

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: P402232

Luminaire Tested: **LD1MR152D010 ED1M152509027SC1MW**

Issue Date: 6/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P402232  
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 ED1M152509027SC1MW  
Description: 1 INCH 50° OPTIC WITH SPECULAR CLEAR BAFFLE  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

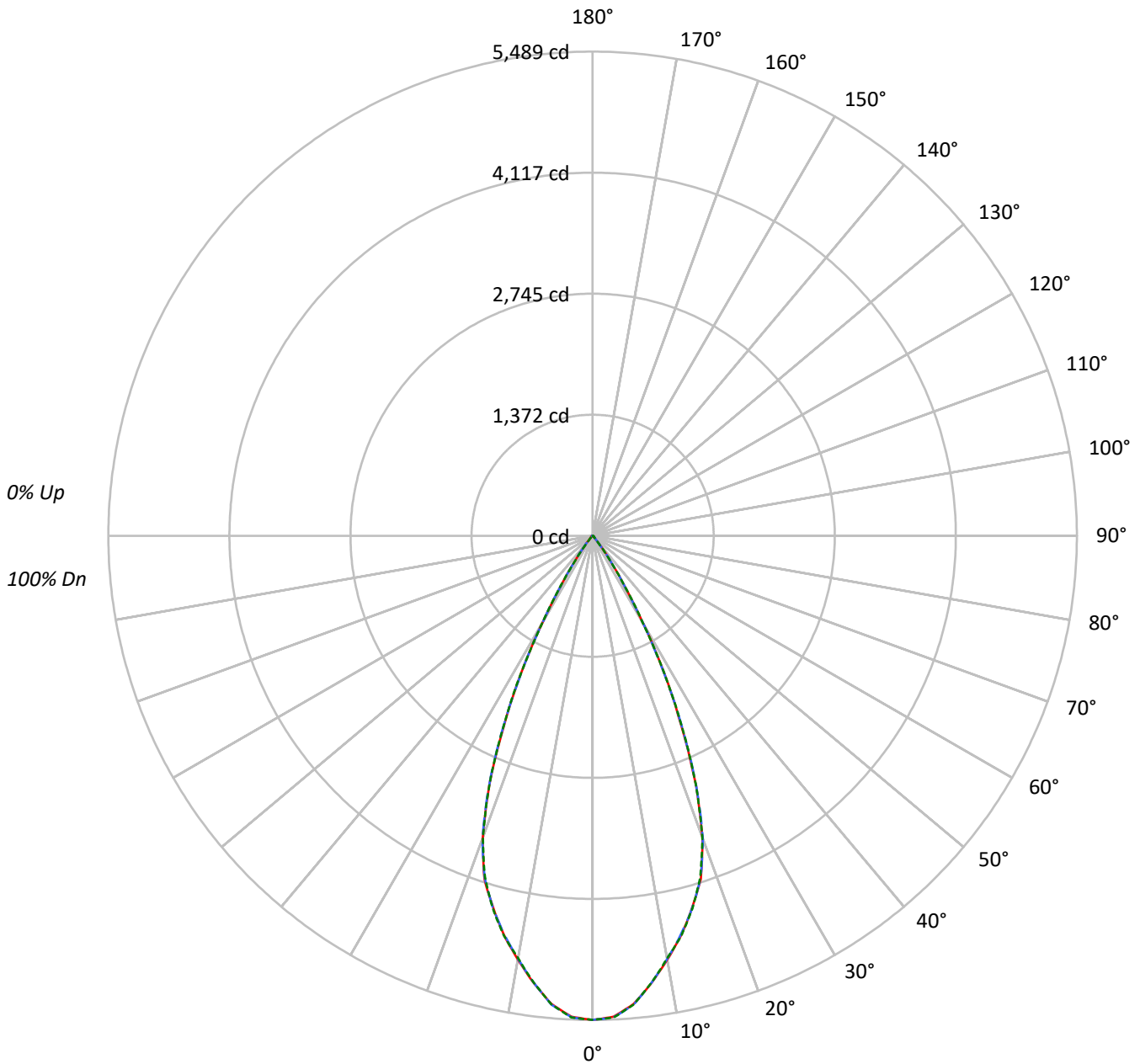
Lumens per Lamp: N/A  
Luminaire Lumens: 3098.0 lumens  
Efficiency: N/A  
Efficacy: 90.6 lumens/watt  
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71  
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')  
CIE Type: Direct

