

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: P290605

Luminaire Tested: **14GR-LD5-24-F1-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P290605  
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-LD5-24-F1-UNV-L82765-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: 2451.0 lumens  
Efficiency: N/A  
Efficacy: 131.8 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

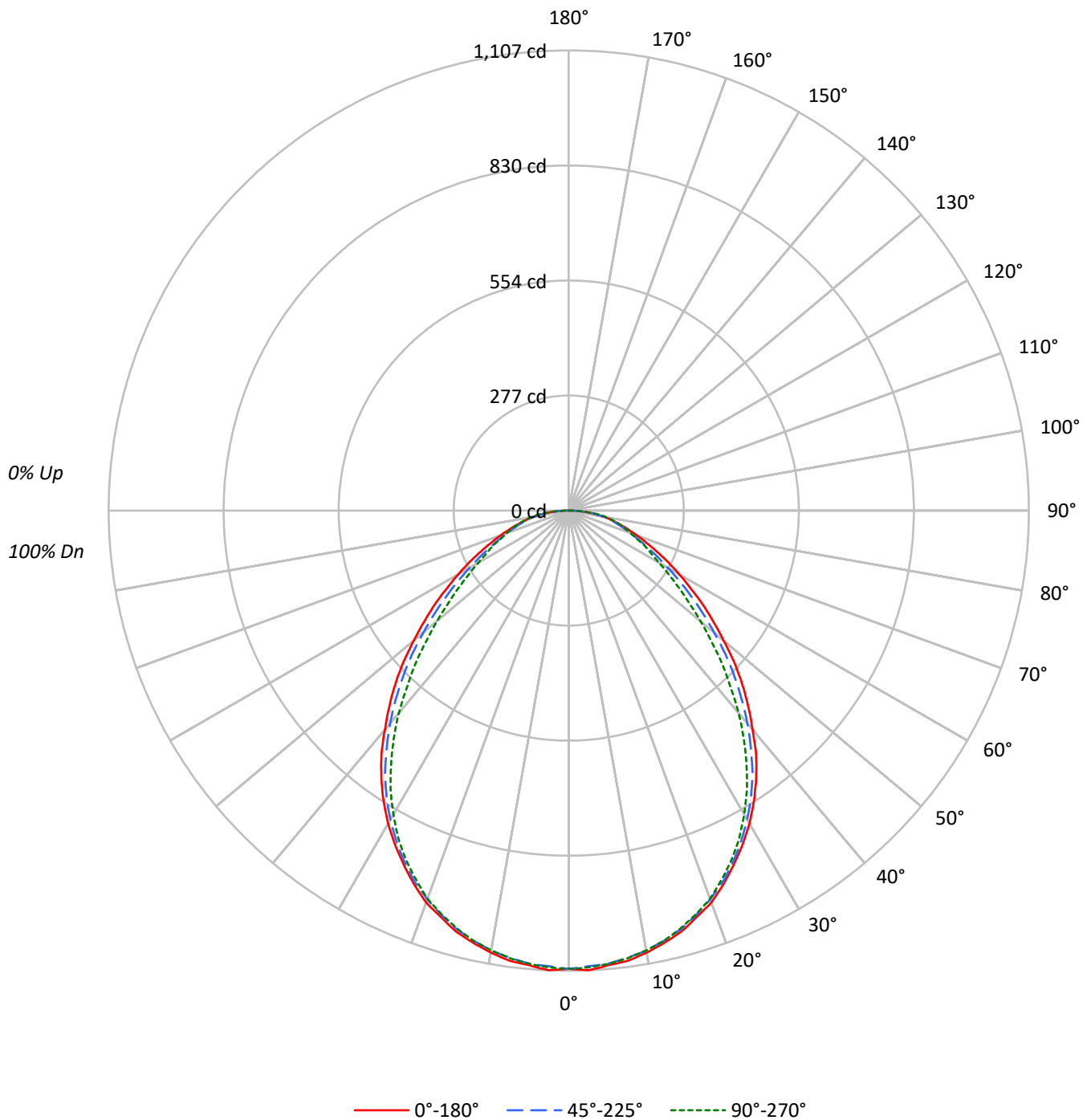
Input Watts (W): 18.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P290605

