

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: P894240

Luminaire Tested: 4MB-SC3-LVR-UNV-CC93-MID-3500K

Issue Date: 11/11/2024

**Test Information**

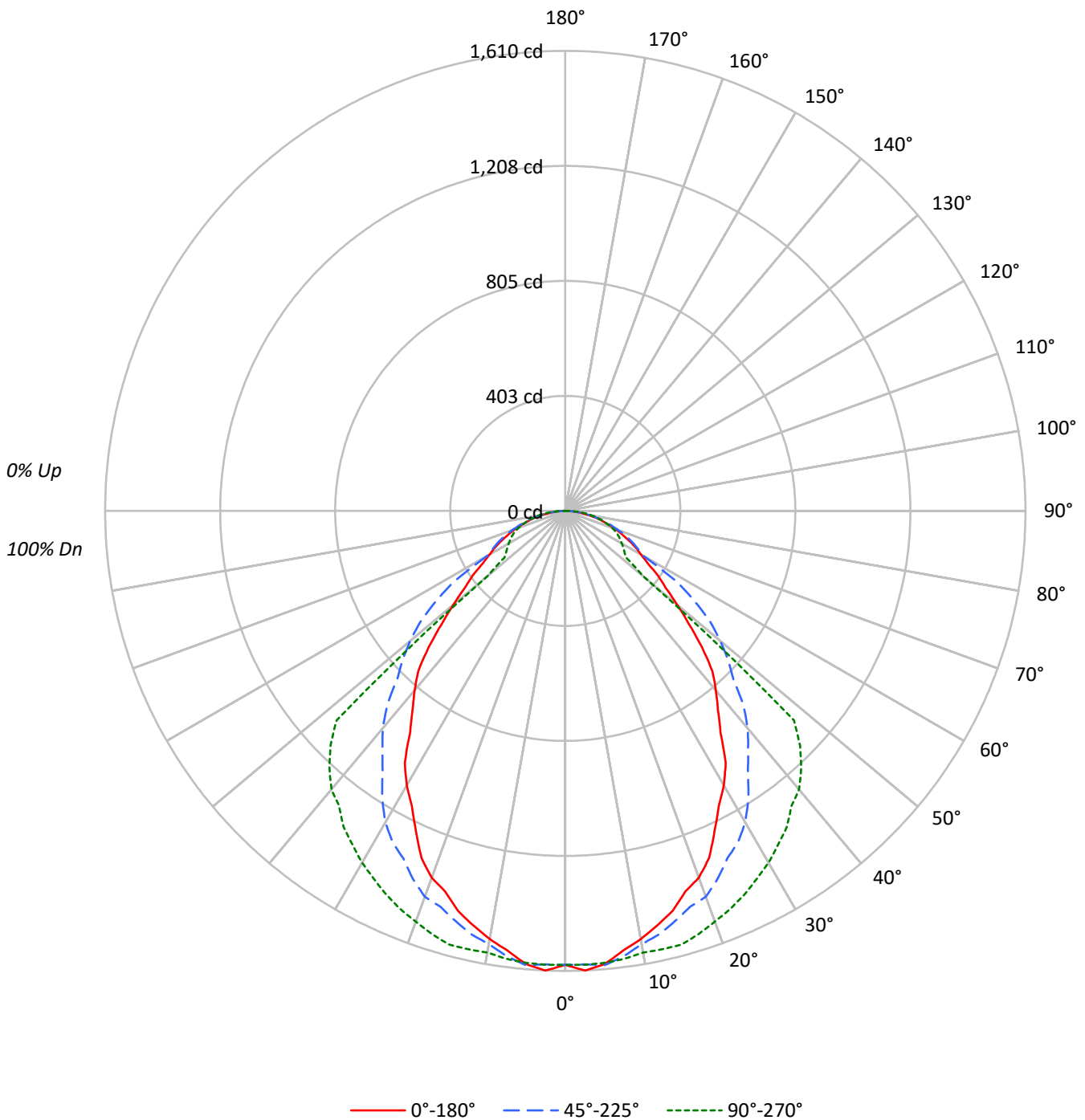
Test Method: LM-79-2019  
Report Number: P894240  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-LVR-UNV-CC93-MID-3500K  
Description: Selectable 4FT MICROBAY LINEAR BAY with LOUVER, 90CRI, 3500K CCT, MID lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3391.0 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.32 / 1.27  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9948  
Total Harmonic Distortion (THDi): 5.65231997856897  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 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  |     |     |     |     |
| 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 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 89  | 89  | 89  | 87  |
| 2   | 102 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 86  | 82  | 79  | 83  | 80  | 77  | 77  | 77  | 77  | 75  |
| 3   | 94  | 84  | 77  | 71  | 91  | 83  | 76  | 71  | 80  | 74  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 67  | 67  | 67  | 65  |
| 4   | 87  | 76  | 68  | 62  | 84  | 74  | 67  | 61  | 72  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  | 59  | 59  | 59  | 57  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 60  | 54  | 65  | 59  | 53  | 63  | 58  | 53  | 62  | 57  | 52  | 52  | 52  | 52  | 50  |
| 6   | 75  | 62  | 54  | 48  | 73  | 61  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 56  | 51  | 47  | 47  | 47  | 47  | 45  |
| 7   | 69  | 57  | 49  | 43  | 68  | 56  | 48  | 43  | 55  | 48  | 43  | 53  | 47  | 42  | 52  | 46  | 42  | 42  | 42  | 42  | 40  |
| 8   | 65  | 52  | 44  | 39  | 63  | 52  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 38  | 48  | 42  | 38  | 38  | 38  | 38  | 36  |
| 9   | 61  | 48  | 40  | 35  | 59  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 35  | 44  | 39  | 35  | 35  | 35  | 35  | 33  |
| 10  | 57  | 45  | 37  | 32  | 56  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 41  | 36  | 32  | 32  | 32  | 32  | 30  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11306 | 11306 | 11306 |
| 5°  | 11367 | 11395 | 11337 |
| 10° | 10994 | 11123 | 11340 |
| 15° | 10676 | 10946 | 11573 |
| 20° | 10342 | 10883 | 11583 |
| 25° | 9703  | 10531 | 11634 |
| 30° | 9114  | 10341 | 11681 |
| 35° | 8219  | 9672  | 11736 |
| 40° | 7613  | 9226  | 11819 |
| 45° | 6810  | 8362  | 11685 |
| 50° | 5651  | 7834  | 3926  |
| 55° | 4923  | 6876  | 3141  |
| 60° | 4354  | 4481  | 3257  |
| 65° | 4140  | 4359  | 3456  |
| 70° | 3884  | 4119  | 3647  |
| 75° | 3615  | 3882  | 3747  |
| 80° | 3290  | 3659  | 3925  |
| 85° | 2914  | 3110  | 4237  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 11685 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 150.7  | 4.4       |
