

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: P580134

Luminaire Tested: **HVSL12-2-LD4-2HI-35-UNV-O-EDD**

Issue Date: 12/16/2022



**Test Information**

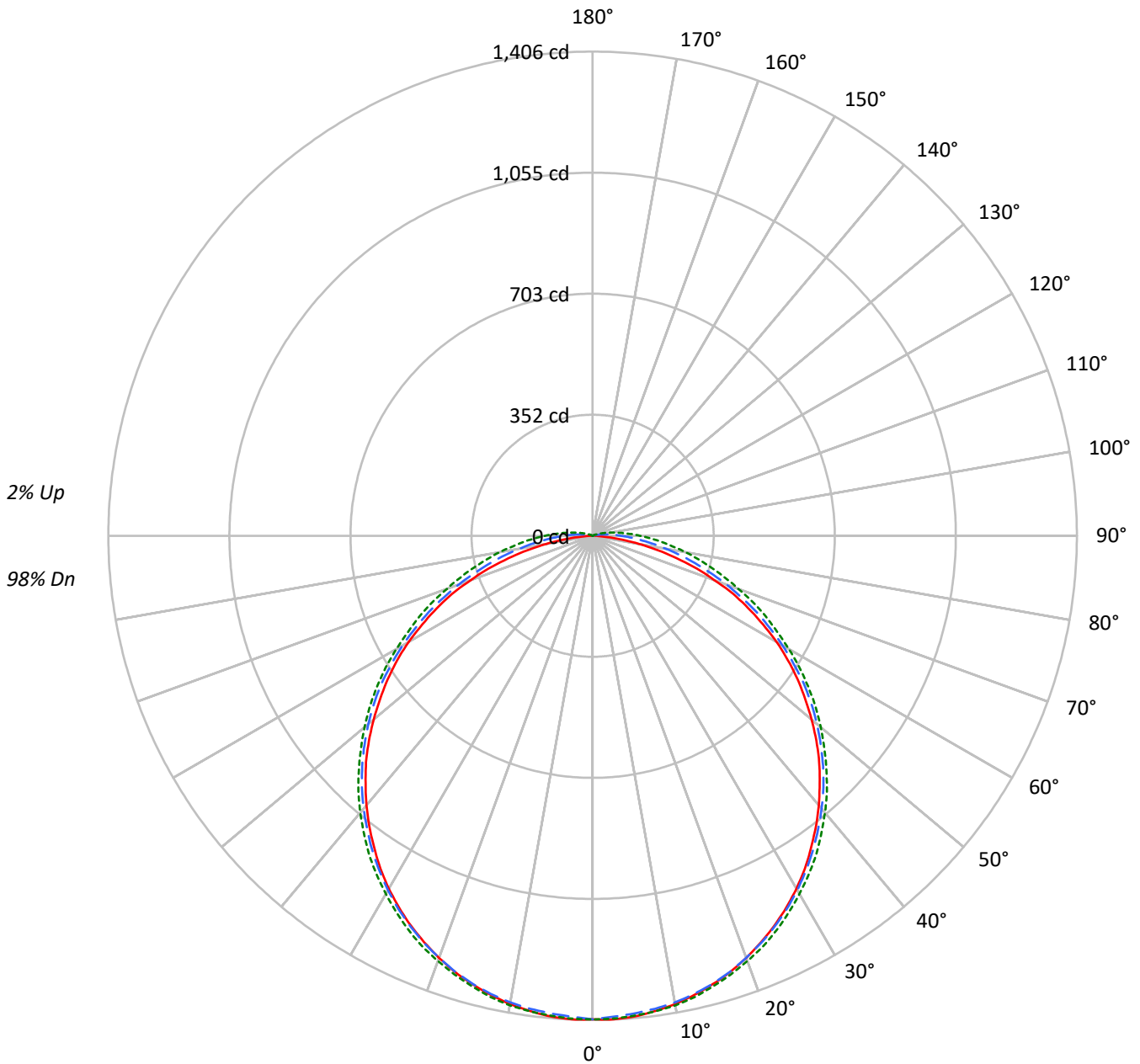
Test Method: LM-79-08  
Report Number: P580134  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/16/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HVSL12-2-LD4-2HI-35-UNV-O-EDD  
Description: 2 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 3500K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4246.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 2' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 45.6  
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





