

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: P402012

Luminaire Tested: **LA1MR012D010 EA1M12309030SC1MW**

Issue Date: 6/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P402012  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2005-766-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 6/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LA1MR012D010 EA1M12309030SC1MW  
Description: 1 INCH 30° OPTIC WITH SPECULAR CLEAR BAFFLE  
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

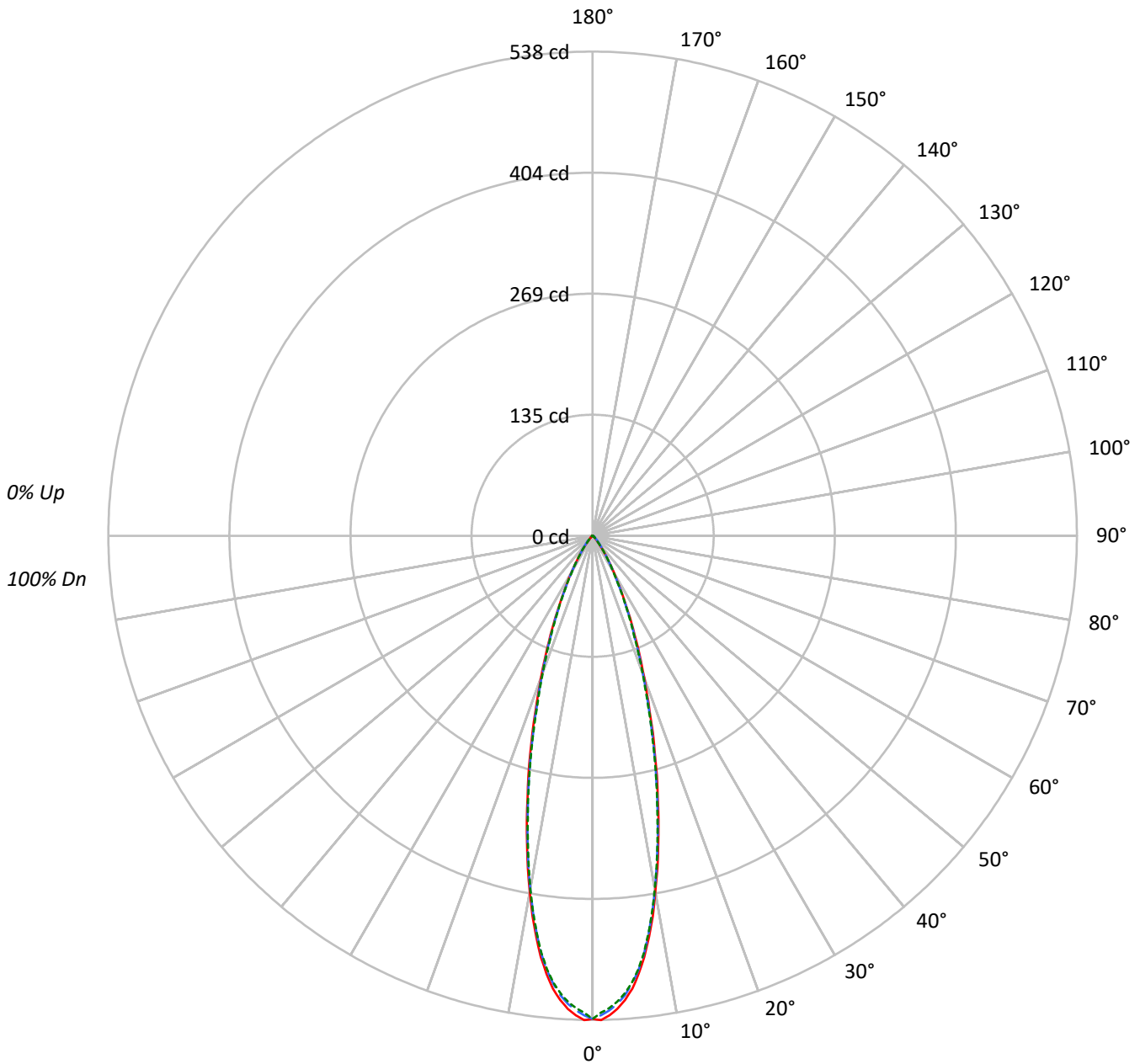
Lumens per Lamp: N/A  
Luminaire Lumens: 183.0 lumens  
Efficiency: N/A  
Efficacy: 50.8 lumens/watt  
Spacing Criteria (0/90/45): 0.51 / 0.5 / 0.52  
Luminous Opening: Rectangular (W 0.08' x L: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 3.6  
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 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 110 | 106 | 103 | 100 | 108 | 104 | 101 | 99  | 101 | 99  | 97  | 98  | 96  | 95  | 96  | 94  | 93  | 91  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 106 | 101 | 96  | 93  | 104 | 99  | 95  | 92  | 97  | 94  | 91  | 94  | 92  | 90  | 92  | 90  | 88  | 87  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 102 | 96  | 91  | 88  | 100 | 95  | 90  | 87  | 93  | 89  | 86  | 91  | 88  | 85  | 89  | 86  | 84  | 83  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 98  | 91  | 87  | 83  | 97  | 90  | 86  | 83  | 89  | 85  | 82  | 87  | 84  | 81  | 86  | 83  | 81  | 79  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 94  | 87  | 82  | 79  | 93  | 87  | 82  | 79  | 85  | 81  | 78  | 84  | 80  | 78  | 83  | 80  | 77  | 76  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 91  | 84  | 79  | 75  | 90  | 83  | 78  | 75  | 82  | 78  | 75  | 81  | 77  | 74  | 80  | 77  | 74  | 73  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 88  | 80  | 76  | 72  | 87  | 80  | 75  | 72  | 79  | 75  | 72  | 78  | 74  | 72  | 77  | 74  | 71  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 85  | 77  | 73  | 69  | 84  | 77  | 