

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: P292214

Luminaire Tested: **22GR-LD5-43-A-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292214  
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-L82765-W2A1-U-2700K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3983.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 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

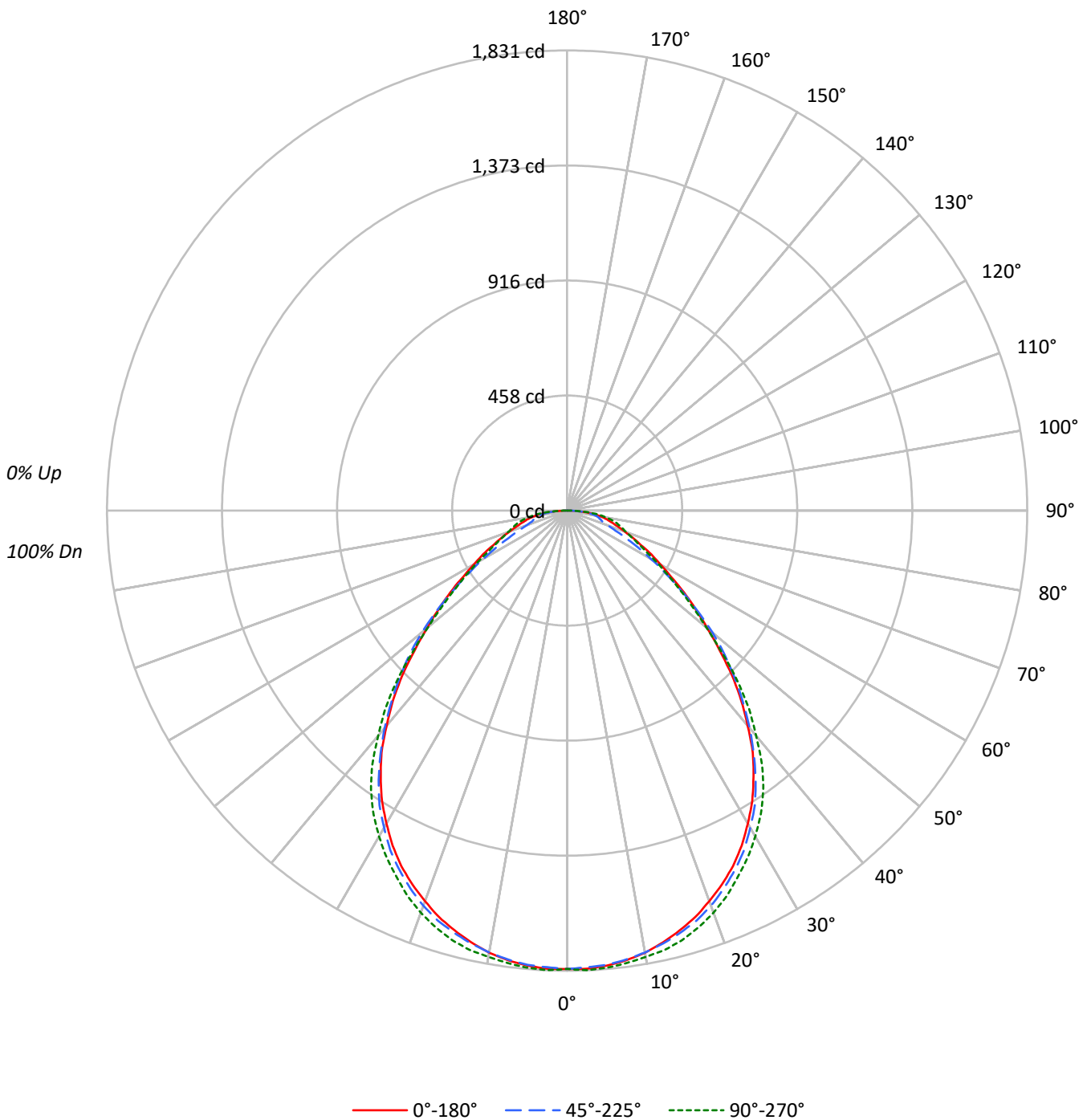
Input Watts (W): 35.154  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |
| 2   | 101 | 94  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |
| 3   | 93  | 84  | 76  | 70  | 91  | 82  | 75  | 70  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 66  | 60  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56  |
| 5   | 80  | 68  | 59  | 53  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |
| 6   | 74  | 62  | 53  | 47  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 57  | 51  | 46  | 56  | 50  | 46  | 44  |
| 7   | 69  | 56  | 48  | 42  | 67  | 55  | 48  | 42  | 54  | 47  | 42  | 53  | 46  | 42  | 51  | 46  | 41  | 39  |
| 8   | 64  | 52  | 44  | 38  | 63  | 51  | 43  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 37  | 36  |
| 9   | 60  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 10  | 57  | 44  | 37  | 32  | 55  | 44  | 36  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 30  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4909 | 4909 | 4909 |
| 5°  | 4910 | 4902 | 4932 |
| 10° | 4881 | 4878 | 4926 |
| 15° | 4818 | 4844 | 4929 |
| 20° | 4735 | 4791 | 4876 |
| 25° | 4634 | 4687 | 4772 |
| 30° | 4467 | 4527 | 4651 |
| 35° | 4248 | 4296 | 4470 |
| 40° | 3927 | 3969 | 4109 |
| 45° | 3527 | 3591 | 3647 |
| 50° | 3050 | 3159 | 3019 |
| 55° | 2661 | 2592 | 2557 |
| 60° | 2305 | 2075 | 2215 |
| 65° | 2060 | 1629 | 1989 |
| 70° | 1910 | 1349 | 1961 |
| 75° | 1908 | 1426 | 2178 |
| 80° | 2111 | 1796 | 2456 |
| 85° | 2205 | 1945 | 2776 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 172.6  | 4.3       |
| 10°-20°   | 491.6  | 12.3      |
| 20°-30°   | 727.1  | 18.3      |
| 30°-40°   | 820.5  | 20.6      |
| 40°-50°   | 723.3  | 18.2      |
| 50°-60°   | 496.2  | 12.5      |
| 60°-70°   | 292.8  | 7.4       |
| 70°-80°   | 182.7  | 4.6       |
| 80°-90°   | 76.2   | 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°    | 1391.3 | 34.9      |
| 0°-40°    | 2211.8 | 55.5      |
| 0°-60°    | 3431.3 | 86.1      |
| 0°-90°    | 3983.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3983.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1824 | 1824  | 1824 | 1824  | 1824 |      |
