

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: P293481

Luminaire Tested: **24GR-LD5-38-A-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P293481  
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-LD5-38-A-UNV-L82765-W2A1-U-5000K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4009.0 lumens  
Efficiency: N/A  
Efficacy: 154.5 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

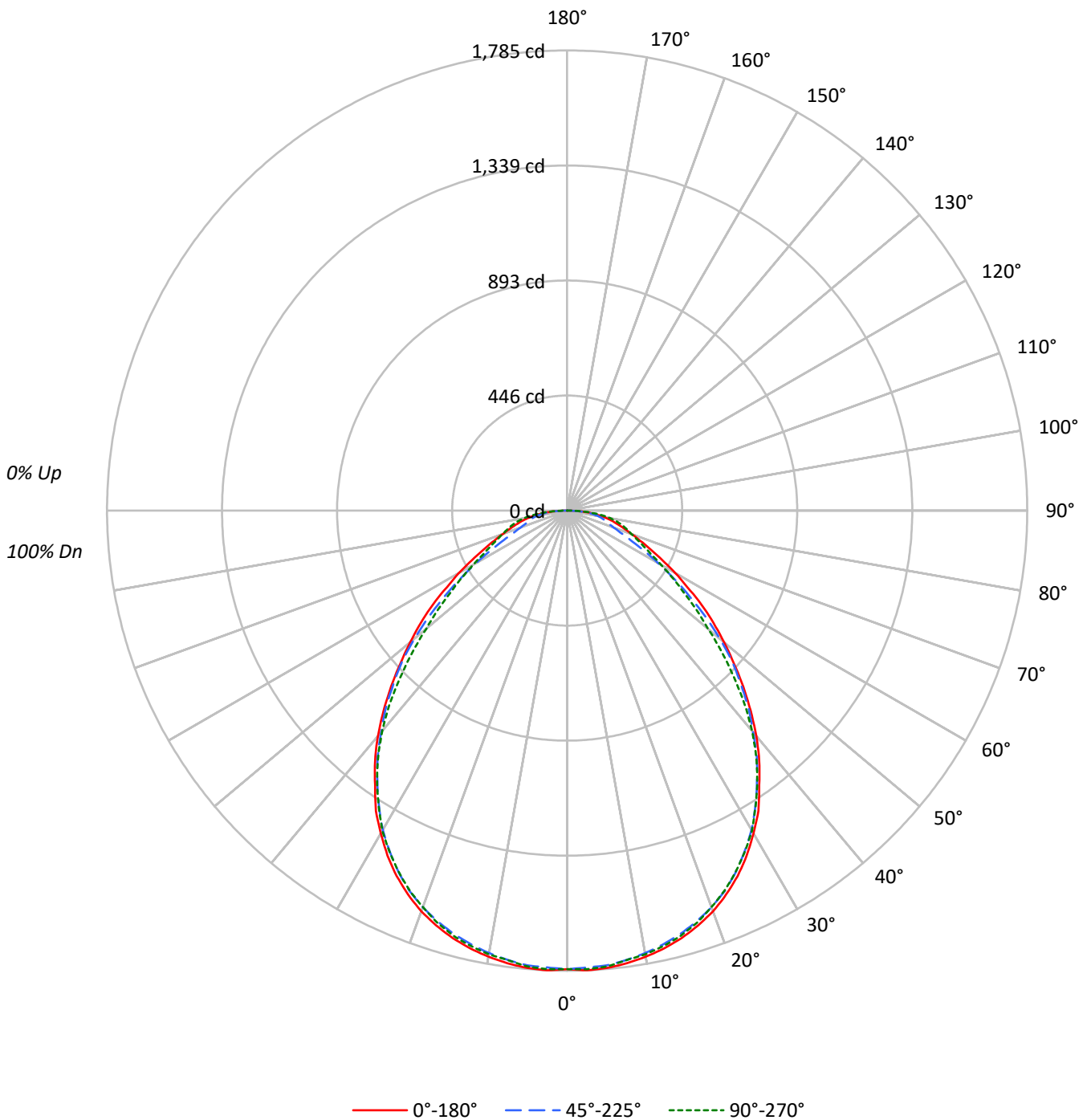
Input Watts (W): 25.947  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2393 | 2393 | 2393 |
| 5°  | 2405 | 2392 | 2397 |
| 10° | 2401 | 2381 | 2388 |
| 15° | 2391 | 2367 | 2378 |
| 20° | 2369 | 2345 | 2344 |
| 25° | 2323 | 2298 | 2296 |
| 30° | 2246 | 2223 | 2228 |
| 35° | 2133 | 2109 | 2112 |
| 40° | 2006 | 1971 | 1959 |
| 45° | 1838 | 1814 | 1742 |
| 50° | 1662 | 1617 | 1495 |
| 55° | 1492 | 1358 | 1289 |
| 60° | 1307 | 1093 | 1133 |
| 65° | 1140 | 860  | 1043 |
| 70° | 1043 | 751  | 1043 |
| 75° | 1043 | 799  | 1149 |
| 80° | 1133 | 941  | 1310 |
| 85° | 1243 | 1061 | 1405 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 168.4  | 4.2       |
| 10°-20°   | 480.7  | 12.0      |
| 20°-30°   | 712.8  | 17.8      |
| 30°-40°   | 804.1  | 20.1      |
| 40°-50°   | 728.3  | 18.2      |
| 50°-60°   | 525.4  | 13.1      |
| 60°-70°   | 313.7  | 7.8       |
| 70°-80°   | 193.9  | 4.8       |
| 80°-90°   | 81.7   | 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°    | 1361.9 | 34.0      |
| 0°-40°    | 2166.0 | 54.0      |
| 0°-60°    | 3419.7 | 85.3      |
| 0°-90°    | 4009.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4009.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1779 | 1779  | 1779 | 1779  | 1779 |      |
| 5°  | 1781 | 1778  | 1771 | 1769  | 1775 | 169  |
| 15° | 1717 | 1706  | 1700 | 1700  | 1707 | 484  |
| 25° | 1564 | 1556  | 1548 | 1542  | 1546 | 719  |
| 35° | 1299 | 1297  | 1284 | 1284  | 1286 | 813  |
| 45° | 966  | 960   | 953  | 930   | 915  | 745  |
| 55° | 636  | 616   | 579  | 551   | 549  | 568  |
| 65° | 358  | 315   | 270  | 307   | 328  | 360  |
| 75° | 201  | 174   | 154  | 191   | 221  | 214  |
