

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: P731124

Luminaire Tested: **HBLED-LD5-48SE-W-UNV-L840**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P731124  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2304-003-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-48SE-W-UNV-L840  
Description: 48000 LUMEN, SE HBLED WITH WIDE DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 47273.0 lumens  
Efficiency: N/A  
Efficacy: 165.6 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.31 / 1.43  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

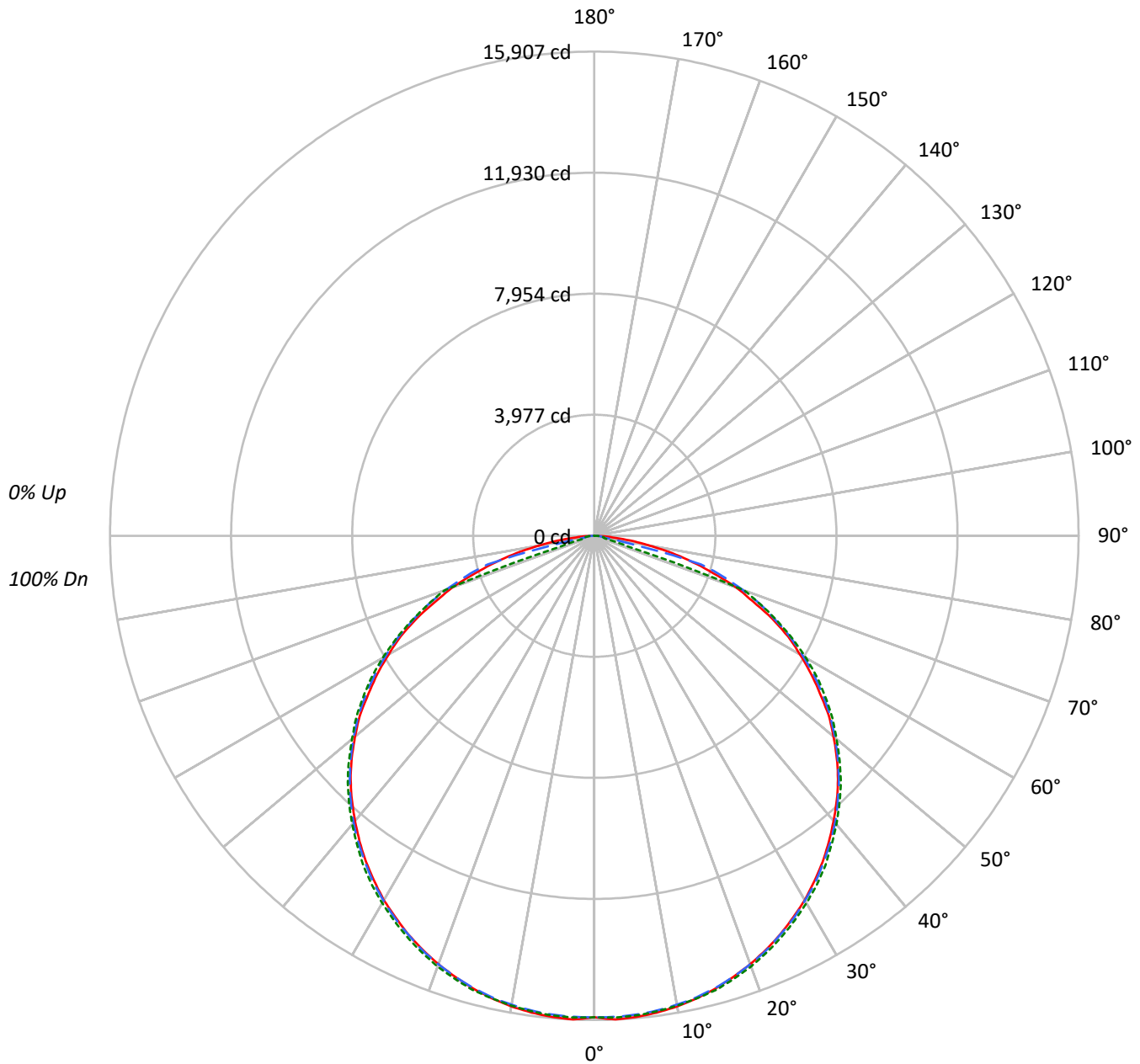
Input Watts (W): 285.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     |    | 0  |
| 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   | 109 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 88  | 87  | 85  |    |    |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 70  |    |    |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 64  | 75  | 69  | 63  | 72  | 67  | 62  | 70  | 65  | 61  | 59  |    |    |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 50  |    |    |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  | 43  |    |    |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 37  |    |    |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |    |    |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |    |    |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 25  | 24  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25541 | 25541 | 25541 |
| 5°  | 25724 | 25593 | 25639 |
| 10° | 25739 | 25646 | 25698 |
| 15° | 25735 | 25700 | 25818 |
| 20° | 25733 | 25739 | 25872 |
| 25° | 25746 | 25758 | 25915 |
| 30° | 25774 | 25807 | 25977 |
| 35° | 25769 | 25852 | 26068 |
| 40° | 25773 | 25936 | 26077 |
| 45° | 25845 | 25942 | 26151 |
| 50° | 25767 | 25918 | 26086 |
| 55° | 25484 | 25841 | 26118 |
| 60° | 25194 | 25603 | 25922 |
| 65° | 24637 | 25149 | 25337 |
| 70° | 23389 | 24388 | 24687 |
| 75° | 20862 | 22621 | 2726  |
| 80° | 16776 | 2818  | 2982  |
| 85° | 11163 | 3655  | 3722  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1502.5  | 3.2       |
| 10°-20°   | 4341.3  | 9.2       |
| 20°-30°   | 6670.2  | 14.1      |
| 30°-40°   | 8211.2  | 17.4      |
| 40°-50°   | 8754.0  | 18.5      |
| 50°-60°   | 8183.2  | 17.3      |
| 60°-70°   | 6478.1  | 13.7      |
| 70°-80°   | 2756.1  | 5.8       |
| 80°-90°   | 376.4   | 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°    | 12514.0 | 26.5      |
| 0°-40°    | 20725.2 | 43.8      |
| 0°-60°    | 37662.5 | 79.7      |
| 0°-90°    | 47273.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 47273.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 15819 | 15819 | 15819 | 15819 | 15819 |      |