TEST NUMBER: P580134

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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°  | 7558 | 7558 | 7558 |
| 5°  | 7516 | 7408 | 7449 |
| 10° | 7438 | 7294 | 7352 |
| 15° | 7347 | 7164 | 7222 |
| 20° | 7250 | 7017 | 7095 |
| 25° | 7140 | 6865 | 6965 |
| 30° | 7015 | 6702 | 6809 |
| 35° | 6864 | 6520 | 6655 |
| 40° | 6706 | 6329 | 6468 |
| 45° | 6536 | 6119 | 6263 |
| 50° | 6321 | 5875 | 6040 |
| 55° | 6088 | 5605 | 5791 |
| 60° | 5810 | 5248 | 5492 |
| 65° | 5390 | 4848 | 5202 |
| 70° | 4807 | 4372 | 4859 |
| 75° | 4006 | 3848 | 4575 |
| 80° | 2871 | 3340 | 4362 |
| 85° | 1382 | 2835 | 4242 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 132.9  | 3.1       |
| 10°-20°   | 381.2  | 9.0       |
| 20°-30°   | 578.4  | 13.6      |
| 30°-40°   | 699.4  | 16.5      |
| 40°-50°   | 729.7  | 17.2      |
| 50°-60°   | 667.2  | 15.7      |
| 60°-70°   | 520.1  | 12.2      |
| 70°-80°   | 325.4  | 7.7       |
| 80°-90°   | 147.8  | 3.5       |
| 90°-100°  | 49.5   | 1.2       |
| 100°-110° | 12.4   | 0.3       |
| 110°-120° | 2.0    | 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°    | 1092.5 | 25.7      |
| 0°-40°    | 1791.9 | 42.2      |
| 0°-60°    | 3188.8 | 75.1      |
| 0°-90°    | 4182.1 | 98.5      |
| 90°-120°  | 63.9   | 1.5       |
| 90°-150°  | 63.9   | 1.5       |
| 90°-180°  | 64.0   | 1.5       |
| 0°-180°   | 4246.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1404 | 1404  | 1404 | 1404  | 1404 |      |
| 5°   | 1401 | 1399  | 1392 | 1399  | 1399 | 133  |
| 15°  | 1348 | 1350  | 1347 | 1354  | 1354 | 381  |
| 25°  | 1249 | 1250  | 1251 | 1262  | 1264 | 576  |
| 35°  | 1106 | 1111  | 1115 | 1127  | 1131 | 692  |
| 45°  | 930  | 938   | 946  | 955   | 960  | 717  |
| 55°  | 726  | 735   | 748  | 759   | 764  | 649  |
| 65°  | 499  | 508   | 525  | 546   | 554  | 494  |
| 75°  | 253  | 268   | 307  | 344   | 357  | 269  |
| 85°  | 44   | 81    | 139  | 183   | 200  | 55   |
| 90°  | 0    | 30    | 82   | 123   | 138  | 2    |
| 95°  | 0    | 8     | 42   | 77    | 89   | 0    |
| 105° | 1    | 1     | 7    | 20    | 28   | 1    |
| 115° | 1    | 1     | 1    | 4     | 5    | 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    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1404.3 | 1404.3 | 1404.3 | 1404.3 | 1404.3 |
| 2.5°   | 1406.0 | 1404.0 | 1397.7 | 1404.0 | 1403.7 |
| 5°     | 1401.3 | 1398.7 | 1392.4 | 1399.0 | 1399.0 |
| 7.5°   | 1392.1 | 1391.1 | 1385.5 | 1393.1 | 1393.1 |
