

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: P859687

Luminaire Tested: **LD4C08D010 EU4089040 4LBMDSWLI**

Issue Date: 4/12/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P859687  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2309-186-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C08D010 EU4089040 4LBMDSWLI  
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBMDSW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

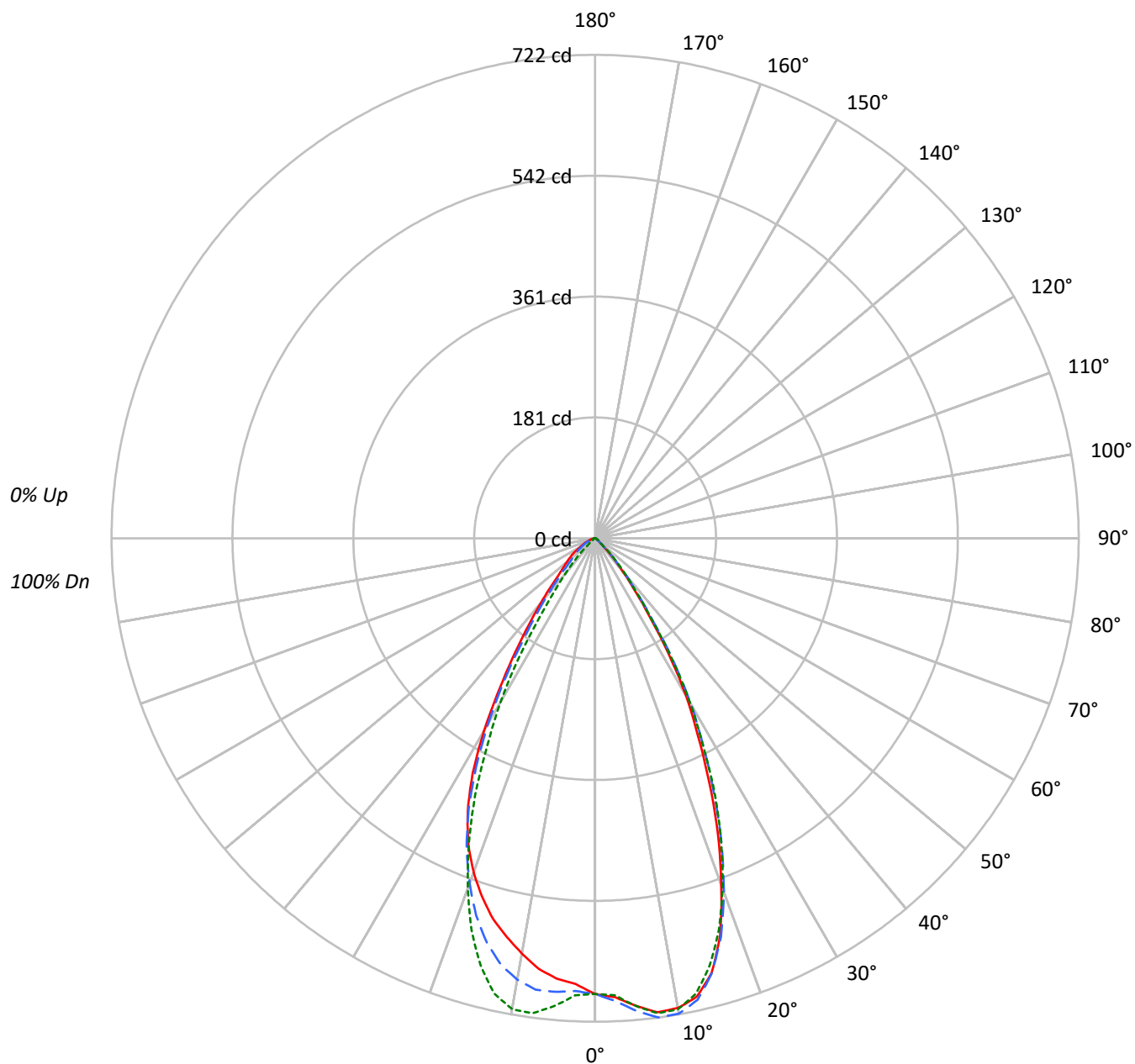
Lumens per Lamp: N/A  
Luminaire Lumens: 605.0 lumens  
Efficiency: N/A  
Efficacy: 61.1 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.9 / 0.85  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.9  
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  |     |     |  |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |  | 50  |     |     |  |  | 30  |     |     |  |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  |  | 50  | 30  | 10  |  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 |  | 104 | 103 | 101 |  |  | 101 | 99  | 98  |  |  | 97  |
| 2   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 94  |  | 98  | 95  | 92  |  |  | 95  | 92  | 90  |  |  | 92  |
| 3   | 102 | 96  | 91  | 87  | 100 | 94  | 90  | 86  |  | 92  | 88  | 85  |  |  | 89  | 86  | 83  |  |  | 87  |
| 4   | 97  | 89  | 84  | 80  | 95  | 88  | 83  | 79  |  | 86  | 82  | 78  |  |  | 84  | 80  | 77  |  |  | 82  |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 77  | 73  |  | 81  | 76  | 73  |  |  | 79  | 75  | 72  |  |  | 78  |
| 6   | 88  | 79  | 73  | 68  | 86  | 78  | 72  | 68  |  | 76  | 71  | 68  |  |  | 75  | 71  | 67  |  |  | 74  |
| 7   | 83  | 74  | 68  | 64  | 82  | 73  | 68  | 64  |  | 72  | 67  | 63  |  |  | 71  | 66  | 63  |  |  | 70  |
| 8   | 79  | 70  | 64  | 60  | 78  | 69  | 64  | 60  |  | 68  | 63  | 59  |  |  | 67  | 63  | 59  |  |  | 66  |
| 9   | 76  | 66  | 60  | 56  | 75  | 66  | 60  | 56  |  | 65  | 59  | 56  |  |  | 64  | 59  | 56  |  |  | 63  |
| 10  | 72  | 63  | 57  | 53  | 71  | 62  | 57  | 53  |  | 61  | 56  | 53  |  |  | 61  | 56  | 53  |  |  | 60  |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 83602 | 83602 | 83602 |
| 5°  | 86449 | 86499 | 81393 |
| 10° | 88846 | 89071 | 78554 |
| 15° | 85483 | 84007 | 74875 |
| 20° | 71971 | 72651 | 69356 |