| 10°-20°   | 424.0  | 12.5      |
| 20°-30°   | 623.7  | 18.4      |
| 30°-40°   | 713.3  | 21.0      |
| 40°-50°   | 675.4  | 19.9      |
| 50°-60°   | 372.1  | 11.0      |
| 60°-70°   | 238.9  | 7.0       |
| 70°-80°   | 147.5  | 4.3       |
| 80°-90°   | 45.4   | 1.3       |
| 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°    | 1198.4 | 35.3      |
| 0°-40°    | 1911.7 | 56.4      |
| 0°-60°    | 2959.3 | 87.3      |
| 0°-90°    | 3391.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3391.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1589 | 1589  | 1589 | 1589  | 1589 |      |
| 5°  | 1592 | 1604  | 1596 | 1596  | 1587 | 149  |
| 15° | 1449 | 1467  | 1486 | 1564  | 1571 | 407  |
| 25° | 1236 | 1291  | 1342 | 1429  | 1482 | 569  |
| 35° | 946  | 1027  | 1114 | 1275  | 1351 | 598  |
| 45° | 677  | 741   | 831  | 1066  | 1161 | 518  |
| 55° | 397  | 416   | 554  | 286   | 253  | 355  |
| 65° | 246  | 254   | 259  | 230   | 205  | 243  |
| 75° | 132  | 134   | 141  | 148   | 136  | 140  |
| 85° | 36   | 36    | 38   | 44    | 52   | 40   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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CATALOG NUMBER: 4MB-SC3-LVR-UNV-CC93-MID-3500K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1589.0 | 1589.0 | 1589.0 | 1589.0 | 1589.0 |
| 2.5°  | 1610.1 | 1614.2 | 1588.2 | 1587.4 | 1589.8 |
| 5°    | 1591.5 | 1604.4 | 1595.5 | 1595.5 | 1587.4 |
| 7.5°  | 1551.7 | 1573.6 | 1571.2 | 1589.8 | 1580.9 |
| 10°   | 1521.7 | 1539.5 | 1539.5 | 1588.2 | 1569.6 |
| 12.5° | 1486.0 | 1506.2 | 1517.6 | 1568.7 | 1571.2 |
| 15°   | 1449.4 | 1467.3 | 1486.0 | 1563.9 | 1571.2 |
| 17.5° | 1396.7 | 1429.2 | 1452.7 | 1529.0 | 1552.5 |
| 20°   | 1365.9 | 1385.3 | 1437.3 | 1498.9 | 1529.8 |
| 22.5° | 1314.7 | 1343.1 | 1393.4 | 1462.4 | 1507.9 |
| 25°   | 1236.0 | 1291.2 | 1341.5 | 1429.2 | 1481.9 |
| 27.5° | 1163.0 | 1204.4 | 1308.2 | 1400.7 | 1451.1 |
| 30°   | 1109.4 | 1141.9 | 1258.7 | 1359.4 | 1421.8 |
| 32.5° | 1044.5 | 1097.2 | 1192.2 | 1318.8 | 1385.3 |
| 35°   | 946.3  | 1027.4 | 1113.5 | 1275.0 | 1351.2 |
| 37.5° | 877.3  | 933.3  | 1050.2 | 1229.5 | 1300.1 |
| 40°   | 819.7  | 870.8  | 993.3  | 1172.7 | 1272.5 |
| 42.5° | 762.1  | 803.4  | 921.9  | 1130.5 | 1221.4 |
| 45°   | 676.8  | 741.0  | 831.0  | 1066.4 | 1161.3 |
| 47.5° | 587.6  | 655.7  | 771.8  | 1012.0 | 1085.1 |
| 50°   | 510.5  | 564.8  | 707.7  | 904.1  | 354.7  |
| 52.5° | 443.1  | 493.4  | 639.5  | 327.1  | 267.8  |
| 55°   | 396.9  | 416.3  | 554.3  | 285.7  | 253.2  |
| 57.5° | 341.7  | 373.3  | 465.0  | 271.9  | 240.2  |
| 60°   | 306.0  | 319.8  | 314.9  | 258.1  | 228.9  |
| 62.5° | 277.6  | 287.3  | 285.7  | 244.3  | 215.9  |
| 65°   | 245.9  | 254.0  | 258.9  | 230.5  | 205.3  |
| 67.5° | 214.3  | 221.6  | 228.9  | 213.4  | 190.7  |