CATALOG NUMBER: 14GR-LD5-24-F1-UNV-L82765-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P290605

CATALOG NUMBER: 14GR-LD5-24-F1-UNV-L82765-W2A1-U-4500K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |  | 20  |     |     |  |     | 20  |     |  |     |     | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |  | 50  |     |     |  |     | 30  |     |  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  |  | 99  | 96  | 93  |  | 95  | 92  | 90  |  | 91  | 89  | 87  |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  |  | 88  | 83  | 78  |  | 84  | 80  | 77  |  | 81  | 78  | 75  |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  |  | 78  | 72  | 67  |  | 75  | 70  | 66  |  | 73  | 69  | 65  |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  |  | 70  | 64  | 58  |  | 68  | 62  | 57  |  | 66  | 61  | 57  |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  |  | 64  | 57  | 51  |  | 62  | 55  | 51  |  | 60  | 54  | 50  |
| 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  |  | 58  | 51  | 45  |  | 56  | 50  | 45  |  | 55  | 49  | 45  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 52  | 45  | 40  |  | 50  | 44  | 40  |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  |  | 49  | 42  | 37  |  | 47  | 41  | 36  |  | 46  | 41  | 36  |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 44  | 38  | 33  |  | 43  | 37  | 33  |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  |  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  | 34  | 30  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2966 | 2966 | 2966 |
| 5°  | 2965 | 2955 | 2956 |
| 10° | 2951 | 2937 | 2935 |
| 15° | 2920 | 2903 | 2899 |
| 20° | 2873 | 2849 | 2846 |
| 25° | 2791 | 2772 | 2752 |
| 30° | 2701 | 2667 | 2622 |
| 35° | 2582 | 2532 | 2449 |
| 40° | 2418 | 2350 | 2234 |
| 45° | 2245 | 2144 | 1988 |
| 50° | 2037 | 1910 | 1731 |
| 55° | 1842 | 1687 | 1513 |
| 60° | 1654 | 1478 | 1349 |
| 65° | 1485 | 1320 | 1291 |
| 70° | 1371 | 1229 | 1242 |
| 75° | 1308 | 1232 | 1303 |
| 80° | 1323 | 1314 | 1420 |
| 85° | 1371 | 1352 | 1510 |



TEST NUMBER: P290605

CATALOG NUMBER: 14GR-LD5-24-F1-UNV-L82765-W2A1-U-4500K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 104.1  | 4.2       |
| 10°-20°   | 294.2  | 12.0      |
| 20°-30°   | 429.6  | 17.5      |
| 30°-40°   | 478.7  | 19.5      |
| 40°-50°   | 431.3  | 17.6      |
| 50°-60°   | 322.4  | 13.2      |
| 60°-70°   | 212.7  | 8.7       |
| 70°-80°   | 129.8  | 5.3       |
| 80°-90°   | 48.2   | 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°    | 827.8  | 33.8      |
| 0°-40°    | 1306.6 | 53.3      |
| 0°-60°    | 2060.3 | 84.1      |
| 0°-90°    | 2451.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2451.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1102 | 1102  | 1102 | 1102  | 1102 |      |
| 5°  | 1098 | 1097  | 1094 | 1100  | 1094 | 104  |
| 15° | 1048 | 1044  | 1042 | 1048  | 1040 | 295  |
| 25° | 940  | 936   | 934  | 935   | 927  | 433  |
| 35° | 786  | 779   | 771  | 757   | 746  | 490  |
| 45° | 590  | 584   | 564  | 538   | 522  | 454  |
| 55° | 393  | 386   | 360  | 330   | 322  | 352  |
| 65° | 233  | 226   | 207  | 199   | 203  | 234  |
| 75° | 126  | 124   | 118  | 122   | 125  | 134  |
| 85° | 44   | 43    | 44   | 48    | 49   | 47   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P290605

