

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: P580248

Luminaire Tested: **HVSL12-4-LD4-3STD-40-UNV-O-EDD**

Issue Date: 12/16/2022



Test Information

Test Method: LM-79-08
Report Number: P580248
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: HVSL12-4-LD4-3STD-40-UNV-O-EDD
Description: 4 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

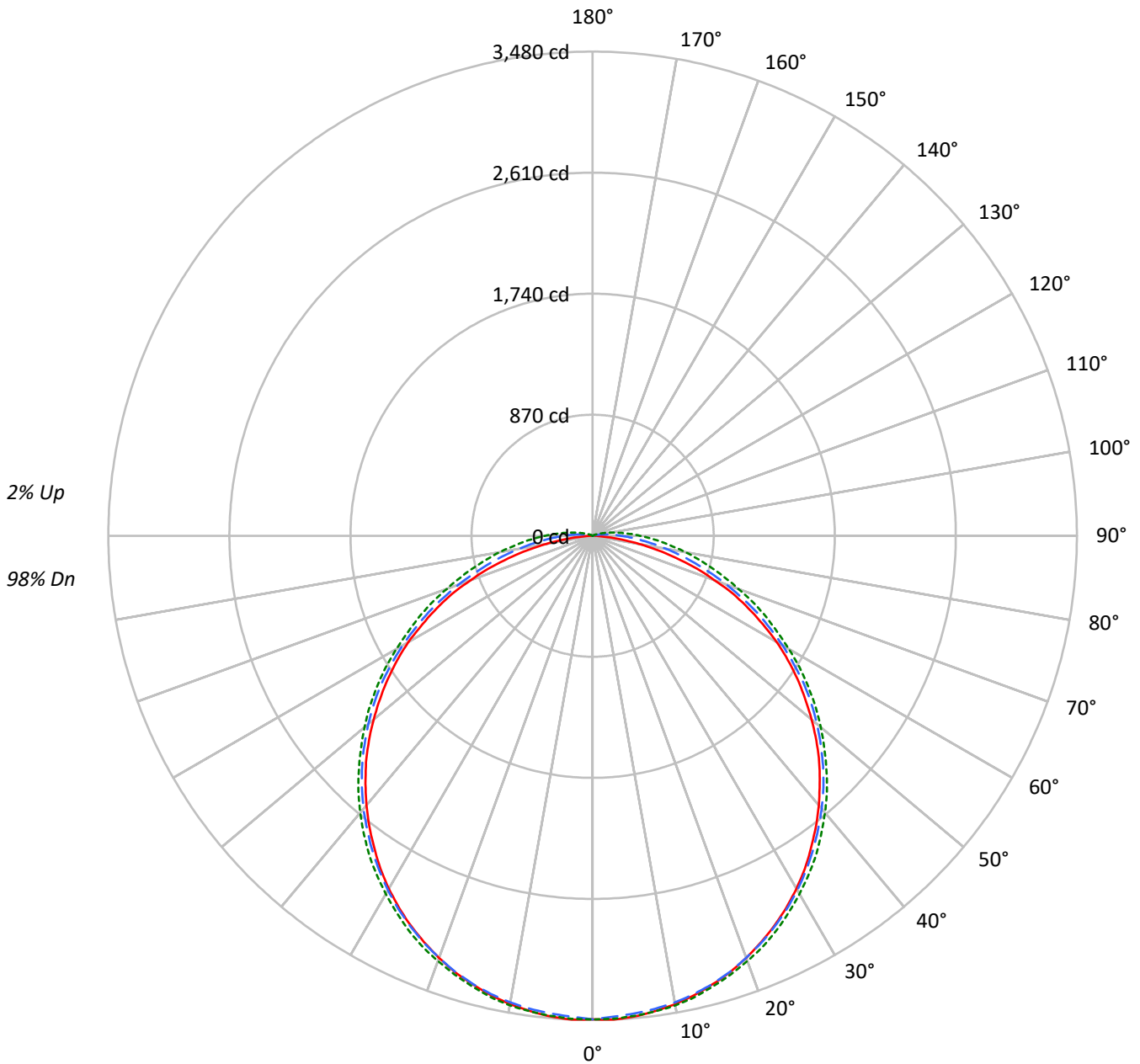
Lumens per Lamp: N/A
Luminaire Lumens: 10510.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.17')
CIE Type: Direct

