

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: P857946

Luminaire Tested: **LD4C40D010 EU4409040 4LBMDSWH**

Issue Date: 4/12/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P857946  
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: LD4C40D010 EU4409040 4LBMDSWH  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBMDSW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

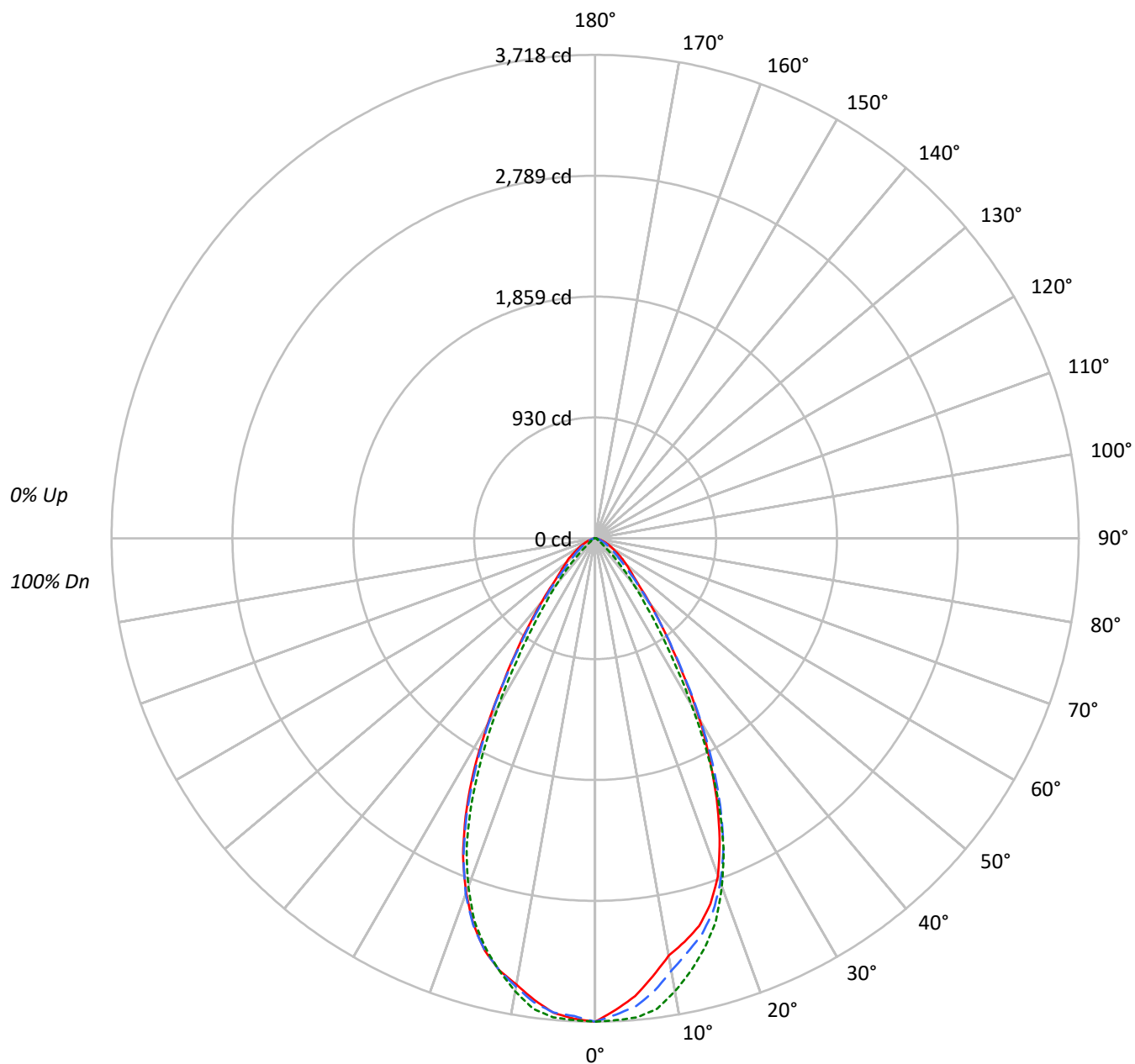
Lumens per Lamp: N/A  
Luminaire Lumens: 3385.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 0.88 / 0.88 / 0.85  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 47  
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°  | 456818 | 456818 | 456818 |
| 5°  | 435897 | 456085 | 451830 |
| 10° | 406556 | 441298 | 434849 |
| 15° | 392589 | 414503 | 417416 |
| 20° | 361124 | 372394 | 379140 |
| 25° | 299316 | 304766 | 319555 |
| 30° | 227698 | 210590 | 234209 |
| 35° | 154161 | 126175 | 155885 |
| 40° | 104997 | 72297  | 101773 |
| 45° | 72832  | 36416  | 68836  |
| 50° | 59268  | 14812  | 55427  |
| 55° | 47978  | 9232   | 43673  |
| 60° | 38109  | 7052   | 34571  |
| 65° | 30058  | 5843   | 26715  |
| 70° | 22701  | 5172   | 20618  |
| 75° | 16376  | 4082   | 15000  |
| 80° | 12169  | 4033   | 10188  |
| 85° | 8035   | 4088   | 8035   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 341.9  | 10.1      |
| 10°-20°   | 898.3  | 26.5      |
| 20°-30°   | 1030.6 | 30.4      |
| 30°-40°   | 626.1  | 18.5      |
| 40°-50°   | 268.3  | 7.9       |
| 50°-60°   | 128.7  | 3.8       |
| 60°-70°   | 62.6   | 1.8       |
| 70°-80°   | 23.2   | 0.7       |
| 80°-90°   | 5.3    | 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°    | 2270.7 | 67.1      |
| 0°-40°    | 2896.8 | 85.6      |
| 0°-60°    | 3293.9 | 97.3      |
| 0°-90°    | 3385.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3385.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 3718 | 3718 | 3718 | 3718 | 3718 |      |
