

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: P730733

Luminaire Tested: **HBLED-LD5-24SE-N-CL-UNV-L835**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730733  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23768)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-24SE-N-CL-UNV-L835  
Description: 24000 LUMEN, SE HBLED WITH NARROW DISTRIBUTION AND CLEAR ACRYLIC LENS & DOOR FRAME  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21417.0 lumens  
Efficiency: N/A  
Efficacy: 142.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.63 / 0.78  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

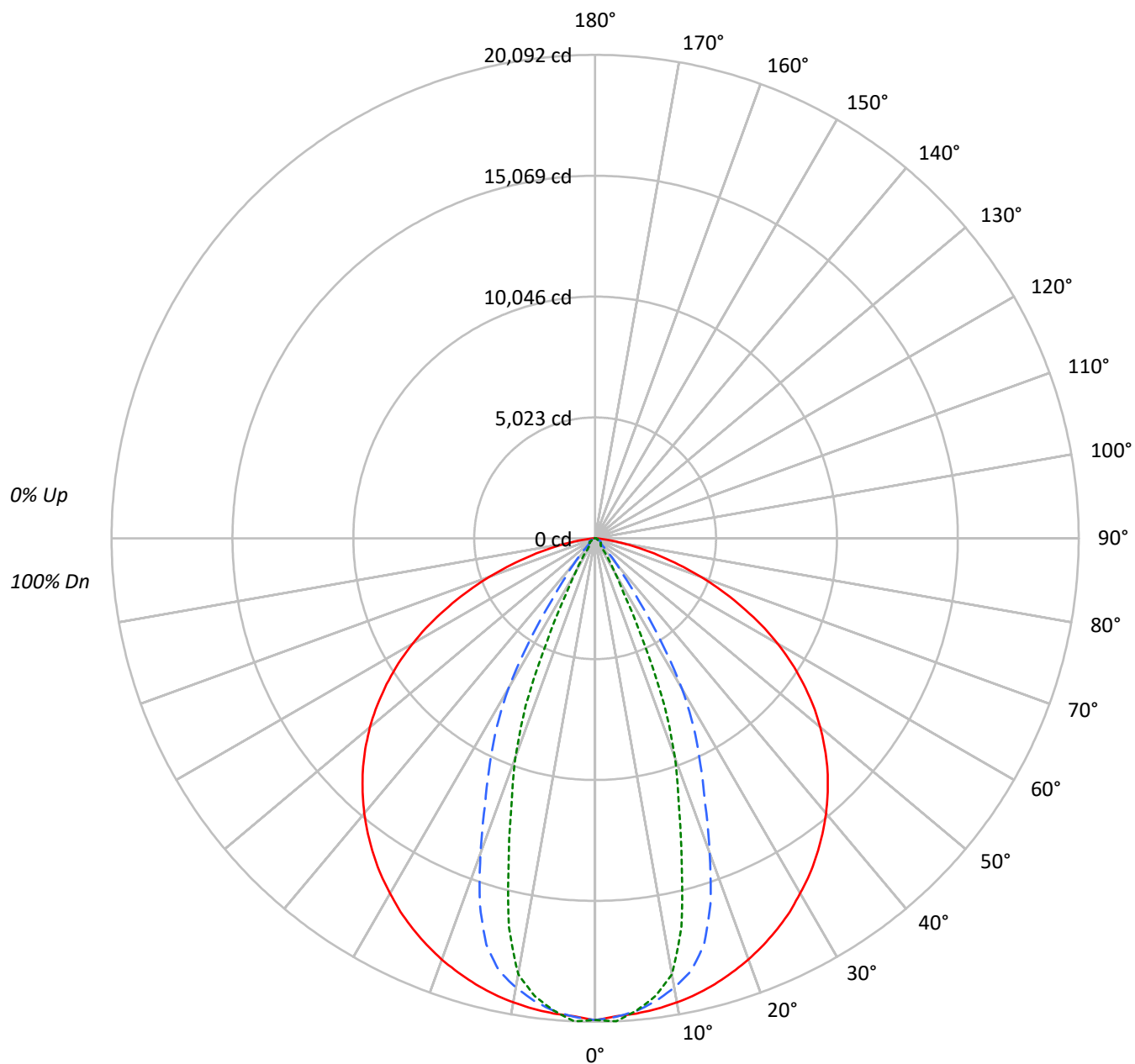
Input Watts (W): 150  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 112 | 109 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98  |  | 98  | 97  | 95  |  | 95  |
| 2   | 105 | 99  | 94  | 90  | 102 | 97  | 92  | 89  | 94  | 90  | 87  |  | 91  | 87  | 85  |  | 88  |
| 3   | 98  | 90  | 84  | 79  | 96  | 89  | 83  | 79  | 86  | 81  | 77  |  | 83  | 79  | 76  |  | 81  |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 75  | 71  | 79  | 74  | 70  |  | 77  | 73  | 69  |  | 75  |
| 5   | 86  | 76  | 69  | 64  | 85  | 75  | 69  | 64  | 73  | 68  | 63  |  | 72  | 67  | 63  |  | 70  |
| 6   | 81  | 71  | 64  | 59  | 80  | 70  | 63  | 58  | 68  | 62  | 58  |  | 67  | 62  | 58  |  | 65  |
| 7   | 77  | 66  | 59  | 54  | 75  | 65  | 58  | 54  | 64  | 58  | 53  |  | 62  | 57  | 53  |  | 61  |
| 8   | 72  | 61  | 55  | 50  | 71  | 61  | 54  | 50  | 60  | 54  | 49  |  | 59  | 53  | 49  |  | 58  |
| 9   | 69  | 58  | 51  | 46  | 67  | 57  | 51  | 46  | 56  | 50  | 46  |  | 55  | 50  | 46  |  | 54  |
| 10  | 65  | 54  | 48  | 43  | 64  | 54  | 47  | 43  | 53  | 47  | 43  |  | 52  | 47  | 43  |  | 51  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 32333 | 32333 | 32333 |
| 5°  | 32134 | 31966 | 31943 |
| 10° | 32112 | 31083 | 30165 |
| 15° | 32076 | 29229 | 23194 |
| 20° | 32013 | 23919 | 16637 |
