

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: P893745

Luminaire Tested: 4MB-6SL-LVR-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893745
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-6SL-LVR-UNV-L830
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

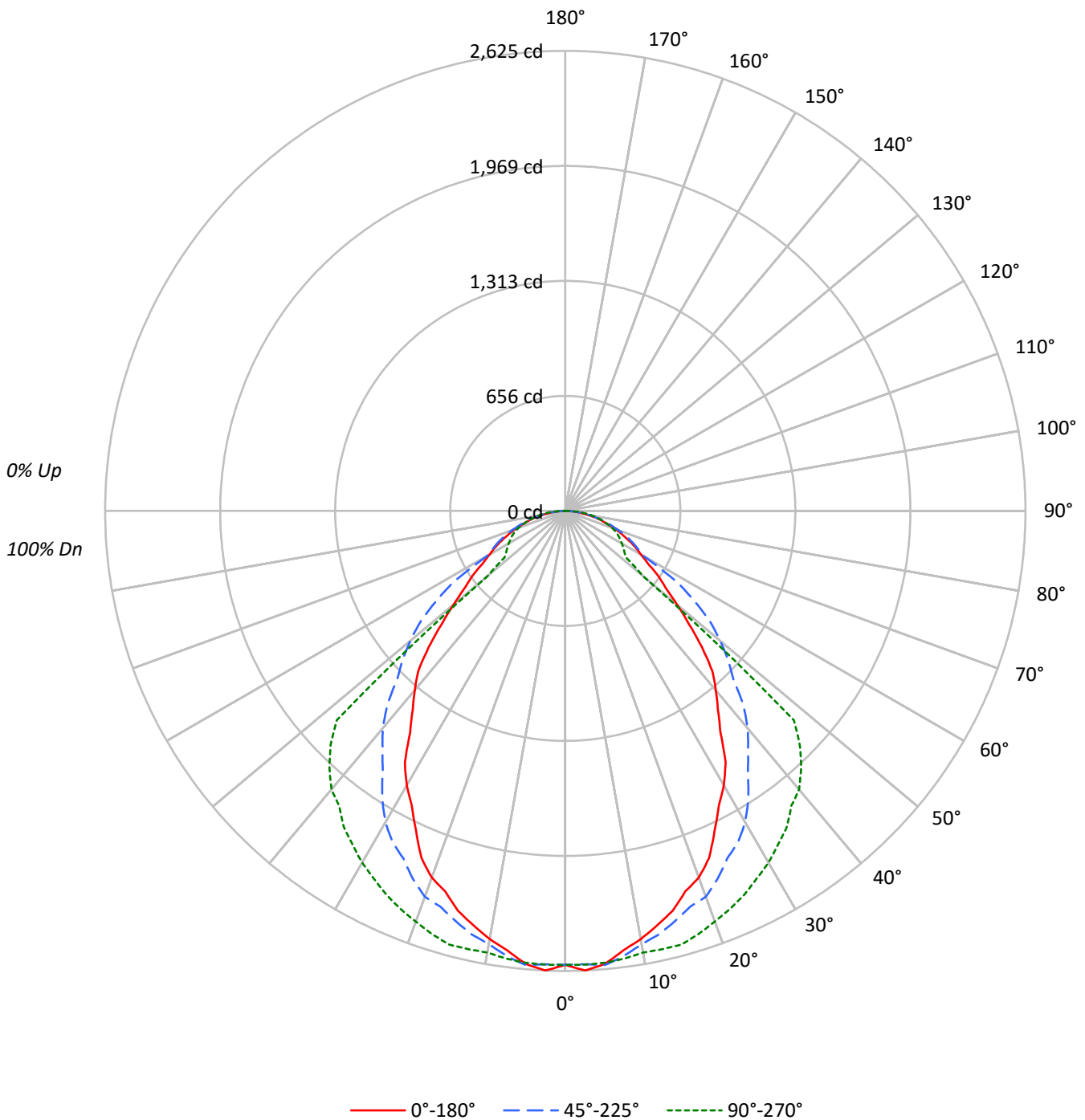
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5528.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.33 / 1.27
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

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CATALOG NUMBER: 4MB-6SL-LVR-UNV-L830

