

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: P290575

Luminaire Tested: **14GR-LD5-32-F1-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P290575  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-7)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-32-F1-UNV-L83050-W2A1-U-4500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3466.0 lumens  
Efficiency: N/A  
Efficacy: 128.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.15 / 1.23  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

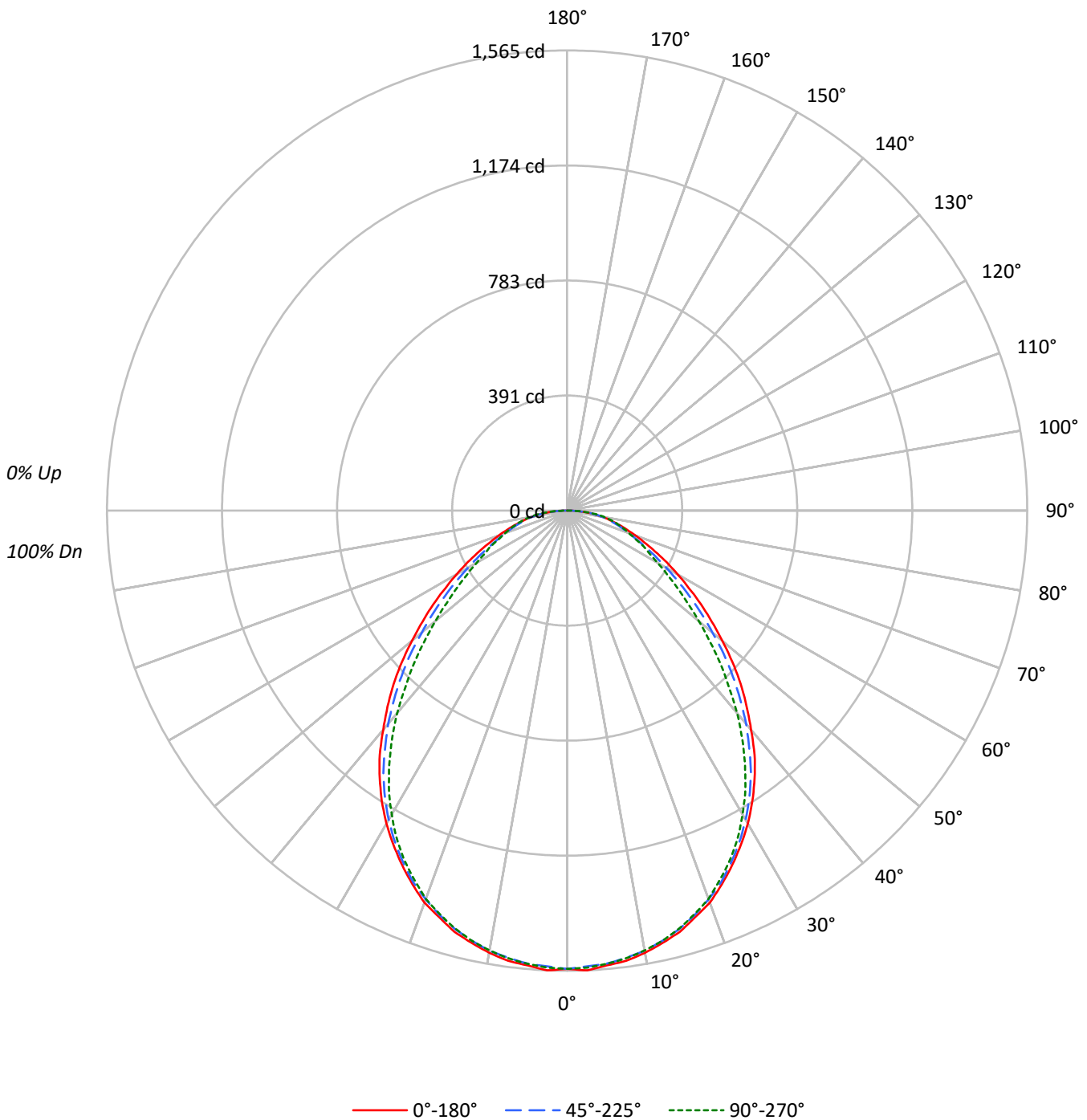
Input Watts (W): 26.97  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 88  | 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  | 64  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 55  |    |    |    |    | 55  |   |  |   |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 64  | 57  | 51  | 62  | 55  | 51  | 60  | 54  | 50  | 48  |    |    |    |    | 48  |   |  |   |
| 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |    |    | 43  |   |  |   |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 53  | 46  | 41  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 41  | 36  | 34  |    |    |    |    | 34  |   |  |   |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    |    | 31  |   |  |   |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 29  |    |    |    |    | 29  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4194 | 4194 | 4194 |
| 5°  | 4193 | 4178 | 4180 |
| 10° | 4173 | 4153 | 4151 |
| 15° | 4130 | 4106 | 4099 |
| 20° | 4063 | 4029 | 4025 |
| 25° | 3946 | 3920 | 3892 |
| 30° | 3819 | 3772 | 3708 |
| 35° | 3651 | 3581 | 3463 |
| 40° | 3419 | 3324 | 3159 |
| 45° | 3175 | 3033 | 2812 |
| 50° | 2880 | 2701 | 2448 |
| 55° | 2605 | 2386 | 2139 |
| 60° | 2339 | 2091 | 1907 |
| 65° | 2099 | 1867 | 1826 |
| 70° | 1938 | 1738 | 1756 |
| 75° | 1851 | 1743 | 1842 |
| 80° | 1872 | 1860 | 2007 |
| 85° | 1939 | 1914 | 2133 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 147.2  | 4.2       |
| 10°-20°   | 416.0  | 12.0      |
| 20°-30°   | 607.5  | 17.5      |
| 30°-40°   | 677.0  | 19.5      |
| 40°-50°   | 610.0  | 17.6      |
| 50°-60°   | 455.9  | 13.2      |
| 60°-70°   | 300.8  | 8.7       |
| 70°-80°   | 183.6  | 5.3       |
| 80°-90°   | 68.1   | 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°    | 1170.7 | 33.8      |
| 0°-40°    | 1847.6 | 53.3      |
| 0°-60°    | 2913.5 | 84.1      |
| 0°-90°    | 3466.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3466.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1559 | 1559  | 1559 | 1559  | 1559 |      |
