

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: P402040

Luminaire Tested: **LA1MR152D010 EA1M152309027SC1MW**

Issue Date: 6/3/2020



Test Information

Test Method: LM-41-14
Report Number: P402040
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: LA1MR152D010 EA1M152309027SC1MW
Description: 1 INCH 30° OPTIC WITH SPECULAR CLEAR BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

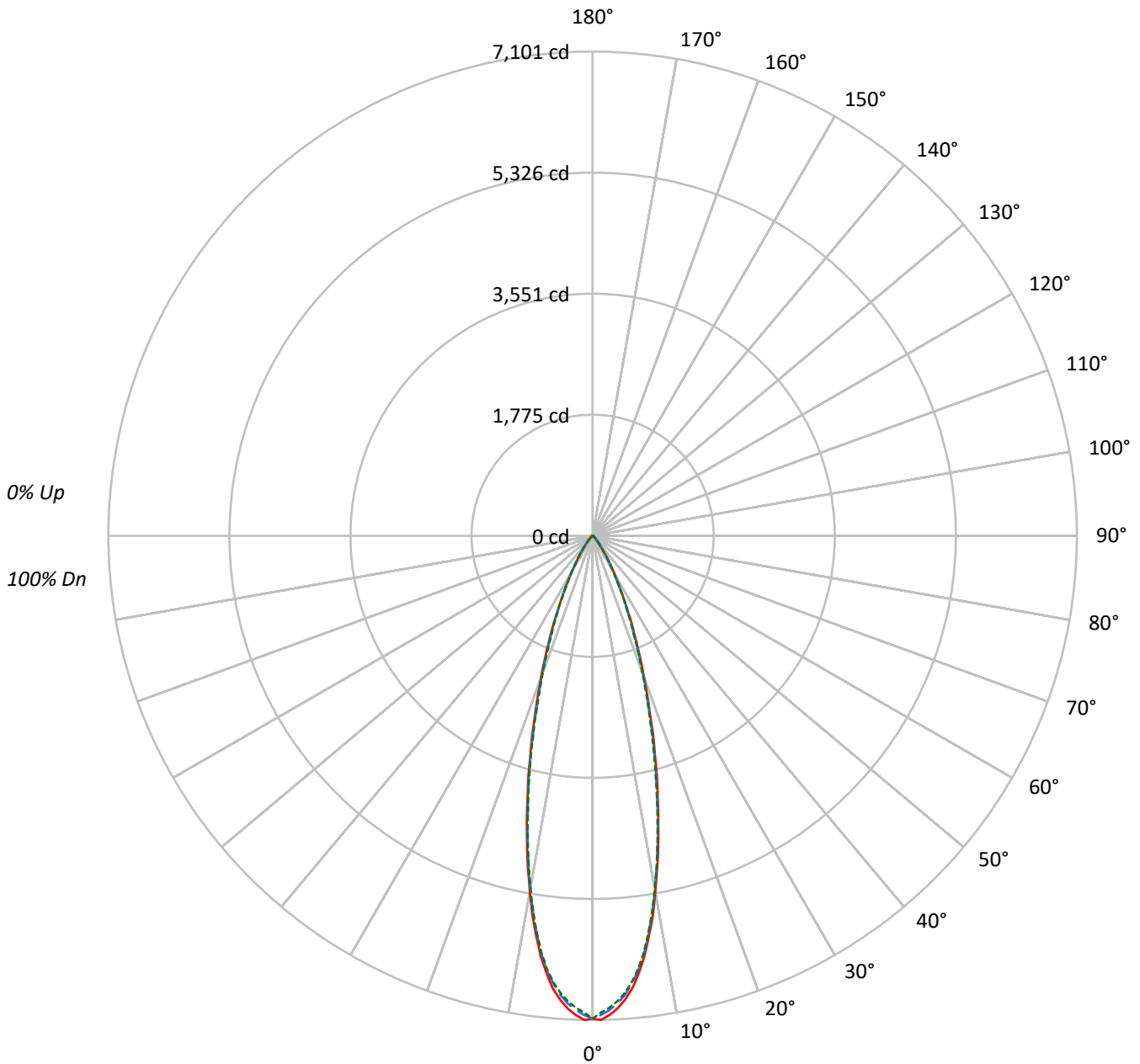
Lumens per Lamp: N/A
Luminaire Lumens: 2414.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 0.51 / 0.5 / 0.52
Luminous Opening: Rectangular (W 0.08' x L: 0.42' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|---------|---------|---------|
| 0° | 2195618 | 2195618 | 2195618 |
| 5° | 2074365 | 2053236 | 2046514 |
| 10° | 1667978 | 1655355 | 1653403 |
| 15° | 1166736 | 1146934 | 1141992 |
| 20° | 727951 | 709608 | 701460 |
| 25° | 421199 | 408509 | 403242 |
| 30° | 224261 | 217639 | 213200 |
| 35° | 107440 | 110959 | 108613 |
| 40° | 44960 | 61187 | 46214 |
| 45° | 23016 | 37879 | 24332 |
| 50° | 14902 | 22329 | 16349 |
| 55° | 9999 | 15025 | 11674 |
| 60° | 5766 | 9548 | 7626 |
| 65° | 2274 | 6822 | 2274 |
| 70° | 0 | 2810 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 588.2 | 24.4 |
| 10°-20° | 981.7 | 40.7 |
| 20°-30° | 564.7 | 23.4 |
| 30°-40° | 196.5 | 8.1 |
| 40°-50° | 55.7 | 2.3 |
| 50°-60° | 21.3 | 0.9 |
| 60°-70° | 5.8 | 0.2 |
| 70°-80° | 0.1 | 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° | 2134.5 | 88.4 |
| 0°-40° | 2331.0 | 96.6 |
| 0°-60° | 2408.1 | 99.8 |
| 0°-90° | 2414.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2414.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 7083 | 7083 | 7083 | 7083 | 7083 | |
| 5° | 6666 | 6626 | 6598 | 6610 | 6576 | 592 |
| 15° | 3635 | 3620 | 3574 | 3564 | 3558 | 992 |
| 25° | 1231 | 1216 | 1194 | 1188 | 1179 | 578 |
| 35° | 284 | 296 | 293 | 293 | 287 | 192 |
| 45° | 52 | 62 | 86 | 62 | 56 | 45 |
| 55° | 18 | 22 | 28 | 22 | 22 | 17 |
| 65° | 3 | 6 | 9 | 6 | 3 | 3 |
| 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° | 7082.6 | 7082.6 | 7082.6 | 7082.6 | 7082.6 |
| 1° | 7101.1 | 7067.2 | 7030.1 | 7030.1 | 6993.1 |
