

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: P894710

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

Issue Date: 11/11/2024

**Test Information**

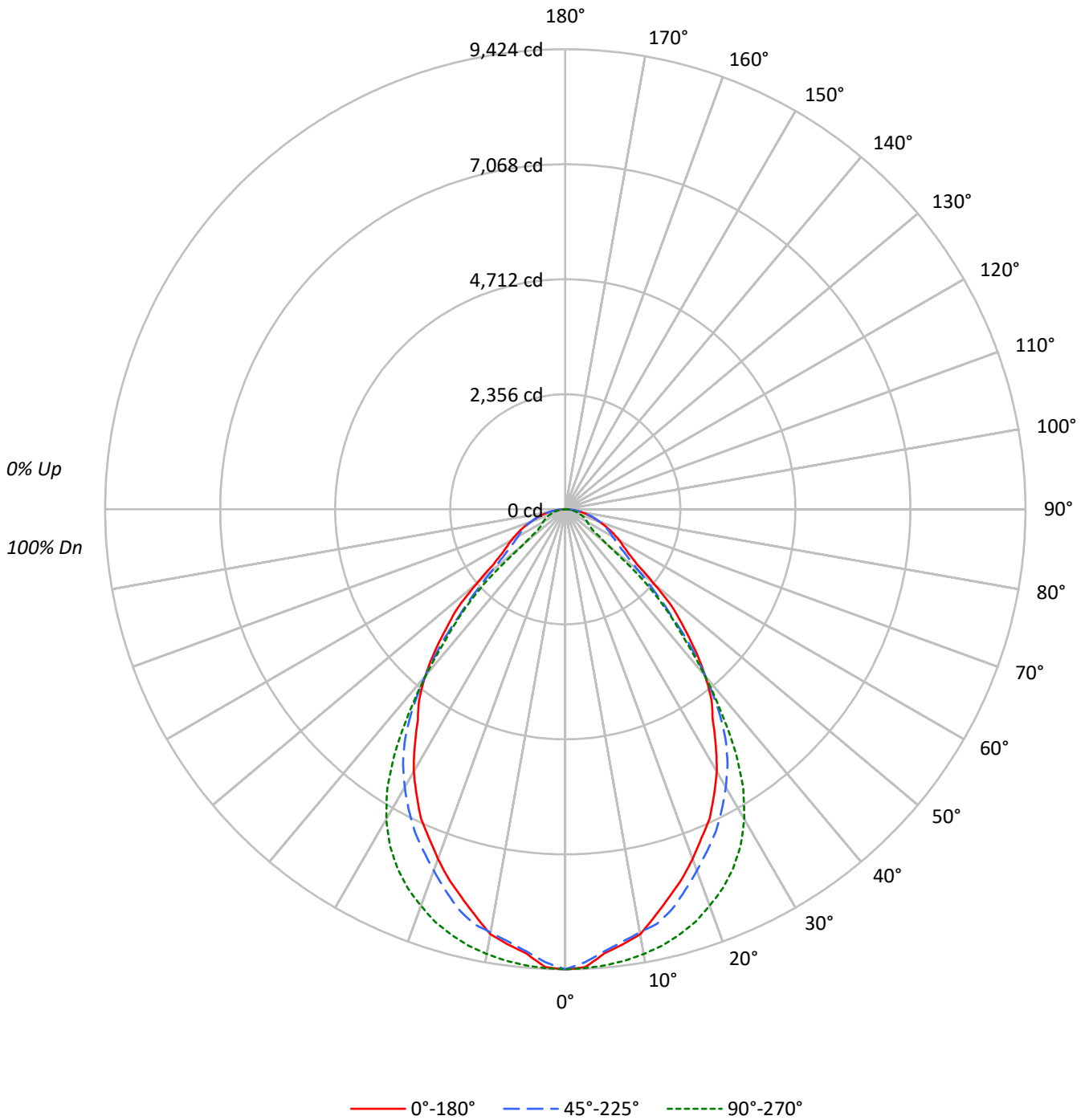
Test Method: LM-79-2019  
Report Number: P894710  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-LVRA-UNV-L835  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15295.0 lumens  
Efficiency: N/A  
Efficacy: 132.1 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): 115.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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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### 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 | 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°  | 33438 | 33438 | 33438 |
| 5°  | 32536 | 32389 | 33402 |
| 10° | 31845 | 31705 | 33324 |
| 15° | 30201 | 31129 | 33136 |
| 20° | 28770 | 29742 | 32631 |
| 25° | 27367 | 28536 | 31798 |
| 30° | 25425 | 26938 | 30023 |
| 35° | 22798 | 24755 | 26333 |
| 40° | 20655 | 20700 | 20588 |
| 45° | 17270 | 15296 | 14918 |
| 50° | 13045 | 10766 | 6100  |
| 55° | 9812  | 8610  | 3846  |
| 60° | 9118  | 7929  | 3706  |
| 65° | 8483  | 7912  | 3712  |
| 70° | 7761  | 7761  | 3654  |
| 75° | 7359  | 7559  | 3530  |
| 80° | 6800  | 7147  | 3623  |
| 85° | 5931  | 6229  | 3957  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 17672 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 870.5   | 5.7       |
| 10°-20°   | 2398.7  | 15.7      |
| 20°-30°   | 3401.3  | 22.2      |
| 30°-40°   | 3504.1  | 22.9      |
| 40°-50°   | 2447.5  | 16.0      |
| 50°-60°   | 1174.4  | 7.7       |
| 60°-70°   | 823.9   | 5.4       |
| 70°-80°   | 515.2   | 3.4       |
| 80°-90°   | 159.3   | 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°    | 6670.5  | 43.6      |
| 0°-40°    | 10174.6 | 66.5      |
| 0°-60°    | 13796.6 | 90.2      |
| 0°-90°    | 15295.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 15295.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 9424 | 9424  | 9424 | 9424  | 9424 |      |
| 5°  | 9135 | 9123  | 9094 | 9332  | 9378 | 865  |
| 15° | 8222 | 8282  | 8474 | 8717  | 9021 | 2315 |
| 25° | 6990 | 7061  | 7289 | 7782  | 8122 | 3196 |
| 35° | 5263 | 5407  | 5715 | 5834  | 6080 | 3317 |
| 45° | 3442 | 3522  | 3048 | 2893  | 2973 | 2652 |
