

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: PORTFOLIO

Report Number: P856714

Luminaire Tested: **LD4C10D010 EU4109030 4LBMDSWWMH**

Issue Date: 4/12/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856714  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2309-186-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109030 4LBMDSWWMH  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBMDSW TRIM WITH WMH FINISH  
Light Source: -  
Ballast/Driver: -

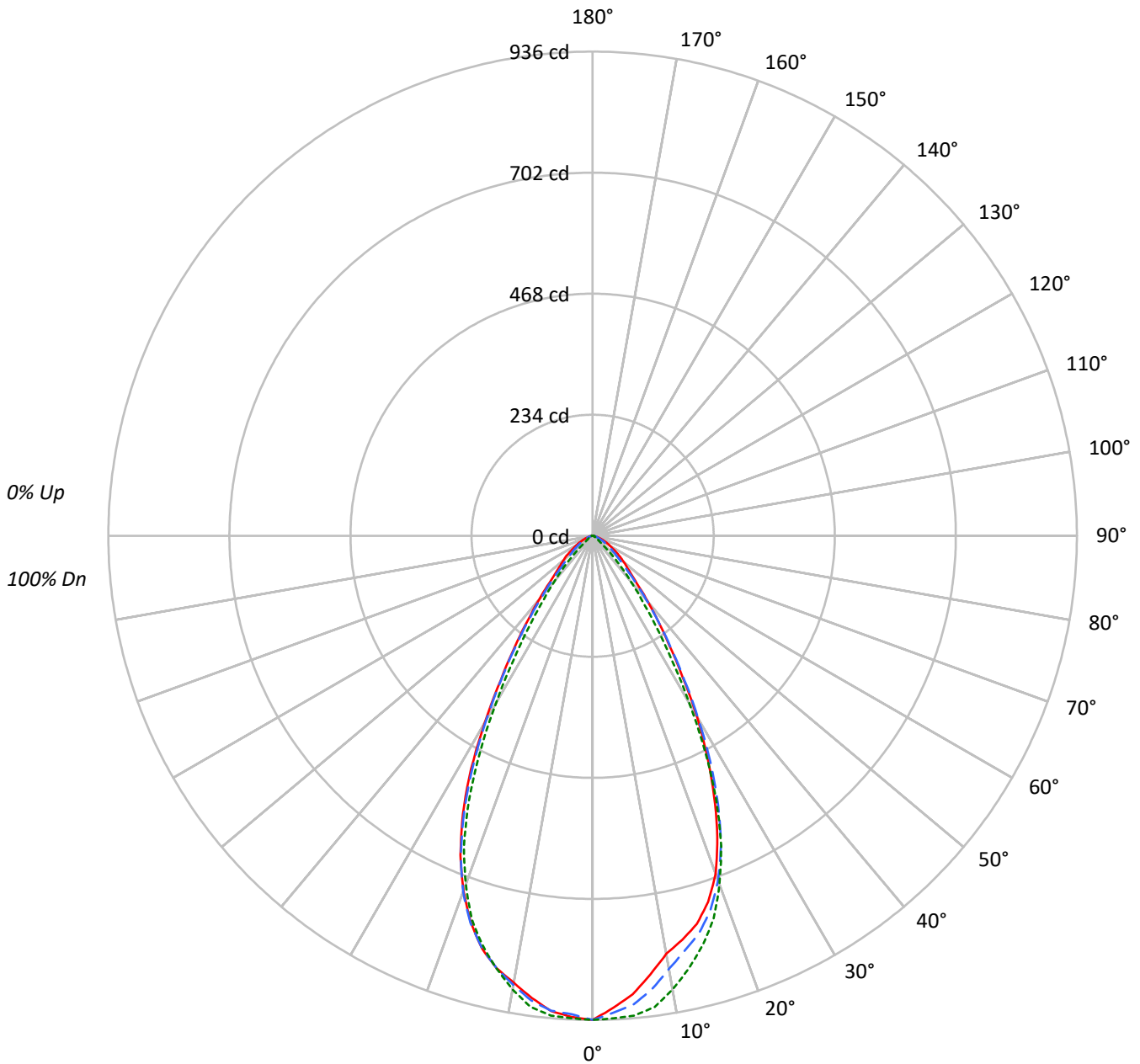
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 852.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 0.88 / 0.88 / 0.85  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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  |     |     |     | 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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1   | 113 | 110 | 107 | 105 | 111 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 95  | 94  | 92  | 92  | 92  | 92  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  | 85  | 85  | 85  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  | 90  | 86  | 83  | 88  | 84  | 81  | 85  | 83  | 80  | 78  | 78  | 78  | 78  |
| 4   | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  | 84  | 80  | 76  | 82  | 78  | 75  | 80  | 77  | 74  | 72  | 72  | 72  | 72  |
| 5   | 91  | 82  | 75  | 71  | 89  | 81  | 75  | 71  | 79  | 74  | 70  | 77  | 73  | 69  | 76  | 72  | 69  | 67  | 67  | 67  | 67  |
| 6   | 86  | 76  | 70  | 66  | 84  | 76  | 70  | 65  | 74  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 64  | 62  | 62  | 62  | 62  |
| 7   | 81  | 72  | 65  | 61  | 80  | 71  | 65  | 61  | 70  | 64  | 60  | 68  | 64  | 60  | 67  | 63  | 60  | 58  | 58  | 58  | 58  |
| 8   | 77  | 67  | 61  | 57  | 76  | 67  | 61  | 57  | 66  | 60  | 56  | 65  | 60  | 56  | 64  | 59  | 56  | 55  | 55  | 55  | 55  |
| 9   | 74  | 63  | 57  | 53  | 72  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 53  | 60  | 56  | 53  | 51  | 51  | 51  | 51  |
| 10  | 70  | 60  | 54  | 50  | 69  | 60  | 54  | 50  | 59  | 53  | 50  | 58  | 53  | 50  | 57  | 53  | 49  | 48  | 48  | 48  | 48  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 114979 | 114979 | 114979 |
| 5°  | 109720 | 114801 | 113728 |
| 10° | 102331 | 111076 | 109454 |
| 15° | 98812  | 104332 | 105069 |
| 20° | 90889  | 93726  | 95426  |
