

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: P893755

Luminaire Tested: 4MB-6SL-LVRA-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893755
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-6SL-LVRA-UNV-L840
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

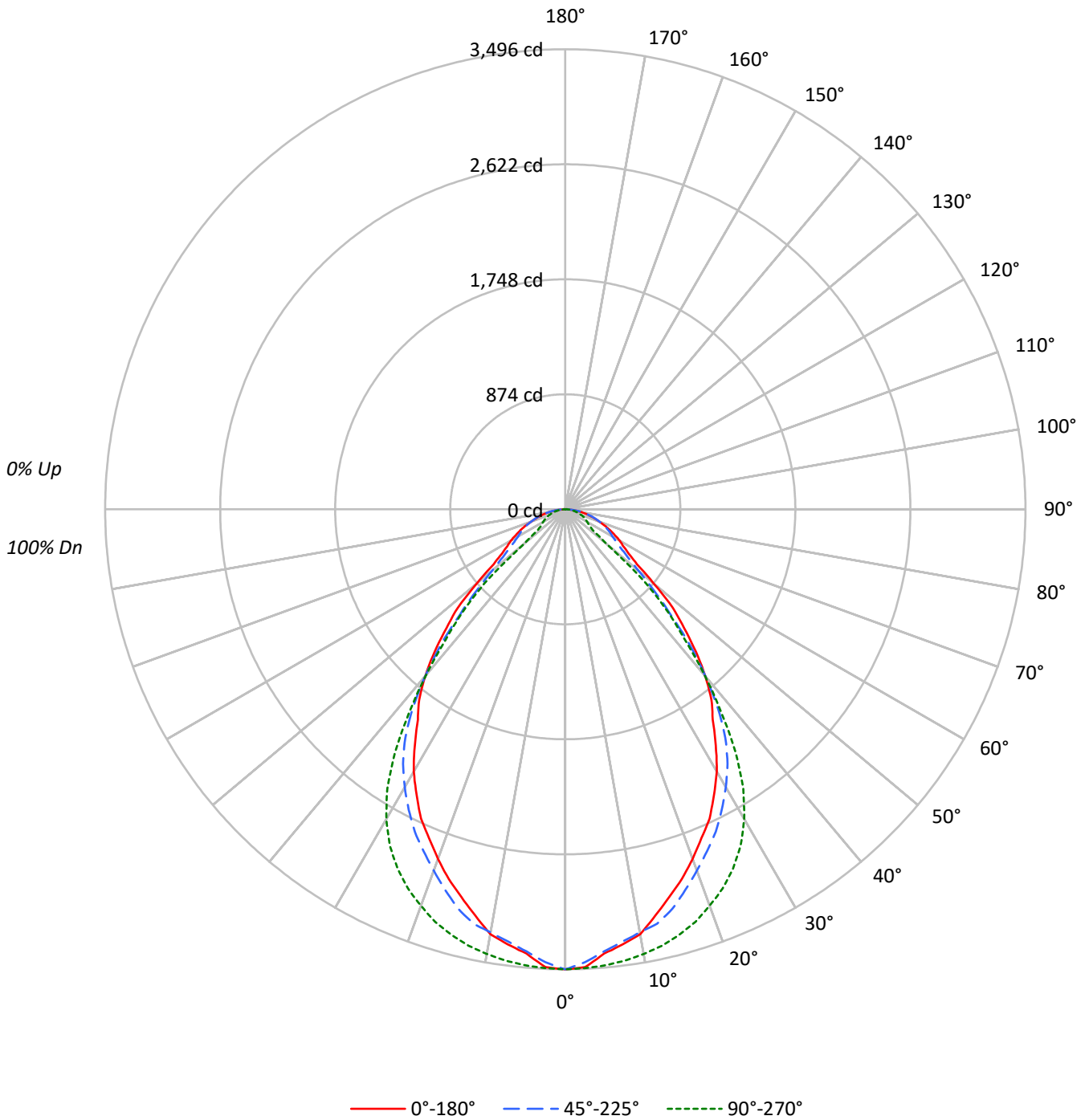
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5674.0 lumens
Efficiency: N/A
Efficacy: 127.8 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 44.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893755
CATALOG NUMBER: 4MB-6SL-LVRA-UNV-L840

