

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: P291911

Luminaire Tested: **22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291911  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3196.0 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.19 / 1.24  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

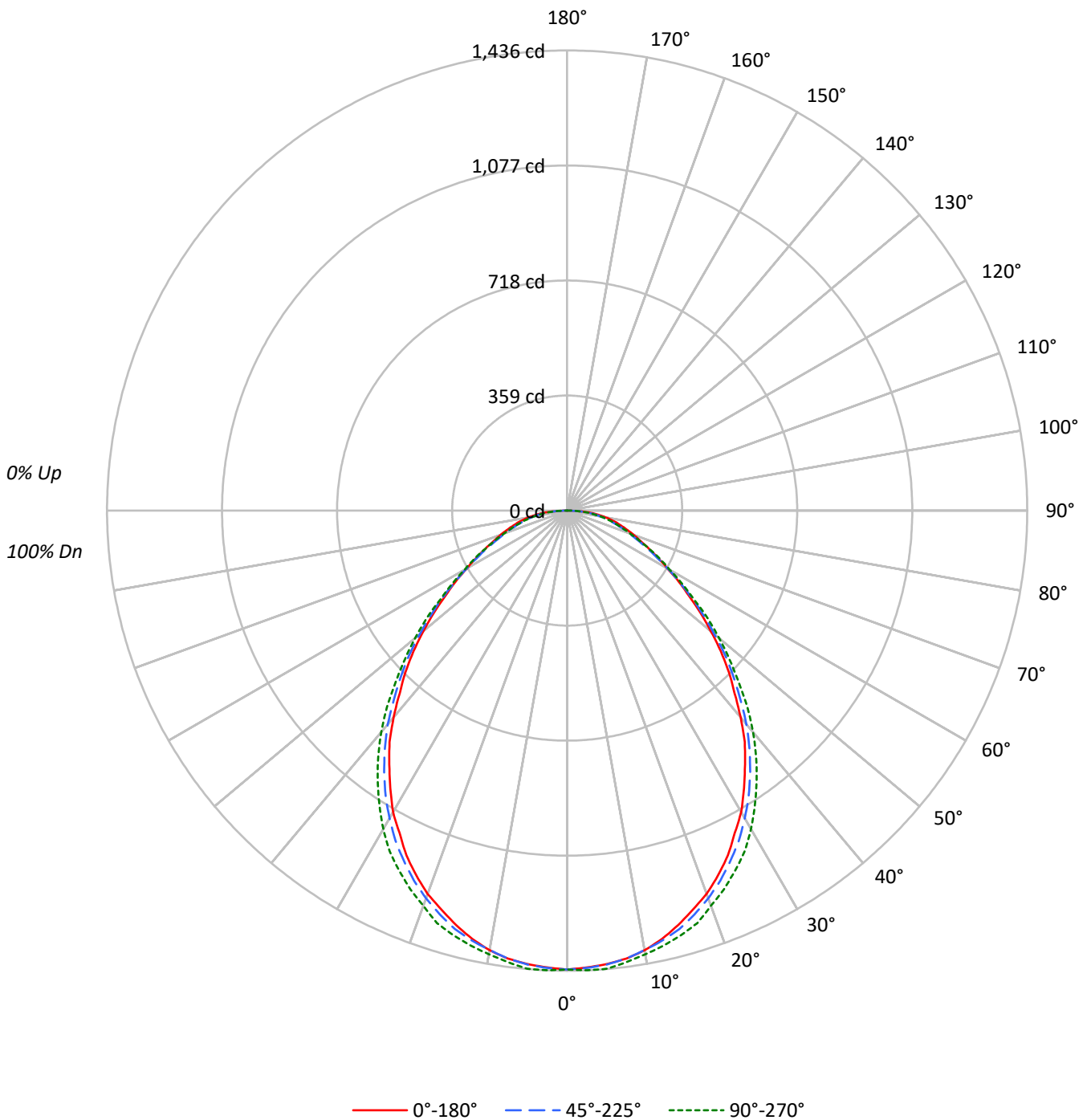
Input Watts (W): 32.271  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P291911

CATALOG NUMBER: 22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K

### Luminous Intensity Polar Plot





TEST NUMBER: P291911

CATALOG NUMBER: 22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K

**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  | 92  | 90  | 91  | 89  | 87  | 85  |    |    |    |    | 85  |   |  |   |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 73  |    |    |    |    | 73  |   |  |   |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |    |    |    |    | 63  |   |  |   |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  | 70  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 55  |    |    |    |    | 55  |   |  |   |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 62  | 55  | 51  | 60  | 54  | 50  | 48  |    |    |    |    | 48  |   |  |   |
| 6   | 73  | 60  | 52  | 46  | 71  | 59  | 51  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |    |    | 43  |   |  |   |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 46  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 8   | 63  | 51  | 42  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |    |    |    |    | 34  |   |  |   |
| 9   | 59  | 47  | 39  | 33  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    |    | 31  |   |  |   |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |    |    |    |    | 28  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3854 | 3854 | 3854 |
| 5°  | 3837 | 3841 | 3877 |
| 10° | 3807 | 3805 | 3841 |
| 15° | 3730 | 3767 | 3822 |
| 20° | 3645 | 3687 | 3759 |
| 25° | 3524 | 3581 | 3681 |
| 30° | 3376 | 3444 | 3565 |
| 35° | 3178 | 3270 | 3386 |
| 40° | 2958 | 3058 | 3169 |
| 45° | 2715 | 2794 | 2880 |
| 50° | 2449 | 2511 | 2591 |
| 55° | 2173 | 2225 | 2263 |
| 60° | 1948 | 1951 | 1991 |
| 65° | 1795 | 1734 | 1795 |
| 70° | 1733 | 1606 | 1651 |
| 75° | 1763 | 1572 | 1603 |
| 80° | 1900 | 1649 | 1649 |
| 85° | 2109 | 1744 | 1723 |