72  | 69  | 76  | 72  | 69  | 75  | 71  | 69  | 74  | 71  | 69  | 67  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 82  | 74  | 70  | 67  | 81  | 74  | 70  | 67  | 73  | 69  | 66  | 73  | 69  | 66  | 72  | 69  | 66  | 65  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 166440 | 166440 | 166440 |
| 5°  | 157242 | 155655 | 155157 |
| 10° | 126449 | 125504 | 125347 |
| 15° | 88450  | 86942  | 86589  |
| 20° | 55192  | 53806  | 53179  |
| 25° | 31913  | 30955  | 30579  |
| 30° | 17003  | 16502  | 16180  |
| 35° | 8137   | 8401   | 8250   |
| 40° | 3399   | 4654   | 3521   |
| 45° | 1754   | 2893   | 1841   |
| 50° | 1109   | 1688   | 1254   |
| 55° | 757    | 1135   | 865    |
| 60° | 434    | 744    | 558    |
| 65° | 147    | 513    | 147    |
| 70° | 0      | 181    | 0      |
| 75° | 0      | 0      | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 44.6   | 24.4      |
| 10°-20°   | 74.4   | 40.7      |
| 20°-30°   | 42.8   | 23.4      |
| 30°-40°   | 14.9   | 8.1       |
| 40°-50°   | 4.2    | 2.3       |
| 50°-60°   | 1.6    | 0.9       |
| 60°-70°   | 0.4    | 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°    | 161.8  | 88.4      |
| 0°-40°    | 176.7  | 96.6      |
| 0°-60°    | 182.5  | 99.8      |
| 0°-90°    | 183.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 183.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 537 | 537   | 537 | 537   | 537 |      |
| 5°  | 505 | 502   | 500 | 501   | 499 | 45   |
| 15° | 276 | 274   | 271 | 270   | 270 | 75   |
| 25° | 93  | 92    | 90  | 90    | 89  | 44   |
| 35° | 22  | 22    | 22  | 22    | 22  | 15   |
| 45° | 4   | 5     | 7   | 5     | 4   | 3    |
| 55° | 1   | 2     | 2   | 2     | 2   | 1    |
| 65° | 0   | 0     | 1   | 0     | 0   | 0    |
| 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°    | 536.9 | 536.9 | 536.9 | 536.9 | 536.9 |
| 1°    | 538.3 | 535.8 | 532.9 | 532.9 | 530.1 |
| 2°    | 533.2 | 530.8 | 527.8 | 528.0 | 525.0 |
| 3°    | 526.4 | 524.1 | 521.0 | 521.5 | 518.7 |
| 4°    | 517.0 | 514.0 | 511.9 | 512.6 | 510.0 |