| 55° | 1586 | 1508  | 1392 | 891   | 622  | 1486 |
| 65° | 1010 | 945   | 942  | 716   | 442  | 1001 |
| 75° | 537  | 530   | 551  | 476   | 258  | 565  |
| 85° | 146  | 146   | 153  | 151   | 97   | 163  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 9424.1 | 9424.1 | 9424.1 | 9424.1 | 9424.1 |
| 2.5°  | 9387.7 | 9358.5 | 9288.1 | 9416.8 | 9407.1 |
| 5°    | 9135.1 | 9122.9 | 9093.8 | 9331.8 | 9378.0 |
| 7.5°  | 8991.8 | 8967.5 | 8933.5 | 9195.8 | 9324.5 |
| 10°   | 8838.8 | 8867.9 | 8799.9 | 9040.4 | 9249.2 |
| 12.5° | 8523.0 | 8600.7 | 8693.0 | 8880.1 | 9156.9 |
| 15°   | 8221.8 | 8282.5 | 8474.4 | 8717.3 | 9020.9 |
| 17.5° | 7940.1 | 8010.5 | 8175.7 | 8540.0 | 8863.1 |
| 20°   | 7619.5 | 7716.6 | 7876.9 | 8343.3 | 8642.0 |
| 22.5° | 7289.1 | 7379.0 | 7580.6 | 8080.9 | 8413.7 |
| 25°   | 6990.4 | 7060.8 | 7289.1 | 7782.2 | 8122.2 |
| 27.5° | 6594.5 | 6725.6 | 6941.8 | 7417.9 | 7774.9 |
| 30°   | 6205.8 | 6317.6 | 6575.0 | 6975.8 | 7328.0 |
| 32.5° | 5737.1 | 5899.8 | 6184.0 | 6490.0 | 6783.9 |
| 35°   | 5263.4 | 5406.7 | 5715.2 | 5834.2 | 6079.5 |
| 37.5° | 4918.5 | 4957.4 | 5132.3 | 5117.7 | 5256.1 |
| 40°   | 4459.5 | 4537.2 | 4469.2 | 4287.0 | 4444.9 |
| 42.5° | 3964.0 | 4056.3 | 3781.8 | 3570.5 | 3626.3 |
| 45°   | 3441.8 | 3521.9 | 3048.3 | 2892.8 | 2973.0 |
| 47.5° | 2990.0 | 2982.7 | 2458.0 | 2353.6 | 2241.9 |
| 50°   | 2363.3 | 2441.0 | 1950.4 | 1756.1 | 1105.1 |
| 52.5° | 1846.0 | 1875.1 | 1607.9 | 1122.2 | 726.2  |
| 55°   | 1586.1 | 1508.3 | 1391.8 | 891.4  | 621.8  |
| 57.5° | 1408.8 | 1311.6 | 1233.9 | 828.3  | 568.4  |
| 60°   | 1284.9 | 1175.6 | 1117.3 | 787.0  | 522.2  |
| 62.5° | 1144.0 | 1059.0 | 1037.1 | 750.5  | 480.9  |
| 65°   | 1010.4 | 944.8  | 942.4  | 716.5  | 442.1  |
| 67.5° | 876.8  | 840.4  | 850.1  | 675.2  | 398.3  |
| 70°   | 748.1  | 740.8  | 748.1  | 621.8  | 352.2  |
| 72.5° | 638.8  | 631.5  | 650.9  | 553.8  | 301.2  |
| 75°   | 536.8  | 529.5  | 551.4  | 476.1  | 257.5  |
| 77.5° | 427.5  | 432.3  | 446.9  | 395.9  | 216.2  |
| 80°   | 332.8  | 332.8  | 349.8  | 310.9  | 177.3  |
| 82.5° | 238.0  | 240.5  | 250.2  | 228.3  | 138.4  |
| 85°   | 145.7  | 145.7  | 153.0  | 150.6  | 97.2   |
| 87.5° | 48.6   | 55.9   | 65.6   | 70.4   | 48.6   |
| 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 | 17.84            | 19.19 | 18.21 | 19.51 | 19.82 | 14.17          | 15.53 | 14.54 | 15.84 | 16.15 |
