

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: P894630

Luminaire Tested: 8TMB-14HL-RFLW-UNV-L835

Issue Date: 11/11/2024

**Test Information**

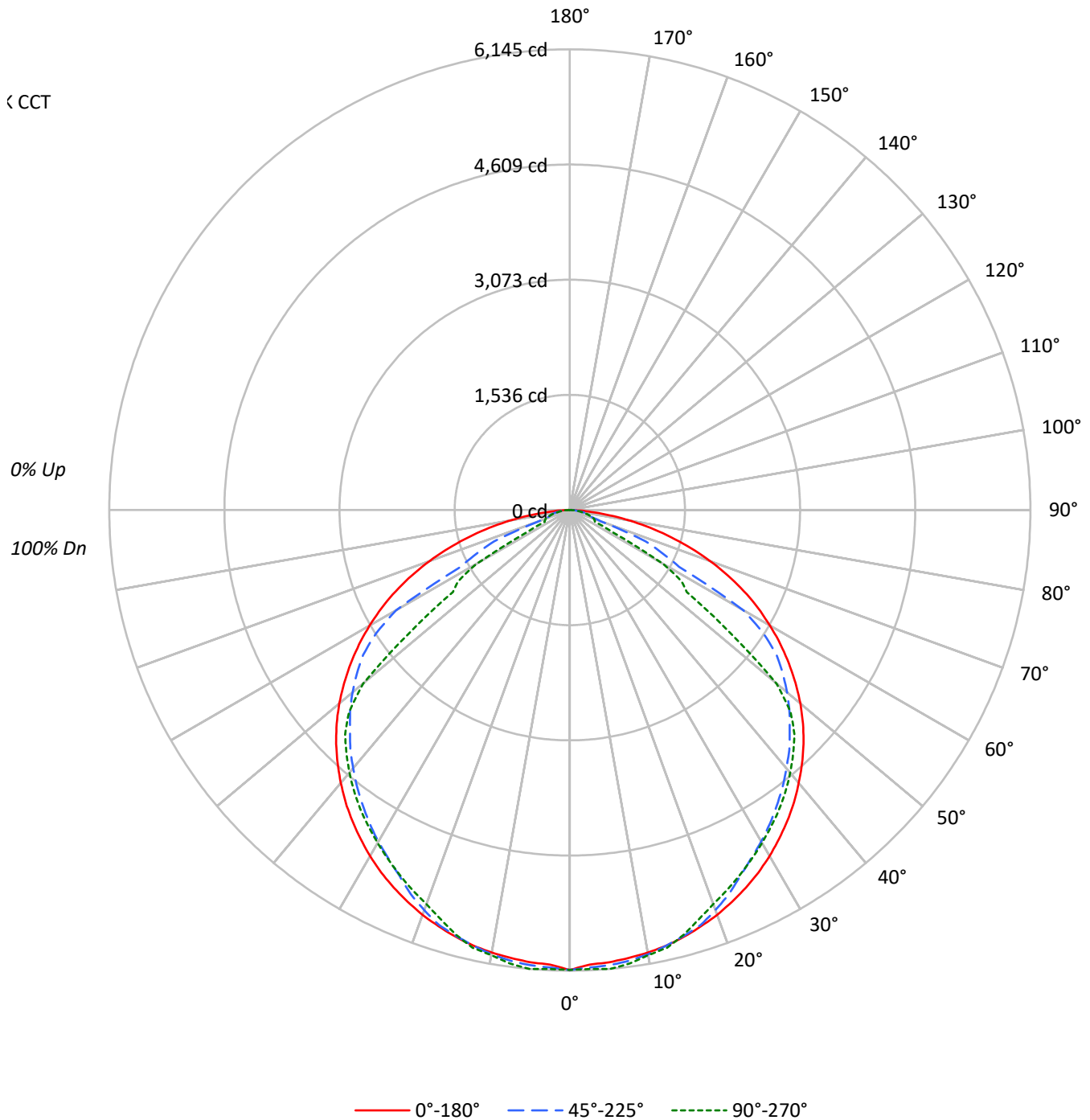
Test Method: LM-79-2019  
Report Number: P894630  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-14HL-RFLW-UNV-L835  
Description: 14000 Lumen 8FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3500K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15991.0 lumens  
Efficiency: N/A  
Efficacy: 154.4 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): 103.6  
Input Voltage (V): 120  
Input Current (Ain): 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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### 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   | 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°  | 39720 | 39720 | 39720 |
| 5°  | 39355 | 39613 | 39946 |
| 10° | 39413 | 39562 | 39637 |
| 15° | 39499 | 39410 | 39322 |
| 20° | 39599 | 39143 | 38544 |
| 25° | 39707 | 38451 | 38369 |
| 30° | 39858 | 38190 | 38345 |
| 35° | 40001 | 38044 | 38507 |
| 40° | 40170 | 37998 | 38668 |
| 45° | 40385 | 37979 | 38828 |
| 50° | 40446 | 38123 | 36277 |
| 55° | 40269 | 38008 | 21511 |
| 60° | 39928 | 34640 | 18654 |
| 65° | 39274 | 20941 | 5648  |
| 70° | 37720 | 8302  | 6477  |
| 75° | 34949 | 6810  | 6620  |
| 80° | 30239 | 7190  | 6201  |
| 85° | 21487 | 6739  | 5899  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 40446 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 581.0   | 3.6       |
| 10°-20°   | 1663.9  | 10.4      |
| 20°-30°   | 2514.5  | 15.7      |
| 30°-40°   | 3067.9  | 19.2      |
| 40°-50°   | 3245.3  | 20.3      |
| 50°-60°   | 2687.9  | 16.8      |
| 60°-70°   | 1494.2  | 9.3       |
| 70°-80°   | 605.7   | 3.8       |
| 80°-90°   | 130.6   | 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°    | 4759.4  | 29.8      |
| 0°-40°    | 7827.3  | 48.9      |
| 0°-60°    | 13760.5 | 86.1      |
| 0°-90°    | 15991.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 15991.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 6134 | 6134  | 6134 | 6134  | 6134 |      |
| 5°  | 6054 | 6162  | 6094 | 6104  | 6145 | 576  |
| 15° | 5892 | 5983  | 5879 | 5875  | 5866 | 1664 |
| 25° | 5557 | 5597  | 5382 | 5348  | 5370 | 2563 |
| 35° | 5060 | 4998  | 4813 | 4832  | 4871 | 3168 |