TEST NUMBER: P291911

CATALOG NUMBER: 22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.1  | 4.2       |
| 10°-20°   | 381.1  | 11.9      |
| 20°-30°   | 556.1  | 17.4      |
| 30°-40°   | 622.6  | 19.5      |
| 40°-50°   | 566.7  | 17.7      |
| 50°-60°   | 426.5  | 13.3      |
| 60°-70°   | 278.3  | 8.7       |
| 70°-80°   | 166.9  | 5.2       |
| 80°-90°   | 62.6   | 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°    | 1072.3 | 33.6      |
| 0°-40°    | 1695.0 | 53.0      |
| 0°-60°    | 2688.1 | 84.1      |
| 0°-90°    | 3196.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3196.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1432 | 1432  | 1432 | 1432  | 1432 |      |
| 5°  | 1420 | 1418  | 1422 | 1427  | 1435 | 135  |
| 15° | 1339 | 1340  | 1352 | 1363  | 1372 | 377  |
| 25° | 1187 | 1191  | 1206 | 1228  | 1240 | 545  |
| 35° | 968  | 976   | 995  | 1019  | 1031 | 605  |
| 45° | 714  | 721   | 734  | 750   | 757  | 549  |
| 55° | 463  | 470   | 474  | 481   | 482  | 419  |
| 65° | 282  | 279   | 272  | 277   | 282  | 282  |
| 75° | 170  | 164   | 151  | 152   | 154  | 180  |
| 85° | 68   | 66    | 56   | 54    | 56   | 70   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P291911

CATALOG NUMBER: 22GR-LD5-40-F1-UNV-L92765-W2A1-U-2700K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1432.2 | 1432.2 | 1432.2 | 1432.2 | 1432.2 |
| 2.5°  | 1427.1 | 1426.3 | 1428.5 | 1432.2 | 1435.9 |
| 5°    | 1420.5 | 1418.2 | 1421.9 | 1427.1 | 1435.1 |
| 7.5°  | 1410.2 | 1410.2 | 1410.2 | 1419.7 | 1421.2 |
| 10°   | 1393.3 | 1394.8 | 1392.6 | 1402.1 | 1405.8 |
| 12.5° | 1369.1 | 1369.8 | 1374.2 | 1383.7 | 1390.4 |
| 15°   | 1339.0 | 1340.4 | 1352.2 | 1363.2 | 1372.0 |
| 17.5° | 1305.2 | 1310.3 | 1321.4 | 1339.0 | 1350.0 |
| 20°   | 1272.9 | 1278.8 | 1287.6 | 1306.7 | 1312.5 |
| 22.5° | 1231.8 | 1238.4 | 1249.4 | 1266.3 | 1278.8 |
| 25°   | 1187.0 | 1190.7 | 1206.1 | 1228.1 | 1239.9 |
| 27.5° | 1133.4 | 1141.5 | 1160.6 | 1183.3 | 1199.5 |
| 30°   | 1086.4 | 1090.8 | 1108.5 | 1134.9 | 1147.4 |
| 32.5° | 1027.0 | 1040.2 | 1054.9 | 1078.4 | 1090.1 |
| 35°   | 967.5  | 976.3  | 995.4  | 1018.9 | 1030.7 |
| 37.5° | 910.3  | 915.4  | 934.5  | 954.3  | 969.0  |
| 40°   | 842.0  | 851.5  | 870.6  | 891.9  | 902.2  |
| 42.5° | 773.7  | 787.7  | 800.2  | 821.4  | 832.5  |
| 45°   | 713.5  | 720.9  | 734.1  | 749.5  | 756.8  |
| 47.5° | 650.4  | 654.1  | 669.5  | 679.0  | 687.1  |
| 50°   | 585.1  | 589.5  | 599.7  | 609.3  | 618.8  |
| 52.5° | 524.9  | 528.5  | 535.1  | 544.0  | 553.5  |
| 55°   | 463.2  | 469.8  | 474.2  | 480.8  | 482.3  |
| 57.5° | 413.3  | 412.6  | 415.5  | 420.6  | 425.8  |
| 60°   | 361.9  | 363.4  | 362.6  | 367.8  | 370.0  |
| 62.5° | 319.3  | 318.6  | 314.2  | 321.5  | 327.4  |
| 65°   | 281.9  | 279.0  | 272.3  | 276.7  | 281.9  |
| 67.5° | 247.4  | 245.9  | 234.9  | 238.6  | 243.0  |
| 70°   | 220.2  | 215.1  | 204.1  | 206.3  | 209.9  |
| 72.5° | 193.8  | 187.9  | 176.9  | 177.6  | 179.9  |
| 75°   | 169.6  | 163.7  | 151.2  | 152.0  | 154.2  |
| 77.5° | 146.8  | 139.5  | 128.5  | 127.0  | 128.5  |
| 80°   | 122.6  | 116.0  | 106.4  | 102.0  | 106.4  |
| 82.5° | 97.6   | 94.0   | 83.0   | 78.5   | 80.0   |
| 85°   | 68.3   | 66.1   | 56.5   | 53.6   | 55.8   |
| 87.5° | 31.6   | 33.8   | 28.6   | 26.4   | 27.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)