

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: P892860

Luminaire Tested: 2MB-5HL-LVRF-UNV-L950

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P892860  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-5HL-LVRF-UNV-L950  
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 5000K C  
Light Source: -  
Ballast/Driver: -

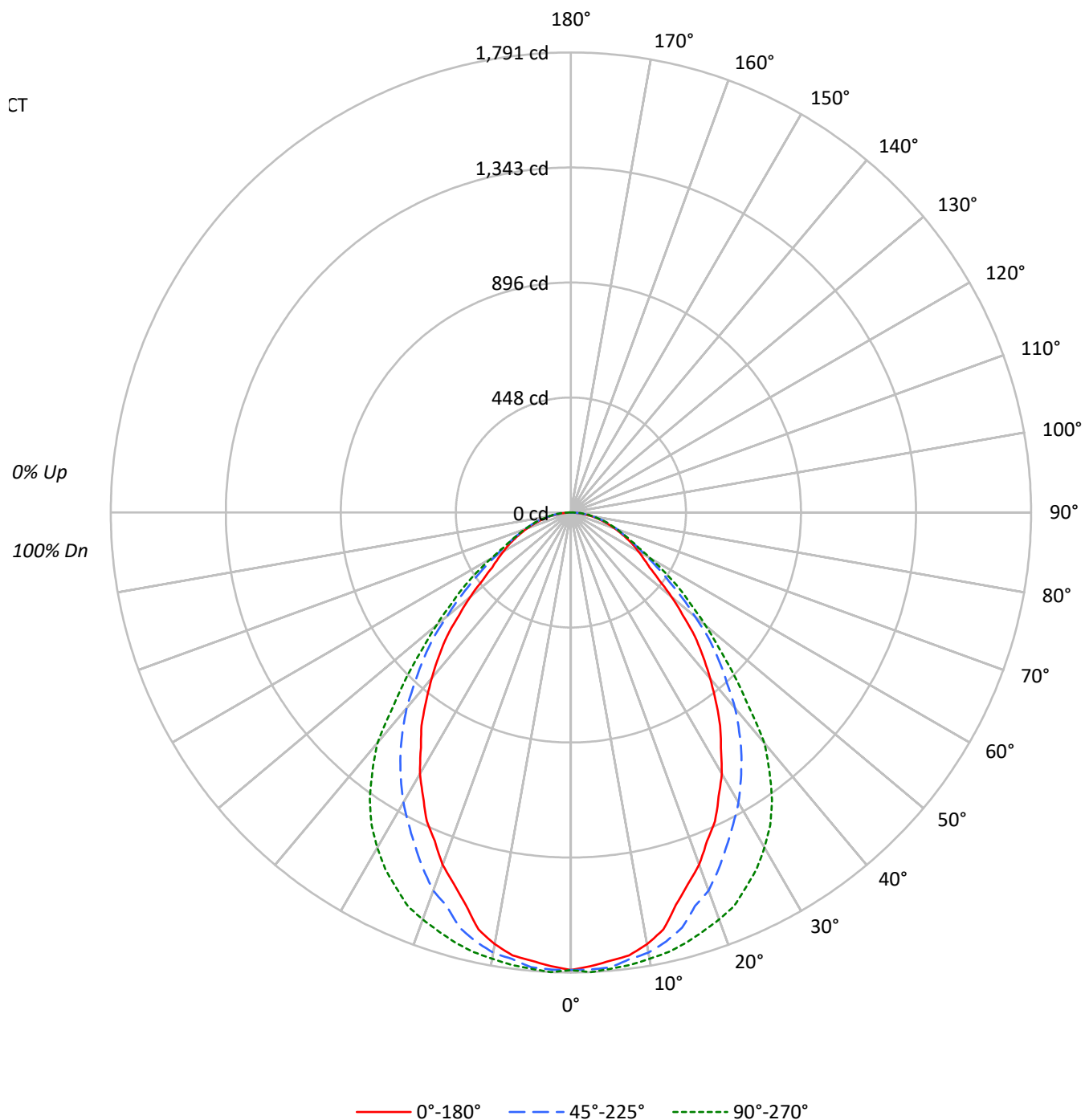
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3502.0 lumens  
Efficiency: N/A  
Efficacy: 103.9 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.25 / 1.19  
Luminous Opening: Rectangular (W 0.38' x L: 1.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4.5  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 110 | 106 | 102 | 99  | 108 | 104 | 101 | 98  | 100 | 97  | 94  |  | 96  | 94  | 92  |  | 92  |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  |  | 86  | 82  | 79  |  | 83  |
| 3   | 94  | 85  | 77  | 72  | 92  | 83  | 76  | 71  | 80  | 75  | 70  |  | 78  | 73  | 69  |  | 75  |
| 4   | 87  | 76  | 68  | 62  | 85  | 75  | 68  | 62  | 73  | 66  | 61  |  | 70  | 65  | 60  |  | 68  |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 60  | 55  | 66  | 59  | 54  |  | 64  | 58  | 54  |  | 62  |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 54  | 49  | 60  | 53  | 48  |  | 59  | 53  | 48  |  | 57  |
| 7   | 70  | 58  | 50  | 44  | 68  | 57  | 49  | 44  | 55  | 48  | 43  |  | 54  | 48  | 43  |  | 53  |
| 8   | 65  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 39  |  | 50  | 44  | 39  |  | 49  |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 41  | 36  |  | 46  | 40  | 36  |  | 45  |
| 10  | 58  | 45  | 38  | 33  | 57  | 45  | 38  | 33  | 44  | 37  | 33  |  | 43  | 37  | 33  |  | 42  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25477 | 25477 | 25477 |
| 5°  | 25156 | 25525 | 25598 |