| 45° | 4410 | 4183  | 4147 | 4198  | 4240 | 3399 |
| 55° | 3567 | 3325  | 3367 | 2310  | 1905 | 3187 |
| 65° | 2563 | 2350  | 1367 | 459   | 369  | 2528 |
| 75° | 1397 | 779   | 272  | 268   | 265  | 1475 |
| 85° | 289  | 96    | 91   | 83    | 79   | 363  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 6133.9 | 6133.9 | 6133.9 | 6133.9 | 6133.9 |
| 2.5°  | 6067.8 | 6173.6 | 6107.5 | 6120.7 | 6126.4 |
| 5°    | 6054.5 | 6162.3 | 6094.2 | 6103.7 | 6145.3 |
| 7.5°  | 6026.2 | 6135.8 | 6064.0 | 6069.6 | 6101.8 |
| 10°   | 5994.0 | 6094.2 | 6016.7 | 6007.3 | 6028.1 |
| 12.5° | 5950.6 | 6041.3 | 5950.6 | 5954.3 | 5980.8 |
| 15°   | 5892.0 | 5982.7 | 5878.7 | 5874.9 | 5865.5 |
| 17.5° | 5822.0 | 5907.1 | 5805.0 | 5744.5 | 5723.7 |
| 20°   | 5746.4 | 5812.6 | 5680.3 | 5587.6 | 5593.3 |
| 22.5° | 5655.7 | 5712.4 | 5546.0 | 5461.0 | 5485.6 |
| 25°   | 5557.4 | 5597.1 | 5381.6 | 5347.6 | 5370.2 |
| 27.5° | 5449.6 | 5479.9 | 5239.8 | 5232.3 | 5251.2 |
| 30°   | 5330.6 | 5341.9 | 5107.5 | 5103.7 | 5128.3 |
| 32.5° | 5198.2 | 5179.3 | 4965.7 | 4969.5 | 5001.6 |
| 35°   | 5060.2 | 4997.9 | 4812.6 | 4831.5 | 4871.2 |
| 37.5° | 4914.7 | 4803.2 | 4661.4 | 4686.0 | 4729.4 |
| 40°   | 4752.1 | 4600.9 | 4495.1 | 4532.9 | 4574.4 |
| 42.5° | 4585.8 | 4389.2 | 4334.4 | 4370.3 | 4410.0 |
| 45°   | 4410.0 | 4183.2 | 4147.2 | 4198.3 | 4239.9 |
| 47.5° | 4219.1 | 3980.9 | 3975.2 | 4014.9 | 3996.0 |
| 50°   | 4014.9 | 3771.1 | 3784.3 | 3731.4 | 3601.0 |
| 52.5° | 3795.7 | 3553.7 | 3580.2 | 3351.4 | 2708.8 |
| 55°   | 3566.9 | 3325.0 | 3366.6 | 2309.9 | 1905.4 |
| 57.5° | 3332.5 | 3090.6 | 3064.1 | 1767.4 | 1765.5 |
| 60°   | 3083.0 | 2852.4 | 2674.7 | 1561.4 | 1440.4 |
| 62.5° | 2831.6 | 2604.8 | 1642.6 | 1175.7 | 661.6  |
| 65°   | 2563.2 | 2349.6 | 1366.7 | 459.3  | 368.6  |
| 67.5° | 2281.6 | 2090.6 | 1094.5 | 345.9  | 359.2  |
| 70°   | 1992.3 | 1822.2 | 438.5  | 334.6  | 342.1  |
| 72.5° | 1697.5 | 1406.4 | 291.1  | 310.0  | 310.0  |
| 75°   | 1396.9 | 778.8  | 272.2  | 268.4  | 264.6  |
| 77.5° | 1098.2 | 521.7  | 238.2  | 221.2  | 215.5  |
| 80°   | 810.9  | 187.1  | 192.8  | 172.0  | 166.3  |
| 82.5° | 536.8  | 145.6  | 138.0  | 124.8  | 121.0  |
| 85°   | 289.2  | 96.4   | 90.7   | 83.2   | 79.4   |
| 87.5° | 104.0  | 49.1   | 49.1   | 39.7   | 35.9   |
| 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 | 25.47            | 27.04 | 25.83 | 27.36 | 27.67 | 21.46          | 23.03 | 21.82 | 23.35 | 23.66 |
