

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: P231883

Luminaire Tested: **FVS4M-2-LD4-50-1HI-P125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231883
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-3)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-50-1HI-P125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH P125 LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

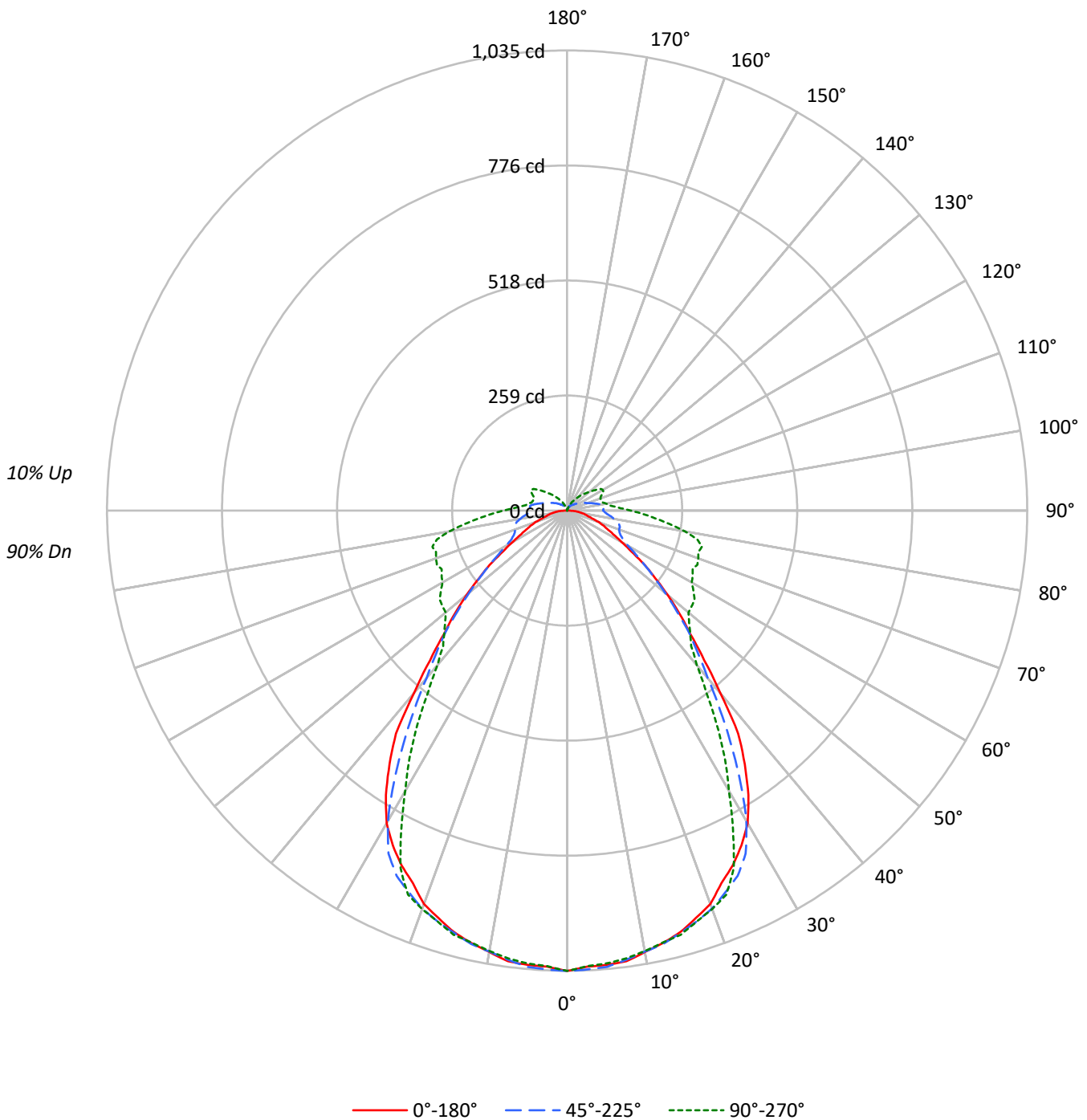
Lumens per Lamp: N/A
Luminaire Lumens: 2408.0 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.1 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 22.2
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: 25 FT