| 10° | 24789 | 25274 | 25621 |
| 15° | 23412 | 24780 | 25679 |
| 20° | 22217 | 23845 | 25667 |
| 25° | 20944 | 22632 | 25425 |
| 30° | 19404 | 21537 | 24885 |
| 35° | 17693 | 20216 | 23829 |
| 40° | 15726 | 18568 | 21873 |
| 45° | 13804 | 16484 | 18230 |
| 50° | 11379 | 14043 | 15223 |
| 55° | 9340  | 11600 | 12815 |
| 60° | 8683  | 9639  | 10226 |
| 65° | 8131  | 8567  | 8625  |
| 70° | 7583  | 8010  | 7976  |
| 75° | 7042  | 7611  | 7655  |
| 80° | 6483  | 7044  | 7184  |
| 85° | 5613  | 6172  | 8141  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 18230 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 168.0  | 4.8       |
| 10°-20°   | 468.4  | 13.4      |
| 20°-30°   | 669.6  | 19.1      |
| 30°-40°   | 730.5  | 20.9      |
| 40°-50°   | 615.3  | 17.6      |
| 50°-60°   | 409.8  | 11.7      |
| 60°-70°   | 252.9  | 7.2       |
| 70°-80°   | 143.3  | 4.1       |
| 80°-90°   | 44.2   | 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°    | 1306.0 | 37.3      |
| 0°-40°    | 2036.5 | 58.2      |
| 0°-60°    | 3061.6 | 87.4      |
| 0°-90°    | 3502.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3502.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1781 | 1781  | 1781 | 1781  | 1781 |      |
| 5°  | 1752 | 1761  | 1778 | 1778  | 1783 | 166  |
| 15° | 1581 | 1612  | 1673 | 1723  | 1734 | 446  |
| 25° | 1327 | 1354  | 1434 | 1570  | 1611 | 606  |
| 35° | 1013 | 1058  | 1158 | 1294  | 1364 | 630  |
| 45° | 682  | 720   | 815  | 869   | 901  | 521  |
| 55° | 374  | 401   | 465  | 497   | 514  | 346  |
| 65° | 240  | 243   | 253  | 263   | 255  | 239  |
| 75° | 127  | 129   | 138  | 143   | 138  | 135  |
| 85° | 34   | 36    | 38   | 44    | 50   | 39   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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CATALOG NUMBER: 2MB-5HL-LVRF-UNV-L950

