

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P892672

Luminaire Tested: 2MB-3SL-RFLW-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892672
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-3SL-RFLW-UNV-L850
Description: 3000 Lumen 2FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 5000K
Light Source: -
Ballast/Driver: -

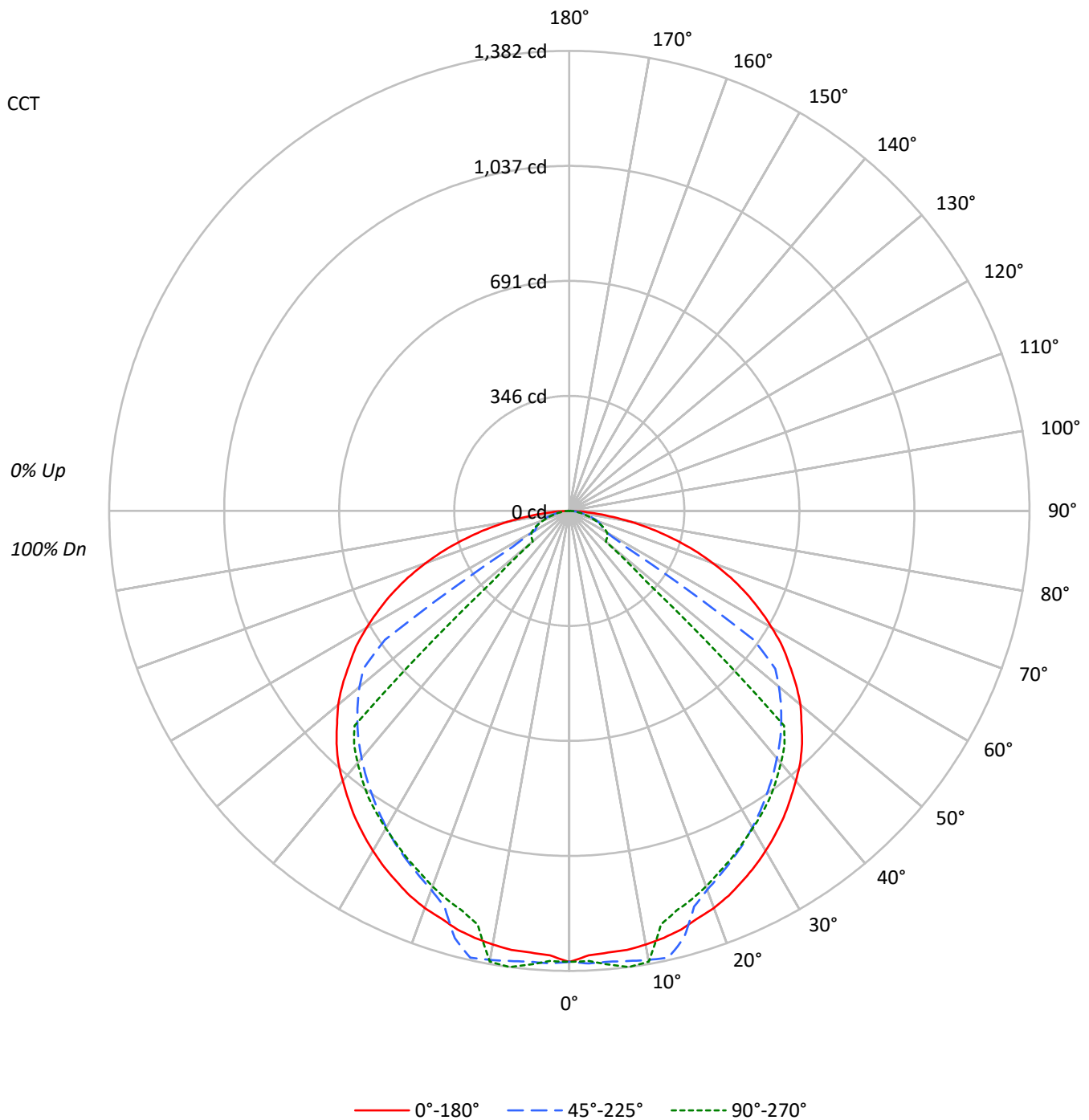
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3181.0 lumens
Efficiency: N/A
Efficacy: 151.5 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.22 / 1.37
Luminous Opening: Rectangular (W 0.21' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 21
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 8
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 2MB-3SL-RFLW-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P892672

