

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: P563272

Luminaire Tested: **VHB-18-N-UNV-L840-CD**

Issue Date: 6/3/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563272  
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-L840-CD  
Description: 18000 LUMEN, VHB LED LUMINAIRE WITH, NARROW LENS AND 80CRI, 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

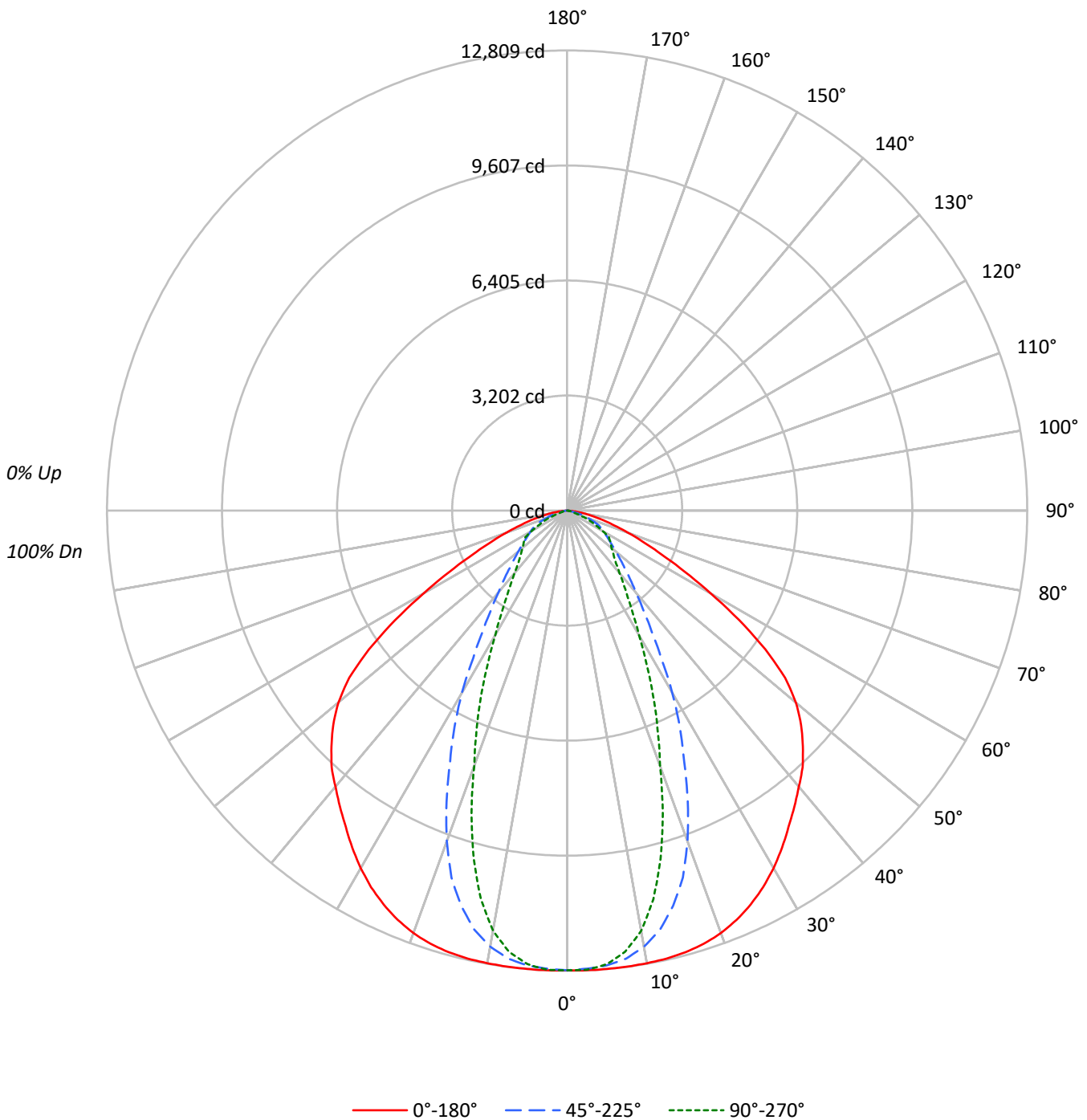
Lumens per Lamp: N/A  
Luminaire Lumens: 18047.0 lumens  
Efficiency: N/A  
Efficacy: 144.4 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.72 / 0.86  
Luminous Opening: Rectangular (W 1.17' x L: 1.58' x H: 0')  
CIE Type: Direct

