

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: P894808

Luminaire Tested: 8TMB-18HL-LVRA-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894808
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-18HL-LVRA-UNV-L850
Description: 18000 Lumen 8FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

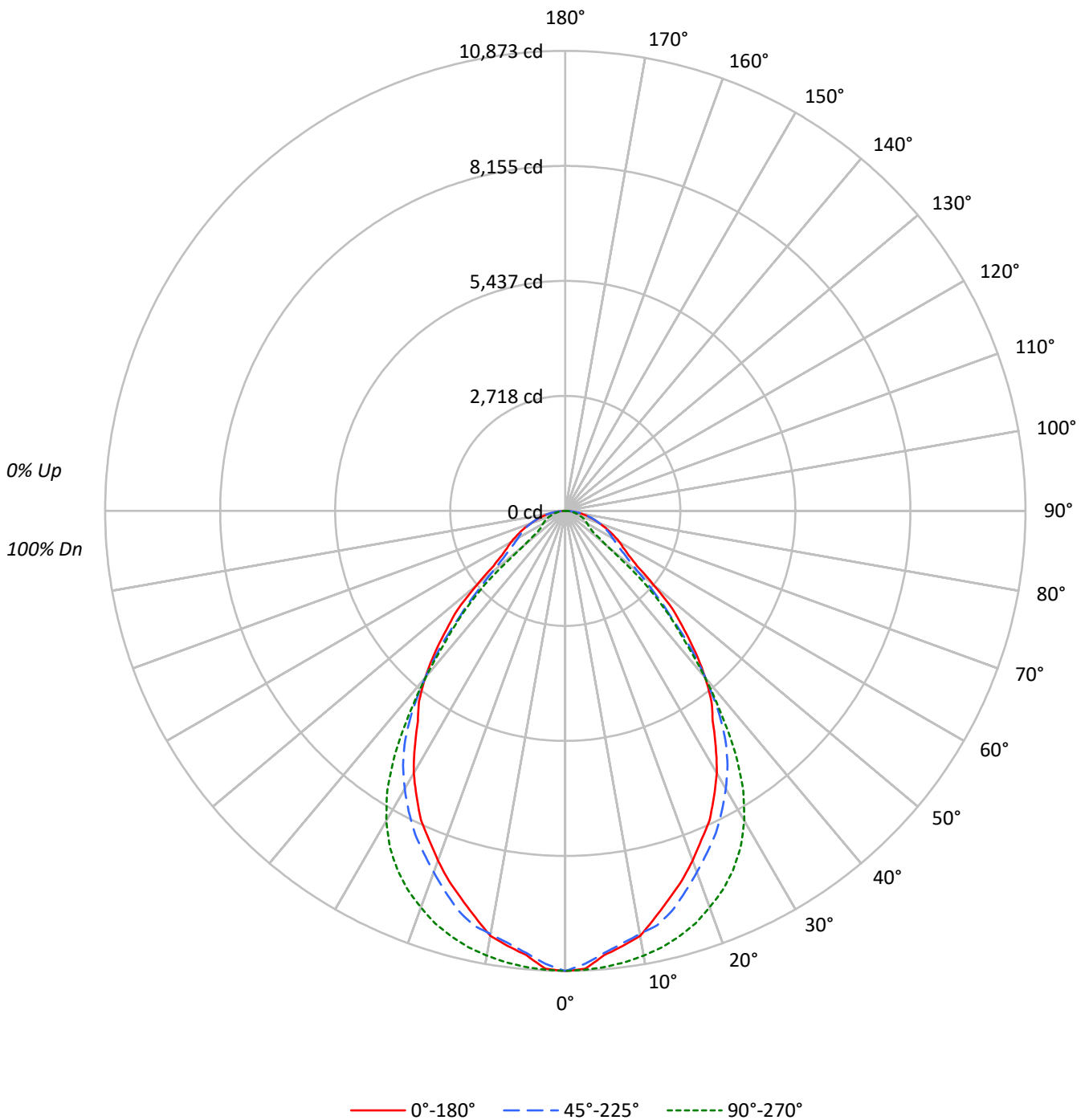
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17646.9 lumens
Efficiency: N/A
Efficacy: 130.9 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): 134.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.62
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P894808
CATALOG NUMBER: 8TMB-18HL-LVRA-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P894808
 CATALOG NUMBER: 8TMB-18HL-LVRA-UNV-L850

