

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: P563314

Luminaire Tested: **VHB-9-N-UNV-L740-CD**

Issue Date: 6/3/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563314  
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-9-N-UNV-L740-CD  
Description: 9000 LUMEN, VHB LED LUMINAIRE WITH, NARROW LENS AND 70CRI, 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

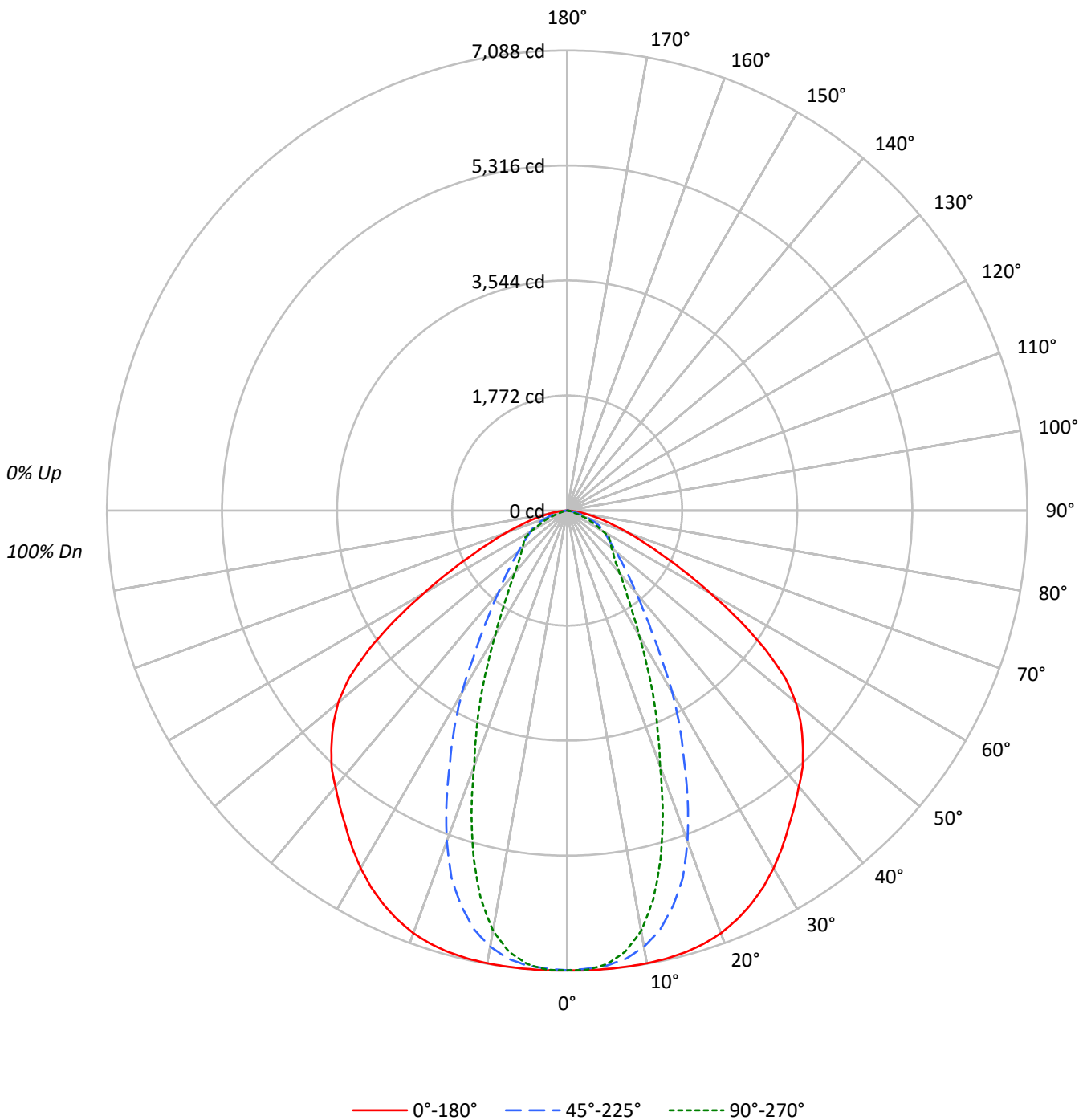
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9987.0 lumens  
Efficiency: N/A  
Efficacy: 178.3 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): 56  
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°  | 41265 | 41265 | 41265 |
| 5°  | 41459 | 41144 | 41025 |
| 10° | 41895 | 40356 | 38882 |
| 15° | 42492 | 38023 | 33525 |
| 20° | 42950 | 33591 | 25956 |
| 25° | 43036 | 27429 | 20112 |
| 30° | 42795 | 21785 | 14886 |
| 35° | 42306 | 16143 | 11575 |
| 40° | 42240 | 12536 | 9553  |
| 45° | 42329 | 10317 | 8486  |
| 50° | 41728 | 8922  | 8094  |
| 55° | 37881 | 7954  | 8178  |
| 60° | 29782 | 7601  | 7452  |
| 65° | 22121 | 7367  | 5608  |
| 70° | 16966 | 5898  | 3423  |
| 75° | 12914 | 4206  | 1889  |
| 80° | 9483  | 1956  | 1527  |
| 85° | 5930  | 1678  | 1357  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 665.3  | 6.7       |
| 10°-20°   | 1751.4 | 17.5      |
| 20°-30°   | 2115.0 | 21.2      |
| 30°-40°   | 1891.1 | 18.9      |
| 40°-50°   | 1480.9 | 14.8      |
| 50°-60°   | 1118.9 | 11.2      |
| 60°-70°   | 664.5  | 6.7       |
| 70°-80°   | 255.4  | 2.6       |
| 80°-90°   | 44.4   | 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°    | 4531.8 | 45.4      |
| 0°-40°    | 6422.9 | 64.3      |
| 0°-60°    | 9022.7 | 90.3      |
| 0°-90°    | 9987.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 9987.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 7082 | 7082  | 7082 | 7082  | 7082 |      |
| 5°  | 7088 | 7057  | 7034 | 7025  | 7014 | 676  |
| 15° | 7044 | 6811  | 6303 | 5776  | 5557 | 1990 |
| 25° | 6693 | 5906  | 4266 | 3364  | 3128 | 3082 |
| 35° | 5947 | 4232  | 2269 | 1769  | 1627 | 3729 |
| 45° | 5136 | 2188  | 1252 | 1058  | 1030 | 3954 |
| 55° | 3729 | 1187  | 783  | 780   | 805  | 3274 |