| 2° | 7033.2 | 7002.3 | 6962.2 | 6965.3 | 6925.2 |
| 3° | 6943.7 | 6912.9 | 6872.7 | 6878.9 | 6841.9 |
| 4° | 6820.3 | 6780.1 | 6752.4 | 6761.6 | 6727.7 |
| 5° | 6666.0 | 6625.8 | 6598.1 | 6610.4 | 6576.5 |
| 6° | 6456.1 | 6428.3 | 6403.6 | 6419.1 | 6388.2 |
| 7° | 6221.6 | 6190.7 | 6172.2 | 6184.5 | 6159.8 |
| 8° | 5934.6 | 5913.0 | 5891.4 | 5903.7 | 5879.0 |
| 9° | 5641.4 | 5607.4 | 5585.8 | 5595.1 | 5576.6 |
| 10° | 5298.8 | 5283.4 | 5258.7 | 5268.0 | 5252.5 |
| 11° | 4968.6 | 4968.6 | 4922.3 | 4906.9 | 4916.1 |
| 12° | 4629.1 | 4626.1 | 4582.8 | 4564.3 | 4570.5 |
| 13° | 4286.6 | 4283.5 | 4240.3 | 4224.9 | 4227.9 |
| 14° | 3947.1 | 3950.2 | 3903.9 | 3891.6 | 3888.5 |
| 15° | 3635.4 | 3620.0 | 3573.7 | 3564.4 | 3558.3 |
| 16° | 3308.3 | 3305.2 | 3258.9 | 3246.6 | 3240.4 |
| 17° | 3015.1 | 2999.7 | 2953.4 | 2941.0 | 2931.8 |
| 18° | 2709.6 | 2712.7 | 2666.4 | 2657.1 | 2641.7 |
| 19° | 2450.4 | 2444.2 | 2401.0 | 2391.7 | 2376.3 |
| 20° | 2206.6 | 2178.8 | 2151.0 | 2141.7 | 2126.3 |
| 22.5° | 1663.4 | 1648.0 | 1610.9 | 1601.7 | 1598.6 |
| 25° | 1231.4 | 1215.9 | 1194.3 | 1188.1 | 1178.9 |
| 26° | 1077.0 | 1080.1 | 1052.4 | 1046.2 | 1040.0 |
| 27° | 953.6 | 947.4 | 922.7 | 919.7 | 910.4 |
| 28° | 820.9 | 827.1 | 799.3 | 796.2 | 790.0 |
| 29° | 716.0 | 716.0 | 700.5 | 691.3 | 685.1 |
| 30° | 626.5 | 623.4 | 608.0 | 601.8 | 595.6 |
| 32.5° | 432.1 | 429.0 | 422.8 | 419.7 | 413.5 |
| 35° | 283.9 | 296.3 | 293.2 | 293.2 | 287.0 |
| 37.5° | 175.9 | 200.6 | 209.9 | 206.8 | 188.3 |
| 40° | 111.1 | 129.6 | 151.2 | 138.9 | 114.2 |
| 42.5° | 74.1 | 89.5 | 111.1 | 92.6 | 74.1 |
| 45° | 52.5 | 61.7 | 86.4 | 61.7 | 55.5 |
| 47.5° | 40.1 | 46.3 | 64.8 | 46.3 | 40.1 |
| 50° | 30.9 | 37.0 | 46.3 | 37.0 | 33.9 |
| 52.5° | 24.7 | 27.8 | 37.0 | 27.8 | 24.7 |
| 55° | 18.5 | 21.6 | 27.8 | 21.6 | 21.6 |
| 57.5° | 15.4 | 18.5 | 21.6 | 18.5 | 15.4 |
| 60° | 9.3 | 12.3 | 15.4 | 12.3 | 12.3 |
| 62.5° | 6.2 | 9.3 | 12.3 | 9.3 | 6.2 |
| 65° | 3.1 | 6.2 | 9.3 | 6.2 | 3.1 |
| 67.5° | 0.0 | 3.1 | 3.1 | 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 | 3.1 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)