

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P402230

Luminaire Tested: **LD1MR152D010 ED1M152509027MW1MW**

Issue Date: 6/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P402230  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1912-604-8)  
Test Lab: INNOVATION CENTER (G3)  
Issue Date: 6/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD1MR152D010 ED1M152509027MW1MW  
Description: 1 INCH 50° OPTIC WITH MATTE WHITE BAFFLE  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

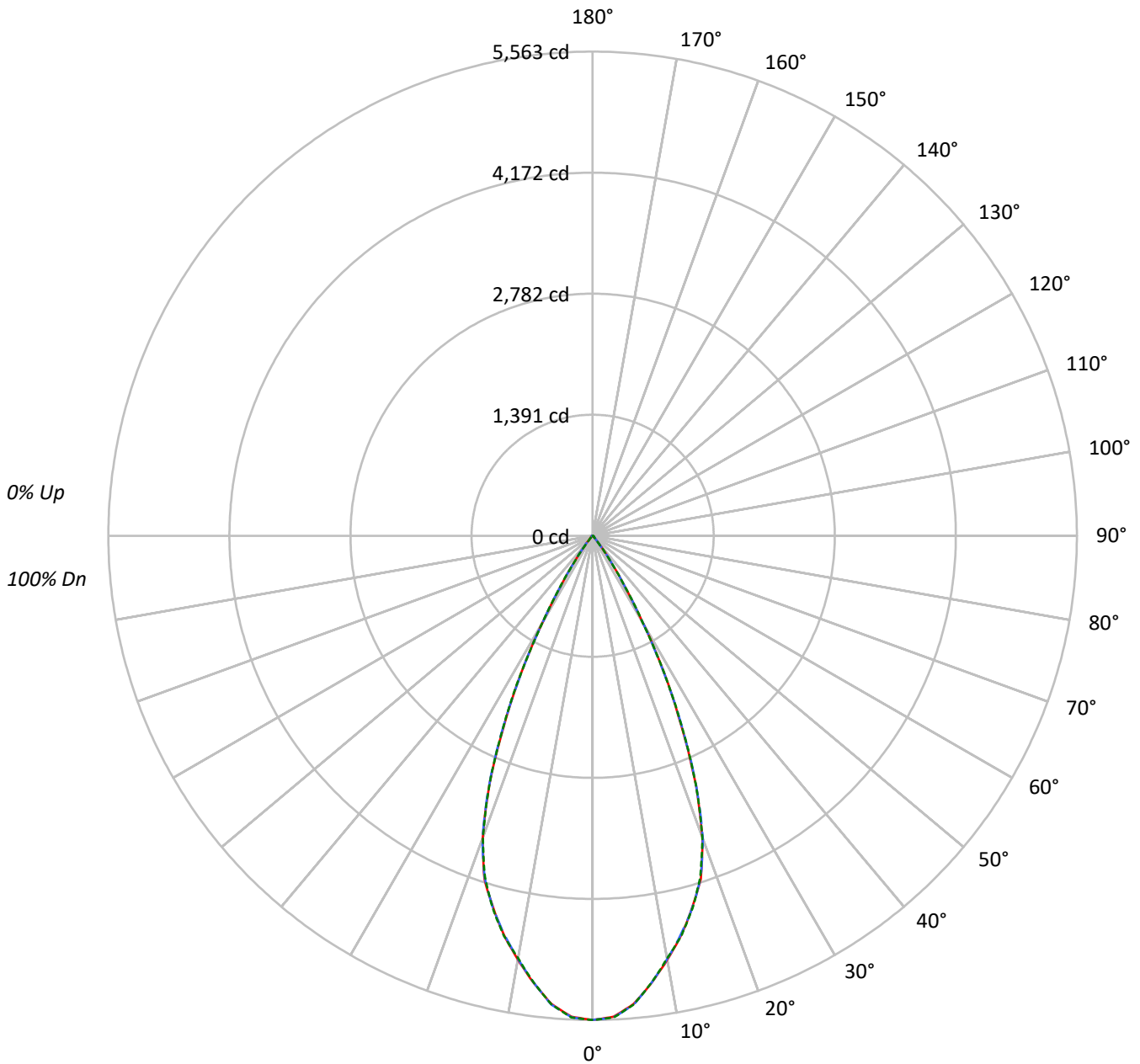
Lumens per Lamp: N/A  
Luminaire Lumens: 3140.0 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71  
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.2  
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 |  |  |  |  |  |  |  |  |   |
| 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   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95  |    |    | 95  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 110 | 105 | 102 | 99  | 107 | 104 | 100 | 98  | 100 | 98  | 96  | 98  | 95  | 94  | 95  | 93  | 92  | 90  |    |    | 90  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 105 | 99  | 95  | 92  | 103 | 98  | 94  | 91  | 96  | 92  | 90  | 93  | 90  | 88  | 91  | 89  | 87  | 85  |    |    | 85  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 101 | 94  | 89  | 86  | 99  | 93  | 89  | 85  | 91  | 87  | 84  | 89  | 86  | 83  | 87  | 85  | 82  | 81  |    |    | 81  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 97  | 89  | 84  | 81  | 95  | 89  | 84  | 80  | 87  | 83  | 80  | 85  | 82  | 79  | 84  | 81  | 78  | 77  |    |    | 77  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 93  | 85  | 80  | 76  | 91  | 84  | 79  | 76  | 83  | 79  | 75  | 82  | 78  | 75  | 80  | 77  | 75  | 73  |    |    | 73  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 89  | 81  | 76  | 72  | 88  | 80  | 76  | 72  | 79  | 75  | 72  | 78  | 74  | 71  | 77  | 74  | 71  | 70  |    |    | 70  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 85  | 77  | 72  | 69  | 84  | 77  | 72  | 69  | 76  | 71  | 68  | 75  | 71  | 68  | 74  | 70  | 68  | 67  |    |    | 67  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 82  | 74  | 69  | 65  | 81  | 73  | 69  | 65  | 73  | 68  | 65  | 72  | 68  | 65  | 71  | 67  | 65  | 64  |    |    | 64  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 79  | 71  | 66  | 62  | 78  | 70  | 66  | 62  | 70  | 65  | 62  | 69  | 65  | 62  | 68  | 64  | 62  | 61  |    |    | 61  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 445040 | 445040 | 445040 |
| 5°  | 433778 | 434356 | 434115 |
| 10° | 401654 | 401069 | 400403 |
| 15° | 366106 | 366529 | 367042 |
| 20° | 314043 | 315005 | 313779 |
| 25° | 212872 | 215503 | 215141 |
| 30° | 105456 | 106121 | 105743 |
| 35° | 35227  | 35422  | 33312  |
| 40° | 8052   | 7832   | 6757   |
| 45° | 3134   | 3485   | 2908   |
| 50° | 2564   | 2688   | 2302   |
| 55° | 2287   | 2287   | 2008   |
