 2431.0 | 75.1      |
| 0°-90°    | 3188.3 | 98.5      |
| 90°-120°  | 48.8   | 1.5       |
| 90°-150°  | 48.8   | 1.5       |
| 90°-180°  | 49.0   | 1.5       |
| 0°-180°   | 3237.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1071 | 1071  | 1071 | 1071  | 1071 |      |
| 5°   | 1068 | 1066  | 1062 | 1067  | 1067 | 101  |
| 15°  | 1028 | 1030  | 1027 | 1032  | 1032 | 290  |
| 25°  | 952  | 953   | 954  | 962   | 964  | 439  |
| 35°  | 843  | 847   | 850  | 859   | 862  | 528  |
| 45°  | 709  | 716   | 721  | 728   | 732  | 546  |
| 55°  | 554  | 560   | 570  | 579   | 582  | 494  |
| 65°  | 380  | 387   | 400  | 416   | 423  | 376  |
| 75°  | 193  | 204   | 234  | 262   | 272  | 205  |
| 85°  | 33   | 62    | 106  | 140   | 152  | 42   |
| 90°  | 0    | 23    | 62   | 94    | 105  | 1    |
| 95°  | 0    | 6     | 32   | 59    | 68   | 0    |
| 105° | 0    | 1     | 5    | 16    | 21   | 1    |
| 115° | 1    | 1     | 1    | 3     | 4    | 1    |
| 125° | 0    | 0     | 0    | 0     | 0    | 0    |
| 135° | 0    | 0     | 0    | 0     | 0    | 0    |
| 145° | 0    | 0     | 0    | 0     | 0    | 0    |
| 155° | 0    | 0     | 0    | 0     | 0    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 0    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1070.6 | 1070.6 | 1070.6 | 1070.6 | 1070.6 |
| 2.5°   | 1071.9 | 1070.4 | 1065.6 | 1070.4 | 1070.1 |
| 5°     | 1068.3 | 1066.3 | 1061.5 | 1066.6 | 1066.6 |
| 7.5°   | 1061.3 | 1060.5 | 1056.2 | 1062.0 | 1062.0 |
| 10°    | 1052.9 | 1052.7 | 1049.2 | 1055.5 | 1055.7 |
| 12.5°  | 1041.3 | 1042.3 | 1039.1 | 1045.1 | 1045.9 |
| 15°    | 1027.7 | 1029.5 | 1026.7 | 1032.5 | 1032.2 |
| 17.5°  | 1012.8 | 1013.8 | 1011.8 | 1018.4 | 1018.1 |
| 20°    | 994.4  | 995.6  | 994.1  | 1000.9 | 1001.7 |
| 22.5°  | 973.9  | 975.7  | 975.5  | 982.5  | 984.5  |
| 25°    | 952.2  | 953.0  | 954.0  | 962.1  | 963.6  |
| 27.5°  | 928.3  | 929.5  | 931.3  | 938.6  | 940.1  |
| 30°    | 902.0  | 904.0  | 906.1  | 913.6  | 915.6  |
| 32.5°  | 874.3  | 876.3  | 878.8  | 888.6  | 889.6  |
| 35°    | 843.0  | 846.7  | 850.3  | 858.9  | 862.4  |
| 37.5°  | 811.7  | 816.5  | 819.7  | 828.8  | 831.6  |
| 40°    | 778.6  | 783.4  | 788.7  | 798.3  | 800.1  |
| 42.5°  | 744.0  | 749.6  | 755.9  | 764.5  | 767.5  |
| 45°    | 709.2  | 715.5  | 721.3  | 728.4  | 731.9  |
| 47.5°  | 671.6  | 677.9  | 685.0  | 693.0  | 695.3  |
| 50°    | 632.7  | 640.0  | 647.6  | 655.2  | 659.2  |
| 52.5°  | 592.8  | 601.7  | 610.3  | 618.3  | 622.1  |
| 55°    | 553.5  | 560.0  | 570.4  | 578.7  | 582.5  |
| 57.5°  | 512.6  | 518.1  | 527.5  | 541.1  | 543.1  |
| 60°    | 470.9  | 476.0  | 485.6  | 496.7  | 501.2  |
| 62.5°  | 425.0  | 431.8  | 441.9  | 456.1  | 460.1  |
| 65°    | 380.3  | 386.9  | 400.3  | 416.2  | 422.7  |
| 67.5°  | 337.2  | 339.5  | 356.6  | 373.3  | 383.9  |
| 70°    | 286.2  | 294.8  | 314.7  | 335.2  | 343.2  |
| 72.5°  | 242.3  | 250.9  | 272.8  | 296.8  | 306.9  |
| 75°    | 192.6  | 204.4  | 234.2  | 262.2  | 272.1  |
| 77.5°  | 148.9  | 162.0  | 198.9  | 227.1  | 238.5  |
| 80°    | 104.0  | 124.4  | 164.6  | 196.4  | 208.7  |
| 82.5°  | 65.4   | 90.6   | 133.5  | 166.8  | 177.7  |
| 85°    | 33.3   | 61.6   | 105.7  | 139.8  | 152.2  |
| 87.5°  | 8.8    | 39.9   | 82.3   | 114.8  | 127.5  |
| 90°    | 0.3    | 23.0   | 62.3   | 93.6   | 105.0  |
| 92.5°  | 0.3    | 12.9   | 46.4   | 74.5   | 86.1   |
| 95°    | 0.3    | 6.1    | 32.3   | 58.6   | 67.6   |
| 97.5°  | 0.3    | 2.5    | 22.2   | 44.2   | 53.3   |
| 100°   | 0.3    | 1.3    | 14.1   | 32.1   | 39.9   |
| 102.5° | 0.5    | 0.8    | 8.8    | 23.0   | 29.3   |
| 105°   | 0.5    | 0.8    | 5.3    | 15.6   | 20.9   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.8 | 0.8   | 1.0 | 4.3   | 6.3 |
| 115°   | 0.8 | 0.8   | 1.0 | 2.8   | 4.0 |
| 117.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 120°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 122.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 125°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 127.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 130°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 132.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 135°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 137.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 140°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 142.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 145°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 147.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 150°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 152.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 155°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 157.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 160°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 162.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 165°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 167.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 170°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 172.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 175°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 177.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 180°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







|        |     |     |     |      |      |
|--------|-----|-----|-----|------|------|
| 107.5° | 0.5 | 0.8 | 3.0 | 10.6 | 14.4 |
| 110°   | 0.8 | 0.8 | 1.8 | 6.6  | 9.6  |



(END OF REPORT)