

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: P292155

Luminaire Tested: **22GR-LD5-43-A-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292155  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33296)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-43-A-UNV-L83050-W2A1-U-3000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4103.0 lumens  
Efficiency: N/A  
Efficacy: 117.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

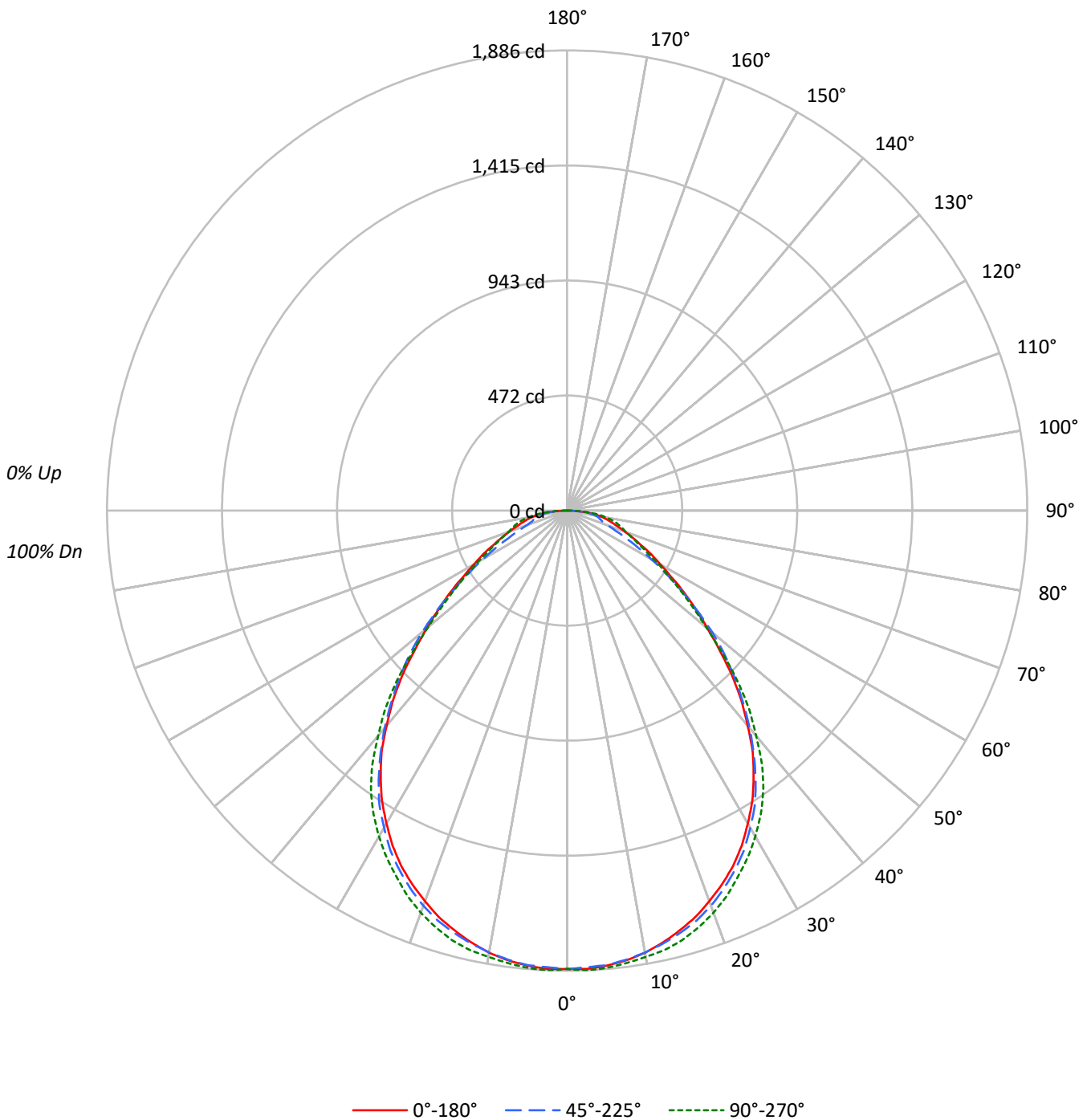
Input Watts (W): 35.061  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |    |    |    |    | 86  |   |  |   |
| 2   | 101 | 94  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |    |    |    |    | 74  |   |  |   |
| 3   | 93  | 84  | 76  | 70  | 91  | 82  | 75  | 70  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |    |    |    |    | 64  |   |  |   |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 66  | 60  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56  |    |    |    |    | 56  |   |  |   |
| 5   | 80  | 68  | 59  | 53  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |    |    |    |    | 49  |   |  |   |
| 6   | 74  | 62  | 53  | 47  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 57  | 51  | 46  | 56  | 50  | 46  | 44  |    |    |    |    | 44  |   |  |   |
| 7   | 69  | 56  | 48  | 42  | 67  | 55  | 48  | 42  | 54  | 47  | 42  | 53  | 46  | 42  | 51  | 46  | 41  | 39  |    |    |    |    | 39  |   |  |   |
| 8   | 64  | 52  | 44  | 38  | 63  | 51  | 43  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 37  | 36  |    |    |    |    | 36  |   |  |   |
| 9   | 60  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |    |    | 32  |   |  |   |
| 10  | 57  | 44  | 37  | 32  | 55  | 44  | 36  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 30  |    |    |    |    | 30  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5056 | 5056 | 5056 |
| 5°  | 5058 | 5050 | 5081 |
| 10° | 5028 | 5025 | 5075 |
| 15° | 4963 | 4990 | 5078 |
| 20° | 4878 | 4935 | 5023 |
| 25° | 4774 | 4828 | 4916 |
| 30° | 4602 | 4664 | 4791 |
| 35° | 4375 | 4426 | 4604 |
| 40° | 4045 | 4089 | 4233 |
| 45° | 3634 | 3699 | 3757 |
| 50° | 3142 | 3254 | 3110 |
| 55° | 2741 | 2670 | 2634 |
| 60° | 2374 | 2138 | 2281 |
| 65° | 2122 | 1678 | 2049 |
| 70° | 1969 | 1389 | 2020 |
| 75° | 1965 | 1469 | 2244 |
| 80° | 2176 | 1849 | 2531 |
| 85° | 2269 | 2004 | 2859 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 177.8  | 4.3       |
| 10°-20°   | 506.4  | 12.3      |
| 20°-30°   | 749.0  | 18.3      |
| 30°-40°   | 845.2  | 20.6      |
| 40°-50°   | 745.1  | 18.2      |
| 50°-60°   | 511.1  | 12.5      |
| 60°-70°   | 301.6  | 7.4       |
| 70°-80°   | 188.2  | 4.6       |
| 80°-90°   | 78.5   | 1.9       |
| 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°    | 1433.3 | 34.9      |