| 5°    | 505.3 | 502.3 | 500.2 | 501.1 | 498.6 |
| 6°    | 489.4 | 487.3 | 485.5 | 486.6 | 484.3 |
| 7°    | 471.7 | 469.3 | 467.9 | 468.8 | 467.0 |
| 8°    | 449.9 | 448.3 | 446.6 | 447.6 | 445.7 |
| 9°    | 427.7 | 425.1 | 423.5 | 424.2 | 422.8 |
| 10°   | 401.7 | 400.5 | 398.7 | 399.4 | 398.2 |
| 11°   | 376.7 | 376.7 | 373.2 | 372.0 | 372.7 |
| 12°   | 350.9 | 350.7 | 347.4 | 346.0 | 346.5 |
| 13°   | 325.0 | 324.7 | 321.5 | 320.3 | 320.5 |
| 14°   | 299.2 | 299.5 | 296.0 | 295.0 | 294.8 |
| 15°   | 275.6 | 274.4 | 270.9 | 270.2 | 269.8 |
| 16°   | 250.8 | 250.6 | 247.1 | 246.1 | 245.7 |
| 17°   | 228.6 | 227.4 | 223.9 | 223.0 | 222.3 |
| 18°   | 205.4 | 205.6 | 202.1 | 201.4 | 200.3 |
| 19°   | 185.8 | 185.3 | 182.0 | 181.3 | 180.1 |
| 20°   | 167.3 | 165.2 | 163.1 | 162.4 | 161.2 |
| 22.5° | 126.1 | 124.9 | 122.1 | 121.4 | 121.2 |
| 25°   | 93.3  | 92.2  | 90.5  | 90.1  | 89.4  |
| 26°   | 81.7  | 81.9  | 79.8  | 79.3  | 78.8  |
| 27°   | 72.3  | 71.8  | 70.0  | 69.7  | 69.0  |
| 28°   | 62.2  | 62.7  | 60.6  | 60.4  | 59.9  |
| 29°   | 54.3  | 54.3  | 53.1  | 52.4  | 51.9  |
| 30°   | 47.5  | 47.3  | 46.1  | 45.6  | 45.2  |
| 32.5° | 32.8  | 32.5  | 32.1  | 31.8  | 31.3  |
| 35°   | 21.5  | 22.5  | 22.2  | 22.2  | 21.8  |
| 37.5° | 13.3  | 15.2  | 15.9  | 15.7  | 14.3  |
| 40°   | 8.4   | 9.8   | 11.5  | 10.5  | 8.7   |
| 42.5° | 5.6   | 6.8   | 8.4   | 7.0   | 5.6   |
| 45°   | 4.0   | 4.7   | 6.6   | 4.7   | 4.2   |
| 47.5° | 3.0   | 3.5   | 4.9   | 3.5   | 3.0   |
| 50°   | 2.3   | 2.8   | 3.5   | 2.8   | 2.6   |
| 52.5° | 1.9   | 2.1   | 2.8   | 2.1   | 1.9   |
| 55°   | 1.4   | 1.6   | 2.1   | 1.6   | 1.6   |
| 57.5° | 1.2   | 1.4   | 1.6   | 1.4   | 1.2   |
| 60°   | 0.7   | 0.9   | 1.2   | 0.9   | 0.9   |
| 62.5° | 0.5   | 0.7   | 0.9   | 0.7   | 0.5   |
| 65°   | 0.2   | 0.5   | 0.7   | 0.5   | 0.2   |
| 67.5° | 0.0   | 0.2   | 0.2   | 0.0   | 0.0   |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 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°







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)