

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: P739904

Luminaire Tested: LD4D05D010-EU4DR150210IC9050-4LBDP1H

Issue Date: 2/2/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P739904  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2310-195-21)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/2/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: PORTFOLIO  
Catalog Number: LD4D05D010-EU4DR150210IC9050-4LBDP1H  
Description: 4 INCH ROUND DEEP 45° CUTOFF SEMI-SPECULAR CLEAR TRIM, WITH 15° OPTIC  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 688.0 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Spacing Criteria (0/90/45): 0.22 / 0.22 / 0.23  
Luminous Opening: Vertical Cylinder (Dia: 0.35' x H: 0.35')  
CIE Type: Direct

Input Watts (W): 7.5  
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



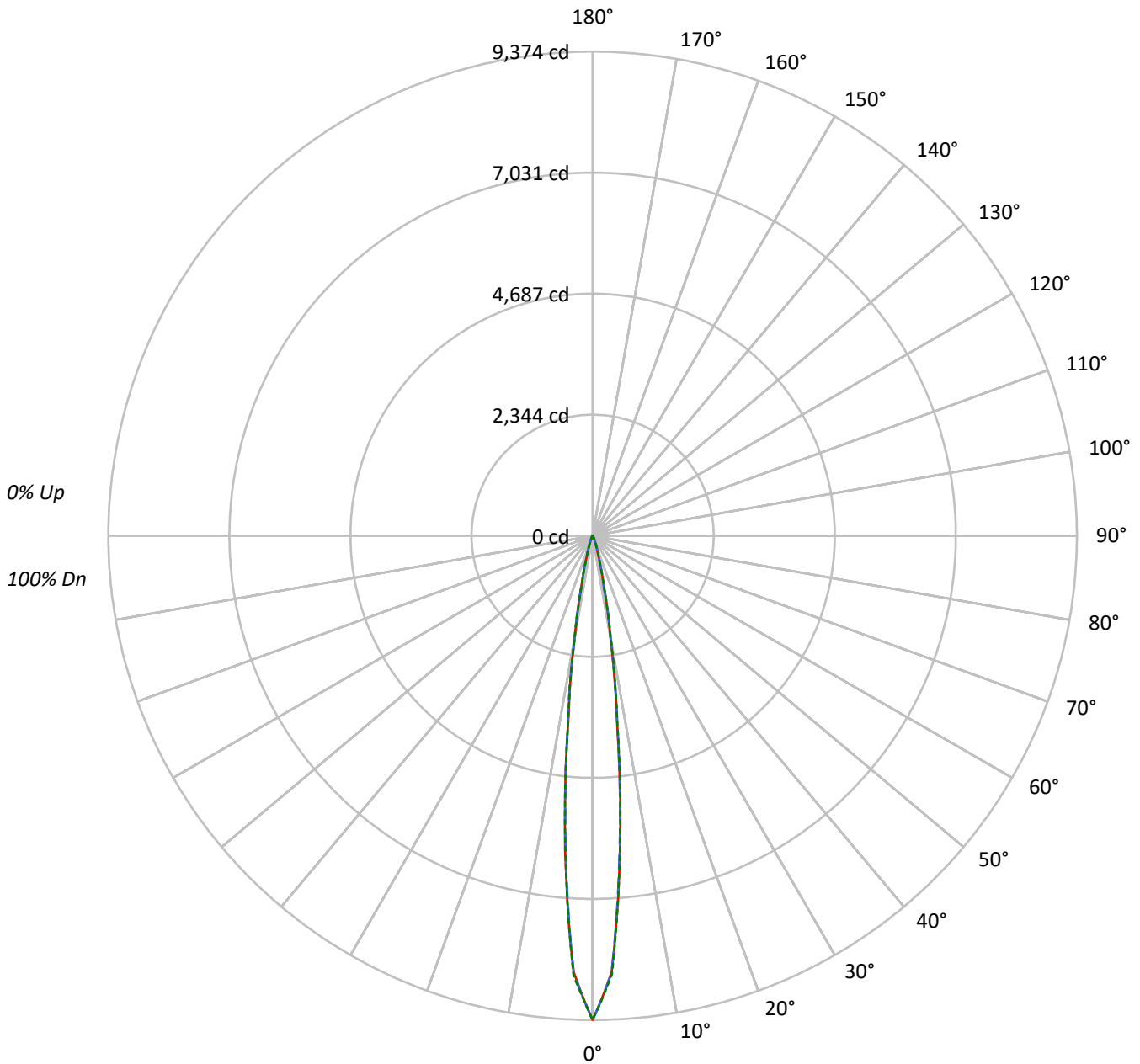
Downlight



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |     |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |     |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 50  |     |     |     |     |     |     |     |     | 30 |    |     |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |     |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    | 100 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 103 | 101 | 100 | 100 | 98  |    |    | 98  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 | 105 | 103 | 102 | 102 | 101 | 100 | 100 | 98  | 98  | 96  |    |    | 96  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 | 103 | 100 | 99  | 100 | 99  | 97  | 98  | 97  | 96  | 94  |    |    | 94  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 108 | 103 | 100 | 98  | 106 | 102 | 99  | 97  | 100 | 98  | 96  | 99  | 97  | 95  | 97  | 95  | 94  | 93  |    |    | 93  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 106 | 101 | 98  | 95  | 104 | 100 | 97  | 95  | 98  | 96  | 94  | 97  | 95  | 93  | 96  | 94  | 92  | 92  |    |    | 92  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 104 | 99  | 95  | 93  | 102 | 98  | 95  | 93  | 97  | 94  | 92  | 96  | 93  | 92  | 95  | 93  | 91  | 90  |    |    | 90  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 102 | 97  | 93  | 91  | 101 | 96  | 93  | 91  | 95  | 93  | 91  | 94  | 92  | 90  | 93  | 91  | 90  | 89  |    |    | 89  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 100 | 95  | 92  | 90  | 99  | 95  | 92  | 90  | 94  | 91  | 89  | 93  | 91  | 89  | 92  | 90  | 89  | 88  |    |    | 88  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 99  | 93  | 90  | 88  | 98  | 93  | 90  | 88  | 92  | 90  | 88  | 92  | 89  | 88  | 91  | 89  | 87  | 87  |    |    | 87  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 97  | 92  | 89  | 87  | 96  | 92  | 89  | 87  | 91  | 89  | 87  | 91  | 88  | 87  | 90  | 88  | 86  | 86  |    |    | 86  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 1054706 | 1054706 | 1054706 |
| 5°  | 619794  | 611776  | 616613  |
| 10° | 184982  | 186279  | 189125  |
| 15° | 46008   | 46911   | 45461   |
| 20° | 13763   | 15939   | 14057   |
| 25° | 4853    | 6185    | 4916    |
| 30° | 1782    | 2344    | 1812    |
| 35° | 893     | 1009    | 864     |
| 40° | 561     | 618     | 561     |
| 45° | 420     | 441     | 420     |
| 50° | 334     | 334     | 334     |
| 55° | 278     | 278     | 278     |
| 60° | 225     | 225     | 225     |
| 65° | 171     | 171     | 171     |
| 70° | 146     | 146     | 146     |
