

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P237854

Luminaire Tested: **4VRVT2-LD5-11-DR100-UNV-L835-CD1-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P237854  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-12)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4VRVT2-LD5-11-DR100-UNV-L835-CD1-WL-U  
Description: METALUX VRVT2 LED LUMINAIRE  
INTERNAL PRISMATIC LENS/100% DR HIGH IMPACT ADDITIVE STANDARD DISTRIBUTION  
4FT FIXTURE  
Light Source: (224) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10771.0 lumens  
Efficiency: N/A  
Efficacy: 130.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.35  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 4.17' x H: 0.17')  
CIE Type: Direct

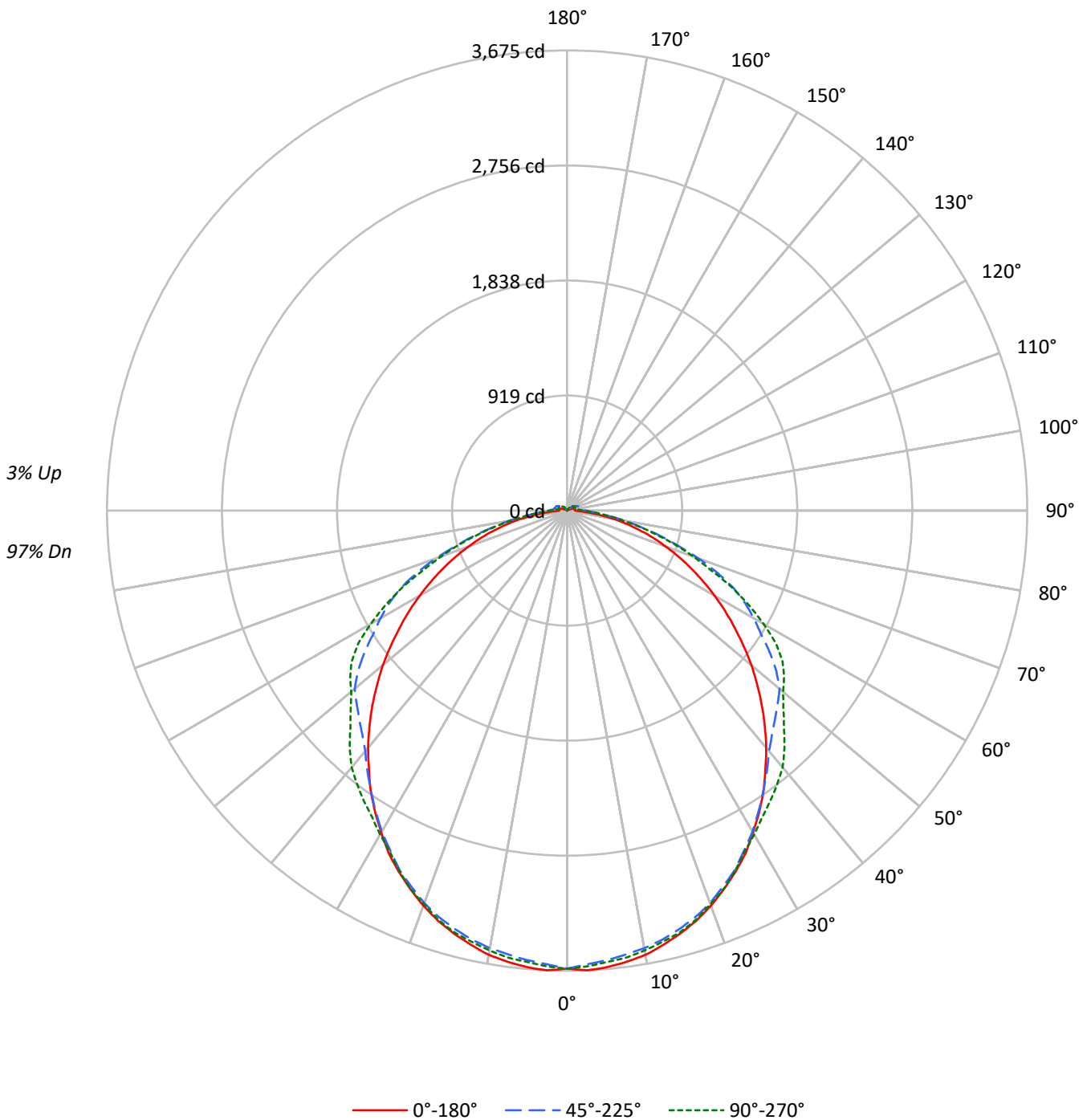
Input Watts (W): 82.44  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 99 | 99 | 99 | 97 |
| 1   | 108 | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 95  | 92  | 89  | 91  | 88  | 86  | 87 | 85 | 83 | 80 |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 80  | 75  | 83  | 77  | 73  | 79  | 75  | 71  | 76 | 72 | 69 | 66 |
| 3   | 89  | 78  | 70  | 63  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 64  | 59  | 67 | 62 | 58 | 56 |
| 4   | 81  | 69  | 60  | 53  | 79  | 67  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 51  | 59 | 54 | 50 | 47 |
| 5   | 75  | 62  | 52  | 46  | 72  | 60  | 52  | 45  | 58  | 50  | 44  | 55  | 49  | 44  | 53 | 48 | 43 | 41 |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 52  | 45  | 39  | 50  | 43  | 38  | 48 | 42 | 38 | 36 |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 47  | 40  | 34  | 46  | 39  | 34  | 44 | 38 | 33 | 31 |
| 8   | 59  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 30  | 40 | 34 | 30 | 28 |
| 9   | 55  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 27  | 37 | 31 | 27 | 25 |
| 10  | 52  | 39  | 31  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35 | 29 | 25 | 23 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 18901 | 18901 | 18901 |
| 5°  | 18921 | 18273 | 18238 |
| 10° | 18772 | 17789 | 17674 |
| 15° | 18503 | 17283 | 17116 |
| 20° | 18196 | 16731 | 16406 |
