

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: PORTFOLIO

Report Number: P778631

Luminaire Tested: LER4D02D010-EC4DR300210IC9040-4LBS1MW

Issue Date: 1/30/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P778631  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2307-078-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/30/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: PORTFOLIO  
Catalog Number: LER4D02D010-EC4DR300210IC9040-4LBS1MW  
Description: 4 INCH ROUND SHALLOW MATTE WHITE TRIM, WITH 30° OPTIC  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 369.4 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 0.52 / 0.52 / 0.49  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.1  
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: 24 FT



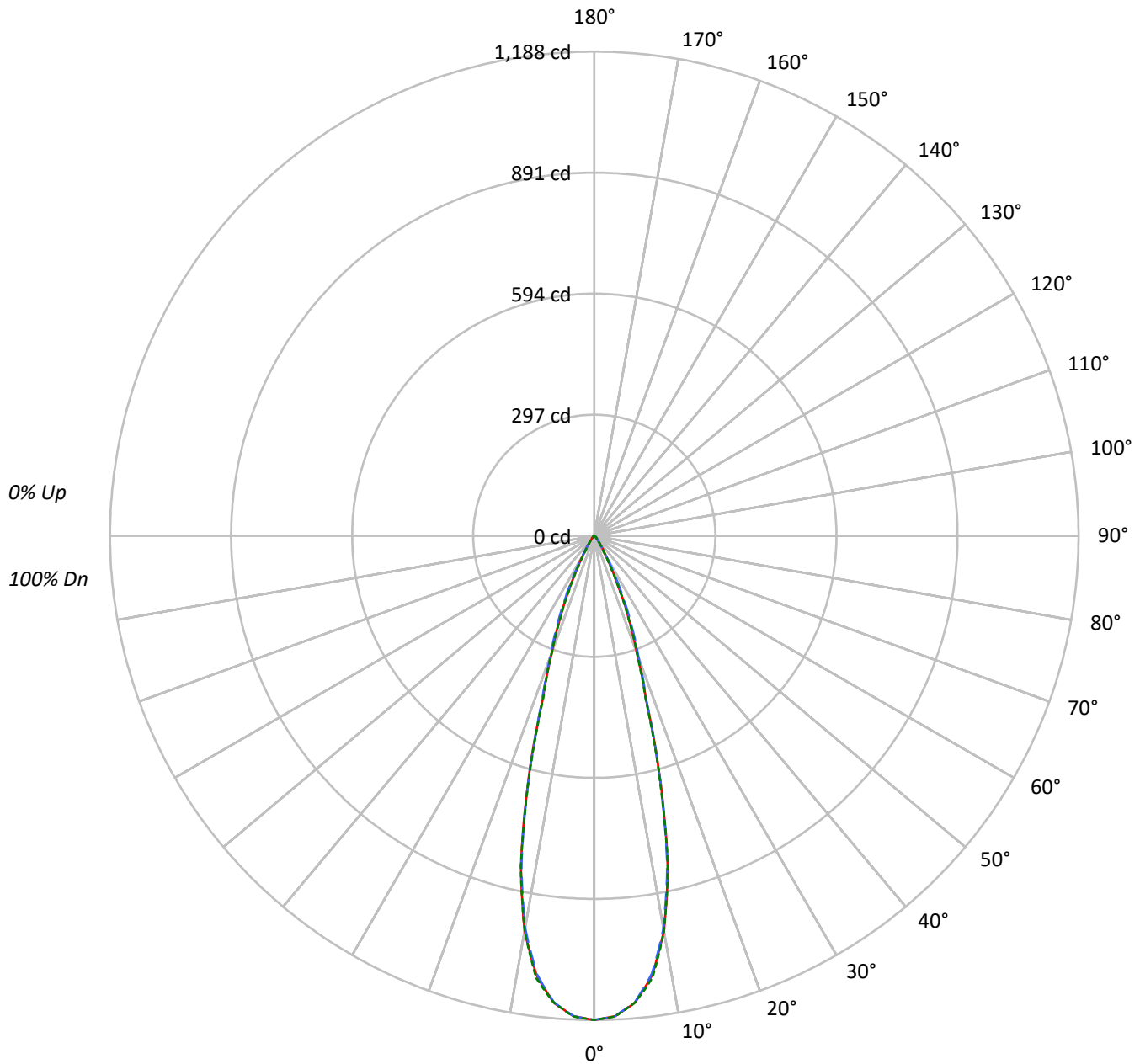
Downlight



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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  |     |  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 115 | 113 | 111 | 109 | 112 | 110 | 109 | 107 |  | 106 | 105 | 104 |  | 103 | 102 | 101 |  | 99  | 99  | 98  |
| 2   | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 |  | 102 | 100 | 98  |  | 99  | 97  | 96  |  | 97  | 95  | 94  |
| 3   | 107 | 102 | 98  | 95  | 105 | 101 | 97  | 94  |  | 98  | 95  | 93  |  | 96  | 93  | 91  |  | 94  | 92  | 90  |
| 4   | 103 | 98  | 93  | 90  | 102 | 96  | 93  | 90  |  | 94  | 91  | 89  |  | 93  | 90  | 88  |  | 91  | 89  | 87  |
| 5   | 100 | 94  | 89  | 86  | 98  | 93  | 89  | 86  |  | 91  | 88  | 85  |  | 90  | 87  | 84  |  | 88  | 86  | 83  |
| 6   | 97  | 90  | 85  | 82  | 95  | 89  | 85  | 82  |  | 88  | 84  | 81  |  | 87  | 83  | 81  |  | 85  | 83  | 80  |
| 7   | 94  | 87  | 82  | 79  | 92  | 86  | 82  | 79  |  | 85  | 81  | 78  |  | 84  | 81  | 78  |  | 83  | 80  | 78  |
| 8   | 91  | 84  | 79  | 76  | 90  | 83  | 79  | 76  |  | 82  | 78  | 76  |  | 81  | 78  | 75  |  | 80  | 77  | 75  |
| 9   | 88  | 81  | 76  | 73  | 87  | 80  | 76  | 73  |  | 80  | 76  | 73  |  | 79  | 75  | 73  |  | 78  | 75  | 73  |
| 10  | 85  | 78  | 74  | 71  | 85  | 78  | 74  | 71  |  | 77  | 73  | 71  |  | 76  | 73  | 71  |  | 76  | 73  | 70  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 90926 | 90926 | 90926 |
| 5°  | 88315 | 88215 | 88323 |
| 10° | 76496 | 75952 | 76473 |
| 15° | 49908 | 49638 | 49393 |
| 20° | 24820 | 25748 | 24779 |
| 25° | 12500 | 14096 | 12246 |
| 30° | 5003  | 5453  | 4357  |
| 35° | 2327  | 2224  | 1860  |
| 40° | 999   | 1109  | 949   |
| 45° | 704   | 877   | 714   |
| 50° | 250   | 643   | 262   |
| 55° | 133   | 267   | 147   |
| 60° | 92    | 107   | 92    |
| 65° | 54    | 54    | 54    |
| 70° | 45    | 22    | 45    |
| 75° | 0     | 30    | 0     |
| 80° | 0     | 0     | 0     |
| 85° | 0     | 0     | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 877 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 104.5  | 28.3      |