Luminous Intensity Polar Plot





TEST NUMBER: P893755

CATALOG NUMBER: 4MB-6SL-LVRA-UNV-L840

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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 90 | 90 | 90 | 88 |
| 2 | 103 | 96 | 91 | 86 | 101 | 95 | 90 | 85 | 91 | 87 | 83 | 88 | 85 | 82 | 85 | 82 | 80 | 80 | 80 | 80 | 78 |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 71 | 71 | 71 | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 63 | 63 | 63 | 62 |
| 5 | 83 | 72 | 65 | 59 | 81 | 71 | 64 | 59 | 69 | 63 | 58 | 67 | 62 | 58 | 66 | 61 | 57 | 57 | 57 | 57 | 55 |
| 6 | 78 | 66 | 59 | 53 | 76 | 65 | 58 | 53 | 64 | 57 | 53 | 62 | 57 | 52 | 61 | 56 | 52 | 52 | 52 | 52 | 50 |
| 7 | 73 | 61 | 54 | 48 | 71 | 60 | 53 | 48 | 59 | 52 | 48 | 58 | 52 | 47 | 56 | 51 | 47 | 47 | 47 | 47 | 45 |
| 8 | 68 | 57 | 49 | 44 | 67 | 56 | 49 | 44 | 55 | 48 | 44 | 53 | 48 | 43 | 52 | 47 | 43 | 43 | 43 | 43 | 41 |
| 9 | 64 | 52 | 45 | 40 | 63 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 40 | 40 | 40 | 38 |
| 10 | 61 | 49 | 42 | 37 | 60 | 48 | 42 | 37 | 47 | 41 | 37 | 47 | 41 | 37 | 46 | 40 | 37 | 37 | 37 | 37 | 35 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 24875 | 24875 | 24875 |
| 5° | 24204 | 24094 | 24848 |
| 10° | 23689 | 23585 | 24790 |
| 15° | 22467 | 23157 | 24650 |
| 20° | 21402 | 22125 | 24274 |
| 25° | 20358 | 21229 | 23654 |
| 30° | 18914 | 20039 | 22334 |
| 35° | 16960 | 18416 | 19589 |
| 40° | 15365 | 15399 | 15315 |
| 45° | 12847 | 11378 | 11098 |
| 50° | 9704 | 8008 | 4538 |
| 55° | 7299 | 6405 | 2862 |
| 60° | 6783 | 5898 | 2756 |
| 65° | 6310 | 5886 | 2761 |
| 70° | 5773 | 5773 | 2719 |
| 75° | 5473 | 5622 | 2625 |
| 80° | 5056 | 5318 | 2696 |
| 85° | 4416 | 4637 | 2939 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 13146 cd/sqm



