

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: P291917

Luminaire Tested: **22GR-LD5-40-F1-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291917  
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-5500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3828.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 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

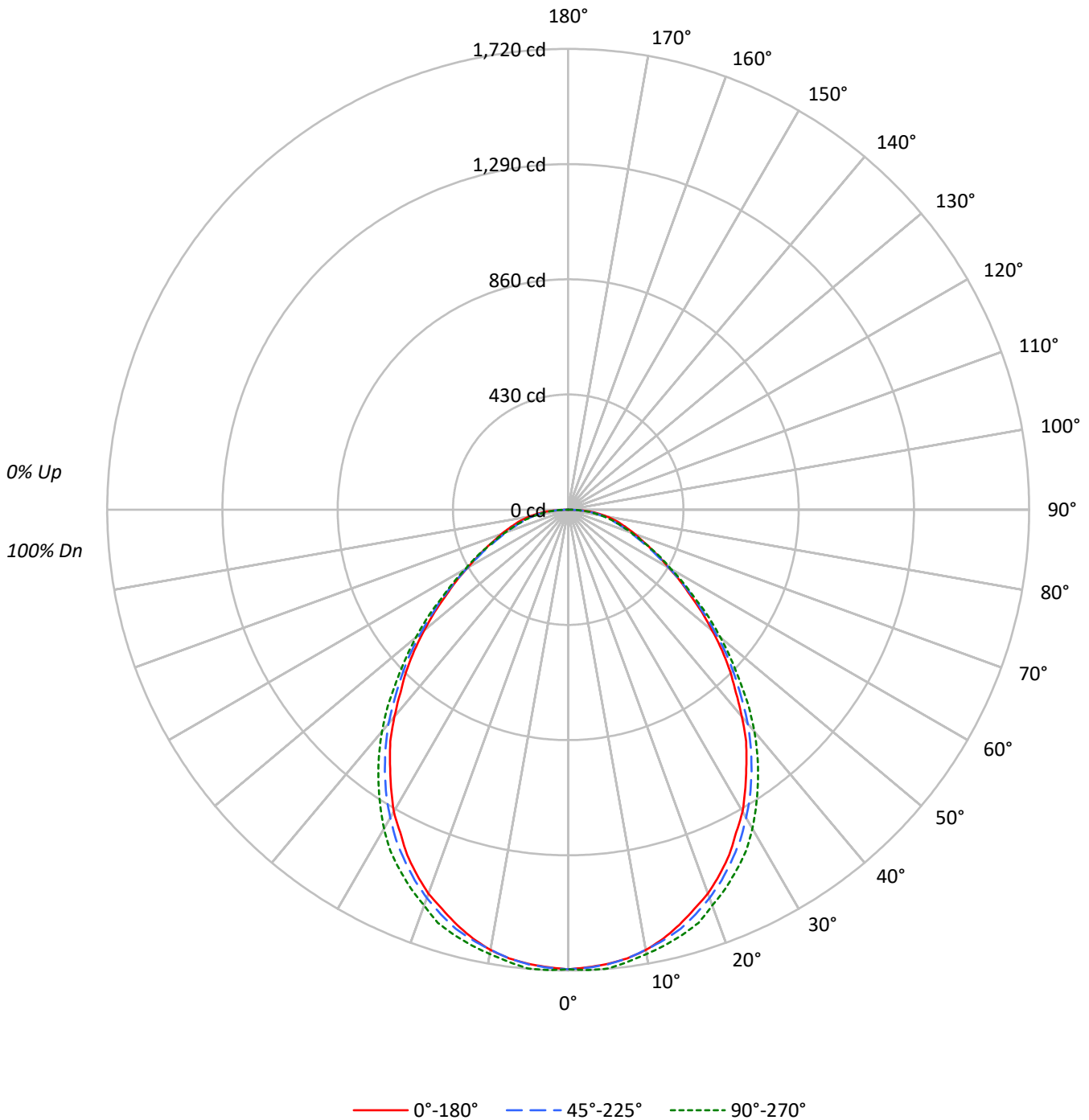
Input Watts (W): 33.294  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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°  | 4616 | 4616 | 4616 |
| 5°  | 4596 | 4601 | 4643 |
| 10° | 4560 | 4558 | 4601 |
| 15° | 4468 | 4512 | 4578 |
| 20° | 4366 | 4416 | 4502 |
| 25° | 4221 | 4289 | 4409 |
| 30° | 4043 | 4126 | 4270 |
| 35° | 3807 | 3917 | 4055 |
| 40° | 3543 | 3663 | 3796 |
| 45° | 3252 | 3346 | 3450 |
| 50° | 2934 | 3007 | 3103 |
| 55° | 2603 | 2665 | 2710 |
| 60° | 2333 | 2337 | 2385 |
| 65° | 2150 | 2077 | 2150 |
| 70° | 2076 | 1923 | 1979 |
| 75° | 2112 | 1883 | 1919 |
| 80° | 2275 | 1976 | 1976 |
| 85° | 2526 | 2090 | 2062 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 161.8  | 4.2       |
| 10°-20°   | 456.4  | 11.9      |
| 20°-30°   | 666.1  | 17.4      |
| 30°-40°   | 745.8  | 19.5      |
| 40°-50°   | 678.7  | 17.7      |
| 50°-60°   | 510.9  | 13.3      |
| 60°-70°   | 333.4  | 8.7       |
| 70°-80°   | 199.9  | 5.2       |
| 80°-90°   | 75.0   | 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°    | 1284.3 | 33.6      |
| 0°-40°    | 2030.1 | 53.0      |
| 0°-60°    | 3219.7 | 84.1      |
| 0°-90°    | 3828.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3828.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1715 | 1715  | 1715 | 1715  | 1715 |      |
| 5°  | 1701 | 1699  | 1703 | 1709  | 1719 | 161  |
| 15° | 1604 | 1606  | 1620 | 1633  | 1643 | 452  |
| 25° | 1422 | 1426  | 1445 | 1471  | 1485 | 653  |
| 35° | 1159 | 1169  | 1192 | 1220  | 1234 | 724  |
| 45° | 855  | 863   | 879  | 898   | 906  | 658  |
| 55° | 555  | 563   | 568  | 576   | 578  | 501  |
| 65° | 338  | 334   | 326  | 332   | 338  | 338  |
| 75° | 203  | 196   | 181  | 182   | 185  | 215  |