| 25° | 75341  | 76710  | 80424  |
| 30° | 57311  | 52999  | 58957  |
| 35° | 38799  | 31765  | 39234  |
| 40° | 26430  | 18202  | 25612  |
| 45° | 18330  | 9174   | 17322  |
| 50° | 14927  | 3727   | 13952  |
| 55° | 12080  | 2313   | 10988  |
| 60° | 9583   | 1769   | 8698   |
| 65° | 7558   | 1483   | 6715   |
| 70° | 5711   | 1293   | 5208   |
| 75° | 4130   | 1044   | 3750   |
| 80° | 3042   | 990    | 2547   |
| 85° | 1973   | 987    | 1973   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 86.0   | 10.1      |
| 10°-20°   | 226.1  | 26.5      |
| 20°-30°   | 259.4  | 30.4      |
| 30°-40°   | 157.6  | 18.5      |
| 40°-50°   | 67.5   | 7.9       |
| 50°-60°   | 32.4   | 3.8       |
| 60°-70°   | 15.8   | 1.8       |
| 70°-80°   | 5.8    | 0.7       |
| 80°-90°   | 1.3    | 0.2       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 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°    | 571.5  | 67.1      |
| 0°-40°    | 729.1  | 85.6      |
| 0°-60°    | 829.1  | 97.3      |
| 0°-90°    | 852.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 852.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 936 | 936 | 936 | 936  | 936  |      |
| 5°  | 890 | 909 | 931 | 922  | 922  | 83   |
| 15° | 777 | 795 | 820 | 825  | 826  | 216  |
| 25° | 556 | 574 | 566 | 588  | 593  | 252  |
| 35° | 259 | 262 | 212 | 256  | 262  | 166  |
| 45° | 106 | 94  | 53  | 85   | 100  | 86   |
| 55° | 56  | 42  | 11  | 38   | 51   | 51   |
| 65° | 26  | 17  | 5   | 16   | 23   | 26   |
| 75° | 9   | 6   | 2   | 5    | 8    | 10   |
| 85° | 1   | 1   | 1   | 1    | 1    | 2    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0°    | 935.9 | 935.9 | 935.9 | 935.9 | 935.9 | 935.9  | 935.9 | 935.9  | 935.9 |
| 2.5°  | 913.5 | 923.6 | 922.9 | 931.6 | 933.7 | 931.6  | 925.8 | 931.6  | 930.9 |
| 5°    | 889.7 | 901.2 | 909.2 | 923.6 | 930.9 | 929.4  | 921.5 | 922.9  | 922.2 |
| 7.5°  | 855.0 | 869.4 | 883.2 | 904.8 | 918.6 | 917.8  | 906.3 | 904.1  | 901.2 |
| 10°   | 820.3 | 834.0 | 849.9 | 872.3 | 890.4 | 893.3  | 881.7 | 878.8  | 877.4 |
| 12.5° | 800.0 | 810.9 | 821.7 | 841.2 | 857.1 | 862.9  | 856.4 | 857.1  | 856.4 |
| 15°   | 776.9 | 787.8 | 795.0 | 809.4 | 820.3 | 828.2  | 825.3 | 829.7  | 826.1 |
| 17.5° | 742.2 | 755.2 | 758.1 | 769.0 | 776.9 | 782.0  | 784.9 | 789.2  | 783.4 |
| 20°   | 695.2 | 705.4 | 709.0 | 713.3 | 716.9 | 723.4  | 732.1 | 736.4  | 729.9 |