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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 89 | 89 | 89 | 87 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 80 | 77 | 77 | 77 | 77 | 75 |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 67 | 67 | 67 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 60 | 71 | 65 | 60 | 69 | 63 | 59 | 67 | 62 | 58 | 58 | 58 | 58 | 56 |
| 5 | 80 | 68 | 59 | 53 | 77 | 67 | 59 | 53 | 64 | 58 | 52 | 63 | 57 | 52 | 61 | 55 | 51 | 51 | 51 | 51 | 49 |
| 6 | 74 | 61 | 53 | 47 | 72 | 60 | 52 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 55 | 50 | 46 | 46 | 46 | 46 | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 47 | 42 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 41 | 41 | 41 | 39 |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 37 | 37 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 37 | 33 | 33 | 33 | 33 | 32 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 30 | 40 | 34 | 30 | 30 | 30 | 30 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 35368 | 35368 | 35368 |
| 5° | 34903 | 35624 | 35863 |
| 10° | 35066 | 36317 | 36439 |
| 15° | 35173 | 35916 | 33605 |
| 20° | 35266 | 33654 | 33357 |
| 25° | 35378 | 33312 | 33180 |
| 30° | 35552 | 33113 | 33204 |
| 35° | 35786 | 33013 | 33501 |
| 40° | 36082 | 33066 | 33693 |
| 45° | 36501 | 33234 | 33684 |
| 50° | 36807 | 33399 | 5824 |
| 55° | 36733 | 30761 | 6318 |
| 60° | 36723 | 6214 | 6851 |
| 65° | 36281 | 6598 | 6783 |
| 70° | 35053 | 6870 | 6290 |
| 75° | 32622 | 6466 | 5538 |
| 80° | 27980 | 5728 | 4811 |
| 85° | 18722 | 5482 | 4104 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 57.5°
 Luminance: 36915 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.8 | 4.1 |
| 10°-20° | 366.0 | 11.5 |
| 20°-30° | 547.8 | 17.2 |
| 30°-40° | 660.4 | 20.8 |
| 40°-50° | 665.0 | 20.9 |
| 50°-60° | 414.9 | 13.0 |
| 60°-70° | 260.8 | 8.2 |
| 70°-80° | 108.5 | 3.4 |
| 80°-90° | 27.8 | 0.9 |
| 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° | 1043.6 | 32.8 |
| 0°-40° | 1704.0 | 53.6 |
| 0°-60° | 2783.9 | 87.5 |
| 0°-90° | 3181.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3181.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1355 | 1355 | 1355 | 1355 | 1355 | |
| 5° | 1332 | 1359 | 1359 | 1361 | 1368 | 127 |
| 15° | 1301 | 1341 | 1329 | 1243 | 1243 | 367 |
| 25° | 1228 | 1275 | 1156 | 1147 | 1152 | 567 |
| 35° | 1123 | 1051 | 1036 | 1042 | 1051 | 703 |
| 45° | 989 | 894 | 900 | 912 | 912 | 762 |
| 55° | 807 | 711 | 676 | 133 | 139 | 723 |
| 65° | 587 | 508 | 107 | 111 | 110 | 579 |
| 75° | 323 | 78 | 64 | 56 | 55 | 341 |
| 85° | 62 | 23 | 18 | 14 | 14 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P892672

