

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: P780191

Luminaire Tested: LER4D20D010-EC4DR3020359040-4LBS1MW

Issue Date: 1/30/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P780191  
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: LER4D20D010-EC4DR3020359040-4LBS1MW  
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: 1954.6 lumens  
Efficiency: N/A  
Efficacy: 84.6 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): 23.1  
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



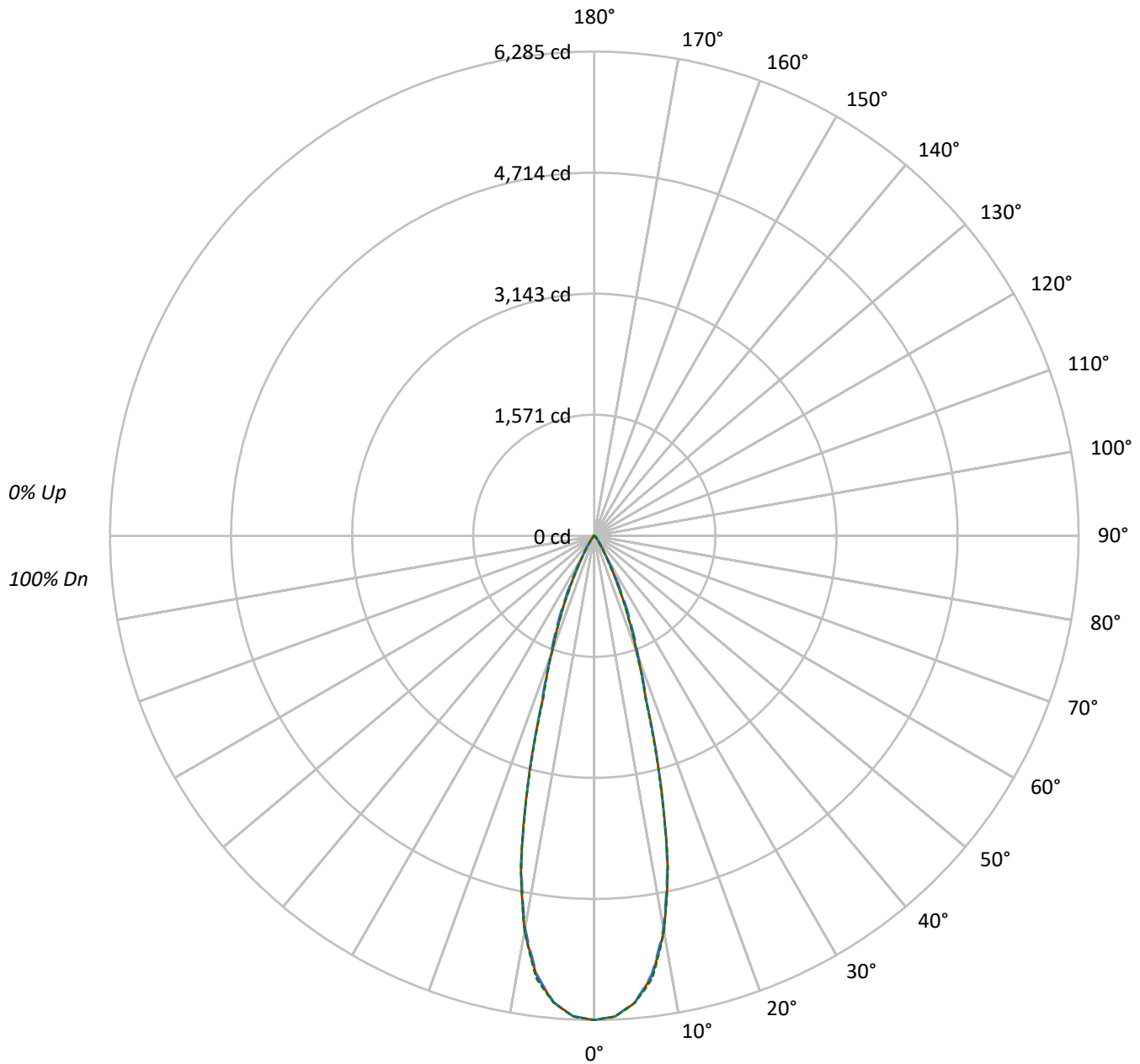
Downlight



TEST NUMBER: P780191

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

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 481083 | 481083 | 481083 |
| 5°  | 467269 | 466724 | 467300 |
| 10° | 404725 | 401873 | 404632 |
| 15° | 264063 | 262645 | 261321 |
| 20° | 131307 | 136235 | 131128 |
| 25° | 66146  | 74583  | 64786  |
| 30° | 26489  | 28858  | 23068  |
| 35° | 12278  | 11764  | 9858   |
| 40° | 5306   | 5895   | 4996   |
| 45° | 3735   | 4644   | 3778   |
| 50° | 1286   | 3382   | 1358   |
| 55° | 747    | 1401   | 774    |
| 60° | 520    | 612    | 520    |
| 65° | 326    | 326    | 326    |
| 70° | 201    | 134    | 201    |
| 75° | 0      | 89     | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 4644 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 552.7  | 28.3      |
| 10°-20°   | 890.1  | 45.5      |
| 20°-30°   | 384.6  | 19.7      |
| 30°-40°   | 87.7   | 4.5       |
| 40°-50°   | 30.1   | 1.5       |
| 50°-60°   | 7.3    | 0.4       |
| 60°-70°   | 1.9    | 0.1       |
| 70°-80°   | 0.2    | 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       |
| 0°-30°    | 1827.4 | 93.5      |
| 0°-40°    | 1915.1 | 98.0      |
| 0°-60°    | 1952.5 | 99.9      |
| 0°-90°    | 1954.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1954.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 6285 | 6285  | 6285 | 6285  | 6285 |      |
| 5°  | 6081 | 6076  | 6074 | 6087  | 6082 | 553  |
| 15° | 3332 | 3292  | 3314 | 3304  | 3298 | 892  |
| 25° | 783  | 813   | 883  | 792   | 767  | 375  |
| 35° | 131  | 134   | 126  | 125   | 106  | 89   |
