

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: P563269

Luminaire Tested: **VHB-18-N-UNV-L740-CD**

Issue Date: 6/3/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563269  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P364424)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/3/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB-18-N-UNV-L740-CD  
Description: 18000 LUMEN, VHB LED LUMINAIRE WITH, NARROW LENS AND 70CRI, 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

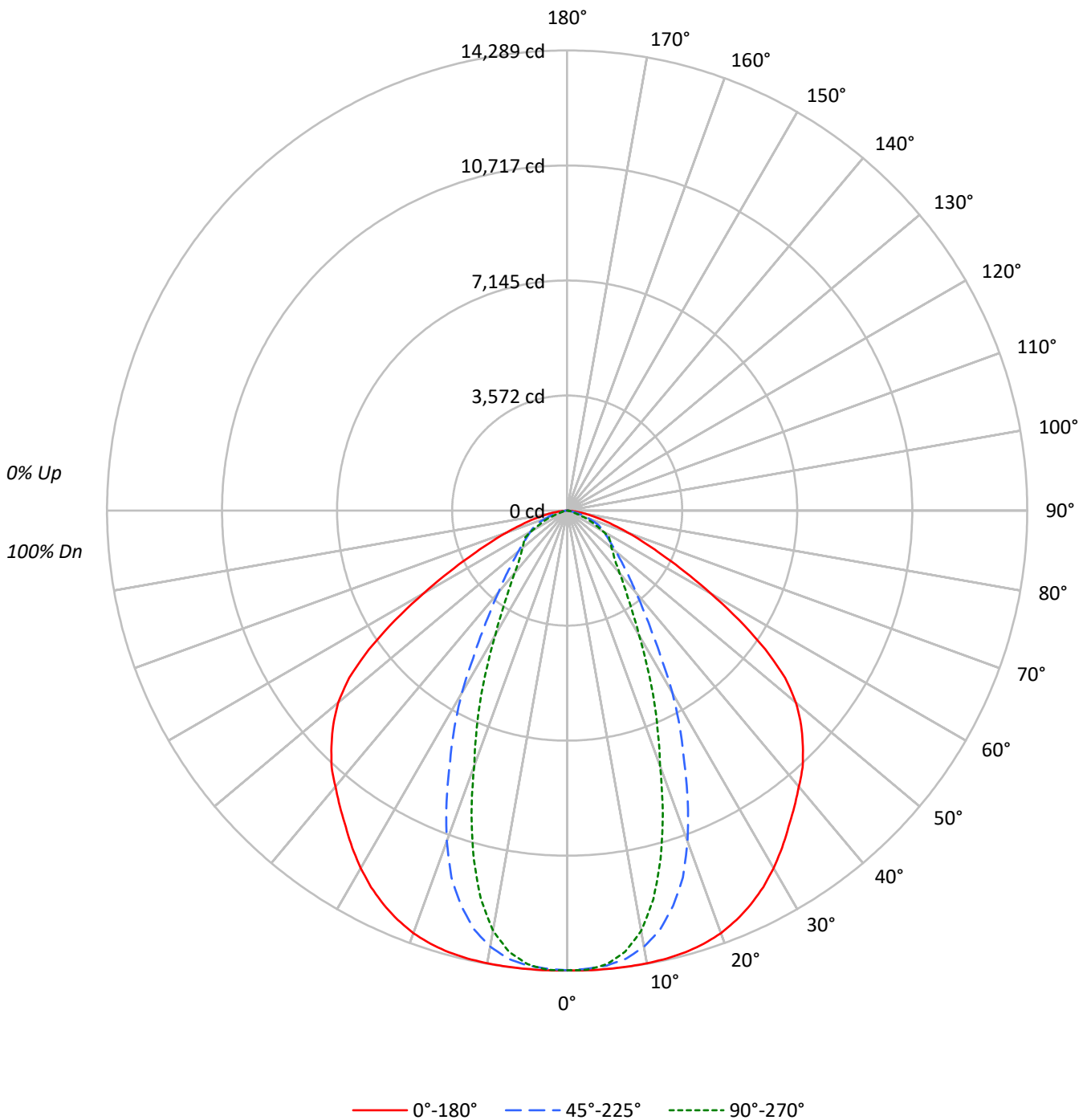
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20133.0 lumens  
Efficiency: N/A  
Efficacy: 161.1 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.72 / 0.86  
Luminous Opening: Rectangular (W 1.17' x L: 1.58' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 125  
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  | 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   | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 96  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 91  | 87  | 84  | 88  | 85  | 82  | 85  | 83  | 80  | 78  |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 64  | 62  |
| 5   | 83  | 72  | 65  | 59  | 81  | 71  | 64  | 59  | 69  | 63  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 55  |
| 6   | 78  | 66  | 59  | 53  | 76  | 66  | 58  | 53  | 64  | 57  | 53  | 62  | 57  | 52  | 61  | 56  | 52  | 50  |
| 7   | 73  | 61  | 54  | 48  | 71  | 61  | 53  | 48  | 59  | 53  | 48  | 58  | 52  | 48  | 57  | 51  | 47  | 46  |
| 8   | 69  | 57  | 49  | 44  | 67  | 56  | 49  | 44  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 47  | 44  | 42  |
| 9   | 65  | 53  | 46  | 41  | 63  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 44  | 40  | 49  | 44  | 40  | 39  |
| 10  | 61  | 49  | 42  | 38  | 60  | 49  | 42  | 38  | 48  | 42  | 38  | 47  | 41  | 37  | 46  | 41  | 37  | 36  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 83188 | 83188 | 83188 |
