

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: P894618

Luminaire Tested: 8TMB-14HL-LVRA-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894618
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: 8TMB-14HL-LVRA-UNV-L935
Description: 14000 Lumen 8FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

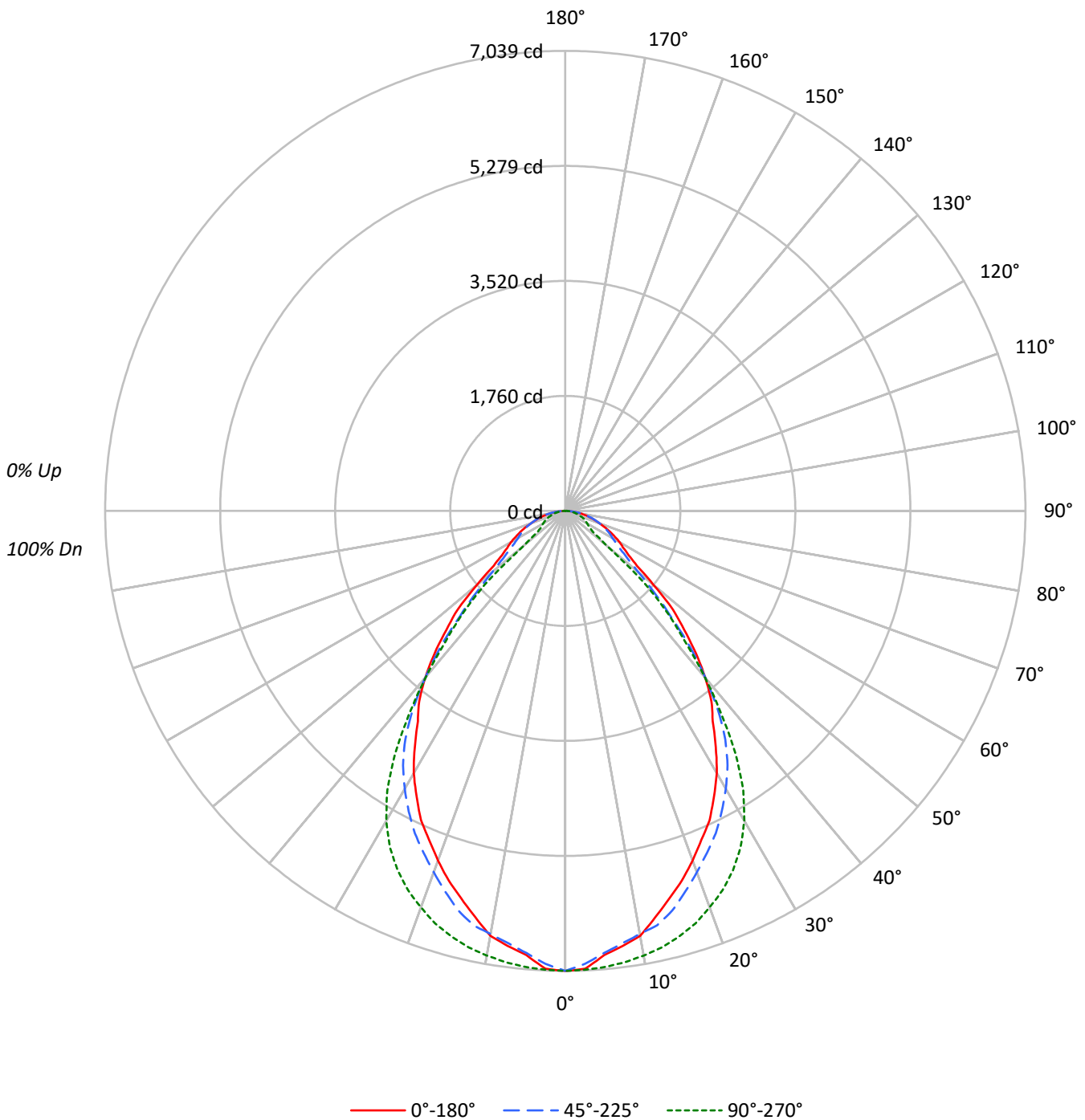
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11424.0 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')
CIE Type: Direct

Input Watts (W): 103.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 5.03
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 8TMB-14HL-LVRA-UNV-L935

