

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: P894731

Luminaire Tested: 8TMB-16HL-RFLW-UNV-L940

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P894731  
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-L940  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 4000K  
Light Source: -  
Ballast/Driver: -

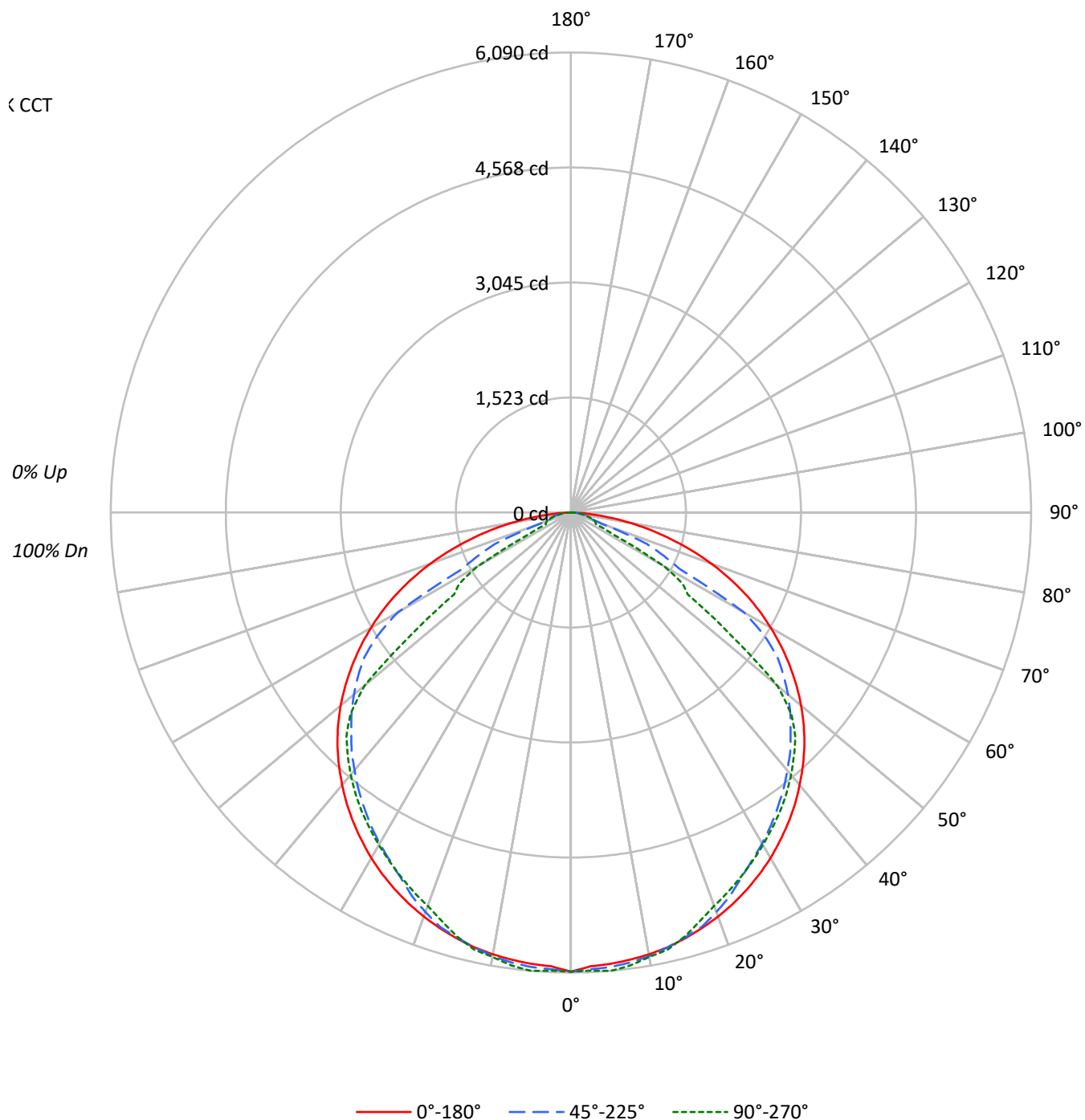
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15846.0 lumens  
Efficiency: N/A  
Efficacy: 136.8 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

