

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: P580304

Luminaire Tested: **HVSL12-8-LD4-3HI-40-UNV-O-EDD**

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580304  
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: HVSL12-8-LD4-3HI-40-UNV-O-EDD  
Description: 8 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

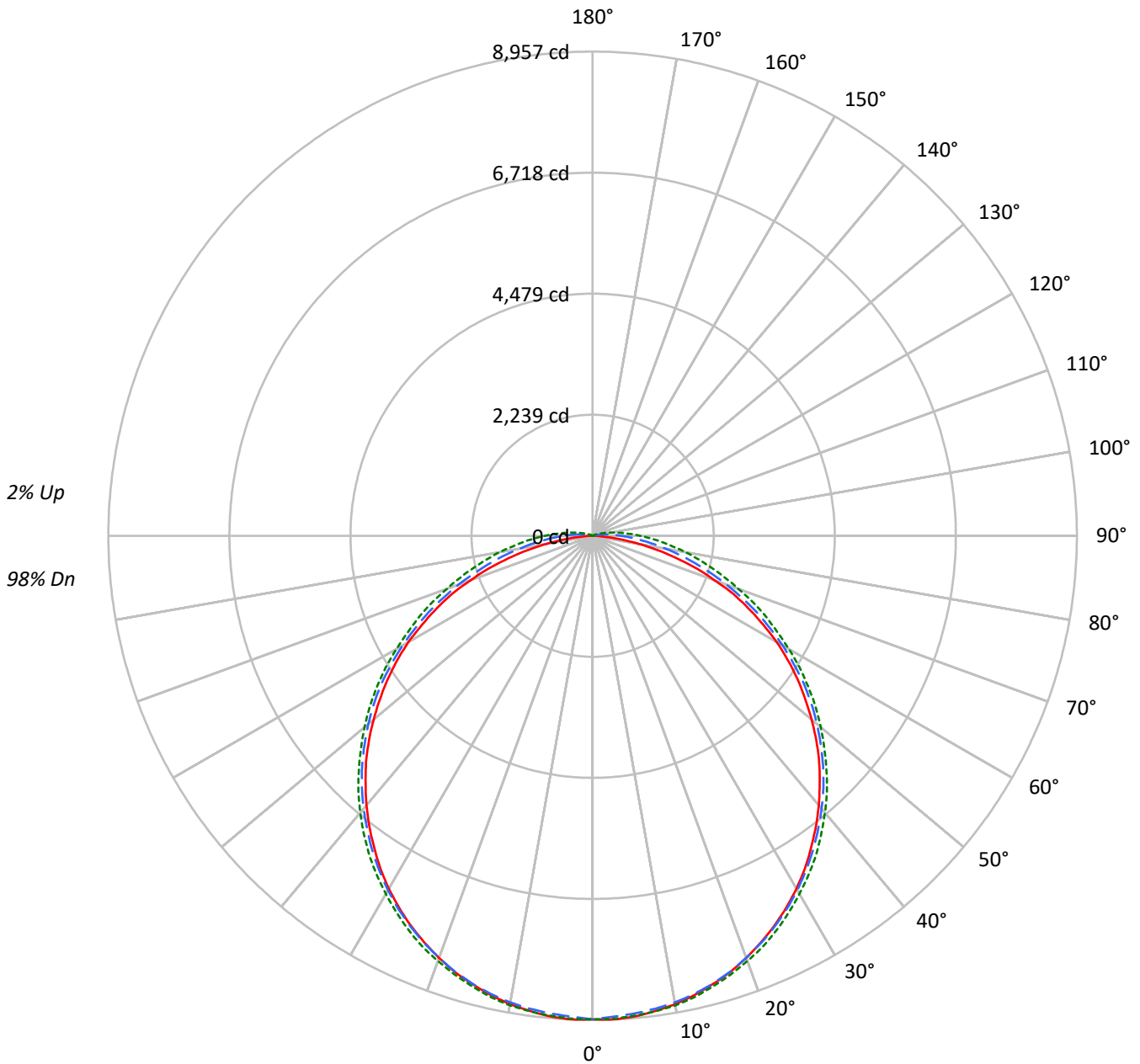
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27050.0 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 266.6  
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