| 10°-20°   | 168.2  | 45.5      |
| 20°-30°   | 72.7   | 19.7      |
| 30°-40°   | 16.6   | 4.5       |
| 40°-50°   | 5.7    | 1.5       |
| 50°-60°   | 1.4    | 0.4       |
| 60°-70°   | 0.3    | 0.1       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 345.4  | 93.5      |
| 0°-40°    | 361.9  | 98.0      |
| 0°-60°    | 369.0  | 99.9      |
| 0°-90°    | 369.4  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 369.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1188 | 1188  | 1188 | 1188  | 1188 |      |
| 5°  | 1149 | 1148  | 1148 | 1150  | 1150 | 105  |
| 15° | 630  | 622   | 626  | 624   | 623  | 169  |
| 25° | 148  | 154   | 167  | 150   | 145  | 71   |
| 35° | 25   | 25    | 24   | 24    | 20   | 17   |
| 45° | 6    | 8     | 8    | 8     | 7    | 5    |
| 55° | 1    | 1     | 2    | 1     | 1    | 1    |
| 65° | 0    | 0     | 0    | 0     | 0    | 0    |
| 75° | 0    | 0     | 0    | 0     | 0    | 0    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1187.9 | 1187.9 | 1187.9 | 1187.9 | 1187.9 |
| 2.5°  | 1180.0 | 1179.2 | 1179.6 | 1180.3 | 1180.5 |
| 5°    | 1149.4 | 1148.3 | 1148.1 | 1150.4 | 1149.5 |
| 7.5°  | 1087.6 | 1086.1 | 1083.7 | 1089.1 | 1094.2 |
| 10°   | 984.2  | 982.4  | 977.2  | 979.8  | 983.9  |
| 12.5° | 831.4  | 825.8  | 825.7  | 833.8  | 832.7  |
| 15°   | 629.8  | 622.2  | 626.4  | 624.4  | 623.3  |
| 17.5° | 423.5  | 420.6  | 426.2  | 424.5  | 417.2  |
| 20°   | 304.7  | 305.4  | 316.1  | 310.7  | 304.2  |
| 22.5° | 222.3  | 225.1  | 237.7  | 223.9  | 218.8  |
| 25°   | 148.0  | 153.6  | 166.9  | 149.7  | 145.0  |
| 27.5° | 91.0   | 93.6   | 107.1  | 89.9   | 87.3   |
| 30°   | 56.6   | 55.3   | 61.7   | 52.9   | 49.3   |
| 32.5° | 37.1   | 35.5   | 37.6   | 33.7   | 30.8   |
| 35°   | 24.9   | 25.4   | 23.8   | 23.6   | 19.9   |
| 37.5° | 15.5   | 17.8   | 15.8   | 16.8   | 12.8   |
| 40°   | 10.0   | 12.9   | 11.1   | 12.3   | 9.5    |
| 42.5° | 8.3    | 10.0   | 9.2    | 9.7    | 8.4    |
| 45°   | 6.5    | 8.1    | 8.1    | 8.1    | 6.6    |
| 47.5° | 3.6    | 5.4    | 6.9    | 5.6    | 3.8    |
| 50°   | 2.1    | 2.8    | 5.4    | 2.9    | 2.2    |
| 52.5° | 1.4    | 1.5    | 3.7    | 1.7    | 1.4    |
| 55°   | 1.0    | 1.1    | 2.0    | 1.1    | 1.1    |
| 57.5° | 0.8    | 0.9    | 1.0    | 0.9    | 0.8    |
| 60°   | 0.6    | 0.6    | 0.7    | 0.7    | 0.6    |
| 62.5° | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    |
| 65°   | 0.3    | 0.3    | 0.3    | 0.3    | 0.3    |
| 67.5° | 0.2    | 0.2    | 0.2    | 0.2    | 0.2    |
| 70°   | 0.2    | 0.1    | 0.1    | 0.1    | 0.2    |
| 72.5° | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 75°   | 0.0    | 0.0    | 0.1    | 0.0    | 0.0    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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







(END OF REPORT)