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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | |
| 2 | 103 | 96 | 91 | 86 | 101 | 95 | 90 | 85 | 91 | 87 | 83 | 88 | 85 | 82 | 85 | 82 | 80 | 78 | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 62 | | |
| 5 | 83 | 72 | 65 | 59 | 81 | 71 | 64 | 59 | 69 | 63 | 58 | 67 | 62 | 58 | 66 | 61 | 57 | 55 | | |
| 6 | 78 | 66 | 59 | 53 | 76 | 65 | 58 | 53 | 64 | 57 | 53 | 62 | 57 | 52 | 61 | 56 | 52 | 50 | | |
| 7 | 73 | 61 | 54 | 48 | 71 | 60 | 53 | 48 | 59 | 52 | 48 | 58 | 52 | 47 | 56 | 51 | 47 | 45 | | |
| 8 | 68 | 57 | 49 | 44 | 67 | 56 | 49 | 44 | 55 | 48 | 44 | 53 | 48 | 43 | 52 | 47 | 43 | 41 | | |
| 9 | 64 | 52 | 45 | 40 | 63 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 38 | | |
| 10 | 61 | 49 | 42 | 37 | 60 | 48 | 42 | 37 | 47 | 41 | 37 | 47 | 41 | 37 | 46 | 40 | 37 | 35 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 38580 | 38580 | 38580 |
| 5° | 37539 | 37370 | 38538 |
| 10° | 36742 | 36580 | 38448 |
| 15° | 34845 | 35916 | 38232 |
| 20° | 33194 | 34316 | 37649 |
| 25° | 31575 | 32925 | 36688 |
| 30° | 29335 | 31081 | 34640 |
| 35° | 26304 | 28562 | 30383 |
| 40° | 23831 | 23883 | 23754 |
| 45° | 19926 | 17648 | 17212 |
| 50° | 15051 | 12421 | 7038 |
| 55° | 11320 | 9933 | 4438 |
| 60° | 10520 | 9148 | 4276 |
| 65° | 9788 | 9129 | 4282 |
| 70° | 8954 | 8954 | 4215 |
| 75° | 8490 | 8720 | 4073 |
| 80° | 7844 | 8245 | 4181 |
| 85° | 6843 | 7189 | 4564 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 20390 cd/sqm



TEST NUMBER: P894808
 CATALOG NUMBER: 8TMB-18HL-LVRA-UNV-L850

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1004.4 | 5.7 |
| 10°-20° | 2767.5 | 15.7 |
| 20°-30° | 3924.4 | 22.2 |
| 30°-40° | 4043.0 | 22.9 |
| 40°-50° | 2823.9 | 16.0 |
| 50°-60° | 1355.0 | 7.7 |
| 60°-70° | 950.6 | 5.4 |
| 70°-80° | 594.3 | 3.4 |
| 80°-90° | 183.8 | 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° | 7696.3 | 43.6 |
| 0°-40° | 11739.3 | 66.5 |
| 0°-60° | 15918.1 | 90.2 |
| 0°-90° | 17646.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 17646.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0° | 10873 | 10873 | 10873 | 10873 | 10873 | |
| 5° | 10540 | 10526 | 10492 | 10767 | 10820 | 998 |
| 15° | 9486 | 9556 | 9778 | 10058 | 10408 | 2671 |
| 25° | 8065 | 8147 | 8410 | 8979 | 9371 | 3688 |
| 35° | 6073 | 6238 | 6594 | 6731 | 7014 | 3827 |
| 45° | 3971 | 4064 | 3517 | 3338 | 3430 | 3059 |
| 55° | 1830 | 1740 | 1606 | 1028 | 717 | 1715 |
| 65° | 1166 | 1090 | 1087 | 827 | 510 | 1155 |
| 75° | 619 | 611 | 636 | 549 | 297 | 652 |
| 85° | 168 | 168 | 177 | 174 | 112 | 188 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P894808
 CATALOG NUMBER: 8TMB-18HL-LVRA-UNV-L850