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1780.9 | 1780.9 | 1780.9 | 1780.9 | 1780.9 |
| 2.5°  | 1768.1 | 1768.9 | 1780.9 | 1787.7 | 1791.2 |
| 5°    | 1751.8 | 1761.2 | 1777.5 | 1777.5 | 1782.6 |
| 7.5°  | 1739.0 | 1740.7 | 1753.5 | 1772.4 | 1776.6 |
| 10°   | 1706.5 | 1715.1 | 1739.9 | 1761.2 | 1763.8 |
| 12.5° | 1662.9 | 1668.1 | 1710.8 | 1751.8 | 1752.7 |
| 15°   | 1580.8 | 1612.5 | 1673.2 | 1722.8 | 1733.9 |
| 17.5° | 1515.9 | 1548.4 | 1606.5 | 1695.4 | 1709.9 |
| 20°   | 1459.4 | 1477.4 | 1566.3 | 1662.9 | 1686.0 |
| 22.5° | 1384.2 | 1417.5 | 1502.2 | 1624.4 | 1658.6 |
| 25°   | 1326.9 | 1354.3 | 1433.8 | 1569.7 | 1610.8 |
| 27.5° | 1245.7 | 1286.7 | 1368.0 | 1511.6 | 1564.6 |
| 30°   | 1174.7 | 1219.2 | 1303.8 | 1450.0 | 1506.5 |
| 32.5° | 1086.7 | 1133.7 | 1231.2 | 1375.7 | 1443.2 |
| 35°   | 1013.1 | 1057.6 | 1157.6 | 1293.6 | 1364.5 |
| 37.5° | 925.9  | 976.4  | 1076.4 | 1203.8 | 1268.8 |
| 40°   | 842.1  | 884.9  | 994.3  | 1103.8 | 1171.3 |
| 42.5° | 761.8  | 801.1  | 898.6  | 990.1  | 1023.4 |
| 45°   | 682.3  | 719.9  | 814.8  | 868.7  | 901.1  |
| 47.5° | 589.9  | 637.0  | 729.3  | 755.8  | 780.6  |
| 50°   | 511.3  | 550.6  | 631.0  | 654.9  | 684.0  |
| 52.5° | 433.5  | 473.7  | 547.2  | 566.8  | 589.9  |
| 55°   | 374.5  | 401.0  | 465.1  | 496.7  | 513.8  |
| 57.5° | 336.9  | 345.4  | 398.4  | 427.5  | 435.2  |
| 60°   | 303.5  | 308.6  | 336.9  | 363.4  | 357.4  |
| 62.5° | 272.7  | 275.3  | 289.8  | 309.5  | 297.5  |
| 65°   | 240.2  | 242.8  | 253.1  | 263.3  | 254.8  |
| 67.5° | 210.3  | 212.0  | 220.6  | 228.3  | 220.6  |
| 70°   | 181.3  | 182.1  | 191.5  | 196.6  | 190.7  |
| 72.5° | 153.0  | 153.9  | 163.3  | 169.3  | 162.4  |
| 75°   | 127.4  | 129.1  | 137.7  | 142.8  | 138.5  |
| 77.5° | 102.6  | 105.2  | 111.1  | 116.3  | 109.4  |
| 80°   | 78.7   | 80.4   | 85.5   | 91.5   | 87.2   |
| 82.5° | 57.3   | 58.1   | 61.6   | 67.5   | 69.3   |
| 85°   | 34.2   | 35.9   | 37.6   | 43.6   | 49.6   |
| 87.5° | 13.7   | 15.4   | 16.2   | 18.8   | 26.5   |
| 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 | 18.27            | 19.73 | 18.63 | 20.05 | 20.36 | 19.78          | 21.24 | 20.14 | 21.55 | 21.87 |
|                 | 3H   | 19.87            | 21.18 | 20.25 | 21.51 | 21.87 | 20.99          | 22.30 | 21.37 | 22.63 | 22.99 |
|                 | 4H   | 20.48            | 21.71 | 20.88 | 22.06 | 22.44 | 21.51          | 22.74 | 21.91 | 23.09 | 23.47 |
|                 | 6H   | 20.95            | 22.08 | 21.36 | 22.45 | 22.84 | 21.92          | 23.06 | 22.34 | 23.42 | 23.82 |
|                 | 8H   | 21.11            | 22.19 | 21.54 | 22.58 | 22.98 | 22.09          | 23.17 | 22.52 | 23.56 | 23.96 |
|                 | 12H  | 21.21            | 22.24 | 21.65 | 22.63 | 23.06 | 22.24          | 23.27 | 22.67 | 23.65 | 24.08 |
| 4H              | 2H   | 18.88            | 20.11 | 19.28 | 20.46 | 20.83 | 20.12          | 21.35 | 20.52 | 21.70 | 22.08 |
|                 | 3H   | 20.70            | 21.71 | 21.11 | 22.11 | 22.51 | 21.60          | 22.62 | 22.02 | 23.02 | 23.42 |
|                 | 4H   | 21.43            | 22.34 | 21.86 | 22.76 | 23.20 | 22.28          | 23.19 | 22.71 | 23.61 | 24.05 |
|                 | 6H   | 22.03            | 22.82 | 22.49 | 23.27 | 23.73 | 22.85          | 23.64 | 23.31 | 24.08 | 24.55 |
|                 | 8H   | 22.23            | 22.98 | 22.70 | 23.42 | 23.89 | 23.07          | 23.81 | 23.54 | 24.26 | 24.73 |
|                 | 12H  | 22.38            | 23.04 | 22.86 | 23.52 | 23.99 | 23.28          | 23.94 | 23.76 | 24.42 | 24.89 |
| 8H              | 4H   | 21.75            | 22.49 | 22.22 | 22.94 | 23.41 | 22.51          | 23.25 | 22.97 | 23.69 | 24.16 |
|                 | 6H   | 22.48            | 23.09 | 22.97 | 23.58 | 24.06 | 23.21          | 23.82 | 23.71 | 24.31 | 24.79 |
|                 | 8H   | 22.76            | 23.31 | 23.27 | 23.82 | 24.31 | 23.52          | 24.07 | 24.04 | 24.58 | 25.07 |
|                 | 12H  | 22.98            | 23.47 | 23.49 | 23.96 | 24.53 | 23.82          | 24.31 | 24.33 | 24.80 | 25.37 |
| 12H             | 4H   | 21.79            | 22.45 | 22.27 | 22.93 | 23.40 | 22.52          | 23.18 | 23.00 | 23.66 | 24.13 |
|                 | 6H   | 22.54            | 23.09 | 23.06 | 23.60 | 24.09 | 23.25          | 23.80 | 23.76 | 24.31 | 24.80 |
|                 | 8H   | 22.89            | 23.37 | 23.40 | 23.87 | 24.43 | 23.62          | 24.11 | 24.13 | 24.60 | 25.17 |