| 25° | 17811 | 16075 | 15664 |
| 30° | 17308 | 15325 | 14948 |
| 35° | 16776 | 14541 | 14470 |
| 40° | 16136 | 13849 | 14114 |
| 45° | 15454 | 13577 | 13415 |
| 50° | 14741 | 13545 | 12947 |
| 55° | 13932 | 12927 | 12817 |
| 60° | 13136 | 12206 | 11867 |
| 65° | 12273 | 11457 | 10333 |
| 70° | 11368 | 9762  | 8430  |
| 75° | 10330 | 7596  | 6511  |
| 80° | 8876  | 5560  | 4601  |
| 85° | 6273  | 3683  | 2964  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 344.5   | 3.2       |
| 10°-20°   | 980.8   | 9.1       |
| 20°-30°   | 1460.7  | 13.6      |
| 30°-40°   | 1728.4  | 16.0      |
| 40°-50°   | 1805.0  | 16.8      |
| 50°-60°   | 1698.1  | 15.8      |
| 60°-70°   | 1361.9  | 12.6      |
| 70°-80°   | 790.4   | 7.3       |
| 80°-90°   | 281.5   | 2.6       |
| 90°-100°  | 109.9   | 1.0       |
| 100°-110° | 82.7    | 0.8       |
| 110°-120° | 62.8    | 0.6       |
| 120°-130° | 38.5    | 0.4       |
| 130°-140° | 18.8    | 0.2       |
| 140°-150° | 6.2     | 0.1       |
| 150°-160° | 0.8     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-30°    | 2785.9  | 25.9      |
| 0°-40°    | 4514.3  | 41.9      |
| 0°-60°    | 8017.4  | 74.4      |
| 0°-90°    | 10451.3 | 97.0      |
| 90°-120°  | 255.4   | 2.4       |
| 90°-150°  | 318.9   | 3.0       |
| 90°-180°  | 320.0   | 3.0       |
| 0°-180°   | 10771.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3658 | 3658  | 3658 | 3658  | 3658 |      |
| 5°   | 3661 | 3641  | 3605 | 3623  | 3619 | 347  |
| 15°  | 3496 | 3470  | 3460 | 3495  | 3486 | 986  |
| 25°  | 3182 | 3164  | 3167 | 3189  | 3175 | 1465 |
| 35°  | 2734 | 2730  | 2732 | 2792  | 2830 | 1707 |
| 45°  | 2200 | 2211  | 2349 | 2465  | 2448 | 1696 |
| 55°  | 1635 | 1716  | 1976 | 2048  | 2100 | 1464 |
| 65°  | 1090 | 1357  | 1468 | 1457  | 1449 | 1083 |
| 75°  | 595  | 816   | 755  | 741   | 732  | 631  |
| 85°  | 154  | 252   | 250  | 244   | 240  | 173  |
| 90°  | 63   | 135   | 150  | 141   | 133  | 38   |
| 95°  | 64   | 99    | 111  | 98    | 89   | 52   |
| 105° | 52   | 74    | 98   | 80    | 69   | 55   |
| 115° | 27   | 47    | 85   | 76    | 65   | 28   |
| 125° | 10   | 18    | 56   | 61    | 59   | 10   |