| 5°  | 3535 | 3612 | 3698 | 3661 | 3664 | 328  |
| 15° | 3087 | 3158 | 3259 | 3279 | 3282 | 859  |
| 25° | 2208 | 2280 | 2248 | 2334 | 2357 | 1002 |
| 35° | 1028 | 1042 | 841  | 1016 | 1039 | 659  |
| 45° | 419  | 373  | 210  | 336  | 396  | 341  |
| 55° | 224  | 166  | 43   | 149  | 204  | 202  |
| 65° | 103  | 69   | 20   | 63   | 92   | 105  |
| 75° | 34   | 23   | 9    | 20   | 32   | 38   |
| 85° | 6    | 6    | 3    | 3    | 6    | 8    |
| 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°    | 3718.4 | 3718.4 | 3718.4 | 3718.4 | 3718.4 | 3718.4 | 3718.4 | 3718.4 | 3718.4 |
| 2.5°  | 3629.4 | 3669.6 | 3666.7 | 3701.1 | 3709.8 | 3701.1 | 3678.2 | 3701.1 | 3698.3 |
| 5°    | 3534.6 | 3580.5 | 3612.1 | 3669.6 | 3698.3 | 3692.5 | 3660.9 | 3666.7 | 3663.8 |
| 7.5°  | 3396.8 | 3454.2 | 3508.8 | 3594.9 | 3649.5 | 3646.6 | 3600.6 | 3592.0 | 3580.5 |
| 10°   | 3259.0 | 3313.5 | 3376.7 | 3465.7 | 3537.5 | 3549.0 | 3503.0 | 3491.5 | 3485.8 |
| 12.5° | 3178.6 | 3221.6 | 3264.7 | 3342.2 | 3405.4 | 3428.4 | 3402.5 | 3405.4 | 3402.5 |
| 15°   | 3086.7 | 3129.8 | 3158.5 | 3215.9 | 3259.0 | 3290.5 | 3279.1 | 3296.3 | 3281.9 |
| 17.5° | 2948.9 | 3000.5 | 3012.0 | 3055.1 | 3086.7 | 3106.8 | 3118.3 | 3135.5 | 3112.5 |
| 20°   | 2762.2 | 2802.4 | 2816.8 | 2834.0 | 2848.4 | 2874.2 | 2908.7 | 2925.9 | 2900.0 |
| 22.5° | 2500.9 | 2578.5 | 2575.6 | 2567.0 | 2581.3 | 2589.9 | 2644.5 | 2673.2 | 2653.1 |
| 25°   | 2208.1 | 2288.5 | 2279.8 | 2245.4 | 2248.3 | 2265.5 | 2334.4 | 2371.7 | 2357.4 |
| 27.5° | 1900.8 | 1975.5 | 1955.4 | 1889.3 | 1872.1 | 1897.9 | 1987.0 | 2030.0 | 2021.4 |
| 30°   | 1605.1 | 1653.9 | 1622.3 | 1504.6 | 1484.5 | 1516.1 | 1630.9 | 1674.0 | 1651.0 |
| 32.5° | 1286.4 | 1323.7 | 1309.3 | 1165.8 | 1131.3 | 1162.9 | 1297.8 | 1338.0 | 1312.2 |
| 35°   | 1027.9 | 1062.4 | 1042.3 | 872.9  | 841.3  | 875.8  | 1016.5 | 1062.4 | 1039.4 |