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  |     |     |    |    | 20 |    |     |   |  |   |
| RC  | 80  |     |     |     |     | 70  |     |     |     |     | 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 | 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°  | 439088 | 439088 | 439088 |
| 5°  | 427980 | 428550 | 428309 |
| 10° | 396284 | 395707 | 395049 |
| 15° | 361203 | 361626 | 362131 |
| 20° | 309837 | 310791 | 309582 |
| 25° | 210021 | 212616 | 212263 |
| 30° | 104043 | 104699 | 104320 |
| 35° | 34748  | 34953  | 32873  |
| 40° | 7937   | 7728   | 6673   |
| 45° | 3100   | 3439   | 2862   |
| 50° | 2526   | 2651   | 2265   |
| 55° | 2260   | 2260   | 1981   |
| 60° | 1792   | 1952   | 1616   |
| 65° | 1155   | 1344   | 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°    | 494.1  | 15.9      |
| 10°-20°   | 1211.2 | 39.1      |
| 20°-30°   | 1078.3 | 34.8      |
| 30°-40°   | 269.2  | 8.7       |
| 40°-50°   | 25.7   | 0.8       |
| 50°-60°   | 14.0   | 0.5       |
| 60°-70°   | 5.6    | 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°    | 2783.5 | 89.8      |
| 0°-40°    | 3052.7 | 98.5      |
| 0°-60°    | 3092.4 | 99.8      |
| 0°-90°    | 3098.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3098.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 5489 | 5489  | 5489 | 5489  | 5489 |      |
| 5°  | 5329 | 5349  | 5336 | 5332  | 5334 | 494  |
| 15° | 4361 | 4384  | 4366 | 4358  | 4372 | 1212 |
| 25° | 2379 | 2406  | 2409 | 2425  | 2405 | 1075 |
| 35° | 356  | 369   | 358  | 353   | 337  | 268  |
| 45° | 27   | 27    | 30   | 26    | 25   | 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°    | 5488.6 | 5488.6 | 5488.6 | 5488.6 | 5488.6 |
| 2.5°  | 5457.1 | 5481.5 | 5464.2 | 5465.2 | 5466.3 |
| 5°    | 5329.4 | 5348.7 | 5336.5 | 5332.4 | 5333.5 |
| 7.5°  | 5113.5 | 5130.7 | 5111.4 | 5118.5 | 5110.4 |
| 10°   | 4878.3 | 4895.5 | 4871.2 | 4871.2 | 4863.1 |
| 12.5° | 4639.0 | 4657.3 | 4627.9 | 4624.8 | 4644.1 |
| 15°   | 4361.2 | 4383.5 | 4366.3 | 4358.2 | 4372.4 |
| 17.5° | 4080.4 | 4077.4 | 4067.3 | 4062.2 | 4057.1 |
| 20°   | 3639.4 | 3657.7 | 3650.6 | 3620.2 | 3636.4 |
| 22.5° | 3059.6 | 3060.6 | 3070.7 | 3075.8 | 3062.6 |
| 25°   | 2379.3 | 2405.7 | 2408.7 | 2424.9 | 2404.7 |
| 27.5° | 1762.9 | 1768.0 | 1740.6 | 1742.7 | 1761.9 |
| 30°   | 1126.3 | 1141.5 | 1133.4 | 1141.5 | 1129.3 |
| 32.5° | 649.8  | 663.0  | 657.9  | 664.0  | 665.0  |
| 35°   | 355.8  | 369.0  | 357.9  | 352.8  | 336.6  |
| 37.5° | 176.4  | 176.4  | 180.5  | 166.3  | 158.1  |
| 40°   | 76.0   | 78.1   | 74.0   | 70.0   | 63.9   |
| 42.5° | 38.5   | 38.5   | 40.6   | 34.5   | 33.5   |
| 45°   | 27.4   | 27.4   | 30.4   | 26.4   | 25.3   |
| 47.5° | 23.3   | 23.3   | 25.3   | 22.3   | 21.3   |
| 50°   | 20.3   | 20.3   | 21.3   | 19.3   | 18.2   |
| 52.5° | 18.2   | 18.2   | 19.3   | 17.2   | 16.2   |
| 55°   | 16.2   | 16.2   | 16.2   | 15.2   | 14.2   |
| 57.5° | 13.2   | 14.2   | 14.2   | 13.2   | 12.2   |
| 60°   | 11.2   | 11.2   | 12.2   | 11.2   | 10.1   |
| 62.5° | 9.1    | 9.1    | 9.1    | 9.1    | 8.1    |
| 65°   | 6.1    | 6.1    | 7.1    | 6.1    | 5.1    |
| 67.5° | 1.0    | 2.0    | 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)