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Luminous Intensity Polar Plot





TEST NUMBER: P231883

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|---|
| RF | 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 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | 99 | 99 | 99 | 93 | 93 | 93 | 90 | | | | |
| 1 | 106 | 101 | 96 | 92 | 102 | 98 | 94 | 90 | 92 | 88 | 85 | 86 | 83 | 81 | 81 | 79 | 77 | 74 | | | | |
| 2 | 97 | 89 | 82 | 76 | 93 | 86 | 80 | 75 | 81 | 76 | 72 | 76 | 72 | 68 | 72 | 68 | 65 | 63 | | | | |
| 3 | 89 | 79 | 71 | 65 | 86 | 77 | 70 | 64 | 72 | 66 | 61 | 68 | 63 | 59 | 65 | 60 | 57 | 54 | | | | |
| 4 | 82 | 71 | 63 | 56 | 79 | 69 | 61 | 55 | 65 | 59 | 54 | 62 | 56 | 52 | 59 | 54 | 50 | 48 | | | | |
| 5 | 76 | 64 | 56 | 49 | 74 | 62 | 55 | 49 | 59 | 53 | 47 | 56 | 51 | 46 | 54 | 49 | 45 | 42 | | | | |
| 6 | 71 | 58 | 50 | 44 | 68 | 57 | 49 | 43 | 54 | 47 | 42 | 52 | 46 | 41 | 49 | 44 | 40 | 38 | | | | |
| 7 | 66 | 53 | 45 | 40 | 64 | 52 | 45 | 39 | 50 | 43 | 38 | 48 | 42 | 37 | 45 | 40 | 36 | 34 | | | | |
| 8 | 62 | 49 | 41 | 36 | 60 | 48 | 41 | 35 | 46 | 39 | 35 | 44 | 38 | 34 | 42 | 37 | 33 | 31 | | | | |
| 9 | 58 | 45 | 38 | 33 | 56 | 45 | 37 | 32 | 43 | 36 | 32 | 41 | 35 | 31 | 39 | 34 | 30 | 28 | | | | |
| 10 | 55 | 42 | 35 | 30 | 53 | 41 | 34 | 30 | 40 | 33 | 29 | 38 | 32 | 28 | 37 | 32 | 28 | 26 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18607 | 18607 | 18607 |
| 5° | 18345 | 17812 | 17524 |
| 10° | 18086 | 16907 | 16601 |
| 15° | 17803 | 16155 | 15828 |
| 20° | 17390 | 15444 | 14970 |
| 25° | 16701 | 14617 | 13746 |
| 30° | 15949 | 13025 | 11222 |
| 35° | 14301 | 10486 | 9059 |
| 40° | 11625 | 8172 | 7075 |
| 45° | 9059 | 6584 | 6216 |
| 50° | 7369 | 5065 | 5810 |
| 55° | 5842 | 3885 | 5904 |
| 60° | 4355 | 3062 | 5705 |
| 65° | 3564 | 2748 | 5796 |
| 70° | 3114 | 2772 | 6228 |
| 75° | 2492 | 2957 | 6729 |
| 80° | 2396 | 2910 | 6328 |
| 85° | 2015 | 2810 | 5206 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.4 | 4.0 |
| 10°-20° | 277.5 | 11.5 |
| 20°-30° | 406.8 | 16.9 |
| 30°-40° | 402.2 | 16.7 |
| 40°-50° | 303.0 | 12.6 |
| 50°-60° | 218.4 | 9.1 |
| 60°-70° | 172.7 | 7.2 |
| 70°-80° | 166.3 | 6.9 |
| 80°-90° | 122.4 | 5.1 |
| 90°-100° | 73.6 | 3.1 |
| 100°-110° | 54.3 | 2.3 |
| 110°-120° | 46.1 | 1.9 |
| 120°-130° | 33.5 | 1.4 |
| 130°-140° | 19.2 | 0.8 |
| 140°-150° | 10.1 | 0.4 |
| 150°-160° | 3.9 | 0.2 |
| 160°-170° | 0.5 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 781.7 | 32.5 |
| 0°-40° | 1183.9 | 49.2 |
| 0°-60° | 1705.3 | 70.8 |
| 0°-90° | 2166.7 | 90.0 |
| 90°-120° | 174.1 | 7.2 |
| 90°-150° | 236.8 | 9.8 |
| 90°-180° | 241.0 | 10.0 |
| 0°-180° | 2408.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1035 | 1035 | 1035 | 1035 | 1035 | |
| 5° | 1026 | 1026 | 1030 | 1028 | 1022 | 97 |
| 15° | 982 | 979 | 983 | 988 | 988 | 276 |
| 25° | 881 | 886 | 907 | 902 | 887 | 405 |
| 35° | 696 | 716 | 643 | 598 | 586 | 430 |
| 45° | 391 | 383 | 387 | 400 | 391 | 308 |
| 55° | 212 | 190 | 211 | 284 | 350 | 189 |
| 65° | 101 | 102 | 133 | 242 | 312 | 103 |
| 75° | 49 | 80 | 121 | 256 | 314 | 54 |
| 85° | 21 | 38 | 90 | 208 | 198 | 19 |
| 90° | 0 | 23 | 81 | 147 | 143 | 1 |
| 95° | 0 | 20 | 84 | 110 | 106 | 0 |
| 105° | 0 | 17 | 62 | 81 | 81 | 0 |
| 115° | 0 | 15 | 40 | 89 | 86 | 0 |
| 125° | 0 | 15 | 28 | 64 | 82 | 0 |
| 135° | 0 | 13 | 18 | 40 | 52 | 0 |
| 145° | 0 | 10 | 14 | 24 | 30 | 0 |
| 155° | 0 | 5 | 9 | 12 | 14 | 0 |
| 165° | 0 | 1 | 2 | 1 | 1 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P231883