| 10°    | 1381.1 | 1380.8 | 1376.2 | 1384.5 | 1384.8 |
| 12.5°  | 1365.9 | 1367.2 | 1362.9 | 1370.9 | 1371.9 |
| 15°    | 1348.0 | 1350.4 | 1346.7 | 1354.3 | 1354.0 |
| 17.5°  | 1328.5 | 1329.8 | 1327.2 | 1335.8 | 1335.5 |
| 20°    | 1304.3 | 1306.0 | 1304.0 | 1313.0 | 1313.9 |
| 22.5°  | 1277.5 | 1279.8 | 1279.5 | 1288.8 | 1291.4 |
| 25°    | 1249.1 | 1250.1 | 1251.4 | 1262.0 | 1264.0 |
| 27.5°  | 1217.6 | 1219.3 | 1221.6 | 1231.2 | 1233.2 |
| 30°    | 1183.2 | 1185.8 | 1188.5 | 1198.4 | 1201.1 |
| 32.5°  | 1146.8 | 1149.4 | 1152.7 | 1165.6 | 1167.0 |
| 35°    | 1105.7 | 1110.7 | 1115.3 | 1126.6 | 1131.2 |
| 37.5°  | 1064.7 | 1071.0 | 1075.3 | 1087.2 | 1090.8 |
| 40°    | 1021.3 | 1027.6 | 1034.5 | 1047.1 | 1049.4 |
| 42.5°  | 975.9  | 983.2  | 991.5  | 1002.8 | 1006.7 |
| 45°    | 930.3  | 938.5  | 946.1  | 955.4  | 960.0  |
| 47.5°  | 880.9  | 889.2  | 898.5  | 909.1  | 912.0  |
| 50°    | 829.9  | 839.5  | 849.5  | 859.4  | 864.7  |
| 52.5°  | 777.6  | 789.2  | 800.5  | 811.1  | 816.0  |
| 55°    | 726.0  | 734.6  | 748.2  | 759.1  | 764.1  |
| 57.5°  | 672.4  | 679.6  | 691.9  | 709.8  | 712.4  |
| 60°    | 617.7  | 624.4  | 636.9  | 651.5  | 657.5  |
| 62.5°  | 557.5  | 566.4  | 579.7  | 598.2  | 603.5  |
| 65°    | 498.9  | 507.5  | 525.0  | 545.9  | 554.5  |
| 67.5°  | 442.3  | 445.3  | 467.8  | 489.6  | 503.5  |
| 70°    | 375.4  | 386.7  | 412.8  | 439.6  | 450.2  |
| 72.5°  | 317.8  | 329.1  | 357.9  | 389.3  | 402.6  |
| 75°    | 252.6  | 268.2  | 307.2  | 344.0  | 356.9  |
| 77.5°  | 195.3  | 212.5  | 260.9  | 297.9  | 312.8  |
| 80°    | 136.4  | 163.2  | 215.8  | 257.6  | 273.8  |
| 82.5°  | 85.7   | 118.8  | 175.1  | 218.8  | 233.1  |
| 85°    | 43.7   | 80.8   | 138.7  | 183.4  | 199.6  |
| 87.5°  | 11.6   | 52.3   | 107.9  | 150.6  | 167.2  |
| 90°    | 0.3    | 30.1   | 81.8   | 122.8  | 137.7  |
| 92.5°  | 0.3    | 16.9   | 60.9   | 97.7   | 112.9  |
| 95°    | 0.3    | 7.9    | 42.4   | 76.8   | 88.7   |
| 97.5°  | 0.3    | 3.3    | 29.1   | 57.9   | 69.9   |
| 100°   | 0.3    | 1.7    | 18.5   | 42.0   | 52.3   |
| 102.5° | 0.7    | 1.0    | 11.6   | 30.1   | 38.4   |
| 105°   | 0.7    | 1.0    | 7.0    | 20.5   | 27.5   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 1.0 | 1.0   | 1.3 | 5.6   | 8.3 |
| 115°   | 1.0 | 1.0   | 1.3 | 3.6   | 5.3 |
| 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° | 0.7 | 1.0 | 4.0 | 13.9 | 18.9 |
| 110°   | 1.0 | 1.0 | 2.3 | 8.6  | 12.6 |



(END OF REPORT)