| 75° | 91      | 91      | 121     |
| 80° | 63      | 63      | 63      |
| 85° | 33      | 33      | 33      |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 441 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 446.2  | 64.9      |
| 10°-20°   | 183.5  | 26.7      |
| 20°-30°   | 36.5   | 5.3       |
| 30°-40°   | 9.1    | 1.3       |
| 40°-50°   | 4.8    | 0.7       |
| 50°-60°   | 3.6    | 0.5       |
| 60°-70°   | 2.5    | 0.4       |
| 70°-80°   | 1.4    | 0.2       |
| 80°-90°   | 0.4    | 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°    | 666.2  | 96.8      |
| 0°-40°    | 675.3  | 98.1      |
| 0°-60°    | 683.6  | 99.4      |
| 0°-90°    | 688.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 688.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 9374 | 9374  | 9374 | 9374  | 9374 |      |
| 5°  | 6099 | 6036  | 6020 | 6061  | 6067 | 445  |
| 15° | 530  | 540   | 540  | 530   | 523  | 182  |
| 25° | 62   | 71    | 79   | 70    | 63   | 33   |
| 35° | 12   | 13    | 14   | 13    | 12   | 8    |
| 45° | 6    | 6     | 6    | 6     | 6    | 5    |
| 55° | 4    | 4     | 4    | 4     | 4    | 4    |
| 65° | 2    | 2     | 2    | 2     | 2    | 3    |
| 75° | 1    | 1     | 1    | 1     | 2    | 1    |
| 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°    | 9373.5 | 9373.5 | 9373.5 | 9373.5 | 9373.5 |
| 2.5°  | 8455.3 | 8462.4 | 8465.2 | 8473.6 | 8504.5 |
| 5°    | 6098.6 | 6035.9 | 6019.7 | 6061.3 | 6067.3 |
| 7.5°  | 3612.6 | 3625.3 | 3671.7 | 3682.0 | 3644.7 |
| 10°   | 1982.5 | 1998.7 | 1996.4 | 2010.7 | 2026.9 |
| 12.5° | 1013.9 | 1001.2 | 997.2  | 1013.5 | 990.8  |
| 15°   | 529.7  | 539.7  | 540.1  | 530.5  | 523.4  |
| 17.5° | 284.9  | 296.4  | 315.5  | 300.0  | 276.2  |
| 20°   | 168.2  | 178.6  | 194.8  | 182.1  | 171.8  |
| 22.5° | 104.0  | 112.3  | 123.8  | 113.9  | 105.6  |
| 25°   | 62.3   | 70.6   | 79.4   | 70.2   | 63.1   |
| 27.5° | 36.9   | 44.0   | 49.6   | 43.6   | 36.5   |
| 30°   | 23.8   | 27.8   | 31.3   | 27.4   | 24.2   |
| 32.5° | 16.7   | 18.3   | 19.8   | 18.3   | 16.7   |
| 35°   | 12.3   | 13.1   | 13.9   | 13.1   | 11.9   |
| 37.5° | 9.5    | 10.3   | 10.7   | 9.9    | 9.1    |
| 40°   | 7.9    | 8.3    | 8.7    | 8.3    | 7.9    |
| 42.5° | 6.7    | 7.1    | 7.1    | 7.1    | 6.7    |
| 45°   | 6.0    | 6.0    | 6.3    | 6.0    | 6.0    |
| 47.5° | 5.2    | 5.2    | 5.6    | 5.2    | 5.2    |
| 50°   | 4.8    | 4.8    | 4.8    | 4.8    | 4.8    |
| 52.5° | 4.4    | 4.4    | 4.4    | 4.4    | 4.4    |
| 55°   | 4.0    | 4.0    | 4.0    | 4.0    | 4.0    |
| 57.5° | 3.6    | 3.6    | 3.6    | 3.6    | 3.6    |
| 60°   | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    |
| 62.5° | 2.8    | 2.8    | 2.8    | 2.8    | 2.8    |
| 65°   | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    |
| 67.5° | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    |
| 70°   | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 72.5° | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    |
| 75°   | 1.2    | 1.2    | 1.2    | 1.2    | 1.6    |
| 77.5° | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 80°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 82.5° | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 85°   | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report







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

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Scaled Data Report



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