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  | 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 |    |    |    |    | 100 |   |  |   |
| 1   | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 96  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |    |    |    |    | 89  |   |  |   |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 91  | 87  | 84  | 88  | 85  | 82  | 85  | 83  | 80  | 78  |    |    |    |    | 78  |   |  |   |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |    |    | 69  |   |  |   |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 64  | 62  |    |    |    |    | 62  |   |  |   |
| 5   | 83  | 72  | 65  | 59  | 81  | 71  | 64  | 59  | 69  | 63  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 55  |    |    |    |    | 55  |   |  |   |
| 6   | 78  | 66  | 59  | 53  | 76  | 66  | 58  | 53  | 64  | 57  | 53  | 62  | 57  | 52  | 61  | 56  | 52  | 50  |    |    |    |    | 50  |   |  |   |
| 7   | 73  | 61  | 54  | 48  | 71  | 61  | 53  | 48  | 59  | 53  | 48  | 58  | 52  | 48  | 57  | 51  | 47  | 46  |    |    |    |    | 46  |   |  |   |
| 8   | 69  | 57  | 49  | 44  | 67  | 56  | 49  | 44  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 47  | 44  | 42  |    |    |    |    | 42  |   |  |   |
| 9   | 65  | 53  | 46  | 41  | 63  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 44  | 40  | 49  | 44  | 40  | 39  |    |    |    |    | 39  |   |  |   |
| 10  | 61  | 49  | 42  | 38  | 60  | 49  | 42  | 38  | 48  | 42  | 38  | 47  | 41  | 37  | 46  | 41  | 37  | 36  |    |    |    |    | 36  |   |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 74569 | 74569 | 74569 |
| 5°  | 74919 | 74350 | 74135 |
| 10° | 75706 | 72924 | 70262 |
| 15° | 76786 | 68708 | 60582 |
| 20° | 77613 | 60700 | 46904 |
| 25° | 77768 | 49566 | 36344 |
| 30° | 77332 | 39367 | 26899 |
| 35° | 76449 | 29171 | 20917 |
| 40° | 76329 | 22653 | 17263 |
| 45° | 76490 | 18643 | 15335 |
| 50° | 75405 | 16124 | 14626 |
| 55° | 68453 | 14372 | 14779 |
| 60° | 53818 | 13736 | 13467 |
| 65° | 39972 | 13313 | 10134 |
| 70° | 30657 | 10657 | 6186  |
| 75° | 23336 | 7601  | 3413  |
| 80° | 17134 | 3537  | 2755  |
| 85° | 10718 | 3035  | 2454  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1202.3  | 6.7       |
| 10°-20°   | 3164.9  | 17.5      |
| 20°-30°   | 3822.0  | 21.2      |
| 30°-40°   | 3417.3  | 18.9      |
| 40°-50°   | 2676.0  | 14.8      |
| 50°-60°   | 2021.9  | 11.2      |
| 60°-70°   | 1200.9  | 6.7       |
| 70°-80°   | 461.5   | 2.6       |
| 80°-90°   | 80.2    | 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°    | 8189.2  | 45.4      |
| 0°-40°    | 11606.5 | 64.3      |
| 0°-60°    | 16304.4 | 90.3      |
| 0°-90°    | 18047.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 18047.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 12797 | 12797 | 12797 | 12797 | 12797 |      |
