

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: P856990

Luminaire Tested: **LD4C15D010 EU4159050 4LBMDDWLI**

Issue Date: 4/12/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856990  
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: LD4C15D010 EU4159050 4LBMDDWLI  
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBMDDW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 985.0 lumens  
Efficiency: N/A  
Efficacy: 62.3 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): 15.8  
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: P856990

CATALOG NUMBER: LD4C15D010 EU4159050 4LBMDDWLI

**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 | 110 | 107 | 105 | 111 | 108 | 105 | 103 |  | 104 | 102 | 100 |  |  | 100 | 99  | 97  |  |  | 97  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  |  | 97  | 93  | 91  |  |  | 94  | 91  | 89  |  |  | 91  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  |  | 90  | 86  | 83  |  |  | 88  | 84  | 81  |  |  | 85  |
| 4   | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  |  | 84  | 80  | 76  |  |  | 82  | 78  | 75  |  |  | 80  |
| 5   | 91  | 82  | 75  | 71  | 89  | 81  | 75  | 71  |  | 79  | 74  | 70  |  |  | 77  | 73  | 69  |  |  | 76  |
| 6   | 86  | 76  | 70  | 66  | 84  | 76  | 70  | 65  |  | 74  | 69  | 65  |  |  | 73  | 68  | 64  |  |  | 71  |
| 7   | 81  | 72  | 65  | 61  | 80  | 71  | 65  | 61  |  | 70  | 64  | 60  |  |  | 68  | 64  | 60  |  |  | 67  |
| 8   | 77  | 67  | 61  | 57  | 76  | 67  | 61  | 57  |  | 66  | 60  | 56  |  |  | 65  | 60  | 56  |  |  | 64  |
| 9   | 74  | 63  | 57  | 53  | 72  | 63  | 57  | 53  |  | 62  | 57  | 53  |  |  | 61  | 56  | 53  |  |  | 60  |
| 10  | 70  | 60  | 54  | 50  | 69  | 60  | 54  | 50  |  | 59  | 53  | 50  |  |  | 58  | 53  | 50  |  |  | 57  |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 132927 | 132927 | 132927 |
| 5°  | 126837 | 132720 | 131474 |
| 10° | 118299 | 128416 | 126533 |
| 15° | 114240 | 120612 | 121464 |
| 20° | 105087 | 108356 | 110330 |
| 25° | 87093  | 88679  | 92990  |
| 30° | 66262  | 61283  | 68149  |
| 35° | 44858  | 36714  | 45368  |
| 40° | 30551  | 21041  | 29621  |
| 45° | 21196  | 10598  | 20032  |
| 50° | 17240  | 4319   | 16131  |
| 55° | 13965  | 2677   | 12701  |
| 60° | 11081  | 2064   | 10049  |
| 65° | 8750   | 1686   | 7762   |
| 70° | 6609   | 1509   | 5999   |
| 75° | 4747   | 1187   | 4367   |
| 80° | 3537   | 1203   | 2971   |
| 85° | 2396   | 1128   | 2396   |



TEST NUMBER: P856990

CATALOG NUMBER: LD4C15D010 EU4159050 4LBMDDWLI

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.5   | 10.1      |
| 10°-20°   | 261.4  | 26.5      |
| 20°-30°   | 299.9  | 30.4      |
| 30°-40°   | 182.2  | 18.5      |
| 40°-50°   | 78.1   | 7.9       |
| 50°-60°   | 37.5   | 3.8       |
| 60°-70°   | 18.2   | 1.8       |
| 70°-80°   | 6.8    | 0.7       |
| 80°-90°   | 1.5    | 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°    | 660.8  | 67.1      |
| 0°-40°    | 842.9  | 85.6      |
| 0°-60°    | 958.5  | 97.3      |
| 0°-90°    | 985.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 985.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1082 | 1082 | 1082 | 1082 | 1082 |      |
| 5°  | 1028 | 1051 | 1076 | 1065 | 1066 | 96   |
| 15° | 898  | 919  | 948  | 954  | 955  | 250  |
| 25° | 642  | 663  | 654  | 679  | 686  | 291  |
| 35° | 299  | 303  | 245  | 296  | 302  | 192  |
| 45° | 122  | 109  | 61   | 98   | 115  | 99   |
| 55° | 65   | 48   | 12   | 43   | 59   | 59   |
| 65° | 30   | 20   | 6    | 18   | 27   | 31   |
| 75° | 10   | 7    | 2    | 6    | 9    | 11   |
| 85° | 2    | 2    | 1    | 1    | 2    | 2    |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



