

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: P894686

Luminaire Tested: 8TMB-16HL-FLT-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-16HL-FLT-UNV-L835
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

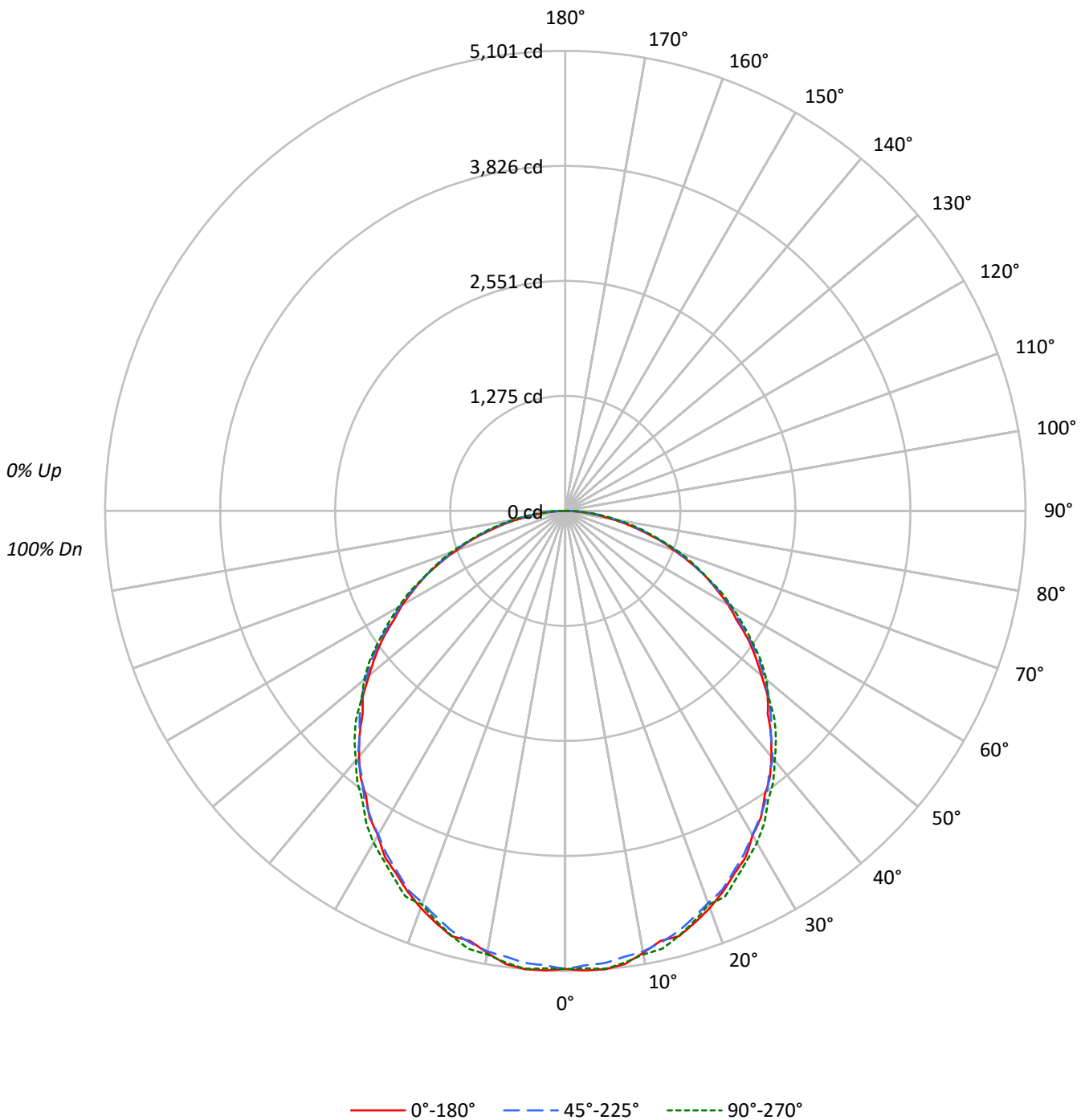
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14073.0 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')
CIE Type: Direct

Input Watts (W): 115.8
Input Voltage (V): 120
Input Current (A_{in}): 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

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CATALOG NUMBER: 8TMB-16HL-FLT-UNV-L835