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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°  | 12037 | 12037 | 12037 |
| 5°  | 12036 | 11843 | 11865 |
| 10° | 11977 | 11704 | 11709 |
| 15° | 11896 | 11541 | 11502 |
| 20° | 11808 | 11347 | 11300 |
| 25° | 11700 | 11146 | 11092 |
| 30° | 11572 | 10927 | 10844 |
| 35° | 11404 | 10679 | 10600 |
| 40° | 11232 | 10417 | 10302 |
| 45° | 11047 | 10127 | 9975  |
| 50° | 10799 | 9782  | 9620  |
| 55° | 10536 | 9401  | 9223  |
| 60° | 10221 | 8880  | 8746  |
| 65° | 9686  | 8291  | 8285  |
| 70° | 8899  | 7583  | 7739  |
| 75° | 7762  | 6806  | 7286  |
| 80° | 6021  | 6081  | 6947  |
| 85° | 3471  | 5423  | 6757  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 846.6   | 3.1       |
| 10°-20°   | 2428.5  | 9.0       |
| 20°-30°   | 3684.8  | 13.6      |
| 30°-40°   | 4455.5  | 16.5      |
| 40°-50°   | 4649.0  | 17.2      |
| 50°-60°   | 4250.6  | 15.7      |
| 60°-70°   | 3313.5  | 12.2      |
| 70°-80°   | 2072.8  | 7.7       |
| 80°-90°   | 941.4   | 3.5       |
| 90°-100°  | 315.5   | 1.2       |
| 100°-110° | 79.2    | 0.3       |
| 110°-120° | 12.5    | 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°    | 6959.9  | 25.7      |
| 0°-40°    | 11415.4 | 42.2      |
| 0°-60°    | 20315.0 | 75.1      |
| 0°-90°    | 26642.8 | 98.5      |
| 90°-120°  | 407.2   | 1.5       |
| 90°-150°  | 407.2   | 1.5       |
| 90°-180°  | 407.0   | 1.5       |
| 0°-180°   | 27050.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 8946 | 8946  | 8946 | 8946  | 8946 |      |
| 5°   | 8928 | 8911  | 8871 | 8913  | 8913 | 848  |
| 15°  | 8588 | 8603  | 8580 | 8628  | 8626 | 2424 |
| 25°  | 7957 | 7964  | 7972 | 8040  | 8052 | 3667 |
| 35°  | 7044 | 7076  | 7105 | 7177  | 7207 | 4409 |
| 45°  | 5926 | 5979  | 6028 | 6087  | 6116 | 4567 |
| 55°  | 4625 | 4680  | 4766 | 4836  | 4868 | 4132 |
| 65°  | 3178 | 3233  | 3345 | 3478  | 3533 | 3145 |
| 75°  | 1609 | 1708  | 1957 | 2191  | 2274 | 1715 |
| 85°  | 278  | 515   | 884  | 1168  | 1272 | 352  |
| 90°  | 2    | 192   | 521  | 782   | 877  | 11   |
| 95°  | 2    | 51    | 270  | 489   | 565  | 2    |
| 105° | 4    | 6     | 44   | 131   | 175  | 4    |
| 115° | 6    | 6     | 8    | 23    | 34   | 4    |
| 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: P580304