|                 | 3H   | 19.58            | 20.79 | 19.96 | 21.12 | 21.48 | 16.15          | 17.36 | 16.53 | 17.69 | 18.05 |
|                 | 4H   | 20.25            | 21.38 | 20.65 | 21.73 | 22.11 | 16.85          | 17.98 | 17.26 | 18.33 | 18.71 |
|                 | 6H   | 20.76            | 21.80 | 21.17 | 22.17 | 22.56 | 17.38          | 18.41 | 17.79 | 18.78 | 19.18 |
|                 | 8H   | 20.93            | 21.91 | 21.36 | 22.30 | 22.71 | 17.56          | 18.55 | 17.99 | 18.94 | 19.34 |
|                 | 12H  | 21.04            | 21.98 | 21.47 | 22.36 | 22.79 | 17.70          | 18.64 | 18.13 | 19.03 | 19.46 |
| 4H              | 2H   | 18.37            | 19.50 | 18.77 | 19.85 | 20.23 | 15.80          | 16.92 | 16.20 | 17.27 | 17.66 |
|                 | 3H   | 20.35            | 21.28 | 20.76 | 21.68 | 22.08 | 17.97          | 18.90 | 18.39 | 19.31 | 19.71 |
|                 | 4H   | 21.15            | 21.99 | 21.58 | 22.40 | 22.85 | 18.85          | 19.69 | 19.29 | 20.11 | 20.55 |
|                 | 6H   | 21.79            | 22.52 | 22.26 | 22.96 | 23.43 | 19.50          | 20.22 | 19.96 | 20.67 | 21.13 |
|                 | 8H   | 22.01            | 22.69 | 22.48 | 23.14 | 23.61 | 19.70          | 20.38 | 20.17 | 20.83 | 21.30 |
|                 | 12H  | 22.17            | 22.77 | 22.65 | 23.25 | 23.72 | 19.86          | 20.46 | 20.35 | 20.94 | 21.42 |
| 8H              | 4H   | 21.43            | 22.11 | 21.90 | 22.56 | 23.03 | 19.50          | 20.18 | 19.97 | 20.62 | 21.09 |
|                 | 6H   | 22.22            | 22.77 | 22.72 | 23.27 | 23.75 | 20.36          | 20.92 | 20.86 | 21.41 | 21.89 |
|                 | 8H   | 22.52            | 23.02 | 23.04 | 23.53 | 24.02 | 20.69          | 21.19 | 21.21 | 21.70 | 22.19 |
|                 | 12H  | 22.75            | 23.20 | 23.27 | 23.69 | 24.26 | 20.95          | 21.39 | 21.47 | 21.89 | 22.46 |
| 12H             | 4H   | 21.45            | 22.05 | 21.94 | 22.53 | 23.01 | 19.57          | 20.17 | 20.06 | 20.66 | 21.13 |
|                 | 6H   | 22.27            | 22.77 | 22.79 | 23.28 | 23.77 | 20.50          | 21.00 | 21.02 | 21.51 | 22.00 |
|                 | 8H   | 22.63            | 23.08 | 23.15 | 23.57 | 24.14 | 20.91          | 21.35 | 21.43 | 21.85 | 22.42 |