| 135° | 5    | 4     | 26   | 42    | 43   | 4    |
| 145° | 3    | 3     | 5    | 18    | 21   | 2    |
| 155° | 1    | 1     | 1    | 1     | 3    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 0    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3658.2 | 3658.2 | 3658.2 | 3658.2 | 3658.2 |
| 2.5°   | 3675.2 | 3655.6 | 3626.9 | 3653.0 | 3643.9 |
| 5°     | 3660.9 | 3641.2 | 3604.7 | 3623.0 | 3619.0 |
| 7.5°   | 3634.7 | 3608.6 | 3575.9 | 3604.7 | 3602.0 |
| 10°    | 3603.3 | 3573.3 | 3548.5 | 3575.9 | 3566.8 |
| 12.5°  | 3551.1 | 3527.5 | 3509.2 | 3541.9 | 3527.5 |
| 15°    | 3496.2 | 3470.0 | 3459.6 | 3494.9 | 3485.7 |
| 17.5°  | 3433.4 | 3412.5 | 3404.7 | 3424.3 | 3425.6 |
| 20°    | 3357.6 | 3341.9 | 3335.4 | 3361.6 | 3345.9 |
| 22.5°  | 3271.4 | 3249.2 | 3250.5 | 3277.9 | 3270.1 |
| 25°    | 3182.5 | 3164.2 | 3166.8 | 3189.0 | 3174.7 |
| 27.5°  | 3085.8 | 3064.9 | 3059.6 | 3083.2 | 3068.8 |
| 30°    | 2968.2 | 2964.2 | 2960.3 | 2979.9 | 2987.8 |
| 32.5°  | 2854.4 | 2853.1 | 2845.3 | 2872.7 | 2900.2 |
| 35°    | 2734.2 | 2730.3 | 2731.6 | 2791.7 | 2829.6 |
| 37.5°  | 2600.9 | 2604.8 | 2620.5 | 2717.2 | 2755.1 |
| 40°    | 2472.8 | 2474.1 | 2508.1 | 2653.2 | 2678.0 |
| 42.5°  | 2336.9 | 2339.5 | 2421.8 | 2574.8 | 2569.5 |
| 45°    | 2199.6 | 2211.4 | 2348.6 | 2465.0 | 2448.0 |
| 47.5°  | 2057.2 | 2079.4 | 2280.7 | 2342.1 | 2343.4 |
| 50°    | 1921.3 | 1950.0 | 2215.3 | 2229.7 | 2250.6 |
| 52.5°  | 1776.2 | 1832.4 | 2105.5 | 2125.2 | 2184.0 |
| 55°    | 1635.0 | 1716.1 | 1976.2 | 2048.0 | 2100.3 |
| 57.5°  | 1496.5 | 1615.4 | 1836.3 | 1950.0 | 1978.8 |
| 60°    | 1359.3 | 1525.2 | 1721.3 | 1814.1 | 1811.5 |
| 62.5°  | 1224.6 | 1439.0 | 1601.1 | 1644.2 | 1637.6 |
| 65°    | 1090.0 | 1356.6 | 1467.7 | 1457.3 | 1449.4 |
| 67.5°  | 965.9  | 1244.2 | 1297.8 | 1254.7 | 1241.6 |
| 70°    | 835.2  | 1108.3 | 1114.9 | 1071.7 | 1069.1 |
| 72.5°  | 717.5  | 961.9  | 922.7  | 901.8  | 903.1  |
| 75°    | 594.7  | 815.6  | 755.4  | 741.1  | 731.9  |
| 77.5°  | 479.7  | 654.8  | 596.0  | 593.4  | 588.1  |
| 80°    | 366.0  | 504.5  | 466.6  | 454.8  | 447.0  |
| 82.5°  | 254.9  | 364.6  | 341.1  | 341.1  | 335.9  |
| 85°    | 154.2  | 252.2  | 249.6  | 244.4  | 240.5  |
