

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: P402449

Luminaire Tested: **LD1MRT102D010TR509040MMS1MW**

Issue Date: 6/3/2020



Test Information

Test Method: LM-41-14
Report Number: P402449
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: LD1MRT102D010TR509040MMS1MW
Description: 1 INCH 50° OPTIC WITH MATTE METALIC SILVER BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

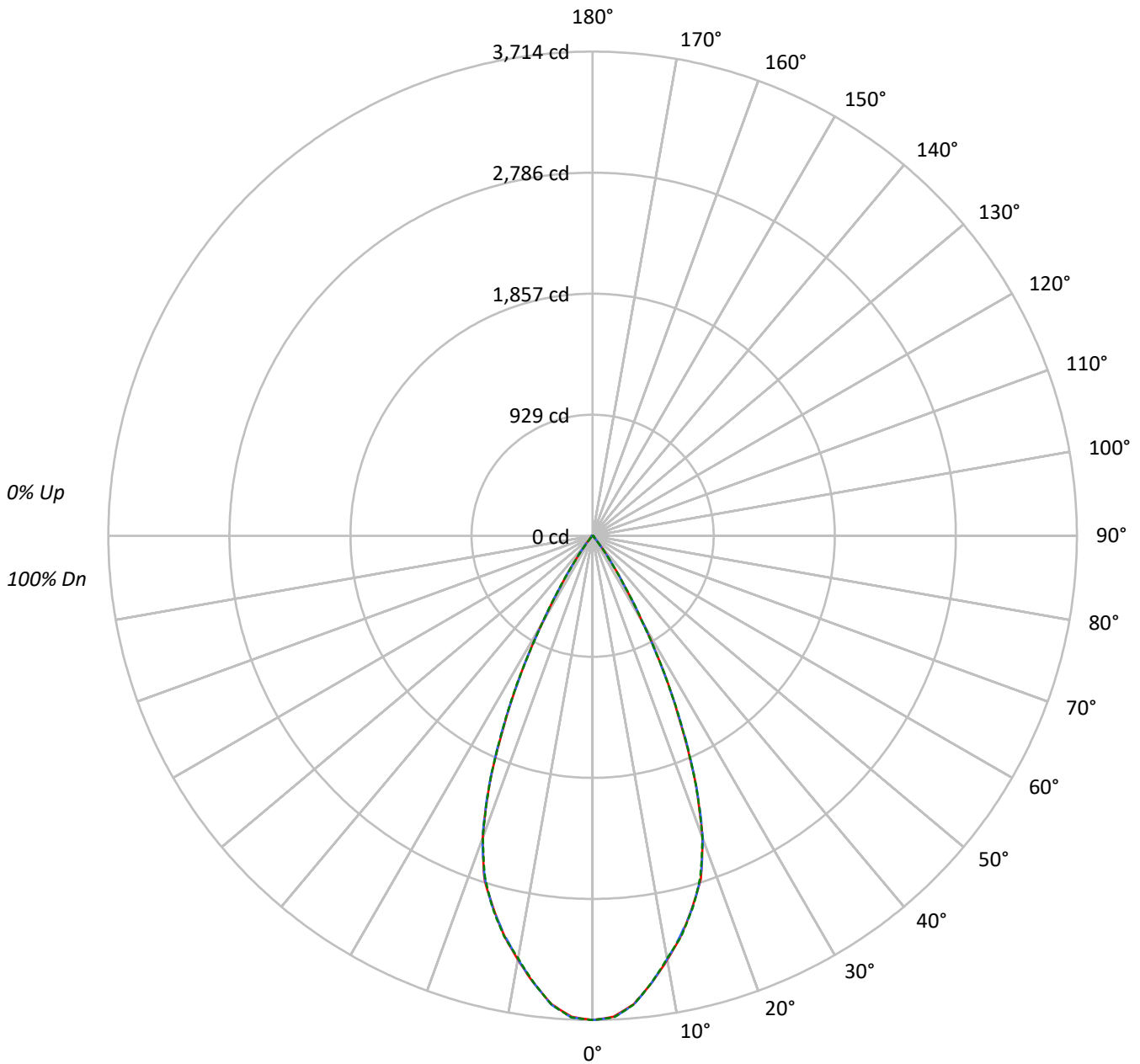
Lumens per Lamp: N/A
Luminaire Lumens: 2096.6 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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: 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 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 105 | 102 | 99 | 107 | 104 | 100 | 98 | 100 | 98 | 96 | 98 | 95 | 94 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | |
| 3 | 105 | 99 | 95 | 92 | 103 | 98 | 94 | 91 | 96 | 92 | 90 | 93 | 90 | 88 | 91 | 89 | 87 | 85 | | | | | | | | | | | | | | | | | | | |
| 4 | 101 | 94 | 89 | 86 | 99 | 93 | 89 | 85 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 85 | 82 | 81 | | | | | | | | | | | | | | | | | | | |
| 5 | 97 | 89 | 84 | 81 | 95 | 89 | 84 | 80 | 87 | 83 | 80 | 85 | 82 | 79 | 84 | 81 | 78 | 77 | | | | | | | | | | | | | | | | | | | |
| 6 | 93 | 85 | 80 | 76 | 91 | 84 | 79 | 76 | 83 | 79 | 75 | 82 | 78 | 75 | 80 | 77 | 75 | 73 | | | | | | | | | | | | | | | | | | | |
| 7 | 89 | 81 | 76 | 72 | 88 | 80 | 76 | 72 | 79 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 70 | | | | | | | | | | | | | | | | | | | |
| 8 | 85 | 77 | 72 | 69 | 84 | 77 | 72 | 69 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 68 | 67 | | | | | | | | | | | | | | | | | | | |
| 9 | 82 | 74 | 69 | 65 | 81 | 73 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 64 | | | | | | | | | | | | | | | | | | | |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | 61 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 297160 | 297160 | 297160 |
| 5° | 289646 | 290031 | 289871 |
| 10° | 268194 | 267804 | 267357 |
| 15° | 244457 | 244739 | 245079 |
| 20° | 209694 | 210332 | 209515 |
| 25° | 142141 | 143898 | 143651 |
| 30° | 70418 | 70862 | 70603 |
| 35° | 23517 | 23654 | 22247 |
| 40° | 5378 | 5232 | 4511 |
| 45° | 2093 | 2331 | 1946 |
| 50° | 1705 | 1792 | 1531 |
| 55° | 1534 | 1534 | 1339 |
| 60° | 1200 | 1312 | 1104 |