| 70°   | 186.7  | 191.5  | 198.0  | 193.2  | 175.3  |
| 72.5° | 158.3  | 163.9  | 168.0  | 172.1  | 155.0  |
| 75°   | 131.5  | 133.9  | 141.2  | 148.5  | 136.3  |
| 77.5° | 107.1  | 109.6  | 114.4  | 122.5  | 116.1  |
| 80°   | 80.3   | 82.8   | 89.3   | 95.8   | 95.8   |
| 82.5° | 56.8   | 58.4   | 62.5   | 71.4   | 75.5   |
| 85°   | 35.7   | 35.7   | 38.1   | 43.8   | 51.9   |
| 87.5° | 13.8   | 13.8   | 16.2   | 19.5   | 26.0   |
| 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 | 16.38            | 17.86 | 16.74 | 18.17 | 18.49 | 14.18          | 15.66 | 14.54 | 15.98 | 16.29 |
|                 | 3H   | 17.90            | 19.23 | 18.28 | 19.56 | 19.92 | 16.51          | 17.84 | 16.89 | 18.16 | 18.53 |
|                 | 4H   | 18.50            | 19.74 | 18.90 | 20.09 | 20.47 | 17.46          | 18.70 | 17.86 | 19.05 | 19.43 |
|                 | 6H   | 18.95            | 20.10 | 19.36 | 20.47 | 20.86 | 18.24          | 19.39 | 18.66 | 19.76 | 20.15 |
|                 | 8H   | 19.10            | 20.19 | 19.52 | 20.58 | 20.98 | 18.56          | 19.65 | 18.98 | 20.04 | 20.44 |
|                 | 12H  | 19.19            | 20.24 | 19.62 | 20.62 | 21.05 | 18.80          | 19.85 | 19.23 | 20.23 | 20.66 |
| 4H              | 2H   | 16.93            | 18.17 | 17.33 | 18.52 | 18.90 | 15.28          | 16.53 | 15.68 | 16.88 | 17.26 |
|                 | 3H   | 18.70            | 19.73 | 19.11 | 20.13 | 20.53 | 17.73          | 18.76 | 18.14 | 19.16 | 19.56 |
|                 | 4H   | 19.42            | 20.34 | 19.85 | 20.76 | 21.20 | 18.79          | 19.72 | 19.23 | 20.14 | 20.58 |
|                 | 6H   | 20.00            | 20.81 | 20.46 | 21.25 | 21.71 | 19.68          | 20.49 | 20.14 | 20.93 | 21.39 |
|                 | 8H   | 20.19            | 20.95 | 20.66 | 21.39 | 21.86 | 20.03          | 20.79 | 20.50 | 21.23 | 21.70 |
|                 | 12H  | 20.33            | 21.00 | 20.81 | 21.48 | 21.95 | 20.32          | 21.00 | 20.81 | 21.47 | 21.95 |
| 8H              | 4H   | 19.73            | 20.48 | 20.19 | 20.92 | 21.39 | 19.18          | 19.93 | 19.65 | 20.38 | 20.85 |
|                 | 6H   | 20.44            | 21.06 | 20.94 | 21.55 | 22.03 | 20.22          | 20.84 | 20.72 | 21.33 | 21.81 |
|                 | 8H   | 20.70            | 21.26 | 21.21 | 21.77 | 22.26 | 20.66          | 21.22 | 21.18 | 21.73 | 22.22 |
|                 | 12H  | 20.91            | 21.41 | 21.42 | 21.90 | 22.46 | 21.05          | 21.55 | 21.56 | 22.04 | 22.60 |
| 12H             | 4H   | 19.76            | 20.44 | 20.25 | 20.91 | 21.39 | 19.22          | 19.89 | 19.70 | 20.37 | 20.84 |
|                 | 6H   | 20.50            | 21.07 | 21.02 | 21.58 | 22.06 | 20.28          | 20.84 | 20.80 | 21.35 | 21.84 |
|                 | 8H   | 20.82            | 21.32 | 21.33 | 21.81 | 22.38 | 20.79          | 21.29 | 21.30 | 21.78 | 22.35 |