Luminous Intensity Polar Plot





TEST NUMBER: P893745

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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° | 18431 | 18431 | 18431 |
| 5° | 18530 | 18577 | 18483 |
| 10° | 17922 | 18132 | 18486 |
| 15° | 17405 | 17843 | 18867 |
| 20° | 16859 | 17740 | 18883 |
| 25° | 15818 | 17168 | 18965 |
| 30° | 14858 | 16859 | 19043 |
| 35° | 13399 | 15766 | 19133 |
| 40° | 12411 | 15040 | 19268 |
| 45° | 11103 | 13631 | 19050 |
| 50° | 9212 | 12770 | 6400 |
| 55° | 8025 | 11209 | 5121 |
| 60° | 7098 | 7304 | 5309 |
| 65° | 6749 | 7105 | 5635 |
| 70° | 6330 | 6715 | 5945 |
| 75° | 5891 | 6328 | 6111 |
| 80° | 5368 | 5962 | 6396 |
| 85° | 4751 | 5078 | 6915 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 19050 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 245.7 | 4.4 |
| 10°-20° | 691.2 | 12.5 |
| 20°-30° | 1016.8 | 18.4 |
| 30°-40° | 1162.8 | 21.0 |
| 40°-50° | 1101.1 | 19.9 |
| 50°-60° | 606.6 | 11.0 |
| 60°-70° | 389.5 | 7.0 |
| 70°-80° | 240.4 | 4.3 |
| 80°-90° | 74.0 | 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° | 1953.7 | 35.3 |
| 0°-40° | 3116.5 | 56.4 |
| 0°-60° | 4824.2 | 87.3 |
| 0°-90° | 5528.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5528.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2590 | 2590 | 2590 | 2590 | 2590 | |
| 5° | 2594 | 2616 | 2601 | 2601 | 2588 | 243 |
| 15° | 2363 | 2392 | 2422 | 2549 | 2561 | 663 |
| 25° | 2015 | 2105 | 2187 | 2330 | 2416 | 928 |
| 35° | 1543 | 1675 | 1815 | 2078 | 2203 | 975 |
| 45° | 1103 | 1208 | 1355 | 1738 | 1893 | 844 |
| 55° | 647 | 679 | 904 | 466 | 413 | 578 |
| 65° | 401 | 414 | 422 | 376 | 335 | 397 |
| 75° | 214 | 218 | 230 | 242 | 222 | 228 |
| 85° | 58 | 58 | 62 | 71 | 85 | 65 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P893745