| 5°  | 1552 | 1551  | 1547 | 1555  | 1548 | 148  |
| 15° | 1482 | 1477  | 1474 | 1482  | 1471 | 417  |
| 25° | 1329 | 1324  | 1320 | 1323  | 1311 | 612  |
| 35° | 1112 | 1102  | 1090 | 1071  | 1054 | 693  |
| 45° | 834  | 826   | 797  | 760   | 739  | 642  |
| 55° | 555  | 547   | 508  | 466   | 456  | 497  |
| 65° | 330  | 319   | 293  | 281   | 287  | 330  |
| 75° | 178  | 175   | 168  | 173   | 177  | 190  |
| 85° | 63   | 60    | 62   | 68    | 69   | 67   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1558.7 | 1558.7 | 1558.7 | 1558.7 | 1558.7 |
| 2.5°  | 1565.1 | 1558.0 | 1551.6 | 1561.1 | 1555.6 |
| 5°    | 1552.4 | 1550.8 | 1546.8 | 1554.8 | 1547.6 |
| 7.5°  | 1544.4 | 1538.9 | 1534.1 | 1543.7 | 1535.7 |
| 10°   | 1527.0 | 1523.8 | 1519.8 | 1527.8 | 1519.0 |
| 12.5° | 1505.5 | 1502.3 | 1498.4 | 1507.9 | 1498.4 |
| 15°   | 1482.5 | 1476.9 | 1473.7 | 1482.5 | 1471.4 |
| 17.5° | 1449.1 | 1446.7 | 1442.0 | 1450.7 | 1439.6 |
| 20°   | 1418.9 | 1410.2 | 1407.0 | 1413.4 | 1405.4 |
| 22.5° | 1375.2 | 1368.9 | 1368.1 | 1372.0 | 1358.5 |
| 25°   | 1329.1 | 1324.4 | 1320.4 | 1322.8 | 1310.9 |
| 27.5° | 1280.7 | 1274.3 | 1269.6 | 1268.8 | 1256.1 |
| 30°   | 1229.0 | 1221.1 | 1213.9 | 1207.6 | 1193.3 |
| 32.5° | 1172.6 | 1163.1 | 1153.6 | 1143.2 | 1128.1 |
| 35°   | 1111.5 | 1101.9 | 1090.0 | 1070.9 | 1054.3 |
| 37.5° | 1047.1 | 1036.0 | 1016.9 | 994.7  | 978.0  |
| 40°   | 973.2  | 967.7  | 946.2  | 917.6  | 899.3  |
| 42.5° | 904.1  | 897.7  | 870.7  | 839.0  | 814.3  |
| 45°   | 834.2  | 825.5  | 796.9  | 760.3  | 738.9  |
| 47.5° | 762.7  | 754.0  | 722.2  | 676.9  | 657.8  |
| 50°   | 688.0  | 683.2  | 645.1  | 603.8  | 584.7  |
| 52.5° | 619.7  | 614.1  | 575.2  | 533.9  | 516.4  |
| 55°   | 555.3  | 546.6  | 508.5  | 466.4  | 456.0  |
| 57.5° | 491.0  | 481.4  | 445.7  | 409.9  | 402.8  |
| 60°   | 434.6  | 422.7  | 388.5  | 360.7  | 354.3  |
| 62.5° | 381.3  | 367.8  | 339.2  | 317.8  | 314.6  |
| 65°   | 329.7  | 319.4  | 293.2  | 281.2  | 286.8  |
| 67.5° | 285.2  | 274.9  | 255.8  | 251.1  | 249.5  |
| 70°   | 246.3  | 236.8  | 220.9  | 222.5  | 223.2  |
| 72.5° | 210.5  | 205.0  | 193.1  | 197.0  | 200.2  |
| 75°   | 178.0  | 174.8  | 167.6  | 173.2  | 177.2  |
| 77.5° | 148.6  | 146.2  | 143.0  | 147.8  | 154.1  |
| 80°   | 120.8  | 119.2  | 120.0  | 123.1  | 129.5  |
| 82.5° | 93.0   | 89.8   | 92.2   | 98.5   | 102.5  |
| 85°   | 62.8   | 60.4   | 62.0   | 68.3   | 69.1   |
| 87.5° | 29.4   | 29.4   | 28.6   | 33.4   | 33.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)