Input Watts (W): 101.1
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

TEST NUMBER: P580248

CATALOG NUMBER: HVSL12-4-LD4-3STD-40-UNV-O-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P580248

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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° | 9354 | 9354 | 9354 |
| 5° | 9336 | 9192 | 9220 |
| 10° | 9273 | 9072 | 9099 |
| 15° | 9193 | 8934 | 8938 |
| 20° | 9108 | 8773 | 8781 |
| 25° | 9005 | 8606 | 8619 |
| 30° | 8886 | 8424 | 8427 |
| 35° | 8736 | 8221 | 8237 |
| 40° | 8580 | 8006 | 8005 |
| 45° | 8412 | 7768 | 7751 |
| 50° | 8193 | 7488 | 7475 |
| 55° | 7957 | 7178 | 7167 |
| 60° | 7676 | 6760 | 6796 |
| 65° | 7218 | 6288 | 6438 |
| 70° | 6560 | 5723 | 6014 |
| 75° | 5625 | 5101 | 5662 |
| 80° | 4232 | 4511 | 5398 |
| 85° | 2263 | 3949 | 5251 |



TEST NUMBER: P580248

CATALOG NUMBER: HVSL12-4-LD4-3STD-40-UNV-O-EDD

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 328.9 | 3.1 |
| 10°-20° | 943.6 | 9.0 |
| 20°-30° | 1431.7 | 13.6 |
| 30°-40° | 1731.1 | 16.5 |
| 40°-50° | 1806.3 | 17.2 |
| 50°-60° | 1651.5 | 15.7 |
| 60°-70° | 1287.4 | 12.2 |
| 70°-80° | 805.4 | 7.7 |
| 80°-90° | 365.8 | 3.5 |
| 90°-100° | 122.6 | 1.2 |
| 100°-110° | 30.8 | 0.3 |
| 110°-120° | 4.9 | 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° | 2704.2 | 25.7 |
| 0°-40° | 4435.3 | 42.2 |
| 0°-60° | 7893.2 | 75.1 |
| 0°-90° | 10351.7 | 98.5 |
| 90°-120° | 158.2 | 1.5 |
| 90°-150° | 158.2 | 1.5 |
| 90°-180° | 158.0 | 1.5 |
| 0°-180° | 10510.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3476 | 3476 | 3476 | 3476 | 3476 | |
| 5° | 3469 | 3462 | 3447 | 3463 | 3463 | 329 |
| 15° | 3337 | 3342 | 3334 | 3352 | 3352 | 942 |
| 25° | 3092 | 3094 | 3098 | 3124 | 3129 | 1425 |
| 35° | 2737 | 2749 | 2761 | 2789 | 2800 | 1713 |
| 45° | 2303 | 2323 | 2342 | 2365 | 2376 | 1774 |
| 55° | 1797 | 1818 | 1852 | 1879 | 1891 | 1605 |
| 65° | 1235 | 1256 | 1300 | 1351 | 1373 | 1222 |
| 75° | 625 | 664 | 760 | 851 | 883 | 666 |
| 85° | 108 | 200 | 343 | 454 | 494 | 137 |
| 90° | 1 | 75 | 202 | 304 | 341 | 4 |
| 95° | 1 | 20 | 105 | 190 | 220 | 1 |
| 105° | 2 | 2 | 17 | 51 | 68 | 2 |
| 115° | 2 | 2 | 3 | 9 | 13 | 2 |
| 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: P580248