| 5°  | 1818 | 1814  | 1815 | 1821  | 1826 | 172  |
| 15° | 1730 | 1731  | 1739 | 1760  | 1769 | 487  |
| 25° | 1561 | 1566  | 1578 | 1599  | 1607 | 717  |
| 35° | 1293 | 1304  | 1308 | 1339  | 1361 | 806  |
| 45° | 927  | 932   | 944  | 949   | 958  | 712  |
| 55° | 567  | 553   | 552  | 534   | 545  | 509  |
| 65° | 324  | 284   | 256  | 296   | 312  | 326  |
| 75° | 184  | 165   | 137  | 192   | 210  | 197  |
| 85° | 71   | 67    | 63   | 82    | 90   | 77   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1824.1 | 1824.1 | 1824.1 | 1824.1 | 1824.1 |
| 2.5°  | 1825.0 | 1820.4 | 1818.5 | 1825.9 | 1830.6 |
| 5°    | 1817.6 | 1813.9 | 1814.8 | 1821.3 | 1825.9 |
| 7.5°  | 1804.6 | 1801.8 | 1801.8 | 1811.1 | 1815.7 |
| 10°   | 1786.1 | 1785.1 | 1785.1 | 1796.3 | 1802.8 |
| 12.5° | 1760.1 | 1761.0 | 1764.8 | 1779.6 | 1790.7 |
| 15°   | 1729.5 | 1731.4 | 1738.8 | 1760.1 | 1769.4 |
| 17.5° | 1696.2 | 1696.2 | 1711.0 | 1727.7 | 1738.8 |
| 20°   | 1653.5 | 1656.3 | 1673.0 | 1691.5 | 1702.7 |
| 22.5° | 1610.0 | 1614.6 | 1628.5 | 1649.8 | 1660.0 |
| 25°   | 1560.8 | 1566.4 | 1578.5 | 1598.8 | 1607.2 |
| 27.5° | 1503.4 | 1510.8 | 1523.8 | 1538.6 | 1556.2 |
| 30°   | 1437.6 | 1448.7 | 1457.0 | 1477.4 | 1496.9 |
| 32.5° | 1370.8 | 1381.0 | 1390.3 | 1411.6 | 1433.9 |
| 35°   | 1293.0 | 1304.1 | 1307.8 | 1339.3 | 1360.6 |
| 37.5° | 1213.3 | 1217.9 | 1219.8 | 1251.3 | 1274.4 |
| 40°   | 1117.8 | 1127.1 | 1129.8 | 1154.9 | 1169.7 |
| 42.5° | 1026.0 | 1029.7 | 1035.3 | 1053.8 | 1071.5 |
| 45°   | 926.9  | 931.5  | 943.5  | 949.1  | 958.4  |
| 47.5° | 823.1  | 837.0  | 850.9  | 833.3  | 834.2  |
| 50°   | 728.5  | 739.6  | 754.5  | 721.1  | 721.1  |
| 52.5° | 644.2  | 649.7  | 650.7  | 622.9  | 628.4  |
| 55°   | 567.2  | 553.3  | 552.4  | 533.9  | 545.0  |
| 57.5° | 490.3  | 471.8  | 465.3  | 459.7  | 472.7  |
| 60°   | 428.2  | 394.8  | 385.6  | 393.9  | 411.5  |
| 62.5° | 377.2  | 334.6  | 317.0  | 338.3  | 354.1  |
| 65°   | 323.5  | 284.5  | 255.8  | 295.7  | 312.4  |
| 67.5° | 281.8  | 244.7  | 207.6  | 264.2  | 276.2  |
| 70°   | 242.8  | 214.1  | 171.5  | 240.1  | 249.3  |
| 72.5° | 211.3  | 189.1  | 148.3  | 216.9  | 228.0  |
| 75°   | 183.5  | 165.0  | 137.2  | 191.9  | 209.5  |
| 77.5° | 161.3  | 140.9  | 127.9  | 165.9  | 187.2  |
| 80°   | 136.2  | 115.9  | 115.9  | 139.0  | 158.5  |
| 82.5° | 107.5  | 90.8   | 93.6   | 113.1  | 127.0  |
| 85°   | 71.4   | 66.7   | 63.0   | 82.5   | 89.9   |
| 87.5° | 36.1   | 37.1   | 33.4   | 42.6   | 43.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)