

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: P857768

Luminaire Tested: **LD4C35D010 EU4359040 4LBMDDWLI**

Issue Date: 4/12/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P857768  
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: LD4C35D010 EU4359040 4LBMDDWLI  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBMDDW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

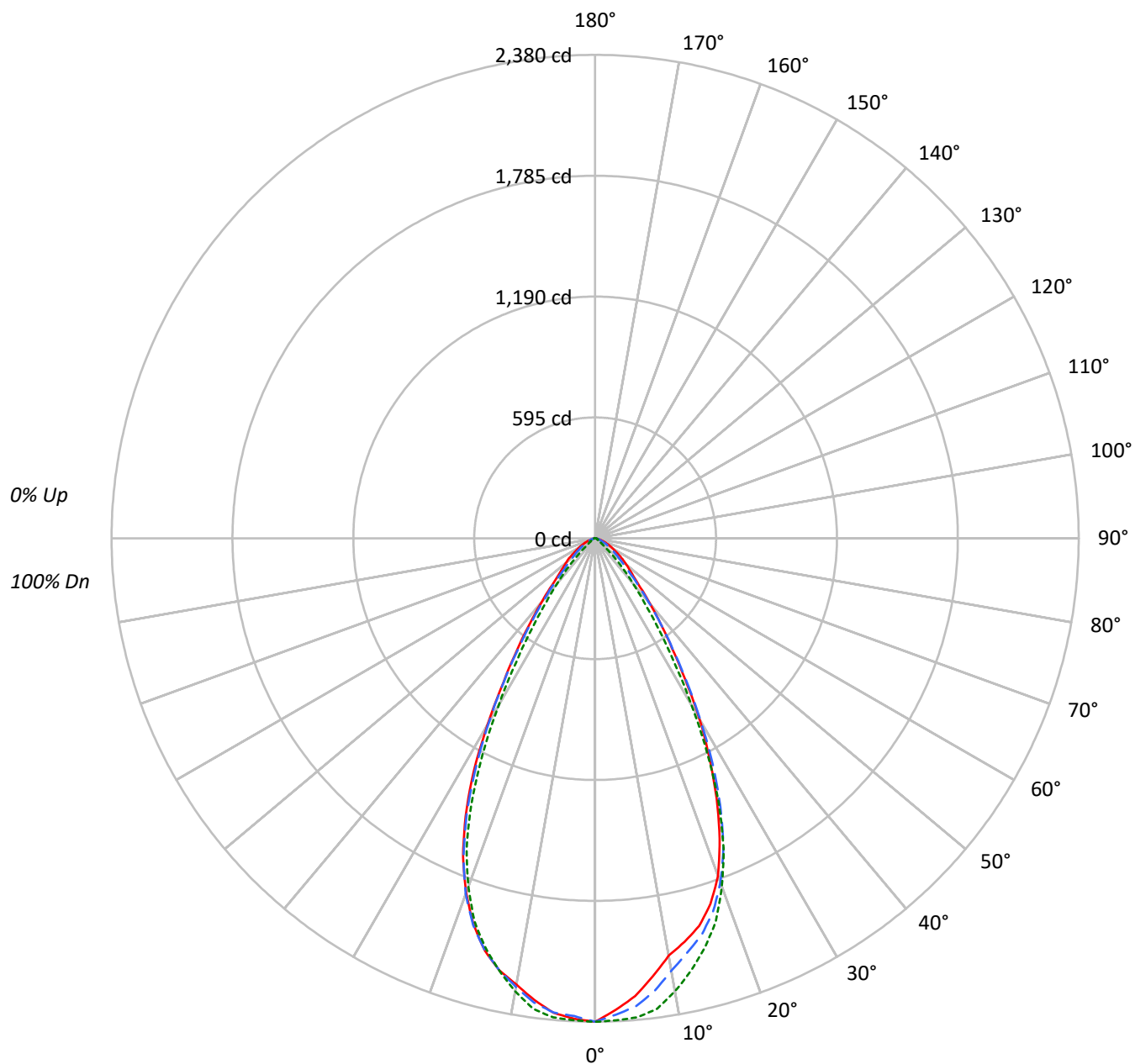
Lumens per Lamp: N/A  
Luminaire Lumens: 2167.0 lumens  
Efficiency: N/A  
Efficacy: 53.6 lumens/watt  
Spacing Criteria (0/90/45): 0.88 / 0.88 / 0.85  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.4  
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 | 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°  | 292440 | 292440 | 292440 |
| 5°  | 279055 | 291979 | 289254 |
| 10° | 260263 | 282506 | 278377 |
| 15° | 251322 | 265351 | 267220 |
| 20° | 231184 | 238401 | 242715 |
| 25° | 191605 | 195103 | 204564 |
| 30° | 145760 | 134809 | 149931 |
| 35° | 98699  | 80777  | 99794  |
| 40° | 67213  | 46284  | 65144  |
| 45° | 46632  | 23316  | 44078  |
| 50° | 37939  | 9480   | 35492  |
| 55° | 30715  | 5912   | 27952  |
| 60° | 24399  | 4521   | 22138  |
| 65° | 19244  | 3750   | 17093  |
| 70° | 14512  | 3305   | 13219  |
| 75° | 10490  | 2611   | 9588   |
| 80° | 7782   | 2618   | 6509   |
| 85° | 5215   | 2537   | 5215   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 218.9  | 10.1      |
| 10°-20°   | 575.0  | 26.5      |
| 20°-30°   | 659.8  | 30.4      |
| 30°-40°   | 400.8  | 18.5      |
| 40°-50°   | 171.8  | 7.9       |
| 50°-60°   | 82.4   | 3.8       |
| 60°-70°   | 40.1   | 1.8       |
| 70°-80°   | 14.9   | 0.7       |
| 80°-90°   | 3.4    | 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       |
| <hr/>     |        |           |
| 0°-30°    | 1453.7 | 67.1      |
| 0°-40°    | 1854.5 | 85.6      |
| 0°-60°    | 2108.6 | 97.3      |