| 25° | 31913 | 18429 | 8454  |
| 30° | 31762 | 13450 | 3076  |
| 35° | 31648 | 6177  | 1070  |
| 40° | 31454 | 2803  | 739   |
| 45° | 31174 | 1046  | 749   |
| 50° | 30677 | 759   | 788   |
| 55° | 29769 | 799   | 600   |
| 60° | 28289 | 854   | 529   |
| 65° | 25655 | 650   | 431   |
| 70° | 21996 | 469   | 397   |
| 75° | 16813 | 415   | 377   |
| 80° | 10520 | 391   | 410   |
| 85° | 3322  | 456   | 552   |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1864.4  | 8.7       |
| 10°-20°   | 4696.5  | 21.9      |
| 20°-30°   | 5114.7  | 23.9      |
| 30°-40°   | 3826.0  | 17.9      |
| 40°-50°   | 2751.0  | 12.8      |
| 50°-60°   | 1689.5  | 7.9       |
| 60°-70°   | 972.2   | 4.5       |
| 70°-80°   | 433.9   | 2.0       |
| 80°-90°   | 68.8    | 0.3       |
| 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°    | 11675.5 | 54.5      |
| 0°-40°    | 15501.5 | 72.4      |
| 0°-60°    | 19942.1 | 93.1      |
| 0°-90°    | 21417.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 21417.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux  |
|-----|-------|-------|-------|-------|-------|-------|
| 0°  | 20025 | 20025 | 20025 | 20025 | 20025 |       |
| 5°  | 19827 | 19920 | 19723 | 19742 | 19709 | ###   |
| 15° | 19189 | 18821 | 17486 | 15018 | 13876 | 5417  |
| 25° | 17914 | 16628 | 10345 | 6637  | 4746  | 8257  |
| 35° | 16057 | 11516 | 3134  | 921   | 543   | 10044 |
| 45° | 13653 | 6470  | 458   | 339   | 328   | 10518 |
| 55° | 10575 | 1344  | 284   | 275   | 213   | 9429  |
| 65° | 6715  | 148   | 170   | 141   | 113   | 6647  |
| 75° | 2695  | 89    | 67    | 69    | 60    | 2925  |
| 85° | 179   | 17    | 25    | 32    | 30    | 357   |
| 90° | 0     | 0     | 0     | 0     | 0     |       |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 20025.4 | 20025.4 | 20025.4 | 20025.4 | 20025.4 |
| 2.5°  | 19886.1 | 20016.2 | 19906.6 | 20004.9 | 20092.0 |
| 5°    | 19826.7 | 19919.9 | 19723.2 | 19741.6 | 19708.8 |
| 7.5°  | 19724.2 | 19746.7 | 19391.2 | 19253.8 | 19187.2 |