| 22.5° | 629.5 | 649.0 | 648.3 | 646.1 | 649.7 | 651.9  | 665.6 | 672.8  | 667.8 |
| 25°   | 555.8 | 576.0 | 573.8 | 565.2 | 565.9 | 570.2  | 587.6 | 597.0  | 593.3 |
| 27.5° | 478.4 | 497.2 | 492.2 | 475.5 | 471.2 | 477.7  | 500.1 | 511.0  | 508.8 |
| 30°   | 404.0 | 416.3 | 408.3 | 378.7 | 373.6 | 381.6  | 410.5 | 421.3  | 415.6 |
| 32.5° | 323.8 | 333.2 | 329.6 | 293.4 | 284.7 | 292.7  | 326.7 | 336.8  | 330.3 |
| 35°   | 258.7 | 267.4 | 262.3 | 219.7 | 211.8 | 220.4  | 255.8 | 267.4  | 261.6 |
| 37.5° | 207.4 | 213.9 | 207.4 | 161.9 | 154.7 | 163.3  | 197.3 | 212.5  | 205.2 |
| 40°   | 164.8 | 169.8 | 161.2 | 119.2 | 113.5 | 117.8  | 149.6 | 164.8  | 159.7 |
| 42.5° | 130.1 | 133.7 | 124.3 | 87.4  | 80.9  | 86.7   | 112.7 | 126.5  | 123.6 |
| 45°   | 105.5 | 105.5 | 94.0  | 60.7  | 52.8  | 58.5   | 84.6  | 99.0   | 99.7  |
| 47.5° | 90.3  | 88.2  | 73.7  | 40.5  | 30.4  | 38.3   | 67.2  | 82.4   | 84.6  |
| 50°   | 78.1  | 75.2  | 60.7  | 29.6  | 19.5  | 27.5   | 55.6  | 70.8   | 73.0  |
| 52.5° | 67.2  | 65.0  | 50.6  | 23.1  | 13.7  | 21.0   | 47.0  | 61.4   | 63.6  |
| 55°   | 56.4  | 54.9  | 41.9  | 18.1  | 10.8  | 15.9   | 37.6  | 49.9   | 51.3  |
| 57.5° | 46.3  | 44.1  | 34.0  | 15.2  | 8.7   | 13.0   | 31.1  | 41.2   | 42.6  |
| 60°   | 39.0  | 36.9  | 27.5  | 12.3  | 7.2   | 10.1   | 25.3  | 34.0   | 35.4  |
| 62.5° | 32.5  | 30.4  | 22.4  | 10.1  | 5.8   | 8.7    | 20.2  | 27.5   | 28.9  |
| 65°   | 26.0  | 24.6  | 17.3  | 7.9   | 5.1   | 6.5    | 15.9  | 21.7   | 23.1  |
| 67.5° | 21.0  | 19.5  | 13.7  | 6.5   | 4.3   | 5.1    | 12.3  | 17.3   | 18.8  |
| 70°   | 15.9  | 14.5  | 10.1  | 5.1   | 3.6   | 4.3    | 9.4   | 13.0   | 14.5  |
| 72.5° | 11.6  | 10.8  | 7.9   | 4.3   | 2.9   | 3.6    | 6.5   | 9.4    | 10.8  |
| 75°   | 8.7   | 7.9   | 5.8   | 2.9   | 2.2   | 2.9    | 5.1   | 7.2    | 7.9   |
| 77.5° | 5.8   | 5.8   | 4.3   | 2.2   | 2.2   | 2.2    | 3.6   | 5.1    | 5.1   |
| 80°   | 4.3   | 3.6   | 2.9   | 1.4   | 1.4   | 1.4    | 2.2   | 3.6    | 3.6   |
| 82.5° | 2.9   | 2.2   | 2.2   | 1.4   | 1.4   | 1.4    | 1.4   | 2.2    | 2.2   |
| 85°   | 1.4   | 1.4   | 1.4   | 0.7   | 0.7   | 0.7    | 0.7   | 1.4    | 1.4   |
| 87.5° | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7    | 0.7   | 0.7    | 0.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   |



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)