| 85° | 82   | 79    | 68   | 64    | 67   | 84   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1715.4 | 1715.4 | 1715.4 | 1715.4 | 1715.4 |
| 2.5°  | 1709.3 | 1708.4 | 1711.0 | 1715.4 | 1719.8 |
| 5°    | 1701.3 | 1698.7 | 1703.1 | 1709.3 | 1718.9 |
| 7.5°  | 1689.0 | 1689.0 | 1689.0 | 1700.5 | 1702.2 |
| 10°   | 1668.8 | 1670.6 | 1667.9 | 1679.4 | 1683.8 |
| 12.5° | 1639.8 | 1640.7 | 1645.9 | 1657.4 | 1665.3 |
| 15°   | 1603.7 | 1605.5 | 1619.6 | 1632.8 | 1643.3 |
| 17.5° | 1563.3 | 1569.5 | 1582.6 | 1603.7 | 1616.9 |
| 20°   | 1524.6 | 1531.6 | 1542.2 | 1565.1 | 1572.1 |
| 22.5° | 1475.4 | 1483.3 | 1496.5 | 1516.7 | 1531.6 |
| 25°   | 1421.7 | 1426.1 | 1444.6 | 1471.0 | 1485.0 |
| 27.5° | 1357.6 | 1367.2 | 1390.1 | 1417.3 | 1436.7 |
| 30°   | 1301.3 | 1306.6 | 1327.7 | 1359.3 | 1374.3 |
| 32.5° | 1230.1 | 1245.9 | 1263.5 | 1291.6 | 1305.7 |
| 35°   | 1158.8 | 1169.4 | 1192.3 | 1220.4 | 1234.5 |
| 37.5° | 1090.3 | 1096.4 | 1119.3 | 1143.0 | 1160.6 |
| 40°   | 1008.5 | 1019.9 | 1042.8 | 1068.3 | 1080.6 |
| 42.5° | 926.7  | 943.4  | 958.4  | 983.9  | 997.1  |
| 45°   | 854.6  | 863.4  | 879.2  | 897.7  | 906.5  |
| 47.5° | 779.0  | 783.4  | 801.9  | 813.3  | 823.0  |
| 50°   | 700.8  | 706.0  | 718.3  | 729.8  | 741.2  |
| 52.5° | 628.7  | 633.1  | 641.0  | 651.5  | 663.0  |
| 55°   | 554.8  | 562.7  | 568.0  | 575.9  | 577.7  |
| 57.5° | 495.0  | 494.1  | 497.7  | 503.8  | 510.0  |
| 60°   | 433.5  | 435.2  | 434.3  | 440.5  | 443.1  |
| 62.5° | 382.5  | 381.6  | 376.3  | 385.1  | 392.1  |
| 65°   | 337.6  | 334.1  | 326.2  | 331.5  | 337.6  |
| 67.5° | 296.3  | 294.5  | 281.4  | 285.8  | 291.0  |
| 70°   | 263.8  | 257.6  | 244.4  | 247.1  | 251.5  |
| 72.5° | 232.1  | 225.1  | 211.9  | 212.8  | 215.4  |
| 75°   | 203.1  | 196.1  | 181.1  | 182.0  | 184.6  |
| 77.5° | 175.8  | 167.1  | 153.9  | 152.1  | 153.9  |
| 80°   | 146.8  | 138.9  | 127.5  | 122.2  | 127.5  |
| 82.5° | 116.9  | 112.5  | 99.4   | 94.1   | 95.8   |
| 85°   | 81.8   | 79.1   | 67.7   | 64.2   | 66.8   |
| 87.5° | 37.8   | 40.4   | 34.3   | 31.7   | 32.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)