

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: P894728

Luminaire Tested: 8TMB-16HL-RFLW-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-16HL-RFLW-UNV-L850
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 5000K
Light Source: -
Ballast/Driver: -

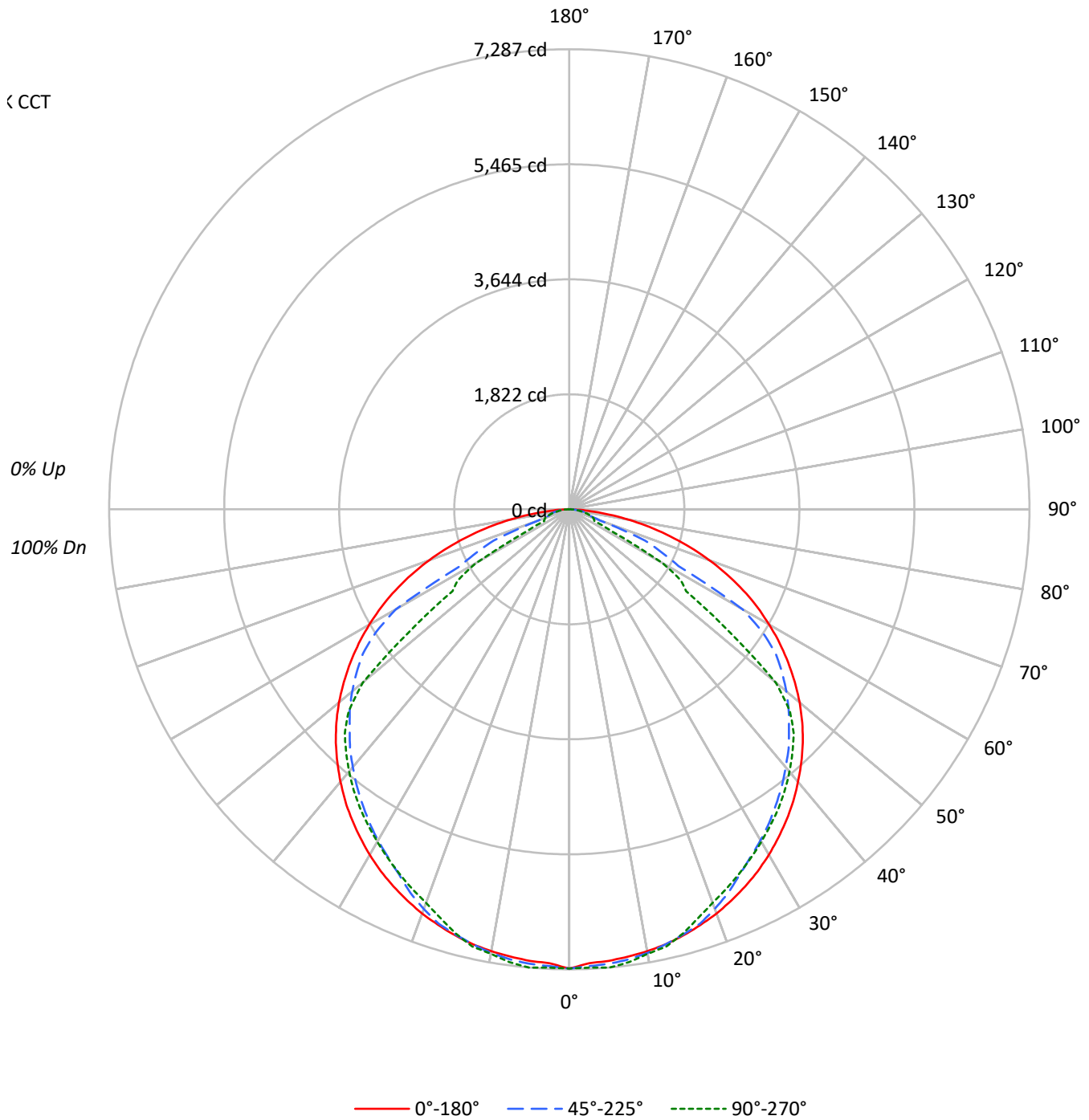
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18963.0 lumens
Efficiency: N/A
Efficacy: 163.8 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38
Luminous Opening: Rectangular (W 0.21' x L: 7.98' x H: 0')
CIE Type: Direct