| 0°-90°    | 2167.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2167.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2380 | 2380 | 2380 | 2380 | 2380 |      |
| 5°  | 2263 | 2312 | 2368 | 2344 | 2346 | 210  |
| 15° | 1976 | 2022 | 2086 | 2099 | 2101 | 550  |
| 25° | 1414 | 1460 | 1439 | 1494 | 1509 | 641  |
| 35° | 658  | 667  | 539  | 651  | 665  | 422  |
| 45° | 268  | 239  | 134  | 215  | 254  | 218  |
| 55° | 143  | 107  | 28   | 96   | 130  | 129  |
| 65° | 66   | 44   | 13   | 40   | 59   | 67   |
| 75° | 22   | 15   | 6    | 13   | 20   | 24   |
| 85° | 4    | 4    | 2    | 2    | 4    | 5    |
| 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°    | 2380.4 | 2380.4 | 2380.4 | 2380.4 | 2380.4 | 2380.4 | 2380.4 | 2380.4 | 2380.4 |
| 2.5°  | 2323.4 | 2349.2 | 2347.3 | 2369.4 | 2374.9 | 2369.4 | 2354.7 | 2369.4 | 2367.6 |
| 5°    | 2262.8 | 2292.2 | 2312.4 | 2349.2 | 2367.6 | 2363.9 | 2343.7 | 2347.3 | 2345.5 |
| 7.5°  | 2174.5 | 2211.3 | 2246.2 | 2301.4 | 2336.3 | 2334.5 | 2305.1 | 2299.5 | 2292.2 |
| 10°   | 2086.3 | 2121.2 | 2161.7 | 2218.7 | 2264.6 | 2272.0 | 2242.6 | 2235.2 | 2231.5 |
| 12.5° | 2034.8 | 2062.4 | 2090.0 | 2139.6 | 2180.1 | 2194.8 | 2178.2 | 2180.1 | 2178.2 |
| 15°   | 1976.0 | 2003.6 | 2022.0 | 2058.7 | 2086.3 | 2106.5 | 2099.2 | 2110.2 | 2101.0 |
| 17.5° | 1887.8 | 1920.9 | 1928.2 | 1955.8 | 1976.0 | 1988.9 | 1996.2 | 2007.3 | 1992.6 |
| 20°   | 1768.3 | 1794.0 | 1803.2 | 1814.3 | 1823.5 | 1840.0 | 1862.1 | 1873.1 | 1856.5 |
| 22.5° | 1601.0 | 1650.7 | 1648.8 | 1643.3 | 1652.5 | 1658.0 | 1692.9 | 1711.3 | 1698.5 |
| 25°   | 1413.5 | 1465.0 | 1459.5 | 1437.4 | 1439.3 | 1450.3 | 1494.4 | 1518.3 | 1509.1 |
| 27.5° | 1216.9 | 1264.7 | 1251.8 | 1209.5 | 1198.5 | 1215.0 | 1272.0 | 1299.6 | 1294.1 |
| 30°   | 1027.5 | 1058.8 | 1038.6 | 963.2  | 950.3  | 970.5  | 1044.1 | 1071.6 | 1056.9 |
| 32.5° | 823.5  | 847.4  | 838.2  | 746.3  | 724.2  | 744.5  | 830.8  | 856.6  | 840.0  |
| 35°   | 658.1  | 680.1  | 667.3  | 558.8  | 538.6  | 560.6  | 650.7  | 680.1  | 665.4  |