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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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 | 100 |
| 1   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  |  | 95  | 93  | 91  |  | 92  | 90  | 88  | 86  |
| 2   | 101 | 93  | 87  | 82  | 98  | 91  | 85  | 81  | 88  | 83  | 79  |  | 85  | 81  | 77  |  | 82  | 78  | 75  | 73  |
| 3   | 92  | 82  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  |  | 75  | 70  | 66  |  | 73  | 68  | 65  | 62  |
| 4   | 85  | 73  | 65  | 59  | 82  | 72  | 64  | 58  | 70  | 63  | 57  |  | 67  | 61  | 57  |  | 65  | 60  | 56  | 54  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 56  | 50  | 62  | 55  | 50  |  | 61  | 54  | 49  |  | 59  | 53  | 49  | 47  |
| 6   | 72  | 59  | 51  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 44  |  | 55  | 48  | 43  |  | 53  | 48  | 43  | 41  |
| 7   | 67  | 54  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  |  | 50  | 43  | 39  |  | 49  | 43  | 38  | 36  |
| 8   | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  |  | 46  | 39  | 35  |  | 45  | 39  | 34  | 32  |
| 9   | 58  | 45  | 37  | 32  | 57  | 44  | 37  | 31  | 43  | 36  | 31  |  | 42  | 36  | 31  |  | 41  | 35  | 31  | 29  |
| 10  | 54  | 42  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 28  |  | 39  | 33  | 28  |  | 38  | 32  | 28  | 26  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 39360 | 39360 | 39360 |
| 5°  | 38999 | 39255 | 39583 |
| 10° | 39056 | 39204 | 39277 |
| 15° | 39141 | 39053 | 38965 |
| 20° | 39240 | 38788 | 38194 |
| 25° | 39347 | 38102 | 38022 |
| 30° | 39496 | 37844 | 37998 |
| 35° | 39639 | 37699 | 38158 |
| 40° | 39806 | 37653 | 38318 |
| 45° | 40019 | 37634 | 38475 |
| 50° | 40079 | 37778 | 35947 |
| 55° | 39904 | 37662 | 21316 |
| 60° | 39566 | 34326 | 18485 |
| 65° | 38918 | 20751 | 5597  |
| 70° | 37379 | 8228  | 6418  |
| 75° | 34632 | 6748  | 6560  |
| 80° | 29967 | 7126  | 6145  |
| 85° | 21294 | 6679  | 5847  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 50°