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 24975 | 24975 | 24975 |
| 5° | 24302 | 24192 | 24948 |
| 10° | 23785 | 23681 | 24890 |
| 15° | 22558 | 23251 | 24750 |
| 20° | 21489 | 22215 | 24372 |
| 25° | 20441 | 21314 | 23750 |
| 30° | 18991 | 20121 | 22425 |
| 35° | 17028 | 18490 | 19669 |
| 40° | 15427 | 15461 | 15377 |
| 45° | 12899 | 11425 | 11142 |
| 50° | 9744 | 8041 | 4556 |
| 55° | 7329 | 6430 | 2873 |
| 60° | 6810 | 5922 | 2768 |
| 65° | 6336 | 5910 | 2772 |
| 70° | 5797 | 5797 | 2729 |
| 75° | 5496 | 5645 | 2636 |
| 80° | 5078 | 5337 | 2705 |
| 85° | 4433 | 4653 | 2956 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 13199 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 650.2 | 5.7 |
| 10°-20° | 1791.6 | 15.7 |
| 20°-30° | 2540.5 | 22.2 |
| 30°-40° | 2617.3 | 22.9 |
| 40°-50° | 1828.1 | 16.0 |
| 50°-60° | 877.2 | 7.7 |
| 60°-70° | 615.4 | 5.4 |
| 70°-80° | 384.8 | 3.4 |
| 80°-90° | 119.0 | 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° | 4982.3 | 43.6 |
| 0°-40° | 7599.6 | 66.5 |
| 0°-60° | 10304.8 | 90.2 |
| 0°-90° | 11424.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 11424.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 7039 | 7039 | 7039 | 7039 | 7039 | |
| 5° | 6823 | 6814 | 6792 | 6970 | 7004 | 646 |
| 15° | 6141 | 6186 | 6330 | 6511 | 6738 | 1729 |
| 25° | 5221 | 5274 | 5444 | 5813 | 6067 | 2387 |
| 35° | 3931 | 4038 | 4269 | 4358 | 4541 | 2477 |
| 45° | 2571 | 2630 | 2277 | 2161 | 2220 | 1981 |
| 55° | 1185 | 1127 | 1040 | 666 | 464 | 1110 |
| 65° | 755 | 706 | 704 | 535 | 330 | 748 |
| 75° | 401 | 396 | 412 | 356 | 192 | 422 |
| 85° | 109 | 109 | 114 | 112 | 73 | 122 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P894618