| 37.5° | 824.1  | 849.9  | 824.1  | 643.2  | 614.5  | 648.9  | 783.9  | 844.2  | 815.5  |
| 40°   | 654.7  | 674.8  | 640.3  | 473.8  | 450.8  | 468.0  | 594.4  | 654.7  | 634.6  |
| 42.5° | 516.8  | 531.2  | 493.9  | 347.4  | 321.6  | 344.6  | 447.9  | 502.5  | 491.0  |
| 45°   | 419.2  | 419.2  | 373.3  | 241.2  | 209.6  | 232.6  | 335.9  | 393.4  | 396.2  |
| 47.5° | 358.9  | 350.3  | 292.9  | 160.8  | 120.6  | 152.2  | 267.0  | 327.3  | 335.9  |
| 50°   | 310.1  | 298.6  | 241.2  | 117.7  | 77.5   | 109.1  | 221.1  | 281.4  | 290.0  |
| 52.5° | 267.0  | 258.4  | 201.0  | 91.9   | 54.6   | 83.3   | 186.6  | 244.1  | 252.7  |
| 55°   | 224.0  | 218.2  | 166.5  | 71.8   | 43.1   | 63.2   | 149.3  | 198.1  | 203.9  |
| 57.5° | 183.8  | 175.2  | 135.0  | 60.3   | 34.5   | 51.7   | 123.5  | 163.7  | 169.4  |
| 60°   | 155.1  | 146.4  | 109.1  | 48.8   | 28.7   | 40.2   | 100.5  | 135.0  | 140.7  |
| 62.5° | 129.2  | 120.6  | 89.0   | 40.2   | 23.0   | 34.5   | 80.4   | 109.1  | 114.9  |
| 65°   | 103.4  | 97.6   | 68.9   | 31.6   | 20.1   | 25.8   | 63.2   | 86.1   | 91.9   |
| 67.5° | 83.3   | 77.5   | 54.6   | 25.8   | 17.2   | 20.1   | 48.8   | 68.9   | 74.7   |
| 70°   | 63.2   | 57.4   | 40.2   | 20.1   | 14.4   | 17.2   | 37.3   | 51.7   | 57.4   |
| 72.5° | 45.9   | 43.1   | 31.6   | 17.2   | 11.5   | 14.4   | 25.8   | 37.3   | 43.1   |
| 75°   | 34.5   | 31.6   | 23.0   | 11.5   | 8.6    | 11.5   | 20.1   | 28.7   | 31.6   |
| 77.5° | 23.0   | 23.0   | 17.2   | 8.6    | 8.6    | 8.6    | 14.4   | 20.1   | 20.1   |
| 80°   | 17.2   | 14.4   | 11.5   | 5.7    | 5.7    | 5.7    | 8.6    | 14.4   | 14.4   |
| 82.5° | 11.5   | 8.6    | 8.6    | 5.7    | 5.7    | 5.7    | 5.7    | 8.6    | 8.6    |
| 85°   | 5.7    | 5.7    | 5.7    | 2.9    | 2.9    | 2.9    | 2.9    | 5.7    | 5.7    |
| 87.5° | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 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)