| 37.5° | 527.6  | 544.1  | 527.6  | 411.7  | 393.4  | 415.4  | 501.8  | 540.4  | 522.0  |
| 40°   | 419.1  | 432.0  | 409.9  | 303.3  | 288.6  | 299.6  | 380.5  | 419.1  | 406.2  |
| 42.5° | 330.9  | 340.1  | 316.2  | 222.4  | 205.9  | 220.6  | 286.8  | 321.7  | 314.3  |
| 45°   | 268.4  | 268.4  | 239.0  | 154.4  | 134.2  | 148.9  | 215.1  | 251.8  | 253.7  |
| 47.5° | 229.8  | 224.3  | 187.5  | 102.9  | 77.2   | 97.4   | 170.9  | 209.6  | 215.1  |
| 50°   | 198.5  | 191.2  | 154.4  | 75.4   | 49.6   | 69.9   | 141.5  | 180.1  | 185.7  |
| 52.5° | 170.9  | 165.4  | 128.7  | 58.8   | 34.9   | 53.3   | 119.5  | 156.2  | 161.8  |
| 55°   | 143.4  | 139.7  | 106.6  | 46.0   | 27.6   | 40.4   | 95.6   | 126.8  | 130.5  |
| 57.5° | 117.6  | 112.1  | 86.4   | 38.6   | 22.1   | 33.1   | 79.0   | 104.8  | 108.5  |
| 60°   | 99.3   | 93.7   | 69.9   | 31.2   | 18.4   | 25.7   | 64.3   | 86.4   | 90.1   |
| 62.5° | 82.7   | 77.2   | 57.0   | 25.7   | 14.7   | 22.1   | 51.5   | 69.9   | 73.5   |
| 65°   | 66.2   | 62.5   | 44.1   | 20.2   | 12.9   | 16.5   | 40.4   | 55.1   | 58.8   |
| 67.5° | 53.3   | 49.6   | 34.9   | 16.5   | 11.0   | 12.9   | 31.2   | 44.1   | 47.8   |
| 70°   | 40.4   | 36.8   | 25.7   | 12.9   | 9.2    | 11.0   | 23.9   | 33.1   | 36.8   |
| 72.5° | 29.4   | 27.6   | 20.2   | 11.0   | 7.4    | 9.2    | 16.5   | 23.9   | 27.6   |
| 75°   | 22.1   | 20.2   | 14.7   | 7.4    | 5.5    | 7.4    | 12.9   | 18.4   | 20.2   |
| 77.5° | 14.7   | 14.7   | 11.0   | 5.5    | 5.5    | 5.5    | 9.2    | 12.9   | 12.9   |
| 80°   | 11.0   | 9.2    | 7.4    | 3.7    | 3.7    | 3.7    | 5.5    | 9.2    | 9.2    |
| 82.5° | 7.4    | 5.5    | 5.5    | 3.7    | 3.7    | 3.7    | 3.7    | 5.5    | 5.5    |
| 85°   | 3.7    | 3.7    | 3.7    | 1.8    | 1.8    | 1.8    | 1.8    | 3.7    | 3.7    |
| 87.5° | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    |
| 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)