| 5°  | 83579 | 82944 | 82704 |
| 10° | 84456 | 81354 | 78383 |
| 15° | 85661 | 76650 | 67584 |
| 20° | 86584 | 67716 | 52326 |
| 25° | 86758 | 55295 | 40545 |
| 30° | 86271 | 43917 | 30008 |
| 35° | 85286 | 32543 | 23335 |
| 40° | 85153 | 25271 | 19258 |
| 45° | 85332 | 20798 | 17108 |
| 50° | 84121 | 17988 | 16317 |
| 55° | 76365 | 16034 | 16488 |
| 60° | 60039 | 15323 | 15022 |
| 65° | 44593 | 14851 | 11305 |
| 70° | 34201 | 11889 | 6902  |
| 75° | 26034 | 8479  | 3807  |
| 80° | 19114 | 3946  | 3074  |
| 85° | 11961 | 3390  | 2735  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1341.3  | 6.7       |
| 10°-20°   | 3530.7  | 17.5      |
| 20°-30°   | 4263.7  | 21.2      |
| 30°-40°   | 3812.3  | 18.9      |
| 40°-50°   | 2985.3  | 14.8      |
| 50°-60°   | 2255.6  | 11.2      |
| 60°-70°   | 1339.7  | 6.7       |
| 70°-80°   | 514.8   | 2.6       |
| 80°-90°   | 89.5    | 0.4       |
| 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°    | 9135.7  | 45.4      |
| 0°-40°    | 12948.1 | 64.3      |
| 0°-60°    | 18189.0 | 90.3      |
| 0°-90°    | 20133.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 20133.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 14276 | 14276 | 14276 | 14276 | 14276 |      |
| 5°  | 14288 | 14226 | 14180 | 14161 | 14139 | ###  |
| 15° | 14199 | 13731 | 12706 | 11644 | 11203 | 4012 |
| 25° | 13494 | 11906 | 8600  | 6780  | 6306  | 6213 |
| 35° | 11989 | 8532  | 4575  | 3567  | 3280  | 7518 |
| 45° | 10355 | 4412  | 2524  | 2132  | 2076  | 7970 |
| 55° | 7517  | 2394  | 1578  | 1572  | 1623  | 6601 |
| 65° | 3234  | 1344  | 1077  | 898   | 820   | 3332 |
| 75° | 1156  | 646   | 377   | 186   | 169   | 1266 |
| 85° | 179   | 62    | 51    | 44    | 41    | 238  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 14275.8 | 14275.8 | 14275.8 | 14275.8 | 14275.8 |
| 2.5°  | 14289.3 | 14242.2 | 14238.4 | 14268.8 | 14273.3 |
| 5°    | 14288.3 | 14226.0 | 14179.8 | 14161.1 | 14138.7 |
| 7.5°  | 14283.9 | 14189.6 | 14033.8 | 13884.2 | 13814.8 |
