

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: P580358

Luminaire Tested: **HVSL2-3-LD4-LO-35-UNV-O-EDD**

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580358  
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: HVSL2-3-LD4-LO-35-UNV-O-EDD  
Description: 3 FOOT, 2INCH WIDE, HVSL LED LUMINAIRE, WITH 3500K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

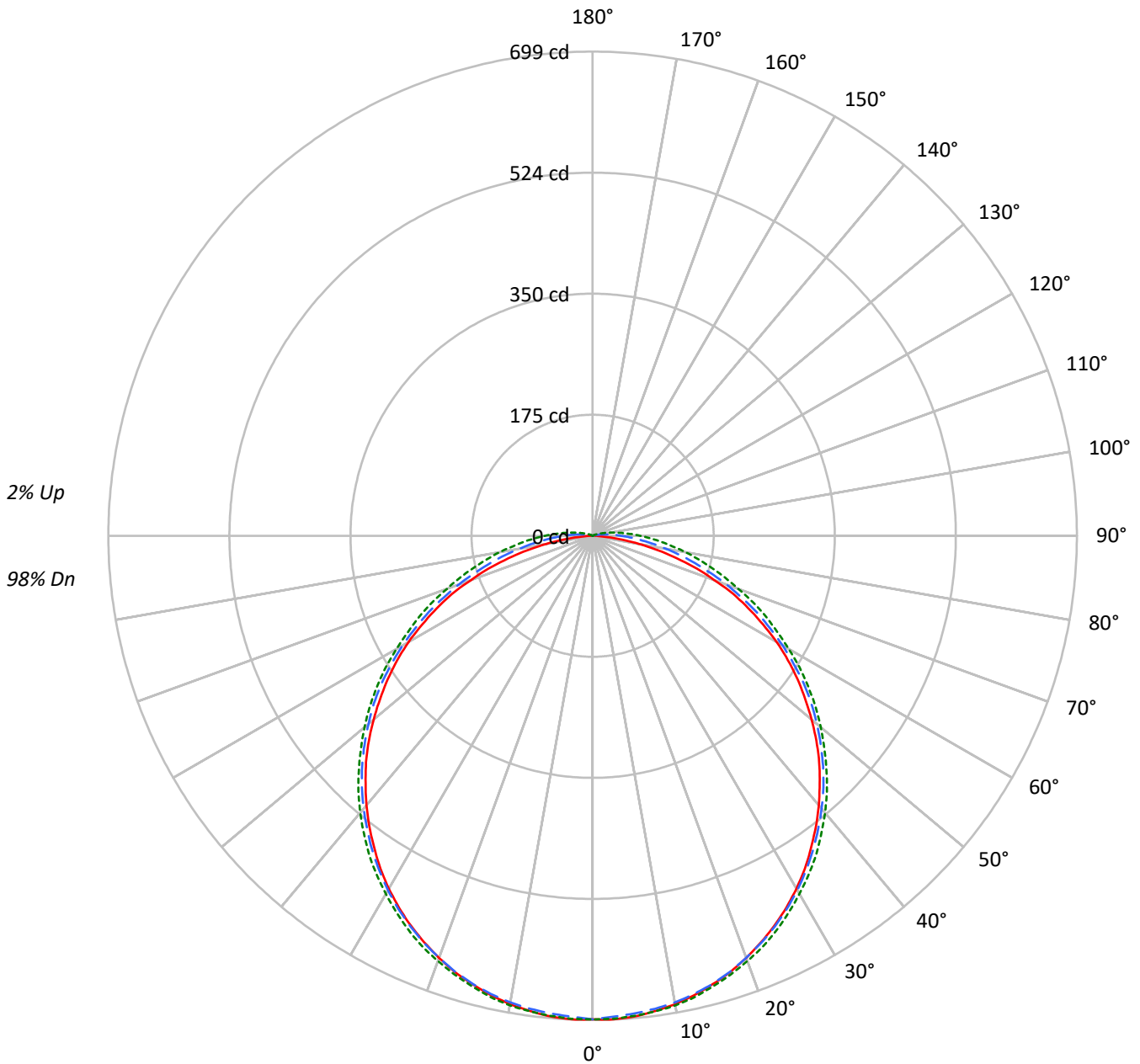
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2111.0 lumens  
Efficiency: N/A  
Efficacy: 122.0 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 3' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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°  | 15031 | 15031 | 15031 |
| 5°  | 14983 | 14043 | 13822 |
| 10° | 14866 | 13217 | 12794 |
| 15° | 14718 | 12436 | 11833 |
| 20° | 14562 | 11679 | 10972 |
| 25° | 14378 | 10963 | 10179 |
| 30° | 14167 | 10265 | 9409  |
| 35° | 13905 | 9570  | 8692  |
| 40° | 13635 | 8886  | 7973  |
| 45° | 13340 | 8200  | 7265  |
| 50° | 12960 | 7485  | 6568  |
| 55° | 12550 | 6757  | 5872  |
| 60° | 12062 | 5947  | 5151  |
| 65° | 11288 | 5112  | 4466  |
| 70° | 10190 | 4233  | 3758  |
| 75° | 8653  | 3355  | 3118  |
| 80° | 6391  | 2542  | 2529  |
| 85° | 3278  | 1788  | 1971  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.1   | 3.1       |
| 10°-20°   | 189.5  | 9.0       |
| 20°-30°   | 287.6  | 13.6      |