|                 | 3H   | 27.48            | 28.88 | 27.85 | 29.21 | 29.57 | 21.59          | 23.00 | 21.97 | 23.33 | 23.69 |
|                 | 4H   | 28.09            | 29.41 | 28.49 | 29.76 | 30.13 | 21.71          | 23.03 | 22.11 | 23.38 | 23.75 |
|                 | 6H   | 28.49            | 29.71 | 28.90 | 30.07 | 30.46 | 21.82          | 23.04 | 22.23 | 23.40 | 23.79 |
|                 | 8H   | 28.61            | 29.77 | 29.03 | 30.16 | 30.56 | 21.85          | 23.01 | 22.28 | 23.40 | 23.80 |
|                 | 12H  | 28.68            | 29.79 | 29.11 | 30.17 | 30.60 | 21.88          | 22.99 | 22.31 | 23.37 | 23.80 |
| 4H              | 2H   | 25.60            | 26.92 | 26.00 | 27.27 | 27.64 | 22.18          | 23.50 | 22.58 | 23.85 | 24.23 |
|                 | 3H   | 27.76            | 28.85 | 28.17 | 29.25 | 29.65 | 22.38          | 23.47 | 22.79 | 23.87 | 24.27 |
|                 | 4H   | 28.41            | 29.39 | 28.85 | 29.81 | 30.24 | 22.54          | 23.51 | 22.97 | 23.93 | 24.37 |
|                 | 6H   | 28.86            | 29.71 | 29.32 | 30.15 | 30.61 | 22.70          | 23.55 | 23.16 | 23.99 | 24.45 |
|                 | 8H   | 29.00            | 29.79 | 29.46 | 30.24 | 30.70 | 22.76          | 23.55 | 23.22 | 23.99 | 24.46 |
|                 | 12H  | 29.10            | 29.81 | 29.59 | 30.29 | 30.76 | 22.80          | 23.51 | 23.28 | 23.99 | 24.46 |
| 8H              | 4H   | 28.35            | 29.14 | 28.81 | 29.59 | 30.05 | 22.81          | 23.60 | 23.27 | 24.05 | 24.51 |
|                 | 6H   | 28.79            | 29.45 | 29.29 | 29.94 | 30.42 | 23.02          | 23.67 | 23.51 | 24.16 | 24.64 |
|                 | 8H   | 28.94            | 29.53 | 29.45 | 30.04 | 30.53 | 23.10          | 23.69 | 23.61 | 24.20 | 24.69 |
|                 | 12H  | 29.07            | 29.59 | 29.58 | 30.09 | 30.65 | 23.19          | 23.71 | 23.69 | 24.20 | 24.76 |
| 12H             | 4H   | 28.32            | 29.03 | 28.81 | 29.51 | 29.98 | 22.82          | 23.53 | 23.31 | 24.01 | 24.48 |
|                 | 6H   | 28.75            | 29.34 | 29.26 | 29.85 | 30.34 | 23.03          | 23.62 | 23.55 | 24.13 | 24.62 |
|                 | 8H   | 28.92            | 29.45 | 29.43 | 29.94 | 30.50 | 23.16          | 23.68 | 23.67 | 24.17 | 24.74 |