| 87.5°  | 86.3   | 173.8  | 186.9  | 181.7  | 171.2  |
| 90°    | 62.7   | 134.6  | 150.3  | 141.2  | 133.3  |
| 92.5°  | 62.7   | 113.7  | 125.5  | 115.0  | 105.9  |
| 95°    | 64.0   | 99.3   | 111.1  | 98.0   | 88.9   |
| 97.5°  | 64.0   | 91.5   | 104.6  | 88.9   | 79.7   |
| 100°   | 61.4   | 85.0   | 100.6  | 83.6   | 73.2   |
| 102.5° | 57.5   | 79.7   | 98.0   | 81.0   | 70.6   |
| 105°   | 52.3   | 74.5   | 98.0   | 79.7   | 69.3   |
| 107.5° | 45.7   | 69.3   | 95.4   | 79.7   | 68.0   |
| 110°   | 39.2   | 62.7   | 94.1   | 78.4   | 68.0   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|--------|------|-------|------|-------|------|
| 112.5° | 34.0 | 54.9  | 90.2 | 77.1  | 66.7 |
| 115°   | 27.4 | 47.1  | 85.0 | 75.8  | 65.3 |
| 117.5° | 22.2 | 39.2  | 78.4 | 73.2  | 64.0 |
| 120°   | 18.3 | 31.4  | 70.6 | 69.3  | 62.7 |
| 122.5° | 13.1 | 23.5  | 64.0 | 66.7  | 61.4 |
| 125°   | 10.5 | 18.3  | 56.2 | 61.4  | 58.8 |
| 127.5° | 9.1  | 11.8  | 48.4 | 57.5  | 56.2 |
| 130°   | 6.5  | 7.8   | 40.5 | 52.3  | 52.3 |
| 132.5° | 5.2  | 5.2   | 32.7 | 47.1  | 48.4 |
| 135°   | 5.2  | 3.9   | 26.1 | 41.8  | 43.1 |
| 137.5° | 3.9  | 3.9   | 20.9 | 35.3  | 37.9 |
| 140°   | 2.6  | 2.6   | 14.4 | 28.8  | 32.7 |
| 142.5° | 2.6  | 2.6   | 9.1  | 23.5  | 26.1 |
| 145°   | 2.6  | 2.6   | 5.2  | 18.3  | 20.9 |
| 147.5° | 2.6  | 1.3   | 2.6  | 13.1  | 15.7 |
| 150°   | 2.6  | 1.3   | 1.3  | 7.8   | 10.5 |
| 152.5° | 1.3  | 1.3   | 1.3  | 3.9   | 6.5  |
| 155°   | 1.3  | 1.3   | 1.3  | 1.3   | 2.6  |
| 157.5° | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 160°   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 162.5° | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 165°   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 167.5° | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 170°   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 172.5° | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 175°   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 177.5° | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| 180°   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |

(END OF REPORT)