TEST NUMBER: P856990

CATALOG NUMBER: LD4C15D010 EU4159050 4LBMDDWLI

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1082.0 | 1082.0 | 1082.0 | 1082.0 | 1082.0 | 1082.0 | 1082.0 | 1082.0 | 1082.0 |
| 2.5°  | 1056.1 | 1067.8 | 1067.0 | 1077.0 | 1079.5 | 1077.0 | 1070.3 | 1077.0 | 1076.2 |
| 5°    | 1028.5 | 1041.9 | 1051.1 | 1067.8 | 1076.2 | 1074.5 | 1065.3 | 1067.0 | 1066.1 |
| 7.5°  | 988.4  | 1005.1 | 1021.0 | 1046.1 | 1062.0 | 1061.1 | 1047.8 | 1045.2 | 1041.9 |
| 10°   | 948.3  | 964.2  | 982.6  | 1008.5 | 1029.4 | 1032.7 | 1019.3 | 1016.0 | 1014.3 |
| 12.5° | 924.9  | 937.5  | 950.0  | 972.6  | 990.9  | 997.6  | 990.1  | 990.9  | 990.1  |
| 15°   | 898.2  | 910.7  | 919.1  | 935.8  | 948.3  | 957.5  | 954.2  | 959.2  | 955.0  |
| 17.5° | 858.1  | 873.1  | 876.5  | 889.0  | 898.2  | 904.0  | 907.4  | 912.4  | 905.7  |
| 20°   | 803.8  | 815.5  | 819.7  | 824.7  | 828.8  | 836.4  | 846.4  | 851.4  | 843.9  |
| 22.5° | 727.7  | 750.3  | 749.5  | 747.0  | 751.1  | 753.6  | 769.5  | 777.9  | 772.0  |
| 25°   | 642.5  | 665.9  | 663.4  | 653.4  | 654.2  | 659.2  | 679.3  | 690.1  | 686.0  |
| 27.5° | 553.1  | 574.8  | 569.0  | 549.8  | 544.8  | 552.3  | 578.2  | 590.7  | 588.2  |
| 30°   | 467.1  | 481.3  | 472.1  | 437.8  | 432.0  | 441.2  | 474.6  | 487.1  | 480.4  |
| 32.5° | 374.3  | 385.2  | 381.0  | 339.2  | 329.2  | 338.4  | 377.7  | 389.4  | 381.8  |
| 35°   | 299.1  | 309.1  | 303.3  | 254.0  | 244.8  | 254.8  | 295.8  | 309.1  | 302.5  |
| 37.5° | 239.8  | 247.3  | 239.8  | 187.2  | 178.8  | 188.8  | 228.1  | 245.6  | 237.3  |
| 40°   | 190.5  | 196.3  | 186.3  | 137.9  | 131.2  | 136.2  | 173.0  | 190.5  | 184.7  |
| 42.5° | 150.4  | 154.6  | 143.7  | 101.1  | 93.6   | 100.3  | 130.3  | 146.2  | 142.9  |
| 45°   | 122.0  | 122.0  | 108.6  | 70.2   | 61.0   | 67.7   | 97.8   | 114.5  | 115.3  |
| 47.5° | 104.4  | 101.9  | 85.2   | 46.8   | 35.1   | 44.3   | 77.7   | 95.3   | 97.8   |
| 50°   | 90.2   | 86.9   | 70.2   | 34.3   | 22.6   | 31.8   | 64.3   | 81.9   | 84.4   |
| 52.5° | 77.7   | 75.2   | 58.5   | 26.7   | 15.9   | 24.2   | 54.3   | 71.0   | 73.5   |
| 55°   | 65.2   | 63.5   | 48.5   | 20.9   | 12.5   | 18.4   | 43.4   | 57.7   | 59.3   |
| 57.5° | 53.5   | 51.0   | 39.3   | 17.5   | 10.0   | 15.0   | 35.9   | 47.6   | 49.3   |
| 60°   | 45.1   | 42.6   | 31.8   | 14.2   | 8.4    | 11.7   | 29.2   | 39.3   | 40.9   |
| 62.5° | 37.6   | 35.1   | 25.9   | 11.7   | 6.7    | 10.0   | 23.4   | 31.8   | 33.4   |
| 65°   | 30.1   | 28.4   | 20.1   | 9.2    | 5.8    | 7.5    | 18.4   | 25.1   | 26.7   |
| 67.5° | 24.2   | 22.6   | 15.9   | 7.5    | 5.0    | 5.8    | 14.2   | 20.1   | 21.7   |
| 70°   | 18.4   | 16.7   | 11.7   | 5.8    | 4.2    | 5.0    | 10.9   | 15.0   | 16.7   |
| 72.5° | 13.4   | 12.5   | 9.2    | 5.0    | 3.3    | 4.2    | 7.5    | 10.9   | 12.5   |
| 75°   | 10.0   | 9.2    | 6.7    | 3.3    | 2.5    | 3.3    | 5.8    | 8.4    | 9.2    |
| 77.5° | 6.7    | 6.7    | 5.0    | 2.5    | 2.5    | 2.5    | 4.2    | 5.8    | 5.8    |
| 80°   | 5.0    | 4.2    | 3.3    | 1.7    | 1.7    | 1.7    | 2.5    | 4.2    | 4.2    |
| 82.5° | 3.3    | 2.5    | 2.5    | 1.7    | 1.7    | 1.7    | 1.7    | 2.5    | 2.5    |
| 85°   | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    |
| 87.5° | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



Report Generated By 670246072 / DESKTOP-50001EG







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







(END OF REPORT)