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------|---------|---------|---------|---------|
| 0° | 10873.3 | 10873.3 | 10873.3 | 10873.3 | 10873.3 |
| 2.5° | 10831.3 | 10797.7 | 10716.4 | 10864.9 | 10853.7 |
| 5° | 10539.8 | 10525.8 | 10492.2 | 10766.8 | 10820.1 |
| 7.5° | 10374.5 | 10346.5 | 10307.2 | 10609.9 | 10758.4 |
| 10° | 10198.0 | 10231.6 | 10153.1 | 10430.6 | 10671.6 |
| 12.5° | 9833.6 | 9923.3 | 10029.8 | 10245.6 | 10565.1 |
| 15° | 9486.1 | 9556.2 | 9777.6 | 10057.8 | 10408.1 |
| 17.5° | 9161.1 | 9242.3 | 9432.9 | 9853.3 | 10226.0 |
| 20° | 8791.1 | 8903.2 | 9088.2 | 9626.3 | 9971.0 |
| 22.5° | 8410.0 | 8513.7 | 8746.3 | 9323.6 | 9707.5 |
| 25° | 8065.3 | 8146.6 | 8410.0 | 8978.9 | 9371.2 |
| 27.5° | 7608.5 | 7759.9 | 8009.3 | 8558.5 | 8970.5 |
| 30° | 7160.1 | 7289.1 | 7586.1 | 8048.5 | 8454.9 |
| 32.5° | 6619.3 | 6807.0 | 7134.9 | 7488.0 | 7827.1 |
| 35° | 6072.8 | 6238.2 | 6594.1 | 6731.4 | 7014.4 |
| 37.5° | 5674.9 | 5719.7 | 5921.5 | 5904.7 | 6064.4 |
| 40° | 5145.2 | 5234.9 | 5156.4 | 4946.2 | 5128.4 |
| 42.5° | 4573.5 | 4680.0 | 4363.3 | 4119.5 | 4184.0 |
| 45° | 3971.0 | 4063.5 | 3517.0 | 3337.7 | 3430.1 |
| 47.5° | 3449.8 | 3441.4 | 2836.0 | 2715.5 | 2586.6 |
| 50° | 2726.7 | 2816.4 | 2250.3 | 2026.1 | 1275.1 |
| 52.5° | 2129.8 | 2163.5 | 1855.2 | 1294.7 | 837.9 |
| 55° | 1830.0 | 1740.3 | 1605.8 | 1028.5 | 717.4 |
| 57.5° | 1625.4 | 1513.3 | 1423.6 | 955.6 | 655.8 |
| 60° | 1482.5 | 1356.4 | 1289.1 | 908.0 | 602.5 |
| 62.5° | 1319.9 | 1221.8 | 1196.6 | 865.9 | 554.9 |
| 65° | 1165.8 | 1090.1 | 1087.3 | 826.7 | 510.0 |
| 67.5° | 1011.7 | 969.6 | 980.8 | 779.1 | 459.6 |
| 70° | 863.1 | 854.7 | 863.1 | 717.4 | 406.3 |
| 72.5° | 737.0 | 728.6 | 751.0 | 638.9 | 347.5 |
| 75° | 619.3 | 610.9 | 636.1 | 549.3 | 297.1 |
| 77.5° | 493.2 | 498.8 | 515.6 | 456.8 | 249.4 |
| 80° | 383.9 | 383.9 | 403.5 | 358.7 | 204.6 |
| 82.5° | 274.6 | 277.4 | 288.6 | 263.4 | 159.7 |
| 85° | 168.1 | 168.1 | 176.6 | 173.7 | 112.1 |
| 87.5° | 56.0 | 64.5 | 75.7 | 81.3 | 56.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P894808
 CATALOG NUMBER: 8TMB-18HL-LVRA-UNV-L850

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 | 18.34 | 19.69 | 18.70 | 20.00 | 20.32 | 14.67 | 16.02 | 15.03 | 16.34 | 16.65 |
| | 3H | 20.08 | 21.28 | 20.46 | 21.61 | 21.98 | 16.65 | 17.85 | 17.03 | 18.18 | 18.55 |
| | 4H | 20.75 | 21.87 | 21.15 | 22.23 | 22.61 | 17.35 | 18.48 | 17.75 | 18.83 | 19.21 |
| | 6H | 21.25 | 22.29 | 21.67 | 22.66 | 23.06 | 17.87 | 18.91 | 18.29 | 19.28 | 19.67 |
| | 8H | 21.43 | 22.41 | 21.85 | 22.80 | 23.21 | 18.06 | 19.04 | 18.49 | 19.43 | 19.84 |
| | 12H | 21.54 | 22.48 | 21.97 | 22.86 | 23.29 | 18.20 | 19.14 | 18.63 | 19.52 | 19.95 |
| 4H | 2H | 18.87 | 20.00 | 19.27 | 20.35 | 20.73 | 16.29 | 17.42 | 16.69 | 17.77 | 18.15 |
| | 3H | 20.85 | 21.78 | 21.26 | 22.18 | 22.58 | 18.47 | 19.40 | 18.88 | 19.80 | 20.21 |
| | 4H | 21.65 | 22.48 | 22.08 | 22.90 | 23.34 | 19.35 | 20.19 | 19.78 | 20.60 | 21.05 |
| | 6H | 22.29 | 23.01 | 22.75 | 23.46 | 23.92 | 19.99 | 20.72 | 20.45 | 21.16 | 21.63 |
| | 8H | 22.51 | 23.19 | 22.98 | 23.63 | 24.10 | 20.20 | 20.88 | 20.67 | 21.32 | 21.79 |
| | 12H | 22.66 | 23.26 | 23.15 | 23.75 | 24.22 | 20.36 | 20.96 | 20.84 | 21.44 | 21.91 |
| 8H | 4H | 21.93 | 22.61 | 22.40 | 23.05 | 23.52 | 20.00 | 20.68 | 20.47 | 21.12 | 21.59 |
| | 6H | 22.71 | 23.27 | 23.22 | 23.77 | 24.25 | 20.86 | 21.42 | 21.36 | 21.91 | 22.39 |
| | 8H | 23.02 | 23.52 | 23.54 | 24.03 | 24.52 | 21.19 | 21.69 | 21.71 | 22.20 | 22.69 |
| | 12H | 23.25 | 23.69 | 23.76 | 24.19 | 24.76 | 21.45 | 21.89 | 21.96 | 22.39 | 22.96 |
| 12H | 4H | 21.95 | 22.55 | 22.43 | 23.03 | 23.50 | 20.07 | 20.67 | 20.56 | 21.15 | 21.63 |
| | 6H | 22.77 | 23.27 | 23.29 | 23.78 | 24.27 | 21.00 | 21.50 | 21.52 | 22.01 | 22.50 |
| | 8H | 23.13 | 23.57 | 23.64 | 24.07 | 24.64 | 21.41 | 21.85 | 21.92 | 22.35 | 22.91 |