CATALOG NUMBER: HVSL12-4-LD4-3STD-40-UNV-O-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3476.1 | 3476.1 | 3476.1 | 3476.1 | 3476.1 |
| 2.5° | 3480.2 | 3475.3 | 3459.7 | 3475.3 | 3474.4 |
| 5° | 3468.7 | 3462.1 | 3446.6 | 3463.0 | 3463.0 |
| 7.5° | 3445.8 | 3443.3 | 3429.4 | 3448.2 | 3448.2 |
| 10° | 3418.7 | 3417.9 | 3406.4 | 3426.9 | 3427.7 |
| 12.5° | 3381.0 | 3384.3 | 3373.6 | 3393.3 | 3395.8 |
| 15° | 3336.8 | 3342.5 | 3333.5 | 3352.3 | 3351.5 |
| 17.5° | 3288.4 | 3291.7 | 3285.1 | 3306.4 | 3305.6 |
| 20° | 3228.6 | 3232.7 | 3227.8 | 3249.9 | 3252.4 |
| 22.5° | 3162.2 | 3168.0 | 3167.1 | 3190.1 | 3196.6 |
| 25° | 3091.8 | 3094.2 | 3097.5 | 3123.7 | 3128.6 |
| 27.5° | 3013.9 | 3018.0 | 3023.7 | 3047.5 | 3052.4 |
| 30° | 2928.7 | 2935.2 | 2941.8 | 2966.4 | 2972.9 |
| 32.5° | 2838.5 | 2845.1 | 2853.3 | 2885.3 | 2888.5 |
| 35° | 2736.9 | 2749.2 | 2760.7 | 2788.6 | 2800.0 |
| 37.5° | 2635.3 | 2650.9 | 2661.5 | 2691.0 | 2700.1 |
| 40° | 2528.0 | 2543.5 | 2560.8 | 2591.9 | 2597.6 |
| 42.5° | 2415.7 | 2433.7 | 2454.2 | 2482.1 | 2491.9 |
| 45° | 2302.6 | 2323.1 | 2342.0 | 2364.9 | 2376.4 |
| 47.5° | 2180.5 | 2201.0 | 2224.0 | 2250.2 | 2257.6 |
| 50° | 2054.3 | 2078.1 | 2102.7 | 2127.3 | 2140.4 |
| 52.5° | 1924.9 | 1953.5 | 1981.4 | 2007.6 | 2019.9 |
| 55° | 1797.0 | 1818.3 | 1851.9 | 1879.0 | 1891.3 |
| 57.5° | 1664.3 | 1682.3 | 1712.6 | 1756.9 | 1763.4 |
| 60° | 1529.1 | 1545.5 | 1576.6 | 1612.7 | 1627.4 |
| 62.5° | 1379.9 | 1402.1 | 1434.8 | 1480.7 | 1493.8 |
| 65° | 1234.9 | 1256.2 | 1299.6 | 1351.3 | 1372.6 |
| 67.5° | 1094.8 | 1102.1 | 1157.9 | 1212.0 | 1246.4 |
| 70° | 929.2 | 957.1 | 1021.8 | 1088.2 | 1114.4 |
| 72.5° | 786.7 | 814.5 | 885.8 | 963.7 | 996.4 |
| 75° | 625.2 | 663.7 | 760.4 | 851.4 | 883.4 |
| 77.5° | 483.5 | 526.1 | 645.7 | 737.5 | 774.4 |
| 80° | 337.6 | 404.0 | 534.3 | 637.5 | 677.7 |
| 82.5° | 212.2 | 294.2 | 433.5 | 541.7 | 576.9 |
| 85° | 108.2 | 199.9 | 343.3 | 454.0 | 494.1 |
| 87.5° | 28.7 | 129.5 | 267.1 | 372.8 | 413.8 |
| 90° | 0.8 | 74.6 | 202.4 | 304.0 | 340.9 |
| 92.5° | 0.8 | 41.8 | 150.8 | 241.7 | 279.4 |
| 95° | 0.8 | 19.7 | 104.9 | 190.1 | 219.6 |
| 97.5° | 0.8 | 8.2 | 72.1 | 143.4 | 172.9 |
| 100° | 0.8 | 4.1 | 45.9 | 104.1 | 129.5 |
| 102.5° | 1.6 | 2.5 | 28.7 | 74.6 | 95.1 |
| 105° | 1.6 | 2.5 | 17.2 | 50.8 | 68.0 |



TEST NUMBER: P580248

CATALOG NUMBER: HVSL12-4-LD4-3STD-40-UNV-O-EDD

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|------|
| 112.5° | 2.5 | 2.5 | 3.3 | 13.9 | 20.5 |
| 115° | 2.5 | 2.5 | 3.3 | 9.0 | 13.1 |
| 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° | 1.6 | 2.5 | 9.8 | 34.4 | 46.7 |
| 110° | 2.5 | 2.5 | 5.7 | 21.3 | 31.1 |



(END OF REPORT)