| 5°  | 15872 | 15801 | 15791 | 15727 | 15819 | ###  |
| 15° | 15396 | 15368 | 15375 | 15333 | 15445 | 4347 |
| 25° | 14452 | 14434 | 14459 | 14452 | 14547 | 6663 |
| 35° | 13074 | 13053 | 13116 | 13162 | 13225 | 8180 |
| 45° | 11319 | 11255 | 11361 | 11407 | 11453 | 8721 |
| 55° | 9053  | 9081  | 9180  | 9212  | 9278  | 8107 |
| 65° | 6449  | 6505  | 6583  | 6632  | 6632  | 6344 |
| 75° | 3344  | 3489  | 3626  | 592   | 437   | 3538 |
| 85° | 603   | 180   | 197   | 204   | 201   | 786  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 15818.9 | 15818.9 | 15818.9 | 15818.9 | 15818.9 |
| 2.5°  | 15907.0 | 15833.0 | 15818.9 | 15755.5 | 15840.0 |
| 5°    | 15871.8 | 15801.3 | 15790.7 | 15727.3 | 15818.9 |
| 7.5°  | 15797.8 | 15741.4 | 15734.3 | 15667.4 | 15759.0 |
| 10°   | 15699.1 | 15646.2 | 15642.7 | 15582.8 | 15674.4 |
| 12.5° | 15565.2 | 15519.4 | 15533.5 | 15473.6 | 15565.2 |
| 15°   | 15396.0 | 15367.8 | 15374.9 | 15332.6 | 15445.4 |
| 17.5° | 15191.6 | 15177.5 | 15191.6 | 15159.9 | 15262.1 |
| 20°   | 14976.7 | 14959.1 | 14980.2 | 14962.6 | 15057.7 |
| 22.5° | 14726.5 | 14705.3 | 14747.6 | 14723.0 | 14811.1 |
| 25°   | 14451.6 | 14434.0 | 14458.7 | 14451.6 | 14546.8 |
| 27.5° | 14138.0 | 14120.4 | 14173.2 | 14176.7 | 14250.8 |
| 30°   | 13824.4 | 13799.7 | 13842.0 | 13859.6 | 13933.6 |
| 32.5° | 13450.8 | 13443.8 | 13507.2 | 13521.3 | 13598.8 |
| 35°   | 13073.8 | 13052.6 | 13116.0 | 13161.9 | 13225.3 |
| 37.5° | 12661.5 | 12657.9 | 12724.9 | 12763.7 | 12795.4 |
| 40°   | 12228.0 | 12210.4 | 12305.5 | 12344.3 | 12372.5 |
| 42.5° | 11787.5 | 11748.8 | 11840.4 | 11889.7 | 11921.4 |
| 45°   | 11318.8 | 11255.4 | 11361.1 | 11406.9 | 11452.8 |
| 47.5° | 10804.4 | 10748.0 | 10850.2 | 10899.5 | 10931.2 |
| 50°   | 10258.1 | 10205.3 | 10318.1 | 10360.3 | 10385.0 |
| 52.5° | 9708.4  | 9655.6  | 9775.4  | 9810.6  | 9870.5  |
| 55°   | 9053.0  | 9081.2  | 9179.8  | 9211.5  | 9278.5  |
| 57.5° | 8446.8  | 8471.5  | 8566.7  | 8605.4  | 8683.0  |
| 60°   | 7802.0  | 7840.7  | 7928.8  | 7967.6  | 8027.5  |
| 62.5° | 7178.2  | 7181.8  | 7287.5  | 7305.1  | 7350.9  |
| 65°   | 6448.8  | 6505.2  | 6582.7  | 6632.0  | 6632.0  |
| 67.5° | 5634.8  | 5772.2  | 5906.1  | 5895.5  | 5923.7  |
| 70°   | 4954.6  | 5007.5  | 5166.1  | 5190.7  | 5229.5  |
| 72.5° | 4101.8  | 4239.3  | 4415.5  | 3298.4  | 1120.6  |
| 75°   | 3344.2  | 3488.7  | 3626.1  | 592.0   | 437.0   |
| 77.5° | 2597.1  | 2709.9  | 1205.2  | 338.3   | 331.2   |
| 80°   | 1804.2  | 1984.0  | 303.1   | 310.1   | 320.7   |
| 82.5° | 1187.6  | 969.1   | 250.2   | 274.9   | 278.4   |
| 85°   | 602.6   | 179.7   | 197.3   | 204.4   | 200.9   |
| 87.5° | 197.3   | 109.2   | 112.8   | 116.3   | 119.8   |
| 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)