Input Watts (W): 115.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P894728
CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P894728
 CATALOG NUMBER: 8TMB-16HL-RFLW-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 | 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 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 88 | 88 | 88 | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 85 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 78 | 75 | 75 | 75 | 75 | 73 |
| 3 | 92 | 82 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 65 | 65 | 65 | 62 |
| 4 | 85 | 73 | 65 | 59 | 82 | 72 | 64 | 58 | 70 | 63 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 56 | 56 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 56 | 50 | 62 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 49 | 49 | 49 | 47 |
| 6 | 72 | 59 | 51 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 55 | 48 | 43 | 53 | 48 | 43 | 43 | 43 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 38 | 38 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 34 | 34 | 34 | 34 | 32 |
| 9 | 58 | 45 | 37 | 32 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 31 | 31 | 31 | 29 |
| 10 | 54 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 28 | 28 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 47102 | 47102 | 47102 |
| 5° | 46670 | 46976 | 47369 |
| 10° | 46738 | 46915 | 47003 |
| 15° | 46840 | 46735 | 46630 |
| 20° | 46958 | 46418 | 45707 |
| 25° | 47086 | 45597 | 45501 |
| 30° | 47266 | 45288 | 45472 |
| 35° | 47436 | 45115 | 45664 |
| 40° | 47636 | 45059 | 45855 |
| 45° | 47891 | 45037 | 46044 |
| 50° | 47963 | 45208 | 43018 |
| 55° | 47754 | 45071 | 25509 |
| 60° | 47348 | 41078 | 22121 |
| 65° | 46573 | 24833 | 6697 |
| 70° | 44731 | 9845 | 7681 |
| 75° | 41444 | 8076 | 7851 |
| 80° | 35859 | 8525 | 7357 |
| 85° | 25484 | 7994 | 6991 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 47963 cd/sqm



TEST NUMBER: P894728
 CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L850

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 689.0 | 3.6 |
| 10°-20° | 1973.1 | 10.4 |
| 20°-30° | 2981.8 | 15.7 |
| 30°-40° | 3638.1 | 19.2 |
| 40°-50° | 3848.4 | 20.3 |
| 50°-60° | 3187.5 | 16.8 |
| 60°-70° | 1772.0 | 9.3 |
| 70°-80° | 718.3 | 3.8 |
| 80°-90° | 154.9 | 0.8 |
| 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° | 5643.9 | 29.8 |
| 0°-40° | 9282.0 | 48.9 |
| 0°-60° | 16317.9 | 86.1 |
| 0°-90° | 18963.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 18963.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 7274 | 7274 | 7274 | 7274 | 7274 | |
| 5° | 7180 | 7308 | 7227 | 7238 | 7287 | 683 |
| 15° | 6987 | 7095 | 6971 | 6967 | 6956 | 1974 |
| 25° | 6590 | 6637 | 6382 | 6341 | 6368 | 3040 |
| 35° | 6001 | 5927 | 5707 | 5730 | 5777 | 3756 |
| 45° | 5230 | 4961 | 4918 | 4979 | 5028 | 4031 |
| 55° | 4230 | 3943 | 3992 | 2739 | 2260 | 3779 |
| 65° | 3040 | 2786 | 1621 | 545 | 437 | 2998 |
| 75° | 1656 | 924 | 323 | 318 | 314 | 1749 |
| 85° | 343 | 114 | 108 | 99 | 94 | 431 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P894728
 CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L850