CATALOG NUMBER: FVS4M-2-LD4-50-1HI-P125-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1035.4 | 1035.4 | 1035.4 | 1035.4 | 1035.4 |
| 2.5° | 1026.7 | 1033.3 | 1033.3 | 1028.9 | 1025.6 |
| 5° | 1025.6 | 1025.6 | 1030.0 | 1027.8 | 1022.4 |
| 7.5° | 1022.4 | 1019.1 | 1019.1 | 1015.8 | 1015.8 |
| 10° | 1008.2 | 1008.2 | 1007.1 | 1011.5 | 1006.0 |
| 12.5° | 996.2 | 996.2 | 998.4 | 997.3 | 995.1 |
| 15° | 982.0 | 978.8 | 983.1 | 987.5 | 987.5 |
| 17.5° | 961.3 | 963.5 | 968.9 | 974.4 | 968.9 |
| 20° | 941.7 | 941.7 | 952.6 | 953.7 | 953.7 |
| 22.5° | 906.8 | 917.7 | 929.7 | 936.2 | 935.2 |
| 25° | 880.7 | 886.1 | 906.8 | 902.5 | 887.2 |
| 27.5° | 849.1 | 858.9 | 869.8 | 831.6 | 807.6 |
| 30° | 812.0 | 817.4 | 806.5 | 743.3 | 728.1 |
| 32.5° | 758.6 | 777.1 | 725.9 | 669.2 | 659.4 |
| 35° | 696.5 | 716.1 | 643.1 | 598.4 | 586.4 |
| 37.5° | 632.2 | 628.9 | 564.6 | 526.4 | 513.4 |
| 40° | 536.2 | 526.4 | 492.6 | 474.1 | 453.4 |
| 42.5° | 456.7 | 449.1 | 436.0 | 432.7 | 413.1 |
| 45° | 391.3 | 382.6 | 386.9 | 400.0 | 391.3 |
| 47.5° | 342.2 | 324.8 | 333.5 | 368.4 | 371.7 |
| 50° | 294.3 | 271.4 | 287.7 | 335.7 | 356.4 |
| 52.5° | 249.6 | 227.8 | 246.3 | 307.4 | 353.1 |
| 55° | 212.5 | 189.6 | 211.4 | 284.5 | 349.9 |
| 57.5° | 170.0 | 156.9 | 182.0 | 269.2 | 336.8 |
| 60° | 141.7 | 131.9 | 158.0 | 258.3 | 323.7 |
| 62.5° | 118.8 | 114.4 | 141.7 | 246.3 | 318.3 |
| 65° | 101.4 | 102.5 | 133.0 | 242.0 | 311.7 |
| 67.5° | 88.3 | 95.9 | 127.5 | 238.7 | 317.2 |
| 70° | 75.2 | 90.5 | 124.3 | 245.2 | 313.9 |
| 72.5° | 58.9 | 86.1 | 124.3 | 251.8 | 309.5 |
| 75° | 49.0 | 79.6 | 121.0 | 256.1 | 313.9 |
| 77.5° | 42.5 | 68.7 | 115.5 | 260.5 | 299.7 |
| 80° | 36.0 | 58.9 | 106.8 | 258.3 | 269.2 |
| 82.5° | 27.2 | 48.0 | 99.2 | 242.0 | 232.2 |
| 85° | 20.7 | 38.1 | 90.5 | 208.2 | 198.4 |
| 87.5° | 8.7 | 29.4 | 85.0 | 177.7 | 170.0 |
| 90° | 0.0 | 22.9 | 80.7 | 147.1 | 142.8 |
| 92.5° | 0.0 | 20.7 | 81.7 | 125.3 | 119.9 |
| 95° | 0.0 | 19.6 | 83.9 | 110.1 | 105.7 |
| 97.5° | 0.0 | 18.5 | 83.9 | 99.2 | 93.7 |
| 100° | 0.0 | 18.5 | 77.4 | 90.5 | 89.4 |
| 102.5° | 0.0 | 18.5 | 69.8 | 86.1 | 82.8 |
| 105° | 0.0 | 17.4 | 62.1 | 80.7 | 80.7 |
| 107.5° | 0.0 | 17.4 | 55.6 | 80.7 | 79.6 |
| 110° | 0.0 | 16.3 | 49.0 | 85.0 | 79.6 |