| 30°-40°   | 347.7  | 16.5      |
| 40°-50°   | 362.8  | 17.2      |
| 50°-60°   | 331.7  | 15.7      |
| 60°-70°   | 258.6  | 12.2      |
| 70°-80°   | 161.8  | 7.7       |
| 80°-90°   | 73.5   | 3.5       |
| 90°-100°  | 24.6   | 1.2       |
| 100°-110° | 6.2    | 0.3       |
| 110°-120° | 1.0    | 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°    | 543.2  | 25.7      |
| 0°-40°    | 890.9  | 42.2      |
| 0°-60°    | 1585.4 | 75.1      |
| 0°-90°    | 2079.2 | 98.5      |
| 90°-120°  | 31.8   | 1.5       |
| 90°-150°  | 31.8   | 1.5       |
| 90°-180°  | 32.0   | 1.5       |
| 0°-180°   | 2111.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 698 | 698   | 698 | 698   | 698 |      |
| 5°   | 697 | 695   | 692 | 696   | 696 | 66   |
| 15°  | 670 | 671   | 670 | 673   | 673 | 189  |
| 25°  | 621 | 622   | 622 | 627   | 628 | 286  |
| 35°  | 550 | 552   | 554 | 560   | 562 | 344  |
| 45°  | 462 | 467   | 470 | 475   | 477 | 356  |
| 55°  | 361 | 365   | 372 | 377   | 380 | 322  |
| 65°  | 248 | 252   | 261 | 271   | 276 | 245  |
| 75°  | 126 | 133   | 153 | 171   | 177 | 134  |
| 85°  | 22  | 40    | 69  | 91    | 99  | 27   |
| 90°  | 0   | 15    | 41  | 61    | 68  | 1    |
| 95°  | 0   | 4     | 21  | 38    | 44  | 0    |
| 105° | 0   | 0     | 4   | 10    | 14  | 0    |
| 115° | 0   | 0     | 1   | 2     | 3   | 0    |
| 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   | 0    |