| 5°  | 12808 | 12752 | 12711 | 12694 | 12674 | ###  |
| 15° | 12728 | 12308 | 11389 | 10437 | 10042 | 3596 |
| 25° | 12095 | 10673 | 7709  | 6078  | 5653  | 5569 |
| 35° | 10747 | 7648  | 4101  | 3197  | 2940  | 6739 |
| 45° | 9282  | 3955  | 2262  | 1911  | 1861  | 7145 |
| 55° | 6738  | 2146  | 1415  | 1409  | 1455  | 5917 |
| 65° | 2899  | 1205  | 966   | 805   | 735   | 2987 |
| 75° | 1036  | 579   | 338   | 167   | 152   | 1135 |
| 85° | 160   | 56    | 45    | 40    | 37    | 214  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 12796.7 | 12796.7 | 12796.7 | 12796.7 | 12796.7 |
| 2.5°  | 12808.8 | 12766.5 | 12763.2 | 12790.4 | 12794.4 |
| 5°    | 12807.9 | 12752.0 | 12710.6 | 12693.9 | 12673.8 |
| 7.5°  | 12804.0 | 12719.4 | 12579.7 | 12445.7 | 12383.5 |
| 10°   | 12794.4 | 12644.4 | 12324.4 | 12019.6 | 11874.4 |
| 12.5° | 12773.6 | 12510.3 | 11945.3 | 11385.2 | 11080.3 |
| 15°   | 12728.2 | 12308.4 | 11389.2 | 10437.1 | 10042.2 |
| 17.5° | 12645.9 | 12029.9 | 10707.7 | 9364.0  | 8855.6  |
| 20°   | 12515.9 | 11675.7 | 9788.5  | 8139.9  | 7563.8  |
| 22.5° | 12329.1 | 11212.9 | 8775.9  | 7037.9  | 6577.6  |
| 25°   | 12095.4 | 10672.7 | 7709.0  | 6078.0  | 5652.6  |
| 27.5° | 11817.7 | 10042.2 | 6789.7  | 5184.3  | 4765.3  |
| 30°   | 11493.0 | 9305.7  | 5850.6  | 4340.0  | 3997.7  |
| 32.5° | 11129.9 | 8530.1  | 4870.0  | 3696.1  | 3414.5  |
| 35°   | 10746.8 | 7647.6  | 4100.7  | 3197.4  | 2940.4  |
| 37.5° | 10386.1 | 6702.7  | 3472.8  | 2756.2  | 2575.8  |
| 40°   | 10034.3 | 5710.2  | 2978.0  | 2407.4  | 2269.4  |
| 42.5° | 9702.3  | 4760.6  | 2599.8  | 2115.4  | 2025.1  |
| 45°   | 9281.8  | 3954.7  | 2262.2  | 1911.1  | 1860.9  |
| 47.5° | 8835.7  | 3337.8  | 1994.0  | 1745.1  | 1727.5  |
| 50°   | 8317.8  | 2843.2  | 1778.6  | 1600.7  | 1613.4  |
| 52.5° | 7645.9  | 2452.1  | 1574.3  | 1498.5  | 1536.1  |
| 55°   | 6737.9  | 2145.8  | 1414.7  | 1409.1  | 1454.7  |
| 57.5° | 5674.2  | 1852.9  | 1288.6  | 1323.8  | 1374.9  |
| 60°   | 4617.8  | 1617.5  | 1178.6  | 1229.6  | 1155.5  |
| 62.5° | 3689.0  | 1401.3  | 1074.1  | 980.6   | 916.9   |
| 65°   | 2899.0  | 1204.8  | 965.5   | 805.2   | 735.0   |
| 67.5° | 2311.7  | 1022.2  | 812.3   | 640.8   | 582.5   |
| 70°   | 1799.4  | 859.4   | 625.5   | 481.2   | 363.1   |
| 72.5° | 1378.9  | 718.2   | 488.3   | 273.7   | 206.7   |
| 75°   | 1036.5  | 579.3   | 337.6   | 166.8   | 151.6   |
| 77.5° | 738.9   | 430.2   | 180.3   | 120.5   | 111.7   |
| 80°   | 510.6   | 276.1   | 105.4   | 87.0    | 82.1    |
| 82.5° | 316.8   | 133.3   | 71.9    | 62.2    | 58.3    |
| 85°   | 160.3   | 55.9    | 45.4    | 39.9    | 36.7    |
| 87.5° | 53.4    | 27.2    | 20.7    | 19.2    | 17.5    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)