| 65° | 776 | 909 | 644 |
| 70° | 0 | 164 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 334.4 | 15.9 |
| 10°-20° | 819.7 | 39.1 |
| 20°-30° | 729.7 | 34.8 |
| 30°-40° | 182.2 | 8.7 |
| 40°-50° | 17.4 | 0.8 |
| 50°-60° | 9.5 | 0.5 |
| 60°-70° | 3.8 | 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° | 1883.8 | 89.8 |
| 0°-40° | 2066.0 | 98.5 |
| 0°-60° | 2092.8 | 99.8 |
| 0°-90° | 2096.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2096.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3714 | 3714 | 3714 | 3714 | 3714 | |
| 5° | 3607 | 3620 | 3612 | 3609 | 3610 | 334 |
| 15° | 2952 | 2967 | 2955 | 2950 | 2959 | 820 |
| 25° | 1610 | 1628 | 1630 | 1641 | 1627 | 727 |
| 35° | 241 | 250 | 242 | 239 | 228 | 181 |
| 45° | 18 | 18 | 21 | 18 | 17 | 18 |
| 55° | 11 | 11 | 11 | 10 | 10 | 10 |
| 65° | 4 | 4 | 5 | 4 | 3 | 4 |
| 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° | 3714.5 | 3714.5 | 3714.5 | 3714.5 | 3714.5 |
| 2.5° | 3693.3 | 3709.7 | 3698.1 | 3698.7 | 3699.4 |
| 5° | 3606.8 | 3619.8 | 3611.6 | 3608.9 | 3609.6 |
| 7.5° | 3460.7 | 3472.3 | 3459.3 | 3464.1 | 3458.6 |
| 10° | 3301.5 | 3313.2 | 3296.7 | 3296.7 | 3291.2 |
| 12.5° | 3139.6 | 3151.9 | 3132.0 | 3130.0 | 3143.0 |
| 15° | 2951.6 | 2966.7 | 2955.0 | 2949.5 | 2959.1 |
| 17.5° | 2761.5 | 2759.5 | 2752.6 | 2749.2 | 2745.8 |
| 20° | 2463.1 | 2475.4 | 2470.6 | 2450.1 | 2461.0 |
| 22.5° | 2070.6 | 2071.3 | 2078.2 | 2081.6 | 2072.7 |
| 25° | 1610.3 | 1628.1 | 1630.2 | 1641.1 | 1627.4 |
| 27.5° | 1193.1 | 1196.6 | 1178.0 | 1179.4 | 1192.4 |
| 30° | 762.3 | 772.5 | 767.1 | 772.5 | 764.3 |
| 32.5° | 439.8 | 448.7 | 445.3 | 449.4 | 450.1 |
| 35° | 240.8 | 249.7 | 242.2 | 238.8 | 227.8 |
| 37.5° | 119.4 | 119.4 | 122.1 | 112.5 | 107.0 |
| 40° | 51.5 | 52.8 | 50.1 | 47.3 | 43.2 |
| 42.5° | 26.1 | 26.1 | 27.4 | 23.3 | 22.6 |
| 45° | 18.5 | 18.5 | 20.6 | 17.8 | 17.2 |
| 47.5° | 15.8 | 15.8 | 17.2 | 15.1 | 14.4 |
| 50° | 13.7 | 13.7 | 14.4 | 13.0 | 12.3 |
| 52.5° | 12.3 | 12.3 | 13.0 | 11.7 | 11.0 |
| 55° | 11.0 | 11.0 | 11.0 | 10.3 | 9.6 |
| 57.5° | 8.9 | 9.6 | 9.6 | 8.9 | 8.2 |
| 60° | 7.5 | 7.5 | 8.2 | 7.5 | 6.9 |
| 62.5° | 6.2 | 6.2 | 6.2 | 6.2 | 5.5 |
| 65° | 4.1 | 4.1 | 4.8 | 4.1 | 3.4 |
| 67.5° | 0.7 | 1.4 | 3.4 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.7 | 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)