| 10°   | 19586.8 | 19526.4 | 18958.7 | 18631.9 | 18399.2 |
| 12.5° | 19413.7 | 19213.9 | 18420.7 | 17253.5 | 16557.8 |
| 15°   | 19189.3 | 18821.4 | 17486.2 | 15017.6 | 13876.0 |
| 17.5° | 18921.8 | 18411.5 | 15938.8 | 12516.1 | 11528.3 |
| 20°   | 18631.9 | 17958.6 | 13921.0 | 10642.0 | 9682.7  |
| 22.5° | 18289.6 | 17379.6 | 11931.0 | 8850.6  | 7533.9  |
| 25°   | 17913.5 | 16628.5 | 10344.8 | 6637.3  | 4745.6  |
| 27.5° | 17507.7 | 15637.5 | 8876.3  | 4070.2  | 2565.9  |
| 30°   | 17036.3 | 14431.4 | 7214.2  | 2284.2  | 1649.8  |
| 32.5° | 16576.2 | 13025.5 | 5153.4  | 1521.7  | 1054.4  |
| 35°   | 16056.6 | 11516.1 | 3133.7  | 921.3   | 543.1   |
| 37.5° | 15506.3 | 10143.9 | 1961.4  | 501.1   | 375.0   |
| 40°   | 14923.3 | 8842.4  | 1330.1  | 355.6   | 350.5   |
| 42.5° | 14300.2 | 7665.0  | 833.1   | 338.1   | 349.4   |
| 45°   | 13652.6 | 6470.2  | 458.1   | 339.2   | 327.9   |
| 47.5° | 12949.7 | 5172.9  | 319.7   | 320.7   | 319.7   |
| 50°   | 12212.9 | 3710.6  | 302.3   | 316.7   | 313.6   |
| 52.5° | 11418.7 | 2303.6  | 303.3   | 309.5   | 277.7   |
| 55°   | 10575.3 | 1344.4  | 283.9   | 274.7   | 213.2   |
| 57.5° | 9688.9  | 838.2   | 277.7   | 226.5   | 191.6   |
| 60°   | 8760.5  | 442.7   | 264.4   | 204.0   | 163.9   |
| 62.5° | 7771.6  | 218.3   | 212.1   | 174.2   | 134.3   |
| 65°   | 6715.1  | 147.6   | 170.2   | 141.4   | 112.7   |
| 67.5° | 5694.5  | 133.2   | 128.1   | 115.8   | 98.4    |
| 70°   | 4659.5  | 121.9   | 99.4    | 101.4   | 84.0    |
| 72.5° | 3644.0  | 110.6   | 79.9    | 87.1    | 70.7    |
| 75°   | 2695.1  | 89.2    | 66.6    | 68.6    | 60.5    |
| 77.5° | 1875.2  | 69.7    | 52.3    | 58.4    | 56.4    |
| 80°   | 1131.4  | 44.1    | 42.0    | 48.1    | 44.1    |
| 82.5° | 548.2   | 28.7    | 32.8    | 37.9    | 34.8    |
| 85°   | 179.3   | 17.4    | 24.6    | 31.7    | 29.8    |
| 87.5° | 22.5    | 10.3    | 20.5    | 27.7    | 25.6    |
| 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)