

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: P402302

Luminaire Tested: **LD1MR052D010 ED1M52509035MW1MW**

Issue Date: 6/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P402302  
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: LD1MR052D010 ED1M52509035MW1MW  
Description: 1 INCH 50° OPTIC WITH MATTE WHITE BAFFLE  
Light Source: HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

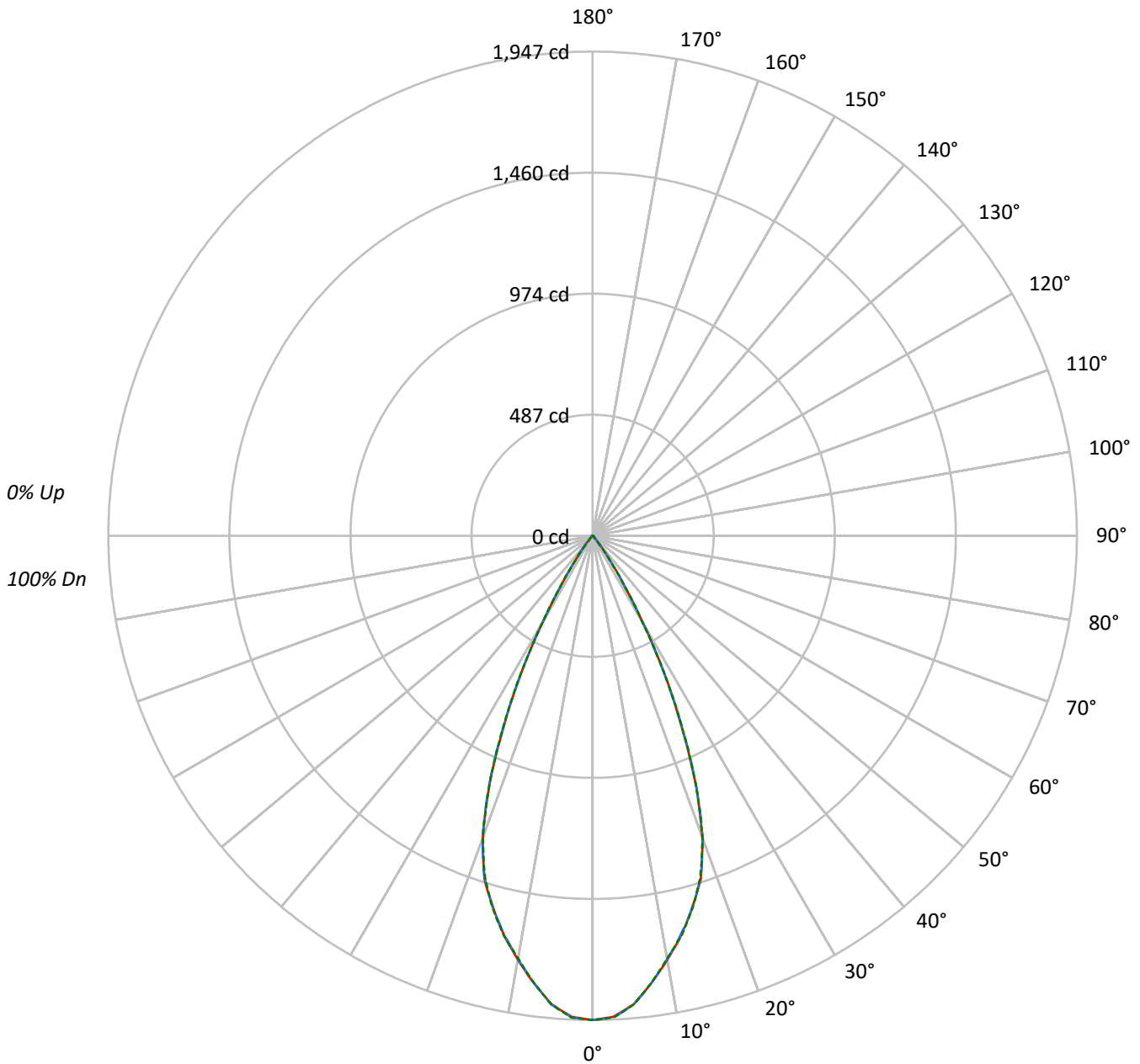
Lumens per Lamp: N/A  
Luminaire Lumens: 1099.1 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71  
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')  
CIE Type: Direct

