

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P730770

Luminaire Tested: **HBLED-LD5-24SE-W-CL-UNV-L840**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730770  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23762)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-24SE-W-CL-UNV-L840  
Description: 24000 LUMEN, SE HBLED WITH WIDE DISTRIBUTION AND CLEAR ACRYLIC LENS  
& DOOR FRAME  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22034.0 lumens  
Efficiency: N/A  
Efficacy: 146.9 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.29 / 1.41  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

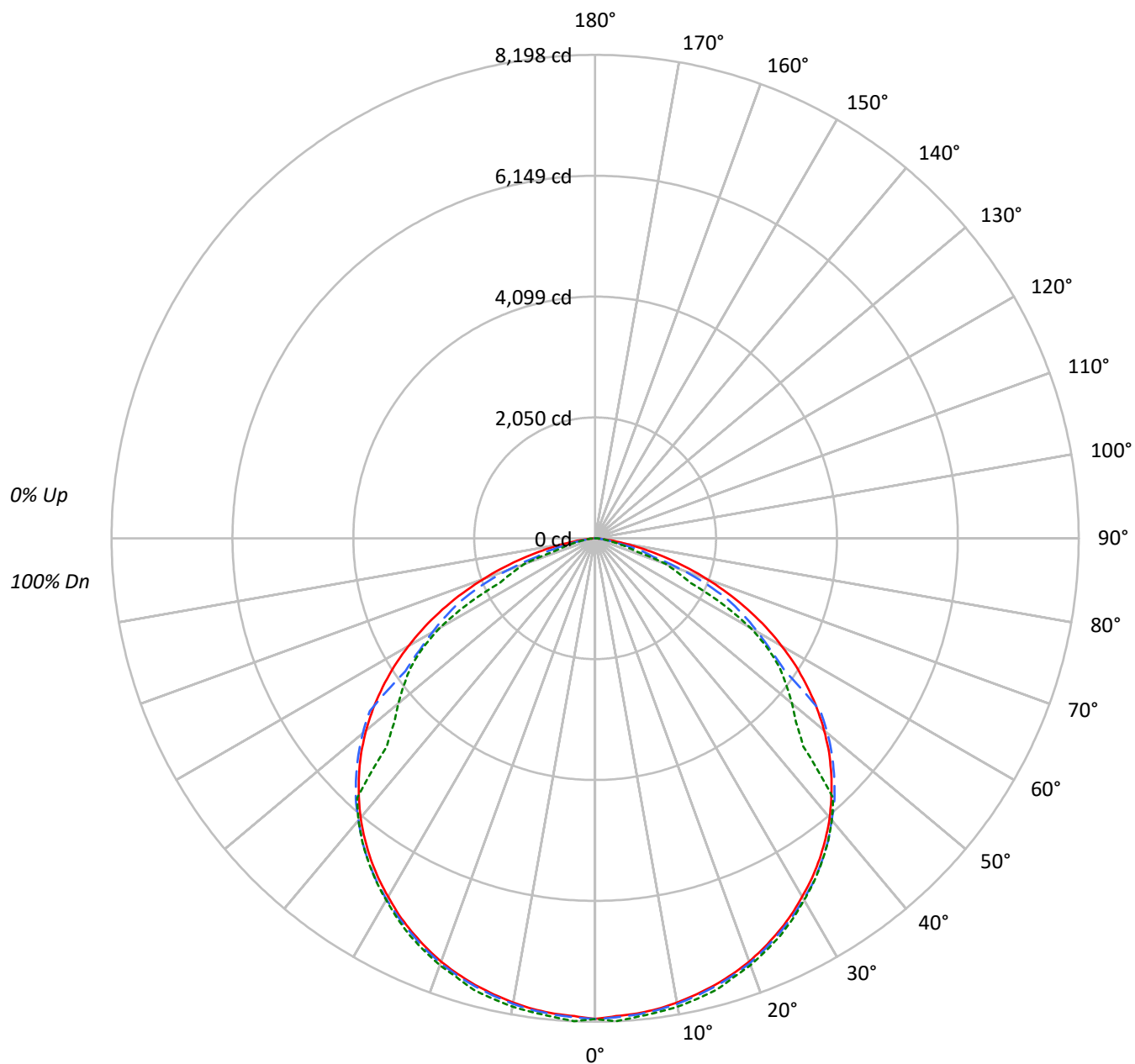
Input Watts (W): 150  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| 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   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 75  | 73  |    |    |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 75  | 69  | 65  | 72  | 68  | 64  | 62  |    |    |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 64  | 57  | 69  | 62  | 57  | 67  | 61  | 56  | 64  | 59  | 55  | 53  |    |    |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 56  | 50  | 62  | 55  | 49  | 60  | 54  | 49  | 58  | 53  | 48  | 46  |    |    |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 49  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |    |    |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |    |    |
| 8   | 62  | 48  | 40  | 34  | 60  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |
| 9   | 58  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 30  | 29  |    |    |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13159 | 13159 | 13159 |
| 5°  | 13112 | 13140 | 13205 |
| 10° | 13110 | 13148 | 13224 |
| 15° | 13109 | 13149 | 13255 |
| 20° | 13126 | 13175 | 13237 |
| 25° | 13111 | 13160 | 13240 |
| 30° | 13086 | 13182 | 13212 |
| 35° | 13080 | 13199 | 13209 |
| 40° | 13039 | 13154 | 13154 |
| 45° | 12927 | 13083 | 11400 |
| 50° | 12728 | 12920 | 10938 |
| 55° | 12367 | 11059 | 10744 |
| 60° | 11786 | 10280 | 9815  |
| 65° | 10900 | 9543  | 6798  |
| 70° | 9491  | 7425  | 6057  |
| 75° | 7497  | 4984  | 3256  |
| 80° | 4826  | 2380  | 2030  |
| 85° | 1986  | 1452  | 1599  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 773.1   | 3.5       |
| 10°-20°   | 2228.4  | 10.1      |
| 20°-30°   | 3416.5  | 15.5      |
| 30°-40°   | 4187.5  | 19.0      |
| 40°-50°   | 4305.0  | 19.5      |
| 50°-60°   | 3674.1  | 16.7      |
| 60°-70°   | 2429.0  | 11.0      |
| 70°-80°   | 899.9   | 4.1       |
| 80°-90°   | 120.3   | 0.5       |
| 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       |
| <hr/>     |         |           |
| 0°-30°    | 6418.1  | 29.1      |
| 0°-40°    | 10605.5 | 48.1      |