| 60° | 1808   | 1968   | 1648   |
| 65° | 1174   | 1363   | 965    |
| 70° | 0      | 234    | 0      |
| 75° | 0      | 0      | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 500.8  | 15.9      |
| 10°-20°   | 1227.6 | 39.1      |
| 20°-30°   | 1092.9 | 34.8      |
| 30°-40°   | 272.8  | 8.7       |
| 40°-50°   | 26.0   | 0.8       |
| 50°-60°   | 14.2   | 0.5       |
| 60°-70°   | 5.7    | 0.2       |
| 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       |
| 0°-30°    | 2821.3 | 89.8      |
| 0°-40°    | 3094.1 | 98.5      |
| 0°-60°    | 3134.3 | 99.8      |
| 0°-90°    | 3140.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3140.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 5563 | 5563  | 5563 | 5563  | 5563 |      |
| 5°  | 5402 | 5421  | 5409 | 5405  | 5406 | 500  |
| 15° | 4420 | 4443  | 4426 | 4417  | 4432 | 1228 |
| 25° | 2412 | 2438  | 2441 | 2458  | 2437 | 1089 |
| 35° | 361  | 374   | 363  | 358   | 341  | 271  |
| 45° | 28   | 28    | 31   | 27    | 26   | 26   |
| 55° | 16   | 16    | 16   | 15    | 14   | 14   |
| 65° | 6    | 6     | 7    | 6     | 5    | 5    |
| 75° | 0    | 0     | 0    | 0     | 0    | 0    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 5563.0 | 5563.0 | 5563.0 | 5563.0 | 5563.0 |
| 2.5°  | 5531.1 | 5555.8 | 5538.3 | 5539.3 | 5540.4 |
| 5°    | 5401.6 | 5421.2 | 5408.8 | 5404.7 | 5405.8 |
| 7.5°  | 5182.8 | 5200.3 | 5180.7 | 5187.9 | 5179.7 |
| 10°   | 4944.4 | 4961.9 | 4937.2 | 4937.2 | 4929.0 |
| 12.5° | 4701.9 | 4720.4 | 4690.6 | 4687.5 | 4707.0 |
| 15°   | 4420.4 | 4443.0 | 4425.5 | 4417.3 | 4431.7 |
| 17.5° | 4135.7 | 4132.7 | 4122.4 | 4117.3 | 4112.1 |
| 20°   | 3688.8 | 3707.3 | 3700.1 | 3669.3 | 3685.7 |
| 22.5° | 3101.0 | 3102.1 | 3112.3 | 3117.5 | 3104.1 |
| 25°   | 2411.6 | 2438.3 | 2441.4 | 2457.8 | 2437.3 |
| 27.5° | 1786.8 | 1792.0 | 1764.2 | 1766.3 | 1785.8 |
| 30°   | 1141.6 | 1157.0 | 1148.8 | 1157.0 | 1144.7 |
| 32.5° | 658.6  | 672.0  | 666.9  | 673.0  | 674.1  |
| 35°   | 360.7  | 374.0  | 362.7  | 357.6  | 341.1  |
| 37.5° | 178.8  | 178.8  | 182.9  | 168.5  | 160.3  |
| 40°   | 77.1   | 79.1   | 75.0   | 70.9   | 64.7   |
| 42.5° | 39.0   | 39.0   | 41.1   | 34.9   | 33.9   |
| 45°   | 27.7   | 27.7   | 30.8   | 26.7   | 25.7   |
| 47.5° | 23.6   | 23.6   | 25.7   | 22.6   | 21.6   |
| 50°   | 20.6   | 20.6   | 21.6   | 19.5   | 18.5   |
| 52.5° | 18.5   | 18.5   | 19.5   | 17.5   | 16.4   |
| 55°   | 16.4   | 16.4   | 16.4   | 15.4   | 14.4   |
| 57.5° | 13.4   | 14.4   | 14.4   | 13.4   | 12.3   |
| 60°   | 11.3   | 11.3   | 12.3   | 11.3   | 10.3   |
| 62.5° | 9.2    | 9.2    | 9.2    | 9.2    | 8.2    |
| 65°   | 6.2    | 6.2    | 7.2    | 6.2    | 5.1    |
| 67.5° | 1.0    | 2.1    | 5.1    | 0.0    | 0.0    |
| 70°   | 0.0    | 0.0    | 1.0    | 0.0    | 0.0    |
| 72.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 0.0    | 0.0    | 0.0    | 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)