| 25° | 54682 | 57461 | 61053 |
| 30° | 38458 | 40047 | 46984 |
| 35° | 20742 | 21732 | 31090 |
| 40° | 10007 | 11050 | 20175 |
| 45° | 3562  | 4847  | 13117 |
| 50° | 1338  | 1682  | 10512 |
| 55° | 1007  | 1199  | 8675  |
| 60° | 811   | 909   | 6290  |
| 65° | 669   | 814   | 4884  |
| 70° | 503   | 682   | 3843  |
| 75° | 427   | 665   | 2895  |
| 80° | 354   | 637   | 1981  |
| 85° | 0     | 705   | 1269  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.3   | 11.0      |
| 10°-20°   | 178.7  | 29.5      |
| 20°-30°   | 193.9  | 32.0      |
| 30°-40°   | 107.6  | 17.8      |
| 40°-50°   | 34.3   | 5.7       |
| 50°-60°   | 13.8   | 2.3       |
| 60°-70°   | 7.0    | 1.2       |
| 70°-80°   | 2.9    | 0.5       |
| 80°-90°   | 0.6    | 0.1       |
| 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°    | 438.9  | 72.5      |
| 0°-40°    | 546.5  | 90.3      |
| 0°-60°    | 594.5  | 98.3      |
| 0°-90°    | 605.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 605.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 680 | 680 | 680 | 680  | 680  |      |
| 5°  | 701 | 708 | 701 | 680  | 660  | 67   |
| 15° | 672 | 673 | 660 | 625  | 589  | 184  |
| 25° | 403 | 420 | 424 | 447  | 450  | 184  |
| 35° | 138 | 150 | 145 | 191  | 207  | 92   |
| 45° | 20  | 24  | 28  | 62   | 76   | 20   |
| 55° | 5   | 5   | 6   | 30   | 40   | 4    |
| 65° | 2   | 2   | 3   | 14   | 17   | 2    |
| 75° | 1   | 1   | 1   | 5    | 6    | 1    |
| 85° | 0   | 0   | 0   | 1    | 1    | 0    |
| 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°    | 680.5 | 680.5 | 680.5 | 680.5 | 680.5 | 680.5  | 680.5 | 680.5  | 680.5 |
| 2.5°  | 686.1 | 692.1 | 691.7 | 687.0 | 683.3 | 681.9  | 676.8 | 670.7  | 666.5 |
| 5°    | 701.0 | 708.4 | 708.4 | 704.7 | 701.4 | 693.5  | 680.0 | 667.0  | 660.0 |
| 7.5°  | 714.0 | 721.5 | 721.9 | 719.1 | 715.4 | 702.4  | 680.0 | 659.1  | 648.4 |
| 10°   | 712.2 | 717.8 | 721.0 | 718.2 | 714.0 | 696.8  | 669.3 | 641.4  | 629.7 |
| 12.5° | 701.4 | 706.6 | 706.1 | 701.9 | 696.3 | 678.6  | 651.6 | 622.7  | 609.7 |
| 15°   | 672.1 | 674.9 | 672.6 | 667.9 | 660.5 | 647.0  | 625.1 | 600.4  | 588.7 |
| 17.5° | 621.3 | 625.1 | 624.1 | 616.7 | 613.9 | 600.8  | 590.6 | 571.5  | 561.3 |
| 20°   | 550.5 | 562.2 | 562.2 | 556.6 | 555.7 | 546.8  | 548.2 | 538.0  | 530.5 |