| 0°-60°    | 18584.7 | 84.3      |
| 0°-90°    | 22034.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 22034.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 8150 | 8150  | 8150 | 8150  | 8150 |      |
| 5°  | 8090 | 8146  | 8108 | 8139  | 8147 | 769  |
| 15° | 7843 | 7890  | 7866 | 7926  | 7930 | 2215 |
| 25° | 7359 | 7398  | 7387 | 7454  | 7432 | 3393 |
| 35° | 6636 | 6682  | 6696 | 6738  | 6702 | 4151 |
| 45° | 5661 | 5718  | 5730 | 5721  | 4993 | 4363 |
| 55° | 4393 | 4474  | 3929 | 3815  | 3817 | 3920 |
| 65° | 2853 | 2877  | 2498 | 2054  | 1779 | 2813 |
| 75° | 1202 | 1053  | 799  | 537   | 522  | 1289 |
| 85° | 107  | 76    | 78   | 85    | 86   | 177  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 8150.3 | 8150.3 | 8150.3 | 8150.3 | 8150.3 |
| 2.5°  | 8110.6 | 8161.2 | 8131.4 | 8169.1 | 8197.9 |
| 5°    | 8089.8 | 8146.3 | 8107.6 | 8139.3 | 8147.3 |
| 7.5°  | 8054.0 | 8106.6 | 8070.9 | 8112.6 | 8106.6 |
| 10°   | 7996.5 | 8044.1 | 8019.3 | 8063.0 | 8065.9 |
| 12.5° | 7923.1 | 7970.6 | 7947.8 | 8001.4 | 8000.4 |
| 15°   | 7842.6 | 7890.3 | 7866.4 | 7926.0 | 7930.0 |
| 17.5° | 7748.4 | 7792.1 | 7774.2 | 7828.8 | 7806.9 |
| 20°   | 7639.2 | 7676.9 | 7667.9 | 7719.6 | 7703.7 |
| 22.5° | 7505.2 | 7543.9 | 7535.1 | 7594.6 | 7570.7 |
| 25°   | 7359.4 | 7398.1 | 7387.2 | 7453.6 | 7431.9 |
| 27.5° | 7201.6 | 7238.3 | 7237.3 | 7299.9 | 7266.1 |
| 30°   | 7019.0 | 7067.7 | 7070.6 | 7126.2 | 7086.5 |
| 32.5° | 6838.4 | 6884.0 | 6897.0 | 6937.7 | 6903.9 |
| 35°   | 6636.0 | 6681.6 | 6696.5 | 6738.2 | 6701.5 |
| 37.5° | 6417.6 | 6456.3 | 6483.1 | 6513.8 | 6485.1 |
| 40°   | 6186.4 | 6221.1 | 6241.0 | 6278.6 | 6241.0 |
| 42.5° | 5928.4 | 5978.0 | 6005.8 | 6032.6 | 5971.1 |
| 45°   | 5661.4 | 5718.0 | 5729.9 | 5721.0 | 4992.6 |
| 47.5° | 5378.7 | 5440.2 | 5447.1 | 4750.5 | 4616.5 |
| 50°   | 5067.0 | 5144.4 | 5143.5 | 4390.2 | 4354.5 |
| 52.5° | 4742.5 | 4817.0 | 4814.0 | 4108.4 | 4084.6 |
| 55°   | 4393.2 | 4473.6 | 3928.7 | 3814.7 | 3816.7 |
| 57.5° | 4036.9 | 4094.5 | 3524.9 | 3529.8 | 3464.3 |
| 60°   | 3649.9 | 3704.5 | 3183.5 | 3152.8 | 3039.6 |
| 62.5° | 3261.9 | 3284.7 | 2853.1 | 2703.2 | 2487.9 |
| 65°   | 2853.1 | 2876.8 | 2497.8 | 2054.2 | 1779.3 |
| 67.5° | 2433.3 | 2457.1 | 2073.0 | 1528.3 | 1507.4 |
| 70°   | 2010.5 | 1816.0 | 1572.9 | 1273.2 | 1283.1 |
| 72.5° | 1593.7 | 1395.3 | 1028.1 | 986.4  | 712.5  |
| 75°   | 1201.8 | 1052.9 | 798.9  | 536.9  | 522.0  |
| 77.5° | 836.6  | 725.4  | 427.7  | 366.2  | 342.4  |
| 80°   | 519.0  | 364.2  | 256.0  | 227.2  | 218.3  |
| 82.5° | 263.0  | 209.4  | 139.0  | 139.0  | 139.0  |
| 85°   | 107.2  | 76.4   | 78.4   | 85.3   | 86.3   |
| 87.5° | 22.8   | 30.8   | 37.7   | 38.7   | 37.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - 90°-270°







(END OF REPORT)