CATALOG NUMBER: 2MB-3SL-RFLW-UNV-L850

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1354.7 | 1354.7 | 1354.7 | 1354.7 | 1354.7 |
| 2.5° | 1336.4 | 1360.8 | 1360.8 | 1354.7 | 1353.2 |
| 5° | 1331.8 | 1359.3 | 1359.3 | 1360.8 | 1368.4 |
| 7.5° | 1330.3 | 1356.2 | 1363.8 | 1373.0 | 1382.1 |
| 10° | 1322.7 | 1353.2 | 1369.9 | 1382.1 | 1374.5 |
| 12.5° | 1313.5 | 1347.1 | 1374.5 | 1296.7 | 1272.3 |
| 15° | 1301.3 | 1341.0 | 1328.8 | 1243.3 | 1243.3 |
| 17.5° | 1283.0 | 1331.8 | 1246.4 | 1222.0 | 1223.5 |
| 20° | 1269.3 | 1324.2 | 1211.3 | 1197.6 | 1200.6 |
| 22.5° | 1251.0 | 1308.9 | 1183.8 | 1171.6 | 1174.7 |
| 25° | 1228.1 | 1275.4 | 1156.4 | 1147.2 | 1151.8 |
| 27.5° | 1205.2 | 1206.7 | 1128.9 | 1122.8 | 1125.9 |
| 30° | 1179.3 | 1141.1 | 1098.4 | 1096.9 | 1101.4 |
| 32.5° | 1151.8 | 1092.3 | 1067.9 | 1070.9 | 1077.0 |
| 35° | 1122.8 | 1051.1 | 1035.8 | 1042.0 | 1051.1 |
| 37.5° | 1090.8 | 1013.0 | 1003.8 | 1014.5 | 1020.6 |
| 40° | 1058.7 | 973.3 | 970.2 | 980.9 | 988.6 |
| 42.5° | 1026.7 | 935.2 | 936.7 | 947.4 | 956.5 |
| 45° | 988.6 | 894.0 | 900.1 | 912.3 | 912.3 |
| 47.5° | 945.8 | 849.7 | 861.9 | 836.0 | 309.7 |
| 50° | 906.2 | 805.5 | 822.3 | 247.1 | 143.4 |
| 52.5° | 858.9 | 758.2 | 779.6 | 135.8 | 140.4 |
| 55° | 807.0 | 710.9 | 675.8 | 132.7 | 138.8 |
| 57.5° | 759.7 | 662.1 | 201.4 | 131.2 | 135.8 |
| 60° | 703.3 | 613.3 | 119.0 | 128.1 | 131.2 |
| 62.5° | 645.3 | 561.4 | 112.9 | 122.0 | 122.0 |
| 65° | 587.3 | 508.0 | 106.8 | 111.4 | 109.8 |
| 67.5° | 524.8 | 453.1 | 100.7 | 97.6 | 96.1 |
| 70° | 459.2 | 279.2 | 90.0 | 83.9 | 82.4 |
| 72.5° | 393.6 | 96.1 | 77.8 | 70.2 | 68.6 |
| 75° | 323.4 | 77.8 | 64.1 | 56.4 | 54.9 |
| 77.5° | 254.8 | 64.1 | 50.3 | 44.2 | 42.7 |
| 80° | 186.1 | 48.8 | 38.1 | 33.6 | 32.0 |
| 82.5° | 120.5 | 35.1 | 29.0 | 22.9 | 21.4 |
| 85° | 62.5 | 22.9 | 18.3 | 13.7 | 13.7 |
| 87.5° | 24.4 | 13.7 | 9.2 | 6.1 | 4.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 25.38 | 26.89 | 25.75 | 27.21 | 27.52 | 14.02 | 15.53 | 14.39 | 15.85 | 16.16 |
| | 3H | 27.30 | 28.65 | 27.68 | 28.98 | 29.34 | 16.15 | 17.50 | 16.53 | 17.83 | 18.19 |
| | 4H | 27.79 | 29.05 | 28.19 | 29.40 | 29.78 | 16.84 | 18.10 | 17.24 | 18.45 | 18.83 |
| | 6H | 28.22 | 29.39 | 28.63 | 29.76 | 30.15 | 17.30 | 18.47 | 17.71 | 18.83 | 19.22 |
| | 8H | 28.36 | 29.47 | 28.79 | 29.86 | 30.26 | 17.43 | 18.54 | 17.86 | 18.93 | 19.33 |
| | 12H | 28.44 | 29.50 | 28.87 | 29.88 | 30.31 | 17.52 | 18.58 | 17.95 | 18.96 | 19.39 |
| 4H | 2H | 25.23 | 26.49 | 25.63 | 26.84 | 27.22 | 14.77 | 16.04 | 15.17 | 16.39 | 16.76 |
| | 3H | 27.26 | 28.30 | 27.67 | 28.70 | 29.10 | 17.11 | 18.16 | 17.52 | 18.56 | 18.96 |
| | 4H | 27.74 | 28.68 | 28.18 | 29.10 | 29.54 | 17.91 | 18.84 | 18.34 | 19.26 | 19.70 |
| | 6H | 28.26 | 29.07 | 28.71 | 29.51 | 29.97 | 18.48 | 19.29 | 18.94 | 19.73 | 20.19 |
| | 8H | 28.44 | 29.20 | 28.91 | 29.65 | 30.11 | 18.65 | 19.41 | 19.11 | 19.85 | 20.32 |
| | 12H | 28.57 | 29.24 | 29.05 | 29.72 | 30.19 | 18.77 | 19.45 | 19.25 | 19.93 | 20.40 |
| 8H | 4H | 27.67 | 28.43 | 28.13 | 28.87 | 29.34 | 18.49 | 19.25 | 18.96 | 19.70 | 20.17 |
| | 6H | 28.18 | 28.80 | 28.68 | 29.30 | 29.77 | 19.15 | 19.77 | 19.64 | 20.27 | 20.74 |
| | 8H | 28.38 | 28.94 | 28.89 | 29.45 | 29.94 | 19.37 | 19.93 | 19.89 | 20.44 | 20.93 |
| | 12H | 28.54 | 29.04 | 29.05 | 29.53 | 30.09 | 19.54 | 20.04 | 20.05 | 20.54 | 21.10 |
| 12H | 4H | 27.64 | 28.31 | 28.12 | 28.79 | 29.26 | 18.58 | 19.25 | 19.06 | 19.73 | 20.20 |
| | 6H | 28.13 | 28.70 | 28.65 | 29.21 | 29.70 | 19.26 | 19.82 | 19.77 | 20.33 | 20.82 |
| | 8H | 28.36 | 28.86 | 28.87 | 29.35 | 29.91 | 19.54 | 20.04 | 20.05 | 20.53 | 21.10 |