TEST NUMBER: P580358

CATALOG NUMBER: HVSL2-3-LD4-LO-35-UNV-O-EDD

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 698.2 | 698.2 | 698.2 | 698.2 | 698.2 |
| 2.5°   | 699.0 | 698.0 | 694.9 | 698.0 | 697.9 |
| 5°     | 696.7 | 695.4 | 692.3 | 695.6 | 695.6 |
| 7.5°   | 692.1 | 691.6 | 688.8 | 692.6 | 692.6 |
| 10°    | 686.7 | 686.5 | 684.2 | 688.3 | 688.5 |
| 12.5°  | 679.1 | 679.8 | 677.6 | 681.6 | 682.1 |
| 15°    | 670.2 | 671.4 | 669.6 | 673.3 | 673.2 |
| 17.5°  | 660.5 | 661.2 | 659.8 | 664.1 | 664.0 |
| 20°    | 648.5 | 649.3 | 648.3 | 652.8 | 653.3 |
| 22.5°  | 635.2 | 636.3 | 636.1 | 640.7 | 642.1 |
| 25°    | 621.0 | 621.5 | 622.2 | 627.4 | 628.4 |
| 27.5°  | 605.4 | 606.2 | 607.3 | 612.1 | 613.1 |
| 30°    | 588.2 | 589.6 | 590.9 | 595.8 | 597.1 |
| 32.5°  | 570.1 | 571.5 | 573.1 | 579.5 | 580.2 |
| 35°    | 549.7 | 552.2 | 554.5 | 560.1 | 562.4 |
| 37.5°  | 529.3 | 532.4 | 534.6 | 540.5 | 542.3 |
| 40°    | 507.8 | 510.9 | 514.3 | 520.6 | 521.8 |
| 42.5°  | 485.2 | 488.8 | 492.9 | 498.5 | 500.5 |
| 45°    | 462.5 | 466.6 | 470.4 | 475.0 | 477.3 |
| 47.5°  | 438.0 | 442.1 | 446.7 | 452.0 | 453.4 |
| 50°    | 412.6 | 417.4 | 422.3 | 427.3 | 429.9 |
| 52.5°  | 386.6 | 392.4 | 398.0 | 403.2 | 405.7 |
| 55°    | 360.9 | 365.2 | 372.0 | 377.4 | 379.9 |
| 57.5°  | 334.3 | 337.9 | 344.0 | 352.9 | 354.2 |
| 60°    | 307.1 | 310.4 | 316.7 | 323.9 | 326.9 |
| 62.5°  | 277.2 | 281.6 | 288.2 | 297.4 | 300.0 |
| 65°    | 248.0 | 252.3 | 261.0 | 271.4 | 275.7 |
| 67.5°  | 219.9 | 221.4 | 232.6 | 243.4 | 250.3 |
| 70°    | 186.6 | 192.2 | 205.2 | 218.6 | 223.8 |
| 72.5°  | 158.0 | 163.6 | 177.9 | 193.6 | 200.1 |
| 75°    | 125.6 | 133.3 | 152.7 | 171.0 | 177.4 |
| 77.5°  | 97.1  | 105.7 | 129.7 | 148.1 | 155.5 |
| 80°    | 67.8  | 81.1  | 107.3 | 128.1 | 136.1 |
| 82.5°  | 42.6  | 59.1  | 87.1  | 108.8 | 115.9 |
| 85°    | 21.7  | 40.2  | 69.0  | 91.2  | 99.2  |
| 87.5°  | 5.8   | 26.0  | 53.7  | 74.9  | 83.1  |
| 90°    | 0.2   | 15.0  | 40.7  | 61.1  | 68.5  |
| 92.5°  | 0.2   | 8.4   | 30.3  | 48.6  | 56.1  |
| 95°    | 0.2   | 4.0   | 21.1  | 38.2  | 44.1  |
| 97.5°  | 0.2   | 1.6   | 14.5  | 28.8  | 34.7  |
| 100°   | 0.2   | 0.8   | 9.2   | 20.9  | 26.0  |
| 102.5° | 0.3   | 0.5   | 5.8   | 15.0  | 19.1  |
| 105°   | 0.3   | 0.5   | 3.5   | 10.2  | 13.7  |



TEST NUMBER: P580358

CATALOG NUMBER: HVSL2-3-LD4-LO-35-UNV-O-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.5 | 0.5   | 0.7 | 2.8   | 4.1 |
| 115°   | 0.5 | 0.5   | 0.7 | 1.8   | 2.6 |
| 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° | 0.3 | 0.5 | 2.0 | 6.9 | 9.4 |
| 110°   | 0.5 | 0.5 | 1.2 | 4.3 | 6.3 |



(END OF REPORT)