

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: P293558

Luminaire Tested: **24GR-LD5-42-A-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P293558  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33306)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-42-A-UNV-L93050-W2A1-U-5000K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3961.1 lumens  
Efficiency: N/A  
Efficacy: 135.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.26  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

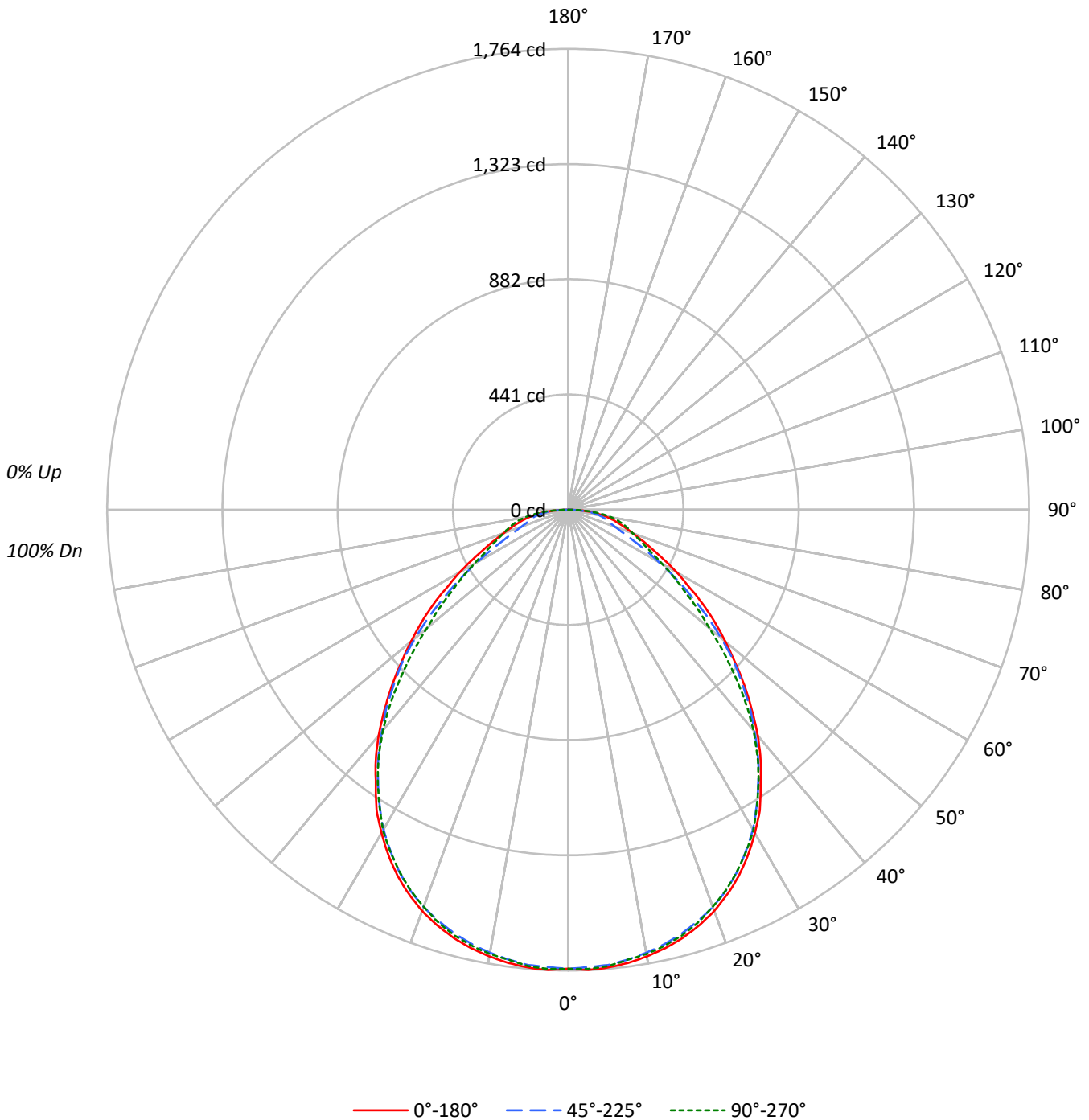
Input Watts (W): 29.168706  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 93  | 90  | 91  | 89  | 88  | 86  |    |    |    |    | 86  |   |  |   |
| 2   | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  | 88  | 83  | 79  | 85  | 81  | 77  | 82  | 78  | 75  | 73  |    |    |    |    | 73  |   |  |   |
| 3   | 93  | 83  | 75  | 69  | 90  | 81  | 74  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 73  | 69  | 65  | 63  |    |    |    |    | 63  |   |  |   |
| 4   | 86  | 74  | 66  | 60  | 83  | 73  | 65  | 60  | 71  | 64  | 59  | 68  | 63  | 58  | 66  | 61  | 57  | 55  |    |    |    |    | 55  |   |  |   |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |    |    | 49  |   |  |   |
| 6   | 73  | 61  | 53  | 46  | 72  | 60  | 52  | 46  | 58  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |    |    | 43  |   |  |   |
| 7   | 68  | 56  | 47  | 42  | 67  | 55  | 47  | 41  | 53  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 39  |    |    |    |    | 39  |   |  |   |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 37  | 47  | 41  | 37  | 35  |    |    |    |    | 35  |   |  |   |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 33  | 43  | 38  | 33  | 32  |    |    |    |    | 32  |   |  |   |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 40  | 35  | 30  | 29  |    |    |    |    | 29  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2365 | 2365 | 2365 |
| 5°  | 2376 | 2363 | 2369 |
| 10° | 2372 | 2353 | 2359 |
| 15° | 2363 | 2339 | 2349 |
| 20° | 2340 | 2317 | 2316 |
| 25° | 2295 | 2270 | 2268 |
| 30° | 2219 | 2196 | 2201 |
| 35° | 2108 | 2084 | 2087 |
| 40° | 1982 | 1948 | 1936 |
| 45° | 1816 | 1792 | 1721 |
| 50° | 1642 | 1597 | 1477 |
| 55° | 1474 | 1342 | 1273 |
| 60° | 1291 | 1080 | 1120 |
| 65° | 1126 | 849  | 1031 |
| 70° | 1030 | 742  | 1030 |
| 75° | 1031 | 789  | 1136 |
| 80° | 1119 | 929  | 1295 |
| 85° | 1229 | 1048 | 1389 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 166.4  | 4.2       |
| 10°-20°   | 474.9  | 12.0      |
| 20°-30°   | 704.2  | 17.8      |
| 30°-40°   | 794.5  | 20.1      |
| 40°-50°   | 719.6  | 18.2      |
| 50°-60°   | 519.1  | 13.1      |
| 60°-70°   | 310.0  | 7.8       |
| 70°-80°   | 191.6  | 4.8       |
| 80°-90°   | 80.7   | 2.0       |