| 45° | 34   | 43    | 43   | 43    | 35   | 25   |
| 55° | 6    | 6     | 10   | 6     | 6    | 5    |
| 65° | 2    | 2     | 2    | 2     | 2    | 2    |
| 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°    | 6285.1 | 6285.1 | 6285.1 | 6285.1 | 6285.1 |
| 2.5°  | 6243.4 | 6239.1 | 6241.6 | 6244.6 | 6245.9 |
| 5°    | 6081.4 | 6075.6 | 6074.3 | 6087.0 | 6081.8 |
| 7.5°  | 5754.7 | 5746.3 | 5733.7 | 5762.3 | 5789.2 |
| 10°   | 5207.2 | 5198.0 | 5170.5 | 5184.1 | 5206.0 |
| 12.5° | 4399.1 | 4369.2 | 4368.5 | 4411.7 | 4405.9 |
| 15°   | 3332.3 | 3292.2 | 3314.4 | 3303.6 | 3297.7 |
| 17.5° | 2240.9 | 2225.5 | 2255.1 | 2246.1 | 2207.6 |
| 20°   | 1612.0 | 1616.0 | 1672.5 | 1644.1 | 1609.8 |
| 22.5° | 1176.3 | 1190.8 | 1257.7 | 1184.6 | 1157.8 |
| 25°   | 783.2  | 812.8  | 883.1  | 792.1  | 767.1  |
| 27.5° | 481.7  | 495.3  | 566.5  | 475.5  | 461.9  |
| 30°   | 299.7  | 292.8  | 326.5  | 280.2  | 261.0  |
| 32.5° | 196.6  | 187.9  | 198.7  | 178.4  | 162.9  |
| 35°   | 131.4  | 134.2  | 125.9  | 125.0  | 105.5  |
| 37.5° | 82.1   | 94.4   | 83.3   | 88.9   | 67.9   |
| 40°   | 53.1   | 68.5   | 59.0   | 65.1   | 50.0   |
| 42.5° | 43.5   | 52.8   | 48.5   | 51.5   | 44.5   |
| 45°   | 34.5   | 42.9   | 42.9   | 42.9   | 34.9   |
| 47.5° | 19.1   | 28.7   | 36.7   | 29.3   | 20.3   |
| 50°   | 10.8   | 14.5   | 28.4   | 15.1   | 11.4   |
| 52.5° | 7.4    | 8.3    | 19.4   | 8.7    | 7.7    |
| 55°   | 5.6    | 5.8    | 10.5   | 6.2    | 5.8    |
| 57.5° | 4.3    | 4.6    | 5.6    | 4.6    | 4.3    |
| 60°   | 3.4    | 3.4    | 4.0    | 3.7    | 3.4    |
| 62.5° | 2.5    | 2.5    | 2.8    | 2.5    | 2.5    |
| 65°   | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    |
| 67.5° | 0.9    | 1.3    | 1.3    | 1.3    | 1.3    |
| 70°   | 0.9    | 0.6    | 0.6    | 0.6    | 0.9    |
| 72.5° | 0.6    | 0.3    | 0.3    | 0.3    | 0.3    |
| 75°   | 0.0    | 0.0    | 0.3    | 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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Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

## Scaled Data Report





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







(END OF REPORT)