CATALOG NUMBER: 14GR-LD5-24-F1-UNV-L82765-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1102.3 | 1102.3 | 1102.3 | 1102.3 | 1102.3 |
| 2.5°  | 1106.8 | 1101.7 | 1097.2 | 1104.0 | 1100.0 |
| 5°    | 1097.8 | 1096.7 | 1093.8 | 1099.5 | 1094.4 |
| 7.5°  | 1092.2 | 1088.2 | 1084.9 | 1091.6 | 1086.0 |
| 10°   | 1079.8 | 1077.6 | 1074.7 | 1080.4 | 1074.2 |
| 12.5° | 1064.6 | 1062.4 | 1059.6 | 1066.3 | 1059.6 |
| 15°   | 1048.3 | 1044.4 | 1042.2 | 1048.3 | 1040.5 |
| 17.5° | 1024.7 | 1023.1 | 1019.7 | 1025.9 | 1018.0 |
| 20°   | 1003.4 | 997.2  | 995.0  | 999.5  | 993.8  |
| 22.5° | 972.5  | 968.0  | 967.4  | 970.3  | 960.7  |
| 25°   | 939.9  | 936.5  | 933.7  | 935.4  | 927.0  |
| 27.5° | 905.6  | 901.1  | 897.8  | 897.2  | 888.2  |
| 30°   | 869.1  | 863.5  | 858.4  | 854.0  | 843.8  |
| 32.5° | 829.2  | 822.5  | 815.8  | 808.4  | 797.8  |
| 35°   | 786.0  | 779.2  | 770.8  | 757.3  | 745.5  |
| 37.5° | 740.5  | 732.6  | 719.1  | 703.4  | 691.6  |
| 40°   | 688.2  | 684.3  | 669.1  | 648.9  | 636.0  |
| 42.5° | 639.3  | 634.8  | 615.7  | 593.3  | 575.9  |
| 45°   | 589.9  | 583.7  | 563.5  | 537.7  | 522.5  |
| 47.5° | 539.3  | 533.2  | 510.7  | 478.7  | 465.2  |
| 50°   | 486.5  | 483.2  | 456.2  | 427.0  | 413.5  |
| 52.5° | 438.2  | 434.3  | 406.8  | 377.5  | 365.2  |
| 55°   | 392.7  | 386.5  | 359.6  | 329.8  | 322.5  |
| 57.5° | 347.2  | 340.5  | 315.2  | 289.9  | 284.8  |
| 60°   | 307.3  | 298.9  | 274.7  | 255.1  | 250.6  |
| 62.5° | 269.7  | 260.1  | 239.9  | 224.7  | 222.5  |
| 65°   | 233.2  | 225.8  | 207.3  | 198.9  | 202.8  |
| 67.5° | 201.7  | 194.4  | 180.9  | 177.5  | 176.4  |
| 70°   | 174.2  | 167.4  | 156.2  | 157.3  | 157.9  |
| 72.5° | 148.9  | 144.9  | 136.5  | 139.3  | 141.6  |
| 75°   | 125.8  | 123.6  | 118.5  | 122.5  | 125.3  |
| 77.5° | 105.1  | 103.4  | 101.1  | 104.5  | 109.0  |
| 80°   | 85.4   | 84.3   | 84.8   | 87.1   | 91.6   |
| 82.5° | 65.7   | 63.5   | 65.2   | 69.7   | 72.5   |
| 85°   | 44.4   | 42.7   | 43.8   | 48.3   | 48.9   |
| 87.5° | 20.8   | 20.8   | 20.2   | 23.6   | 23.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)