Luminance: 40079 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 575.8   | 3.6       |
| 10°-20°   | 1648.8  | 10.4      |
| 20°-30°   | 2491.7  | 15.7      |
| 30°-40°   | 3040.1  | 19.2      |
| 40°-50°   | 3215.8  | 20.3      |
| 50°-60°   | 2663.6  | 16.8      |
| 60°-70°   | 1480.7  | 9.3       |
| 70°-80°   | 600.2   | 3.8       |
| 80°-90°   | 129.4   | 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°    | 4716.2  | 29.8      |
| 0°-40°    | 7756.3  | 48.9      |
| 0°-60°    | 13635.7 | 86.1      |
| 0°-90°    | 15846.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 15846.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 6078 | 6078  | 6078 | 6078  | 6078 |      |
| 5°  | 6000 | 6106  | 6039 | 6048  | 6090 | 571  |
| 15° | 5838 | 5928  | 5825 | 5822  | 5812 | 1649 |
| 25° | 5507 | 5546  | 5333 | 5299  | 5322 | 2540 |
| 35° | 5014 | 4952  | 4769 | 4788  | 4827 | 3139 |
| 45° | 4370 | 4145  | 4110 | 4160  | 4201 | 3369 |
| 55° | 3535 | 3295  | 3336 | 2289  | 1888 | 3158 |
| 65° | 2540 | 2328  | 1354 | 455   | 365  | 2505 |
| 75° | 1384 | 772   | 270  | 266   | 262  | 1462 |
| 85° | 287  | 96    | 90   | 82    | 79   | 360  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 6078.3 | 6078.3 | 6078.3 | 6078.3 | 6078.3 |
| 2.5°  | 6012.7 | 6117.6 | 6052.1 | 6065.2 | 6070.8 |
| 5°    | 5999.6 | 6106.4 | 6039.0 | 6048.3 | 6089.5 |
| 7.5°  | 5971.5 | 6080.2 | 6009.0 | 6014.6 | 6046.5 |
| 10°   | 5939.7 | 6039.0 | 5962.2 | 5952.8 | 5973.4 |
| 12.5° | 5896.6 | 5986.5 | 5896.6 | 5900.3 | 5926.6 |
| 15°   | 5838.5 | 5928.4 | 5825.4 | 5821.7 | 5812.3 |
| 17.5° | 5769.2 | 5853.5 | 5752.4 | 5692.4 | 5671.8 |
| 20°   | 5694.3 | 5759.9 | 5628.7 | 5537.0 | 5542.6 |
| 22.5° | 5604.4 | 5660.6 | 5495.8 | 5411.5 | 5435.8 |
| 25°   | 5507.0 | 5546.3 | 5332.8 | 5299.1 | 5321.6 |
| 27.5° | 5400.2 | 5430.2 | 5192.3 | 5184.8 | 5203.5 |
| 30°   | 5282.2 | 5293.5 | 5061.2 | 5057.4 | 5081.8 |
| 32.5° | 5151.1 | 5132.4 | 4920.7 | 4924.4 | 4956.3 |
| 35°   | 5014.4 | 4952.5 | 4769.0 | 4787.7 | 4827.0 |
| 37.5° | 4870.1 | 4759.6 | 4619.1 | 4643.5 | 4686.6 |
| 40°   | 4709.0 | 4559.2 | 4454.3 | 4491.8 | 4533.0 |
| 42.5° | 4544.2 | 4349.4 | 4295.1 | 4330.7 | 4370.0 |
| 45°   | 4370.0 | 4145.2 | 4109.6 | 4160.2 | 4201.4 |
| 47.5° | 4180.8 | 3944.8 | 3939.2 | 3978.5 | 3959.8 |
| 50°   | 3978.5 | 3736.9 | 3750.0 | 3697.6 | 3568.3 |
| 52.5° | 3761.2 | 3521.5 | 3547.7 | 3321.1 | 2684.2 |
| 55°   | 3534.6 | 3294.8 | 3336.0 | 2289.0 | 1888.1 |
| 57.5° | 3302.3 | 3062.6 | 3036.3 | 1751.4 | 1749.5 |
| 60°   | 3055.1 | 2826.5 | 2650.5 | 1547.2 | 1427.3 |
| 62.5° | 2805.9 | 2581.2 | 1627.7 | 1165.1 | 655.6  |
| 65°   | 2540.0 | 2328.3 | 1354.3 | 455.2  | 365.3  |
| 67.5° | 2260.9 | 2071.7 | 1084.5 | 342.8  | 355.9  |
| 70°   | 1974.3 | 1805.7 | 434.6  | 331.5  | 339.0  |
| 72.5° | 1682.1 | 1393.6 | 288.5  | 307.2  | 307.2  |
| 75°   | 1384.2 | 771.7  | 269.7  | 266.0  | 262.2  |
| 77.5° | 1088.3 | 517.0  | 236.0  | 219.2  | 213.5  |
| 80°   | 803.6  | 185.4  | 191.1  | 170.5  | 164.8  |
| 82.5° | 532.0  | 144.2  | 136.7  | 123.6  | 119.9  |
| 85°   | 286.6  | 95.5   | 89.9   | 82.4   | 78.7   |
| 87.5° | 103.0  | 48.7   | 48.7   | 39.3   | 35.6   |
| 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 | 25.44            | 27.01 | 25.80 | 27.32 | 27.64 | 21.43          | 23.00 | 21.79 | 23.31 | 23.63 |
|                 | 3H   | 27.44            | 28.85 | 27.82 | 29.18 | 29.54 | 21.56          | 22.97 | 21.94 | 23.29 | 23.66 |
|                 | 4H   | 28.06            | 29.38 | 28.46 | 29.72 | 30.10 | 21.68          | 23.00 | 22.08 | 23.35 | 23.72 |
|                 | 6H   | 28.46            | 29.67 | 28.87 | 30.04 | 30.43 | 21.79          | 23.00 | 22.20 | 23.37 | 23.76 |
|                 | 8H   | 28.58            | 29.74 | 29.00 | 30.13 | 30.53 | 21.82          | 22.98 | 22.25 | 23.37 | 23.77 |
|                 | 12H  | 28.65            | 29.76 | 29.08 | 30.14 | 30.57 | 21.84          | 22.95 | 22.27 | 23.34 | 23.77 |
| 4H              | 2H   | 25.57            | 26.89 | 25.97 | 27.23 | 27.61 | 22.15          | 23.47 | 22.55 | 23.82 | 24.20 |
|                 | 3H   | 27.73            | 28.82 | 28.14 | 29.22 | 29.62 | 22.35          | 23.44 | 22.76 | 23.84 | 24.24 |
|                 | 4H   | 28.38            | 29.36 | 28.81 | 29.77 | 30.21 | 22.51          | 23.48 | 22.94 | 23.90 | 24.34 |
|                 | 6H   | 28.83            | 29.68 | 29.28 | 30.12 | 30.58 | 22.67          | 23.52 | 23.13 | 23.96 | 24.42 |
|                 | 8H   | 28.97            | 29.76 | 29.43 | 30.21 | 30.67 | 22.72          | 23.52 | 23.19 | 23.96 | 24.43 |
|                 | 12H  | 29.07            | 29.78 | 29.55 | 30.26 | 30.73 | 22.77          | 23.48 | 23.25 | 23.96 | 24.43 |
| 8H              | 4H   | 28.32            | 29.11 | 28.78 | 29.55 | 30.02 | 22.78          | 23.57 | 23.24 | 24.01 | 24.48 |
|                 | 6H   | 28.76            | 29.42 | 29.26 | 29.91 | 30.38 | 22.99          | 23.64 | 23.48 | 24.13 | 24.61 |
|                 | 8H   | 28.91            | 29.50 | 29.42 | 30.01 | 30.49 | 23.07          | 23.66 | 23.58 | 24.17 | 24.65 |
|                 | 12H  | 29.04            | 29.56 | 29.55 | 30.05 | 30.62 | 23.15          | 23.68 | 23.66 | 24.17 | 24.73 |
| 12H             | 4H   | 28.29            | 29.00 | 28.77 | 29.48 | 29.95 | 22.79          | 23.50 | 23.27 | 23.98 | 24.45 |
|                 | 6H   | 28.72            | 29.31 | 29.23 | 29.82 | 30.31 | 23.00          | 23.59 | 23.52 | 24.10 | 24.59 |
|                 | 8H   | 28.89            | 29.41 | 29.40 | 29.91 | 30.47 | 23.13          | 23.65 | 23.63 | 24.14 | 24.70 |