TEST NUMBER: P231883

CATALOG NUMBER: FVS4M-2-LD4-50-1HI-P125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 0.0 | 16.3 | 44.7 | 89.4 | 81.7 |
| 115° | 0.0 | 15.3 | 40.3 | 89.4 | 86.1 |
| 117.5° | 0.0 | 15.3 | 37.1 | 83.9 | 91.6 |
| 120° | 0.0 | 15.3 | 33.8 | 78.5 | 92.6 |
| 122.5° | 0.0 | 15.3 | 31.6 | 71.9 | 90.5 |
| 125° | 0.0 | 15.3 | 28.3 | 64.3 | 81.7 |
| 127.5° | 0.0 | 15.3 | 25.1 | 57.8 | 74.1 |
| 130° | 0.0 | 14.2 | 22.9 | 51.2 | 65.4 |
| 132.5° | 0.0 | 14.2 | 20.7 | 44.7 | 57.8 |
| 135° | 0.0 | 13.1 | 18.5 | 40.3 | 52.3 |
| 137.5° | 0.0 | 12.0 | 17.4 | 34.9 | 45.8 |
| 140° | 0.0 | 12.0 | 16.3 | 31.6 | 40.3 |
| 142.5° | 0.0 | 10.9 | 15.3 | 27.2 | 36.0 |
| 145° | 0.0 | 9.8 | 14.2 | 24.0 | 30.5 |
| 147.5° | 0.0 | 8.7 | 13.1 | 20.7 | 26.2 |
| 150° | 0.0 | 7.6 | 12.0 | 17.4 | 21.8 |
| 152.5° | 0.0 | 6.5 | 10.9 | 15.3 | 17.4 |
| 155° | 0.0 | 5.4 | 8.7 | 12.0 | 14.2 |
| 157.5° | 0.0 | 4.4 | 6.5 | 8.7 | 9.8 |
| 160° | 0.0 | 3.3 | 5.4 | 6.5 | 6.5 |
| 162.5° | 0.0 | 2.2 | 3.3 | 3.3 | 3.3 |
| 165° | 0.0 | 1.1 | 2.2 | 1.1 | 1.1 |
| 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 |

(END OF REPORT)