Luminous Intensity Polar Plot





TEST NUMBER: P894686

CATALOG NUMBER: 8TMB-16HL-FLT-UNV-L835

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 | 109 | 104 | 99 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 86 | 86 | 86 | 84 |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 72 | 72 | 72 | 70 |
| 3 | 90 | 79 | 71 | 65 | 88 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 67 | 62 | 69 | 65 | 61 | 61 | 61 | 61 | 59 |
| 4 | 82 | 70 | 62 | 55 | 80 | 69 | 61 | 54 | 67 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 52 | 52 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 45 | 45 | 45 | 43 |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 40 | 40 | 40 | 38 |
| 7 | 65 | 51 | 43 | 36 | 63 | 51 | 42 | 36 | 49 | 41 | 36 | 48 | 41 | 36 | 46 | 40 | 35 | 35 | 35 | 35 | 33 |
| 8 | 60 | 47 | 38 | 33 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 44 | 37 | 32 | 42 | 36 | 32 | 32 | 32 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 55 | 42 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 29 | 29 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 26 | 26 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18021 | 18021 | 18021 |
| 5° | 18168 | 17926 | 18153 |
| 10° | 17920 | 17872 | 17991 |
| 15° | 17923 | 17738 | 17907 |
| 20° | 17686 | 17471 | 17537 |
| 25° | 17367 | 17273 | 17582 |
| 30° | 17016 | 16989 | 17411 |
| 35° | 16687 | 16830 | 16972 |
| 40° | 16462 | 16564 | 16726 |
| 45° | 15930 | 16172 | 16469 |
| 50° | 15671 | 15901 | 16059 |
| 55° | 15282 | 15472 | 15634 |
| 60° | 14806 | 15024 | 15164 |
| 65° | 14367 | 14423 | 14423 |
| 70° | 13361 | 13679 | 14021 |
| 75° | 12301 | 12782 | 13054 |
| 80° | 10848 | 11790 | 12194 |
| 85° | 9734 | 10898 | 11700 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 16469 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 480.7 | 3.4 |
| 10°-20° | 1370.1 | 9.7 |
| 20°-30° | 2055.0 | 14.6 |
| 30°-40° | 2440.6 | 17.3 |
| 40°-50° | 2498.9 | 17.8 |
| 50°-60° | 2238.8 | 15.9 |
| 60°-70° | 1700.8 | 12.1 |
| 70°-80° | 990.6 | 7.0 |
| 80°-90° | 297.5 | 2.1 |
| 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° | 3905.8 | 27.8 |
| 0°-40° | 6346.4 | 45.1 |
| 0°-60° | 11084.1 | 78.8 |
| 0°-90° | 14073.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 14073.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 5079 | 5079 | 5079 | 5079 | 5079 | |
| 5° | 5101 | 5081 | 5033 | 5064 | 5097 | 483 |
| 15° | 4879 | 4912 | 4829 | 4849 | 4875 | 1370 |
| 25° | 4436 | 4476 | 4412 | 4469 | 4491 | 2047 |
| 35° | 3853 | 3938 | 3886 | 3901 | 3918 | 2422 |
| 45° | 3175 | 3254 | 3223 | 3249 | 3282 | 2469 |
| 55° | 2470 | 2508 | 2501 | 2530 | 2527 | 2201 |
| 65° | 1711 | 1711 | 1718 | 1740 | 1718 | 1681 |
| 75° | 897 | 913 | 932 | 961 | 952 | 955 |
| 85° | 239 | 244 | 268 | 285 | 287 | 268 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P894686