TEST NUMBER: P893755

CATALOG NUMBER: 4MB-6SL-LVRA-UNV-L840

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 322.9 | 5.7 |
| 10°-20° | 889.8 | 15.7 |
| 20°-30° | 1261.8 | 22.2 |
| 30°-40° | 1299.9 | 22.9 |
| 40°-50° | 908.0 | 16.0 |
| 50°-60° | 435.7 | 7.7 |
| 60°-70° | 305.7 | 5.4 |
| 70°-80° | 191.1 | 3.4 |
| 80°-90° | 59.1 | 1.0 |
| 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° | 2474.6 | 43.6 |
| 0°-40° | 3774.5 | 66.5 |
| 0°-60° | 5118.1 | 90.2 |
| 0°-90° | 5674.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5674.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3496 | 3496 | 3496 | 3496 | 3496 | |
| 5° | 3389 | 3384 | 3374 | 3462 | 3479 | 321 |
| 15° | 3050 | 3073 | 3144 | 3234 | 3346 | 859 |
| 25° | 2593 | 2619 | 2704 | 2887 | 3013 | 1186 |
| 35° | 1953 | 2006 | 2120 | 2164 | 2255 | 1230 |
| 45° | 1277 | 1306 | 1131 | 1073 | 1103 | 984 |
| 55° | 588 | 560 | 516 | 331 | 231 | 551 |
| 65° | 375 | 350 | 350 | 266 | 164 | 371 |
| 75° | 199 | 196 | 204 | 177 | 96 | 210 |
| 85° | 54 | 54 | 57 | 56 | 36 | 60 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P893755

CATALOG NUMBER: 4MB-6SL-LVRA-UNV-L840

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3496.1 | 3496.1 | 3496.1 | 3496.1 | 3496.1 |
| 2.5° | 3482.6 | 3471.7 | 3445.6 | 3493.4 | 3489.8 |
| 5° | 3388.9 | 3384.3 | 3373.5 | 3461.8 | 3479.0 |
| 7.5° | 3335.7 | 3326.7 | 3314.1 | 3411.4 | 3459.1 |
| 10° | 3278.9 | 3289.7 | 3264.5 | 3353.7 | 3431.2 |
| 12.5° | 3161.8 | 3190.6 | 3224.9 | 3294.2 | 3397.0 |
| 15° | 3050.1 | 3072.6 | 3143.8 | 3233.9 | 3346.5 |
| 17.5° | 2945.5 | 2971.7 | 3032.9 | 3168.1 | 3287.9 |
| 20° | 2826.6 | 2862.6 | 2922.1 | 3095.1 | 3205.9 |
| 22.5° | 2704.1 | 2737.4 | 2812.2 | 2997.8 | 3121.2 |
| 25° | 2593.2 | 2619.4 | 2704.1 | 2887.0 | 3013.1 |
| 27.5° | 2446.4 | 2495.0 | 2575.2 | 2751.8 | 2884.3 |
| 30° | 2302.2 | 2343.6 | 2439.1 | 2587.8 | 2718.5 |
| 32.5° | 2128.3 | 2188.7 | 2294.1 | 2407.6 | 2516.6 |
| 35° | 1952.6 | 2005.7 | 2120.2 | 2164.3 | 2255.3 |
| 37.5° | 1824.6 | 1839.0 | 1903.9 | 1898.5 | 1949.9 |
| 40° | 1654.3 | 1683.2 | 1657.9 | 1590.4 | 1648.9 |
| 42.5° | 1470.5 | 1504.8 | 1402.9 | 1324.5 | 1345.3 |
| 45° | 1276.8 | 1306.5 | 1130.8 | 1073.2 | 1102.9 |
| 47.5° | 1109.2 | 1106.5 | 911.9 | 873.1 | 831.7 |
| 50° | 876.7 | 905.6 | 723.5 | 651.5 | 410.0 |
| 52.5° | 684.8 | 695.6 | 596.5 | 416.3 | 269.4 |
| 55° | 588.4 | 559.6 | 516.3 | 330.7 | 230.7 |
| 57.5° | 522.6 | 486.6 | 457.7 | 307.3 | 210.8 |
| 60° | 476.7 | 436.1 | 414.5 | 291.9 | 193.7 |
| 62.5° | 424.4 | 392.9 | 384.7 | 278.4 | 178.4 |
| 65° | 374.8 | 350.5 | 349.6 | 265.8 | 164.0 |
| 67.5° | 325.3 | 311.8 | 315.4 | 250.5 | 147.8 |
| 70° | 277.5 | 274.8 | 277.5 | 230.7 | 130.7 |
| 72.5° | 237.0 | 234.3 | 241.5 | 205.4 | 111.7 |
| 75° | 199.1 | 196.4 | 204.5 | 176.6 | 95.5 |
| 77.5° | 158.6 | 160.4 | 165.8 | 146.9 | 80.2 |
| 80° | 123.4 | 123.4 | 129.8 | 115.3 | 65.8 |
| 82.5° | 88.3 | 89.2 | 92.8 | 84.7 | 51.4 |
| 85° | 54.1 | 54.1 | 56.8 | 55.9 | 36.0 |
| 87.5° | 18.0 | 20.7 | 24.3 | 26.1 | 18.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P893755
 CATALOG NUMBER: 4MB-6SL-LVRA-UNV-L840