| 0°-40°    | 2278.5 | 55.5      |
| 0°-60°    | 3534.7 | 86.1      |
| 0°-90°    | 4103.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4103.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1879 | 1879  | 1879 | 1879  | 1879 |      |
| 5°  | 1872 | 1868  | 1870 | 1876  | 1881 | 178  |
| 15° | 1782 | 1784  | 1791 | 1813  | 1823 | 502  |
| 25° | 1608 | 1614  | 1626 | 1647  | 1656 | 738  |
| 35° | 1332 | 1343  | 1347 | 1380  | 1402 | 830  |
| 45° | 955  | 960   | 972  | 978   | 987  | 733  |
| 55° | 584  | 570   | 569  | 550   | 561  | 524  |
| 65° | 333  | 293   | 264  | 305   | 322  | 336  |
| 75° | 189  | 170   | 141  | 198   | 216  | 203  |
| 85° | 74   | 69    | 65   | 85    | 93   | 79   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1879.0 | 1879.0 | 1879.0 | 1879.0 | 1879.0 |
| 2.5°  | 1880.0 | 1875.2 | 1873.3 | 1880.9 | 1885.7 |
| 5°    | 1872.3 | 1868.5 | 1869.5 | 1876.2 | 1880.9 |
| 7.5°  | 1859.0 | 1856.1 | 1856.1 | 1865.7 | 1870.4 |
| 10°   | 1839.9 | 1838.9 | 1838.9 | 1850.4 | 1857.1 |
| 12.5° | 1813.1 | 1814.1 | 1817.9 | 1833.2 | 1844.7 |
| 15°   | 1781.6 | 1783.5 | 1791.2 | 1813.1 | 1822.7 |
| 17.5° | 1747.3 | 1747.3 | 1762.5 | 1779.7 | 1791.2 |
| 20°   | 1703.3 | 1706.2 | 1723.4 | 1742.5 | 1753.9 |
| 22.5° | 1658.5 | 1663.2 | 1677.6 | 1699.5 | 1710.0 |
| 25°   | 1607.9 | 1613.6 | 1626.0 | 1647.0 | 1655.6 |
| 27.5° | 1548.7 | 1556.3 | 1569.7 | 1585.0 | 1603.1 |
| 30°   | 1480.9 | 1492.3 | 1500.9 | 1521.9 | 1542.0 |
| 32.5° | 1412.1 | 1422.6 | 1432.2 | 1454.1 | 1477.1 |
| 35°   | 1331.9 | 1343.4 | 1347.2 | 1379.7 | 1401.6 |
| 37.5° | 1249.8 | 1254.6 | 1256.5 | 1289.0 | 1312.8 |
| 40°   | 1151.5 | 1161.0 | 1163.9 | 1189.7 | 1204.9 |
| 42.5° | 1057.0 | 1060.8 | 1066.5 | 1085.6 | 1103.7 |
| 45°   | 954.8  | 959.6  | 972.0  | 977.7  | 987.3  |
| 47.5° | 847.9  | 862.2  | 876.5  | 858.4  | 859.3  |
| 50°   | 750.5  | 761.9  | 777.2  | 742.8  | 742.8  |
| 52.5° | 663.6  | 669.3  | 670.3  | 641.6  | 647.3  |
| 55°   | 584.3  | 570.0  | 569.1  | 550.0  | 561.4  |
| 57.5° | 505.1  | 486.0  | 479.3  | 473.6  | 486.9  |
| 60°   | 441.1  | 406.7  | 397.2  | 405.8  | 423.9  |
| 62.5° | 388.6  | 344.7  | 326.5  | 348.5  | 364.7  |
| 65°   | 333.2  | 293.1  | 263.5  | 304.6  | 321.8  |
| 67.5° | 290.3  | 252.1  | 213.9  | 272.1  | 284.5  |
| 70°   | 250.2  | 220.6  | 176.6  | 247.3  | 256.8  |
| 72.5° | 217.7  | 194.8  | 152.8  | 223.4  | 234.9  |
| 75°   | 189.0  | 170.0  | 141.3  | 197.6  | 215.8  |
| 77.5° | 166.1  | 145.1  | 131.8  | 170.9  | 192.9  |
| 80°   | 140.4  | 119.3  | 119.3  | 143.2  | 163.3  |
| 82.5° | 110.8  | 93.6   | 96.4   | 116.5  | 130.8  |
| 85°   | 73.5   | 68.7   | 64.9   | 85.0   | 92.6   |
| 87.5° | 37.2   | 38.2   | 34.4   | 43.9   | 44.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)