CATALOG NUMBER: 8TMB-16HL-FLT-UNV-L835

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 5079.0 | 5079.0 | 5079.0 | 5079.0 | 5079.0 |
| 2.5° | 5100.9 | 5076.8 | 5043.9 | 5054.9 | 5076.8 |
| 5° | 5100.9 | 5081.2 | 5032.9 | 5063.6 | 5096.6 |
| 7.5° | 5068.0 | 5094.4 | 4989.1 | 4989.1 | 5050.5 |
| 10° | 4973.7 | 5024.2 | 4960.5 | 4953.9 | 4993.4 |
| 12.5° | 4883.7 | 4975.9 | 4901.3 | 4923.2 | 4971.5 |
| 15° | 4879.4 | 4912.3 | 4828.9 | 4848.6 | 4875.0 |
| 17.5° | 4785.0 | 4817.9 | 4728.0 | 4765.3 | 4765.3 |
| 20° | 4684.1 | 4690.7 | 4627.0 | 4708.2 | 4644.6 |
| 22.5° | 4567.8 | 4635.8 | 4548.1 | 4574.4 | 4629.2 |
| 25° | 4436.2 | 4475.7 | 4412.0 | 4469.1 | 4491.0 |
| 27.5° | 4328.7 | 4376.9 | 4289.2 | 4357.2 | 4363.8 |
| 30° | 4153.2 | 4205.8 | 4146.6 | 4190.5 | 4249.7 |
| 32.5° | 4034.7 | 4052.2 | 4021.5 | 4087.3 | 4104.9 |
| 35° | 3852.6 | 3938.1 | 3885.5 | 3900.8 | 3918.4 |
| 37.5° | 3725.3 | 3751.7 | 3705.6 | 3758.2 | 3786.8 |
| 40° | 3554.2 | 3593.7 | 3576.1 | 3584.9 | 3611.2 |
| 42.5° | 3376.5 | 3418.2 | 3372.1 | 3435.7 | 3455.5 |
| 45° | 3174.7 | 3253.6 | 3222.9 | 3249.2 | 3282.2 |
| 47.5° | 3043.0 | 3069.3 | 3060.6 | 3075.9 | 3054.0 |
| 50° | 2839.0 | 2865.3 | 2880.7 | 2900.4 | 2909.2 |
| 52.5° | 2656.9 | 2676.6 | 2705.1 | 2716.1 | 2735.9 |
| 55° | 2470.4 | 2507.7 | 2501.1 | 2529.6 | 2527.4 |
| 57.5° | 2253.2 | 2308.0 | 2290.5 | 2332.2 | 2332.2 |
| 60° | 2086.4 | 2095.2 | 2117.2 | 2136.9 | 2136.9 |
| 62.5° | 1893.4 | 1904.4 | 1915.3 | 1932.9 | 1946.0 |
| 65° | 1711.3 | 1711.3 | 1717.9 | 1739.8 | 1717.9 |
| 67.5° | 1500.7 | 1491.9 | 1513.8 | 1540.2 | 1538.0 |
| 70° | 1287.9 | 1298.8 | 1318.6 | 1351.5 | 1351.5 |
| 72.5° | 1105.8 | 1105.8 | 1127.7 | 1145.2 | 1143.0 |
| 75° | 897.3 | 912.7 | 932.4 | 961.0 | 952.2 |
| 77.5° | 710.8 | 721.8 | 754.7 | 781.0 | 783.2 |
| 80° | 530.9 | 541.9 | 577.0 | 603.3 | 596.8 |
| 82.5° | 370.8 | 386.1 | 419.0 | 438.8 | 436.6 |
| 85° | 239.1 | 243.5 | 267.7 | 285.2 | 287.4 |
| 87.5° | 109.7 | 118.5 | 136.0 | 142.6 | 142.6 |
| 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 | 21.58 | 23.21 | 21.94 | 23.53 | 23.84 | 21.68 | 23.32 | 22.05 | 23.63 | 23.95 |
| | 3H | 23.36 | 24.84 | 23.73 | 25.16 | 25.52 | 23.52 | 25.00 | 23.89 | 25.33 | 25.69 |
| | 4H | 24.02 | 25.42 | 24.42 | 25.76 | 26.14 | 24.22 | 25.61 | 24.61 | 25.96 | 26.34 |
| | 6H | 24.49 | 25.79 | 24.90 | 26.15 | 26.54 | 24.76 | 26.06 | 25.18 | 26.43 | 26.82 |
| | 8H | 24.64 | 25.88 | 25.07 | 26.27 | 26.67 | 24.95 | 26.19 | 25.38 | 26.58 | 26.98 |
| | 12H | 24.75 | 25.94 | 25.18 | 26.32 | 26.75 | 25.10 | 26.29 | 25.53 | 26.67 | 27.10 |
| 4H | 2H | 22.22 | 23.62 | 22.62 | 23.96 | 24.34 | 22.30 | 23.70 | 22.70 | 24.05 | 24.42 |
| | 3H | 24.22 | 25.40 | 24.63 | 25.79 | 26.19 | 24.37 | 25.54 | 24.78 | 25.94 | 26.34 |
| | 4H | 25.01 | 26.08 | 25.45 | 26.49 | 26.93 | 25.20 | 26.27 | 25.64 | 26.68 | 27.12 |
| | 6H | 25.61 | 26.54 | 26.07 | 26.98 | 27.44 | 25.89 | 26.82 | 26.35 | 27.26 | 27.72 |
| | 8H | 25.81 | 26.68 | 26.27 | 27.12 | 27.59 | 26.14 | 27.01 | 26.60 | 27.45 | 27.92 |
| | 12H | 25.96 | 26.75 | 26.44 | 27.22 | 27.69 | 26.34 | 27.12 | 26.82 | 27.59 | 28.06 |
| 8H | 4H | 25.35 | 26.22 | 25.81 | 26.66 | 27.13 | 25.52 | 26.39 | 25.98 | 26.83 | 27.30 |
| | 6H | 26.07 | 26.80 | 26.57 | 27.29 | 27.76 | 26.34 | 27.07 | 26.83 | 27.55 | 28.03 |
| | 8H | 26.35 | 27.00 | 26.85 | 27.50 | 27.99 | 26.67 | 27.32 | 27.18 | 27.83 | 28.32 |
| | 12H | 26.57 | 27.15 | 27.08 | 27.64 | 28.20 | 26.96 | 27.54 | 27.47 | 28.03 | 28.59 |
| 12H | 4H | 25.39 | 26.18 | 25.87 | 26.65 | 27.12 | 25.55 | 26.33 | 26.03 | 26.81 | 27.28 |
| | 6H | 26.15 | 26.80 | 26.65 | 27.30 | 27.79 | 26.40 | 27.05 | 26.91 | 27.56 | 28.04 |
| | 8H | 26.48 | 27.06 | 26.99 | 27.55 | 28.11 | 26.80 | 27.37 | 27.30 | 27.86 | 28.42 |