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 | 16.81 | 18.17 | 17.18 | 18.48 | 18.79 | 13.15 | 14.50 | 13.51 | 14.81 | 15.13 |
| | 3H | 18.55 | 19.76 | 18.93 | 20.09 | 20.45 | 15.12 | 16.33 | 15.50 | 16.66 | 17.02 |
| | 4H | 19.22 | 20.35 | 19.62 | 20.70 | 21.08 | 15.83 | 16.95 | 16.23 | 17.30 | 17.69 |
| | 6H | 19.73 | 20.77 | 20.14 | 21.14 | 21.53 | 16.35 | 17.39 | 16.76 | 17.76 | 18.15 |
| | 8H | 19.90 | 20.89 | 20.33 | 21.28 | 21.68 | 16.53 | 17.52 | 16.96 | 17.91 | 18.31 |
| | 12H | 20.01 | 20.95 | 20.44 | 21.34 | 21.77 | 16.67 | 17.62 | 17.11 | 18.00 | 18.43 |
| 4H | 2H | 17.34 | 18.47 | 17.75 | 18.82 | 19.20 | 14.77 | 15.89 | 15.17 | 16.25 | 16.63 |
| | 3H | 19.32 | 20.25 | 19.73 | 20.65 | 21.06 | 16.95 | 17.88 | 17.36 | 18.28 | 18.68 |
| | 4H | 20.12 | 20.96 | 20.56 | 21.38 | 21.82 | 17.83 | 18.66 | 18.26 | 19.08 | 19.52 |
| | 6H | 20.77 | 21.49 | 21.23 | 21.94 | 22.40 | 18.47 | 19.19 | 18.93 | 19.64 | 20.10 |
| | 8H | 20.99 | 21.66 | 21.45 | 22.11 | 22.58 | 18.68 | 19.35 | 19.14 | 19.80 | 20.27 |
| | 12H | 21.14 | 21.74 | 21.62 | 22.22 | 22.69 | 18.83 | 19.44 | 19.32 | 19.92 | 20.39 |
| 8H | 4H | 20.41 | 21.08 | 20.87 | 21.53 | 22.00 | 18.47 | 19.15 | 18.94 | 19.60 | 20.07 |
| | 6H | 21.19 | 21.75 | 21.69 | 22.24 | 22.72 | 19.34 | 19.89 | 19.84 | 20.39 | 20.87 |
| | 8H | 21.49 | 21.99 | 22.01 | 22.50 | 23.00 | 19.66 | 20.16 | 20.18 | 20.68 | 21.17 |
| | 12H | 21.73 | 22.17 | 22.24 | 22.66 | 23.23 | 19.93 | 20.37 | 20.44 | 20.86 | 21.43 |
| 12H | 4H | 20.42 | 21.02 | 20.91 | 21.51 | 21.98 | 18.55 | 19.15 | 19.03 | 19.63 | 20.10 |
| | 6H | 21.24 | 21.74 | 21.76 | 22.26 | 22.75 | 19.47 | 19.97 | 19.99 | 20.49 | 20.98 |
| | 8H | 21.61 | 22.05 | 22.12 | 22.54 | 23.11 | 19.89 | 20.33 | 20.40 | 20.82 | 21.39 |