CATALOG NUMBER: 4MB-6SL-LVR-UNV-L830

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2590.4 | 2590.4 | 2590.4 | 2590.4 | 2590.4 |
| 2.5° | 2624.8 | 2631.4 | 2589.1 | 2587.8 | 2591.8 |
| 5° | 2594.4 | 2615.6 | 2601.0 | 2601.0 | 2587.8 |
| 7.5° | 2529.6 | 2565.3 | 2561.3 | 2591.8 | 2577.2 |
| 10° | 2480.6 | 2509.7 | 2509.7 | 2589.1 | 2558.7 |
| 12.5° | 2422.4 | 2455.5 | 2474.0 | 2557.4 | 2561.3 |
| 15° | 2362.9 | 2392.0 | 2422.4 | 2549.4 | 2561.3 |
| 17.5° | 2276.9 | 2329.8 | 2368.2 | 2492.5 | 2530.9 |
| 20° | 2226.6 | 2258.4 | 2343.0 | 2443.6 | 2493.9 |
| 22.5° | 2143.3 | 2189.6 | 2271.6 | 2384.0 | 2458.1 |
| 25° | 2014.9 | 2104.9 | 2186.9 | 2329.8 | 2415.8 |
| 27.5° | 1895.9 | 1963.3 | 2132.7 | 2283.5 | 2365.5 |
| 30° | 1808.5 | 1861.5 | 2052.0 | 2216.0 | 2317.9 |
| 32.5° | 1702.7 | 1788.7 | 1943.5 | 2149.9 | 2258.4 |
| 35° | 1542.6 | 1674.9 | 1815.2 | 2078.4 | 2202.8 |
| 37.5° | 1430.2 | 1521.4 | 1712.0 | 2004.3 | 2119.4 |
| 40° | 1336.2 | 1419.6 | 1619.3 | 1911.7 | 2074.5 |
| 42.5° | 1242.3 | 1309.8 | 1502.9 | 1842.9 | 1991.1 |
| 45° | 1103.4 | 1207.9 | 1354.7 | 1738.4 | 1893.2 |
| 47.5° | 957.9 | 1069.0 | 1258.2 | 1649.8 | 1768.8 |
| 50° | 832.2 | 920.8 | 1153.7 | 1473.8 | 578.2 |
| 52.5° | 722.4 | 804.4 | 1042.5 | 533.2 | 436.6 |
| 55° | 646.9 | 678.7 | 903.6 | 465.7 | 412.8 |
| 57.5° | 557.0 | 608.6 | 758.1 | 443.2 | 391.6 |
| 60° | 498.8 | 521.3 | 513.3 | 420.7 | 373.1 |
| 62.5° | 452.5 | 468.3 | 465.7 | 398.2 | 351.9 |
| 65° | 400.9 | 414.1 | 422.0 | 375.7 | 334.7 |
| 67.5° | 349.3 | 361.2 | 373.1 | 347.9 | 310.9 |
| 70° | 304.3 | 312.2 | 322.8 | 314.9 | 285.8 |
| 72.5° | 258.0 | 267.2 | 273.9 | 280.5 | 252.7 |
| 75° | 214.3 | 218.3 | 230.2 | 242.1 | 222.3 |
| 77.5° | 174.6 | 178.6 | 186.5 | 199.8 | 189.2 |
| 80° | 131.0 | 134.9 | 145.5 | 156.1 | 156.1 |
| 82.5° | 92.6 | 95.3 | 101.9 | 116.4 | 123.0 |
| 85° | 58.2 | 58.2 | 62.2 | 71.4 | 84.7 |
| 87.5° | 22.5 | 22.5 | 26.5 | 31.8 | 42.3 |
| 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 | 18.07 | 19.56 | 18.44 | 19.87 | 20.19 | 15.88 | 17.36 | 16.24 | 17.67 | 17.99 |
| | 3H | 19.60 | 20.93 | 19.98 | 21.26 | 21.62 | 18.21 | 19.53 | 18.59 | 19.86 | 20.22 |
| | 4H | 20.19 | 21.44 | 20.59 | 21.79 | 22.16 | 19.16 | 20.40 | 19.56 | 20.75 | 21.13 |
| | 6H | 20.65 | 21.80 | 21.06 | 22.16 | 22.56 | 19.94 | 21.09 | 20.35 | 21.46 | 21.85 |
| | 8H | 20.79 | 21.89 | 21.22 | 22.28 | 22.68 | 20.25 | 21.35 | 20.68 | 21.74 | 22.14 |
| | 12H | 20.89 | 21.94 | 21.32 | 22.32 | 22.75 | 20.50 | 21.55 | 20.93 | 21.93 | 22.36 |
| 4H | 2H | 18.63 | 19.87 | 19.03 | 20.22 | 20.60 | 16.98 | 18.22 | 17.38 | 18.57 | 18.95 |
| | 3H | 20.40 | 21.43 | 20.81 | 21.83 | 22.23 | 19.43 | 20.46 | 19.84 | 20.86 | 21.26 |
| | 4H | 21.12 | 22.04 | 21.55 | 22.46 | 22.90 | 20.49 | 21.42 | 20.93 | 21.83 | 22.27 |
| | 6H | 21.70 | 22.51 | 22.16 | 22.95 | 23.41 | 21.38 | 22.19 | 21.84 | 22.63 | 23.09 |
| | 8H | 21.89 | 22.64 | 22.36 | 23.09 | 23.56 | 21.73 | 22.49 | 22.20 | 22.93 | 23.40 |
| | 12H | 22.03 | 22.70 | 22.51 | 23.18 | 23.65 | 22.02 | 22.69 | 22.50 | 23.17 | 23.64 |
| 8H | 4H | 21.42 | 22.18 | 21.89 | 22.62 | 23.09 | 20.88 | 21.63 | 21.34 | 22.08 | 22.54 |
| | 6H | 22.14 | 22.76 | 22.63 | 23.25 | 23.73 | 21.92 | 22.54 | 22.41 | 23.03 | 23.51 |
| | 8H | 22.40 | 22.96 | 22.91 | 23.47 | 23.96 | 22.36 | 22.92 | 22.87 | 23.43 | 23.92 |
| | 12H | 22.61 | 23.10 | 23.12 | 23.60 | 24.16 | 22.74 | 23.24 | 23.25 | 23.74 | 24.30 |
| 12H | 4H | 21.46 | 22.13 | 21.94 | 22.61 | 23.08 | 20.91 | 21.59 | 21.40 | 22.07 | 22.54 |
| | 6H | 22.20 | 22.76 | 22.71 | 23.27 | 23.76 | 21.98 | 22.54 | 22.49 | 23.05 | 23.54 |
| | 8H | 22.52 | 23.02 | 23.03 | 23.51 | 24.08 | 22.49 | 22.99 | 23.00 | 23.48 | 24.04 |