| 10°   | 14273.3 | 14105.9 | 13749.0 | 13408.9 | 13246.9 |
| 12.5° | 14250.1 | 13956.3 | 13326.0 | 12701.1 | 12361.1 |
| 15°   | 14199.4 | 13731.1 | 12705.7 | 11643.5 | 11202.9 |
| 17.5° | 14107.6 | 13420.4 | 11945.4 | 10446.3 | 9879.2  |
| 20°   | 13962.6 | 13025.2 | 10919.9 | 9080.8  | 8438.1  |
| 22.5° | 13754.2 | 12509.0 | 9790.3  | 7851.4  | 7337.9  |
| 25°   | 13493.5 | 11906.3 | 8600.1  | 6780.5  | 6306.0  |
| 27.5° | 13183.7 | 11202.9 | 7574.5  | 5783.5  | 5316.1  |
| 30°   | 12821.4 | 10381.3 | 6526.8  | 4841.7  | 4459.8  |
| 32.5° | 12416.3 | 9516.0  | 5432.9  | 4123.3  | 3809.1  |
| 35°   | 11989.0 | 8531.5  | 4574.7  | 3566.9  | 3280.3  |
| 37.5° | 11586.6 | 7477.5  | 3874.2  | 3074.8  | 2873.5  |
| 40°   | 11194.2 | 6370.2  | 3322.2  | 2685.7  | 2531.7  |
| 42.5° | 10823.8 | 5310.9  | 2900.3  | 2359.9  | 2259.2  |
| 45°   | 10354.7 | 4411.8  | 2523.7  | 2132.0  | 2076.0  |
| 47.5° | 9857.0  | 3723.6  | 2224.5  | 1946.8  | 1927.2  |
| 50°   | 9279.2  | 3171.8  | 1984.2  | 1785.7  | 1799.9  |
| 52.5° | 8529.7  | 2735.5  | 1756.3  | 1671.7  | 1713.7  |
| 55°   | 7516.7  | 2393.8  | 1578.2  | 1572.0  | 1622.9  |
| 57.5° | 6330.1  | 2067.0  | 1437.6  | 1476.8  | 1533.8  |
| 60°   | 5151.6  | 1804.4  | 1314.8  | 1371.7  | 1289.0  |
| 62.5° | 4115.4  | 1563.2  | 1198.2  | 1094.0  | 1022.9  |
| 65°   | 3234.1  | 1344.1  | 1077.1  | 898.3   | 819.9   |
| 67.5° | 2578.9  | 1140.3  | 906.2   | 714.8   | 649.8   |
| 70°   | 2007.4  | 958.7   | 697.8   | 536.8   | 405.1   |
| 72.5° | 1538.3  | 801.2   | 544.7   | 305.4   | 230.6   |
| 75°   | 1156.3  | 646.3   | 376.6   | 186.1   | 169.1   |
| 77.5° | 824.3   | 479.9   | 201.1   | 134.4   | 124.6   |
| 80°   | 569.6   | 308.1   | 117.6   | 97.0    | 91.6    |
| 82.5° | 353.4   | 148.7   | 80.2    | 69.4    | 65.0    |
| 85°   | 178.9   | 62.3    | 50.7    | 44.5    | 40.9    |
| 87.5° | 59.6    | 30.3    | 23.1    | 21.4    | 19.5    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)