| 22.5° | 479.3 | 489.5 | 492.8 | 490.5 | 492.3 | 488.1  | 501.2 | 498.4  | 494.6 |
| 25°   | 403.4 | 413.6 | 420.1 | 419.2 | 423.9 | 423.9  | 446.7 | 452.3  | 450.4 |
| 27.5° | 332.1 | 341.9 | 349.3 | 351.2 | 348.4 | 353.5  | 384.7 | 395.9  | 395.9 |
| 30°   | 271.1 | 279.0 | 286.0 | 286.0 | 282.3 | 286.0  | 319.1 | 332.1  | 331.2 |
| 32.5° | 202.1 | 211.0 | 217.5 | 216.6 | 213.3 | 218.4  | 253.4 | 266.4  | 263.2 |
| 35°   | 138.3 | 144.4 | 149.5 | 147.6 | 144.9 | 153.2  | 191.4 | 207.7  | 207.3 |
| 37.5° | 93.6  | 99.2  | 102.5 | 101.1 | 100.1 | 109.9  | 144.9 | 163.0  | 162.1 |
| 40°   | 62.4  | 66.1  | 68.5  | 68.0  | 68.9  | 77.3   | 109.0 | 125.8  | 125.8 |
| 42.5° | 39.6  | 41.9  | 44.2  | 44.2  | 46.6  | 55.4   | 82.9  | 97.3   | 97.3  |
| 45°   | 20.5  | 21.9  | 24.2  | 25.6  | 27.9  | 37.3   | 62.4  | 74.5   | 75.5  |
| 47.5° | 9.8   | 10.2  | 11.2  | 11.6  | 13.5  | 23.3   | 48.0  | 61.0   | 63.8  |
| 50°   | 7.0   | 7.5   | 7.5   | 7.5   | 8.8   | 17.7   | 40.5  | 52.6   | 55.0  |
| 52.5° | 5.6   | 5.6   | 5.6   | 6.1   | 7.0   | 14.9   | 34.9  | 45.6   | 47.5  |
| 55°   | 4.7   | 4.7   | 4.7   | 4.7   | 5.6   | 12.1   | 29.8  | 39.1   | 40.5  |
| 57.5° | 3.7   | 3.7   | 3.7   | 3.7   | 4.7   | 9.8    | 24.7  | 31.2   | 31.7  |
| 60°   | 3.3   | 3.3   | 3.3   | 3.3   | 3.7   | 8.4    | 20.0  | 25.6   | 25.6  |
| 62.5° | 2.8   | 2.8   | 2.8   | 2.8   | 3.3   | 7.0    | 16.8  | 21.0   | 20.5  |
| 65°   | 2.3   | 2.3   | 2.3   | 2.3   | 2.8   | 5.6    | 13.5  | 16.8   | 16.8  |
| 67.5° | 1.9   | 1.9   | 1.9   | 1.9   | 2.3   | 4.7    | 10.7  | 13.5   | 13.5  |
| 70°   | 1.4   | 1.4   | 1.4   | 1.4   | 1.9   | 3.7    | 8.8   | 10.7   | 10.7  |
| 72.5° | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 2.8    | 6.5   | 8.4    | 7.9   |
| 75°   | 0.9   | 0.9   | 0.9   | 0.9   | 1.4   | 2.3    | 4.7   | 6.1    | 6.1   |
| 77.5° | 0.9   | 0.9   | 0.9   | 0.9   | 0.9   | 1.9    | 3.7   | 4.2    | 4.2   |
| 80°   | 0.5   | 0.5   | 0.5   | 0.5   | 0.9   | 1.4    | 2.3   | 2.8    | 2.8   |
| 82.5° | 0.0   | 0.5   | 0.0   | 0.5   | 0.5   | 0.9    | 1.9   | 1.9    | 1.9   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.5   | 0.5    | 0.9   | 1.4    | 0.9   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.5    | 0.5   | 0.5    | 0.5   |
| 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)