CATALOG NUMBER: HVSL12-8-LD4-3HI-40-UNV-O-EDD

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 8946.5 | 8946.5 | 8946.5 | 8946.5 | 8946.5 |
| 2.5°   | 8957.1 | 8944.4 | 8904.3 | 8944.4 | 8942.3 |
| 5°     | 8927.5 | 8910.7 | 8870.6 | 8912.8 | 8912.8 |
| 7.5°   | 8868.5 | 8862.1 | 8826.3 | 8874.8 | 8874.8 |
| 10°    | 8798.9 | 8796.8 | 8767.2 | 8820.0 | 8822.1 |
| 12.5°  | 8701.9 | 8710.3 | 8682.9 | 8733.5 | 8739.8 |
| 15°    | 8588.0 | 8602.7 | 8579.5 | 8628.0 | 8625.9 |
| 17.5°  | 8463.5 | 8472.0 | 8455.1 | 8509.9 | 8507.8 |
| 20°    | 8309.6 | 8320.1 | 8307.5 | 8364.4 | 8370.7 |
| 22.5°  | 8138.7 | 8153.5 | 8151.4 | 8210.5 | 8227.3 |
| 25°    | 7957.4 | 7963.7 | 7972.1 | 8039.6 | 8052.3 |
| 27.5°  | 7757.0 | 7767.6 | 7782.3 | 7843.5 | 7856.1 |
| 30°    | 7537.7 | 7554.5 | 7571.4 | 7634.7 | 7651.6 |
| 32.5°  | 7305.7 | 7322.6 | 7343.6 | 7425.9 | 7434.3 |
| 35°    | 7044.2 | 7075.8 | 7105.3 | 7177.0 | 7206.6 |
| 37.5°  | 6782.6 | 6822.7 | 6850.1 | 6926.1 | 6949.3 |
| 40°    | 6506.4 | 6546.4 | 6590.7 | 6670.9 | 6685.6 |
| 42.5°  | 6217.4 | 6263.8 | 6316.5 | 6388.3 | 6413.6 |
| 45°    | 5926.4 | 5979.1 | 6027.6 | 6086.7 | 6116.2 |
| 47.5°  | 5612.1 | 5664.9 | 5723.9 | 5791.4 | 5810.4 |
| 50°    | 5287.3 | 5348.5 | 5411.8 | 5475.0 | 5508.8 |
| 52.5°  | 4954.1 | 5027.9 | 5099.6 | 5167.1 | 5198.8 |
| 55°    | 4625.1 | 4679.9 | 4766.4 | 4836.0 | 4867.6 |
| 57.5°  | 4283.4 | 4329.8 | 4407.9 | 4521.8 | 4538.6 |
| 60°    | 3935.5 | 3977.6 | 4057.8 | 4150.6 | 4188.5 |
| 62.5°  | 3551.6 | 3608.6 | 3692.9 | 3811.0 | 3844.8 |
| 65°    | 3178.3 | 3233.1 | 3344.9 | 3477.8 | 3532.6 |
| 67.5°  | 2817.7 | 2836.6 | 2980.1 | 3119.3 | 3207.8 |
| 70°    | 2391.6 | 2463.3 | 2630.0 | 2800.8 | 2868.3 |
| 72.5°  | 2024.7 | 2096.4 | 2279.9 | 2480.2 | 2564.6 |
| 75°    | 1609.2 | 1708.3 | 1957.2 | 2191.3 | 2273.5 |
| 77.5°  | 1244.3 | 1354.0 | 1661.9 | 1898.1 | 1993.0 |
| 80°    | 868.9  | 1039.8 | 1375.1 | 1640.8 | 1744.2 |
| 82.5°  | 546.2  | 757.1  | 1115.7 | 1394.1 | 1484.8 |
| 85°    | 278.4  | 514.6  | 883.7  | 1168.4 | 1271.7 |
| 87.5°  | 73.8   | 333.2  | 687.5  | 959.6  | 1065.1 |
| 90°    | 2.1    | 191.9  | 520.9  | 782.5  | 877.4  |
| 92.5°  | 2.1    | 107.6  | 388.1  | 622.2  | 719.2  |
| 95°    | 2.1    | 50.6   | 270.0  | 489.3  | 565.2  |
| 97.5°  | 2.1    | 21.1   | 185.6  | 369.1  | 445.0  |
| 100°   | 2.1    | 10.5   | 118.1  | 267.8  | 333.2  |
| 102.5° | 4.2    | 6.3    | 73.8   | 191.9  | 244.6  |
| 105°   | 4.2    | 6.3    | 44.3   | 130.8  | 175.0  |



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CATALOG NUMBER: HVSL12-8-LD4-3HI-40-UNV-O-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90°  |
|--------|-----|-------|-----|-------|------|
| 112.5° | 6.3 | 6.3   | 8.4 | 35.9  | 52.7 |
| 115°   | 6.3 | 6.3   | 8.4 | 23.2  | 33.7 |
| 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° | 4.2 | 6.3 | 25.3 | 88.6 | 120.2 |
| 110°   | 6.3 | 6.3 | 14.8 | 54.8 | 80.1  |



(END OF REPORT)