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 7273.9 | 7273.9 | 7273.9 | 7273.9 | 7273.9 |
| 2.5° | 7195.5 | 7321.0 | 7242.5 | 7258.2 | 7265.0 |
| 5° | 7179.8 | 7307.6 | 7226.9 | 7238.1 | 7287.4 |
| 7.5° | 7146.2 | 7276.2 | 7191.0 | 7197.7 | 7235.8 |
| 10° | 7108.1 | 7226.9 | 7135.0 | 7123.7 | 7148.4 |
| 12.5° | 7056.5 | 7164.1 | 7056.5 | 7061.0 | 7092.4 |
| 15° | 6987.0 | 7094.6 | 6971.3 | 6966.8 | 6955.6 |
| 17.5° | 6904.1 | 7004.9 | 6883.9 | 6812.2 | 6787.5 |
| 20° | 6814.4 | 6892.9 | 6736.0 | 6626.1 | 6632.8 |
| 22.5° | 6706.8 | 6774.1 | 6576.8 | 6475.9 | 6505.1 |
| 25° | 6590.2 | 6637.3 | 6381.8 | 6341.4 | 6368.3 |
| 27.5° | 6462.5 | 6498.3 | 6213.7 | 6204.7 | 6227.1 |
| 30° | 6321.3 | 6334.7 | 6056.8 | 6052.3 | 6081.4 |
| 32.5° | 6164.3 | 6141.9 | 5888.6 | 5893.1 | 5931.2 |
| 35° | 6000.7 | 5926.7 | 5707.1 | 5729.5 | 5776.6 |
| 37.5° | 5828.1 | 5695.9 | 5527.7 | 5556.9 | 5608.4 |
| 40° | 5635.3 | 5456.0 | 5330.5 | 5375.3 | 5424.6 |
| 42.5° | 5438.1 | 5205.0 | 5139.9 | 5182.5 | 5229.6 |
| 45° | 5229.6 | 4960.6 | 4918.0 | 4978.6 | 5027.9 |
| 47.5° | 5003.2 | 4720.8 | 4714.0 | 4761.1 | 4738.7 |
| 50° | 4761.1 | 4472.0 | 4487.6 | 4424.9 | 4270.2 |
| 52.5° | 4501.1 | 4214.2 | 4245.6 | 3974.3 | 3212.2 |
| 55° | 4229.9 | 3942.9 | 3992.3 | 2739.2 | 2259.5 |
| 57.5° | 3951.9 | 3665.0 | 3633.6 | 2095.9 | 2093.6 |
| 60° | 3656.0 | 3382.5 | 3171.8 | 1851.5 | 1708.1 |
| 62.5° | 3357.9 | 3088.9 | 1947.9 | 1394.3 | 784.6 |
| 65° | 3039.6 | 2786.3 | 1620.7 | 544.7 | 437.1 |
| 67.5° | 2705.6 | 2479.2 | 1297.9 | 410.2 | 425.9 |
| 70° | 2362.6 | 2160.9 | 520.0 | 396.8 | 405.7 |
| 72.5° | 2012.9 | 1667.7 | 345.2 | 367.6 | 367.6 |
| 75° | 1656.5 | 923.5 | 322.8 | 318.3 | 313.8 |
| 77.5° | 1302.4 | 618.7 | 282.4 | 262.3 | 255.5 |
| 80° | 961.6 | 221.9 | 228.6 | 204.0 | 197.3 |
| 82.5° | 636.6 | 172.6 | 163.6 | 147.9 | 143.5 |
| 85° | 343.0 | 114.3 | 107.6 | 98.6 | 94.1 |
| 87.5° | 123.3 | 58.3 | 58.3 | 47.1 | 42.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P894728
 CATALOG NUMBER: 8TMB-16HL-RFLW-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 | 26.06 | 27.63 | 26.43 | 27.95 | 28.26 | 22.05 | 23.62 | 22.42 | 23.94 | 24.25 |
| | 3H | 28.07 | 29.48 | 28.45 | 29.80 | 30.16 | 22.18 | 23.59 | 22.56 | 23.92 | 24.28 |
| | 4H | 28.68 | 30.00 | 29.08 | 30.35 | 30.73 | 22.30 | 23.62 | 22.70 | 23.97 | 24.35 |
| | 6H | 29.08 | 30.30 | 29.49 | 30.66 | 31.06 | 22.41 | 23.63 | 22.82 | 23.99 | 24.39 |
| | 8H | 29.20 | 30.36 | 29.63 | 30.75 | 31.15 | 22.44 | 23.60 | 22.87 | 23.99 | 24.39 |
| | 12H | 29.27 | 30.38 | 29.70 | 30.76 | 31.19 | 22.47 | 23.58 | 22.90 | 23.96 | 24.39 |
| 4H | 2H | 26.19 | 27.51 | 26.59 | 27.86 | 28.24 | 22.78 | 24.10 | 23.18 | 24.44 | 24.82 |
| | 3H | 28.35 | 29.44 | 28.76 | 29.84 | 30.24 | 22.97 | 24.06 | 23.39 | 24.46 | 24.86 |
| | 4H | 29.01 | 29.98 | 29.44 | 30.40 | 30.84 | 23.13 | 24.11 | 23.56 | 24.52 | 24.96 |
| | 6H | 29.45 | 30.30 | 29.91 | 30.74 | 31.20 | 23.30 | 24.14 | 23.75 | 24.59 | 25.05 |
| | 8H | 29.59 | 30.39 | 30.06 | 30.83 | 31.30 | 23.35 | 24.14 | 23.81 | 24.58 | 25.05 |
| | 12H | 29.70 | 30.41 | 30.18 | 30.88 | 31.35 | 23.39 | 24.10 | 23.88 | 24.58 | 25.05 |
| 8H | 4H | 28.94 | 29.73 | 29.40 | 30.18 | 30.65 | 23.40 | 24.20 | 23.86 | 24.64 | 25.11 |
| | 6H | 29.38 | 30.04 | 29.88 | 30.53 | 31.01 | 23.61 | 24.26 | 24.11 | 24.76 | 25.23 |
| | 8H | 29.53 | 30.12 | 30.05 | 30.63 | 31.12 | 23.69 | 24.28 | 24.21 | 24.79 | 25.28 |
| | 12H | 29.66 | 30.19 | 30.17 | 30.68 | 31.24 | 23.78 | 24.30 | 24.29 | 24.79 | 25.36 |
| 12H | 4H | 28.92 | 29.62 | 29.40 | 30.10 | 30.57 | 23.42 | 24.12 | 23.90 | 24.60 | 25.07 |
| | 6H | 29.34 | 29.93 | 29.86 | 30.44 | 30.93 | 23.63 | 24.22 | 24.14 | 24.73 | 25.21 |
| | 8H | 29.52 | 30.04 | 30.02 | 30.53 | 31.09 | 23.75 | 24.27 | 24.26 | 24.76 | 25.33 |