| 85° | 80   | 71    | 69   | 90    | 91   | 84   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1778.7 | 1778.7 | 1778.7 | 1778.7 | 1778.7 |
| 2.5°  | 1784.9 | 1780.0 | 1773.8 | 1777.5 | 1780.6 |
| 5°    | 1780.6 | 1778.1 | 1770.7 | 1768.8 | 1775.0 |
| 7.5°  | 1771.3 | 1765.1 | 1758.3 | 1761.4 | 1758.9 |
| 10°   | 1757.1 | 1751.5 | 1742.8 | 1743.4 | 1747.8 |
| 12.5° | 1739.7 | 1732.9 | 1723.6 | 1726.1 | 1729.8 |
| 15°   | 1716.8 | 1706.3 | 1699.5 | 1700.1 | 1706.9 |
| 17.5° | 1687.7 | 1679.7 | 1671.0 | 1672.8 | 1675.9 |
| 20°   | 1654.3 | 1649.9 | 1637.5 | 1633.8 | 1636.9 |
| 22.5° | 1612.1 | 1604.1 | 1597.3 | 1595.4 | 1596.0 |
| 25°   | 1564.5 | 1555.8 | 1547.7 | 1542.2 | 1546.5 |
| 27.5° | 1508.7 | 1501.3 | 1490.8 | 1488.9 | 1492.6 |
| 30°   | 1445.5 | 1440.0 | 1430.7 | 1428.2 | 1433.8 |
| 32.5° | 1381.1 | 1371.8 | 1358.8 | 1358.8 | 1360.1 |
| 35°   | 1298.8 | 1296.9 | 1283.9 | 1284.5 | 1285.8 |
| 37.5° | 1224.4 | 1215.8 | 1208.3 | 1200.9 | 1204.6 |
| 40°   | 1142.1 | 1132.2 | 1122.2 | 1117.3 | 1115.4 |
| 42.5° | 1053.5 | 1046.1 | 1041.7 | 1023.8 | 1019.4 |
| 45°   | 966.2  | 960.0  | 953.2  | 929.6  | 915.4  |
| 47.5° | 877.0  | 875.7  | 870.2  | 828.7  | 814.4  |
| 50°   | 794.0  | 792.1  | 772.3  | 728.3  | 714.1  |
| 52.5° | 715.3  | 703.0  | 676.9  | 633.6  | 631.1  |
| 55°   | 636.1  | 616.2  | 579.1  | 550.6  | 549.4  |
| 57.5° | 552.5  | 528.9  | 491.1  | 475.7  | 483.7  |
| 60°   | 485.6  | 449.6  | 406.3  | 408.1  | 421.2  |
| 62.5° | 416.2  | 375.9  | 333.2  | 351.8  | 367.3  |
| 65°   | 358.0  | 315.2  | 270.0  | 306.6  | 327.6  |
| 67.5° | 307.2  | 267.6  | 224.2  | 273.1  | 293.6  |
| 70°   | 265.1  | 232.9  | 190.8  | 242.2  | 265.1  |
| 72.5° | 231.6  | 201.9  | 169.1  | 217.4  | 244.0  |
| 75°   | 200.7  | 174.0  | 153.6  | 191.4  | 221.1  |
| 77.5° | 174.0  | 148.0  | 138.7  | 169.1  | 198.2  |
| 80°   | 146.2  | 122.6  | 121.4  | 147.4  | 169.1  |
| 82.5° | 114.0  | 97.9   | 97.9   | 123.2  | 136.3  |
| 85°   | 80.5   | 70.6   | 68.7   | 89.8   | 91.0   |
| 87.5° | 41.5   | 39.6   | 35.9   | 47.1   | 47.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)