Input Watts (W): 12.1  
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: 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°  | 155768 | 155768 | 155768 |
| 5°  | 151834 | 152034 | 151946 |
| 10° | 140584 | 140381 | 140145 |
| 15° | 128142 | 128291 | 128474 |
| 20° | 109917 | 110257 | 109832 |
| 25° | 74509  | 75427  | 75303  |
| 30° | 36913  | 37144  | 37006  |
| 35° | 12325  | 12403  | 11661  |
| 40° | 2820   | 2747   | 2371   |
| 45° | 1097   | 1222   | 1018   |
| 50° | 896    | 946    | 809    |
| 55° | 809    | 809    | 697    |
| 60° | 640    | 688    | 576    |
| 65° | 416    | 473    | 341    |
| 70° | 0      | 94     | 0      |
| 75° | 0      | 0      | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 175.3  | 15.9      |
| 10°-20°   | 429.7  | 39.1      |
| 20°-30°   | 382.5  | 34.8      |
| 30°-40°   | 95.5   | 8.7       |
| 40°-50°   | 9.1    | 0.8       |
| 50°-60°   | 5.0    | 0.5       |
| 60°-70°   | 2.0    | 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°    | 987.5  | 89.8      |
| 0°-40°    | 1083.0 | 98.5      |
| 0°-60°    | 1097.1 | 99.8      |
| 0°-90°    | 1099.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1099.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1947 | 1947  | 1947 | 1947  | 1947 |      |
| 5°  | 1891 | 1898  | 1893 | 1892  | 1892 | 175  |
| 15° | 1547 | 1555  | 1549 | 1546  | 1551 | 430  |
| 25° | 844  | 853   | 854  | 860   | 853  | 381  |
| 35° | 126  | 131   | 127  | 125   | 119  | 95   |
| 45° | 10   | 10    | 11   | 9     | 9    | 9    |
| 55° | 6    | 6     | 6    | 5     | 5    | 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    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1947.1 | 1947.1 | 1947.1 | 1947.1 | 1947.1 |
| 2.5°  | 1936.0 | 1944.6 | 1938.5 | 1938.9 | 1939.2 |
| 5°    | 1890.7 | 1897.5 | 1893.2 | 1891.7 | 1892.1 |
| 7.5°  | 1814.1 | 1820.2 | 1813.3 | 1815.9 | 1813.0 |
| 10°   | 1730.6 | 1736.7 | 1728.1 | 1728.1 | 1725.2 |
| 12.5° | 1645.7 | 1652.2 | 1641.8 | 1640.7 | 1647.5 |
| 15°   | 1547.2 | 1555.1 | 1549.0 | 1546.1 | 1551.2 |
| 17.5° | 1447.6 | 1446.5 | 1442.9 | 1441.1 | 1439.3 |
| 20°   | 1291.1 | 1297.6 | 1295.1 | 1284.3 | 1290.1 |
| 22.5° | 1085.4 | 1085.8 | 1089.4 | 1091.2 | 1086.5 |
| 25°   | 844.1  | 853.4  | 854.5  | 860.3  | 853.1  |
| 27.5° | 625.4  | 627.2  | 617.5  | 618.2  | 625.1  |
| 30°   | 399.6  | 405.0  | 402.1  | 405.0  | 400.6  |
| 32.5° | 230.5  | 235.2  | 233.4  | 235.6  | 235.9  |
| 35°   | 126.2  | 130.9  | 127.0  | 125.2  | 119.4  |
| 37.5° | 62.6   | 62.6   | 64.0   | 59.0   | 56.1   |
| 40°   | 27.0   | 27.7   | 26.3   | 24.8   | 22.7   |
| 42.5° | 13.7   | 13.7   | 14.4   | 12.2   | 11.9   |
| 45°   | 9.7    | 9.7    | 10.8   | 9.4    | 9.0    |
| 47.5° | 8.3    | 8.3    | 9.0    | 7.9    | 7.6    |
| 50°   | 7.2    | 7.2    | 7.6    | 6.8    | 6.5    |
| 52.5° | 6.5    | 6.5    | 6.8    | 6.1    | 5.8    |
| 55°   | 5.8    | 5.8    | 5.8    | 5.4    | 5.0    |
| 57.5° | 4.7    | 5.0    | 5.0    | 4.7    | 4.3    |
| 60°   | 4.0    | 4.0    | 4.3    | 4.0    | 3.6    |
| 62.5° | 3.2    | 3.2    | 3.2    | 3.2    | 2.9    |
| 65°   | 2.2    | 2.2    | 2.5    | 2.2    | 1.8    |
| 67.5° | 0.4    | 0.7    | 1.8    | 0.0    | 0.0    |
| 70°   | 0.0    | 0.0    | 0.4    | 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)