| 65° | 1604 | 667   | 534  | 446   | 407  | 1653 |
| 75° | 574  | 321   | 187  | 92    | 84   | 628  |
| 85° | 89   | 31    | 25   | 22    | 20   | 118  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 7081.5 | 7081.5 | 7081.5 | 7081.5 | 7081.5 |
| 2.5°  | 7088.2 | 7064.8 | 7063.0 | 7078.0 | 7080.3 |
| 5°    | 7087.7 | 7056.8 | 7033.9 | 7024.6 | 7013.5 |
| 7.5°  | 7085.6 | 7038.8 | 6961.5 | 6887.3 | 6852.9 |
| 10°   | 7080.3 | 6997.2 | 6820.2 | 6651.5 | 6571.1 |
| 12.5° | 7068.8 | 6923.0 | 6610.4 | 6300.4 | 6131.7 |
| 15°   | 7043.6 | 6811.3 | 6302.7 | 5775.8 | 5557.2 |
| 17.5° | 6998.1 | 6657.2 | 5925.5 | 5181.9 | 4900.6 |
| 20°   | 6926.1 | 6461.2 | 5416.9 | 4504.5 | 4185.7 |
| 22.5° | 6822.8 | 6205.1 | 4856.5 | 3894.7 | 3640.0 |
| 25°   | 6693.4 | 5906.1 | 4266.1 | 3363.5 | 3128.1 |
| 27.5° | 6539.8 | 5557.2 | 3757.3 | 2868.9 | 2637.1 |
| 30°   | 6360.1 | 5149.7 | 3237.6 | 2401.7 | 2212.3 |
| 32.5° | 6159.1 | 4720.4 | 2695.0 | 2045.4 | 1889.5 |
| 35°   | 5947.2 | 4232.1 | 2269.3 | 1769.4 | 1627.2 |
| 37.5° | 5747.6 | 3709.2 | 1921.8 | 1525.2 | 1425.4 |
| 40°   | 5552.9 | 3159.9 | 1648.0 | 1332.2 | 1255.9 |
| 42.5° | 5369.1 | 2634.5 | 1438.7 | 1170.6 | 1120.7 |
| 45°   | 5136.5 | 2188.5 | 1251.9 | 1057.6 | 1029.8 |
| 47.5° | 4889.6 | 1847.1 | 1103.5 | 965.7  | 956.0  |
| 50°   | 4603.0 | 1573.4 | 984.2  | 885.8  | 892.8  |
| 52.5° | 4231.2 | 1357.0 | 871.2  | 829.3  | 850.1  |
| 55°   | 3728.7 | 1187.4 | 782.9  | 779.8  | 805.0  |
| 57.5° | 3140.1 | 1025.4 | 713.1  | 732.6  | 760.8  |
| 60°   | 2555.4 | 895.1  | 652.2  | 680.4  | 639.4  |
| 62.5° | 2041.4 | 775.4  | 594.4  | 542.7  | 507.4  |
| 65°   | 1604.3 | 666.7  | 534.3  | 445.6  | 406.7  |
| 67.5° | 1279.3 | 565.6  | 449.5  | 354.6  | 322.3  |
| 70°   | 995.8  | 475.6  | 346.2  | 266.3  | 200.9  |
| 72.5° | 763.1  | 397.5  | 270.2  | 151.5  | 114.4  |
| 75°   | 573.6  | 320.6  | 186.8  | 92.3   | 83.9   |
| 77.5° | 408.9  | 238.0  | 99.8   | 66.7   | 61.8   |
| 80°   | 282.6  | 152.8  | 58.3   | 48.1   | 45.5   |
| 82.5° | 175.3  | 73.8   | 39.8   | 34.4   | 32.3   |
| 85°   | 88.7   | 30.9   | 25.1   | 22.1   | 20.3   |
| 87.5° | 29.6   | 15.0   | 11.4   | 10.6   | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)