CATALOG NUMBER: 8TMB-14HL-LVRA-UNV-L935

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 7039.0 | 7039.0 | 7039.0 | 7039.0 | 7039.0 |
| 2.5° | 7011.8 | 6990.0 | 6937.4 | 7033.5 | 7026.3 |
| 5° | 6823.1 | 6814.0 | 6792.3 | 6970.0 | 7004.5 |
| 7.5° | 6716.1 | 6697.9 | 6672.5 | 6868.5 | 6964.6 |
| 10° | 6601.8 | 6623.5 | 6572.7 | 6752.3 | 6908.4 |
| 12.5° | 6365.9 | 6424.0 | 6492.9 | 6632.6 | 6839.4 |
| 15° | 6141.0 | 6186.3 | 6329.6 | 6511.1 | 6737.8 |
| 17.5° | 5930.5 | 5983.1 | 6106.5 | 6378.6 | 6619.9 |
| 20° | 5691.1 | 5763.6 | 5883.4 | 6231.7 | 6454.8 |
| 22.5° | 5444.3 | 5511.5 | 5662.0 | 6035.7 | 6284.3 |
| 25° | 5221.2 | 5273.8 | 5444.3 | 5812.6 | 6066.6 |
| 27.5° | 4925.5 | 5023.4 | 5184.9 | 5540.5 | 5807.2 |
| 30° | 4635.2 | 4718.7 | 4911.0 | 5210.3 | 5473.4 |
| 32.5° | 4285.1 | 4406.6 | 4618.9 | 4847.5 | 5067.0 |
| 35° | 3931.3 | 4038.3 | 4268.7 | 4357.6 | 4540.9 |
| 37.5° | 3673.7 | 3702.7 | 3833.3 | 3822.5 | 3925.9 |
| 40° | 3330.8 | 3388.9 | 3338.1 | 3202.0 | 3319.9 |
| 42.5° | 2960.7 | 3029.7 | 2824.7 | 2666.8 | 2708.6 |
| 45° | 2570.7 | 2630.5 | 2276.8 | 2160.7 | 2220.5 |
| 47.5° | 2233.2 | 2227.8 | 1835.9 | 1757.9 | 1674.5 |
| 50° | 1765.2 | 1823.2 | 1456.8 | 1311.6 | 825.4 |
| 52.5° | 1378.8 | 1400.5 | 1201.0 | 838.1 | 542.4 |
| 55° | 1184.7 | 1126.6 | 1039.5 | 665.8 | 464.4 |
| 57.5° | 1052.2 | 979.7 | 921.6 | 618.6 | 424.5 |
| 60° | 959.7 | 878.1 | 834.5 | 587.8 | 390.0 |
| 62.5° | 854.5 | 791.0 | 774.7 | 560.6 | 359.2 |
| 65° | 754.7 | 705.7 | 703.9 | 535.2 | 330.2 |
| 67.5° | 654.9 | 627.7 | 635.0 | 504.3 | 297.5 |
| 70° | 558.8 | 553.3 | 558.8 | 464.4 | 263.1 |
| 72.5° | 477.1 | 471.7 | 486.2 | 413.6 | 225.0 |
| 75° | 400.9 | 395.5 | 411.8 | 355.6 | 192.3 |
| 77.5° | 319.3 | 322.9 | 333.8 | 295.7 | 161.5 |
| 80° | 248.5 | 248.5 | 261.2 | 232.2 | 132.4 |
| 82.5° | 177.8 | 179.6 | 186.9 | 170.5 | 103.4 |
| 85° | 108.9 | 108.9 | 114.3 | 112.5 | 72.6 |
| 87.5° | 36.3 | 41.7 | 49.0 | 52.6 | 36.3 |
| 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 | 16.83 | 18.18 | 17.19 | 18.49 | 18.81 | 13.16 | 14.51 | 13.52 | 14.82 | 15.14 |
| | 3H | 18.57 | 19.77 | 18.95 | 20.10 | 20.47 | 15.13 | 16.34 | 15.51 | 16.67 | 17.04 |
| | 4H | 19.24 | 20.36 | 19.64 | 20.71 | 21.10 | 15.84 | 16.97 | 16.24 | 17.32 | 17.70 |
| | 6H | 19.74 | 20.78 | 20.16 | 21.15 | 21.55 | 16.36 | 17.40 | 16.78 | 17.77 | 18.16 |
| | 8H | 19.91 | 20.90 | 20.34 | 21.29 | 21.70 | 16.55 | 17.53 | 16.98 | 17.92 | 18.33 |
| | 12H | 20.02 | 20.97 | 20.46 | 21.35 | 21.78 | 16.69 | 17.63 | 17.12 | 18.01 | 18.44 |
| 4H | 2H | 17.36 | 18.48 | 17.76 | 18.84 | 19.22 | 14.78 | 15.91 | 15.18 | 16.26 | 16.64 |
| | 3H | 19.33 | 20.26 | 19.75 | 20.67 | 21.07 | 16.96 | 17.89 | 17.37 | 18.29 | 18.70 |
| | 4H | 20.14 | 20.97 | 20.57 | 21.39 | 21.83 | 17.84 | 18.67 | 18.27 | 19.09 | 19.53 |
| | 6H | 20.78 | 21.50 | 21.24 | 21.95 | 22.41 | 18.48 | 19.21 | 18.94 | 19.65 | 20.12 |
| | 8H | 21.00 | 21.68 | 21.47 | 22.12 | 22.59 | 18.69 | 19.37 | 19.16 | 19.81 | 20.28 |
| | 12H | 21.15 | 21.75 | 21.64 | 22.24 | 22.71 | 18.85 | 19.45 | 19.33 | 19.93 | 20.40 |
| 8H | 4H | 20.42 | 21.10 | 20.89 | 21.54 | 22.01 | 18.49 | 19.16 | 18.96 | 19.61 | 20.08 |
| | 6H | 21.20 | 21.76 | 21.70 | 22.25 | 22.73 | 19.35 | 19.90 | 19.85 | 20.40 | 20.88 |
| | 8H | 21.51 | 22.00 | 22.03 | 22.52 | 23.01 | 19.68 | 20.18 | 20.20 | 20.69 | 21.18 |
| | 12H | 21.74 | 22.18 | 22.25 | 22.68 | 23.24 | 19.94 | 20.38 | 20.45 | 20.87 | 21.44 |
| 12H | 4H | 20.44 | 21.04 | 20.92 | 21.52 | 21.99 | 18.56 | 19.16 | 19.05 | 19.64 | 20.12 |
| | 6H | 21.26 | 21.76 | 21.78 | 22.27 | 22.76 | 19.49 | 19.99 | 20.01 | 20.50 | 20.99 |
| | 8H | 21.62 | 22.06 | 22.13 | 22.56 | 23.12 | 19.90 | 20.34 | 20.41 | 20.83 | 21.40 |