| 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°    | 1345.6 | 34.0      |
| 0°-40°    | 2140.1 | 54.0      |
| 0°-60°    | 3378.8 | 85.3      |
| 0°-90°    | 3961.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3961.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1757 | 1757  | 1757 | 1757  | 1757 |      |
| 5°  | 1759 | 1757  | 1750 | 1748  | 1754 | 167  |
| 15° | 1696 | 1686  | 1679 | 1680  | 1686 | 478  |
| 25° | 1546 | 1537  | 1529 | 1524  | 1528 | 710  |
| 35° | 1283 | 1281  | 1268 | 1269  | 1270 | 803  |
| 45° | 955  | 948   | 942  | 918   | 904  | 736  |
| 55° | 628  | 609   | 572  | 544   | 543  | 561  |
| 65° | 354  | 312   | 267  | 303   | 324  | 356  |
| 75° | 198  | 172   | 152  | 189   | 218  | 212  |
| 85° | 80   | 70    | 68   | 89    | 90   | 83   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1757.4 | 1757.4 | 1757.4 | 1757.4 | 1757.4 |
| 2.5°  | 1763.6 | 1758.7 | 1752.6 | 1756.2 | 1759.3 |
| 5°    | 1759.3 | 1756.8 | 1749.5 | 1747.7 | 1753.8 |
| 7.5°  | 1750.1 | 1744.0 | 1737.3 | 1740.3 | 1737.9 |
| 10°   | 1736.0 | 1730.5 | 1722.0 | 1722.6 | 1726.9 |
| 12.5° | 1718.9 | 1712.2 | 1703.0 | 1705.4 | 1709.1 |
| 15°   | 1696.3 | 1685.9 | 1679.1 | 1679.7 | 1686.5 |
| 17.5° | 1667.5 | 1659.5 | 1651.0 | 1652.8 | 1655.9 |
| 20°   | 1634.5 | 1630.2 | 1617.9 | 1614.3 | 1617.3 |
| 22.5° | 1592.8 | 1584.9 | 1578.2 | 1576.3 | 1576.9 |
| 25°   | 1545.7 | 1537.2 | 1529.2 | 1523.7 | 1528.0 |
| 27.5° | 1490.7 | 1483.3 | 1472.9 | 1471.1 | 1474.7 |
| 30°   | 1428.2 | 1422.7 | 1413.5 | 1411.1 | 1416.6 |
| 32.5° | 1364.6 | 1355.4 | 1342.6 | 1342.6 | 1343.8 |
| 35°   | 1283.2 | 1281.4 | 1268.5 | 1269.1 | 1270.4 |
| 37.5° | 1209.8 | 1201.2 | 1193.9 | 1186.5 | 1190.2 |
| 40°   | 1128.4 | 1118.6 | 1108.8 | 1103.9 | 1102.1 |
| 42.5° | 1040.9 | 1033.5 | 1029.3 | 1011.5 | 1007.2 |
| 45°   | 954.6  | 948.5  | 941.8  | 918.5  | 904.4  |
| 47.5° | 866.5  | 865.3  | 859.8  | 818.8  | 804.7  |
| 50°   | 784.5  | 782.7  | 763.1  | 719.6  | 705.5  |
| 52.5° | 706.8  | 694.5  | 668.8  | 626.0  | 623.6  |
| 55°   | 628.4  | 608.9  | 572.2  | 544.0  | 542.8  |
| 57.5° | 545.8  | 522.6  | 485.3  | 470.0  | 477.9  |
| 60°   | 479.7  | 444.3  | 401.4  | 403.3  | 416.1  |
| 62.5° | 411.2  | 371.4  | 329.2  | 347.6  | 362.9  |
| 65°   | 353.7  | 311.5  | 266.8  | 302.9  | 323.7  |
| 67.5° | 303.5  | 264.4  | 221.5  | 269.9  | 290.1  |
| 70°   | 261.9  | 230.1  | 188.5  | 239.3  | 261.9  |
| 72.5° | 228.9  | 199.5  | 167.1  | 214.8  | 241.1  |
| 75°   | 198.3  | 172.0  | 151.8  | 189.1  | 218.5  |
| 77.5° | 172.0  | 146.3  | 137.1  | 167.1  | 195.8  |
| 80°   | 144.4  | 121.2  | 119.9  | 145.6  | 167.1  |
| 82.5° | 112.6  | 96.7   | 96.7   | 121.8  | 134.6  |
| 85°   | 79.6   | 69.8   | 67.9   | 88.7   | 90.0   |
| 87.5° | 41.0   | 39.2   | 35.5   | 46.5   | 46.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)