

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: P291695

Luminaire Tested: **14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291695  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-24)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2077.0 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

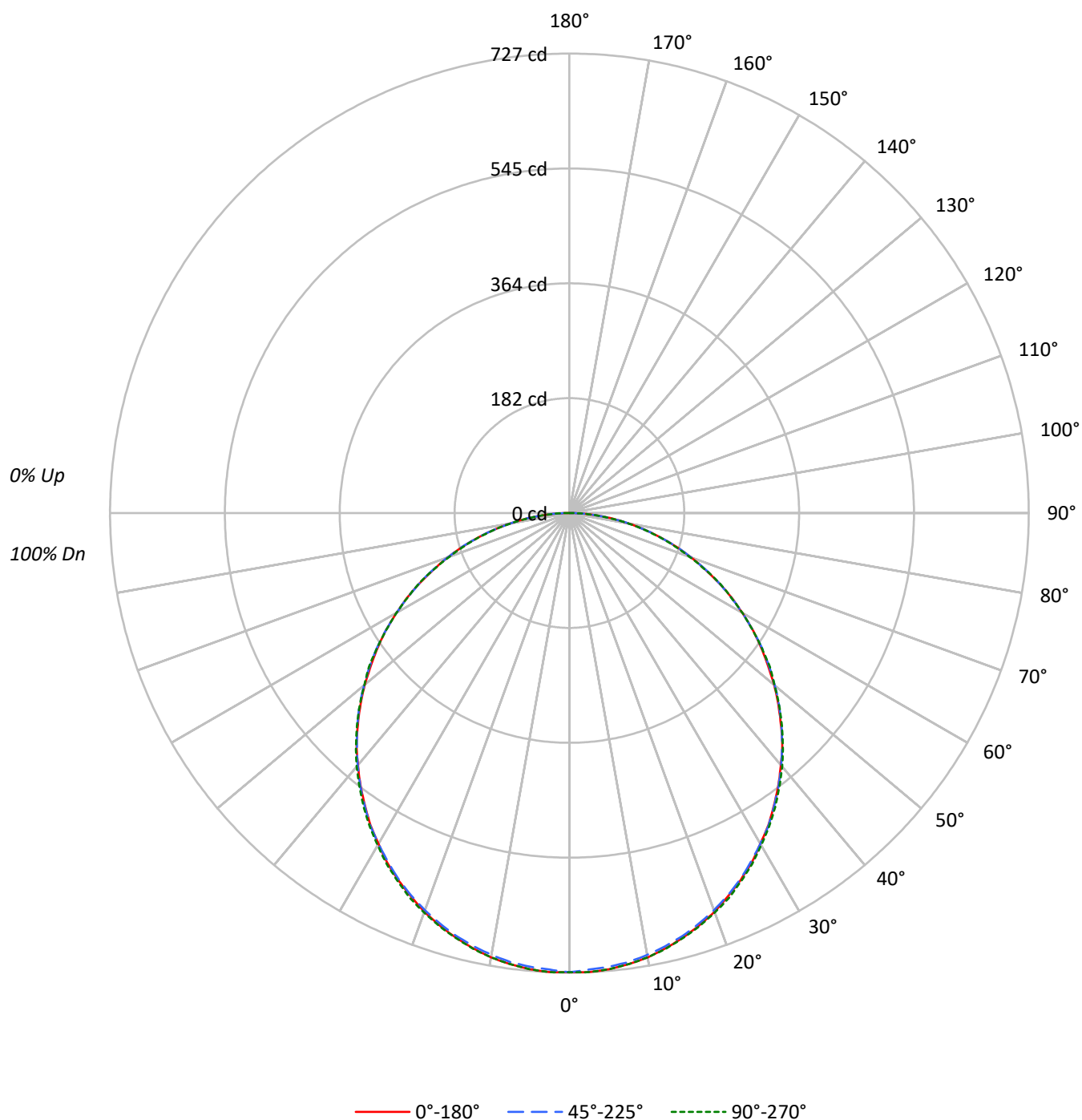
Input Watts (W): 22.878  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P291695

CATALOG NUMBER: 14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P291695

CATALOG NUMBER: 14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K

**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   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 93  |  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  | 87  | 85  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  | 74  | 71  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  |  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  |  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  | 56  | 51  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  |  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  | 49  | 45  |
| 6   | 70  | 56  | 47  | 40  | 68  | 55  | 47  | 40  |  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  | 44  | 39  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 42  | 36  |  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  | 39  | 35  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  |  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  | 36  | 31  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  |  | 41  | 34  | 28  |  | 40  | 33  | 28  |  | 39  | 33  | 28  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  |  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  | 30  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1955 | 1955 | 1955 |
| 5°  | 1957 | 1946 | 1957 |
| 10° | 1950 | 1940 | 1950 |
| 15° | 1937 | 1929 | 1938 |
| 20° | 1922 | 1915 | 1926 |
| 25° | 1902 | 1898 | 1908 |
| 30° | 1877 | 1877 | 1886 |
| 35° | 1854 | 1856 | 1865 |
| 40° | 1828 | 1831 | 1840 |
| 45° | 1802 | 1807 | 1809 |
| 50° | 1770 | 1776 | 1773 |
| 55° | 1735 | 1744 | 1742 |
| 60° | 1701 | 1701 | 1701 |
| 65° | 1661 | 1661 | 1670 |
| 70° | 1609 | 1609 | 1593 |
| 75° | 1553 | 1546 | 1540 |
| 80° | 1481 | 1471 | 1461 |
| 85° | 1392 | 1374 | 1334 |



TEST NUMBER: P291695

CATALOG NUMBER: 14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 68.7   | 3.3       |
| 10°-20°   | 196.0  | 9.4       |
| 20°-30°   | 295.4  | 14.2      |
| 30°-40°   | 354.0  | 17.0      |
| 40°-50°   | 366.1  | 17.6      |
| 50°-60°   | 331.9  | 16.0      |
| 60°-70°   | 258.0  | 12.4      |
| 70°-80°   | 157.6  | 7.6       |
| 80°-90°   | 49.3   | 2.4       |
| 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°    | 560.1  | 27.0      |
| 0°-40°    | 914.2  | 44.0      |
| 0°-60°    | 1612.2 | 77.6      |
| 0°-90°    | 2077.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2077.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 726 | 726   | 726 | 726   | 726 |      |
| 5°  | 724 | 724   | 720 | 724   | 724 | 69   |
| 15° | 695 | 695   | 692 | 696   | 696 | 196  |
| 25° | 641 | 641   | 639 | 643   | 643 | 295  |
| 35° | 564 | 565   | 565 | 568   | 568 | 353  |
| 45° | 473 | 474   | 475 | 475   | 475 | 365  |
| 55° | 370 | 371   | 372 | 372   | 371 | 331  |
| 65° | 261 | 261   | 261 | 260   | 262 | 258  |
| 75° | 149 | 149   | 149 | 148   | 148 | 158  |
| 85° | 45  | 44    | 44  | 43    | 43  | 50   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P291695

CATALOG NUMBER: 14GR-LD5-28-FGW080-UNV-L92765-W2A1-U-5700K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 726.4 | 726.4 | 726.4 | 726.4 | 726.4 |
| 2.5°  | 727.0 | 726.4 | 723.0 | 726.4 | 727.0 |
| 5°    | 724.4 | 723.7 | 720.4 | 723.7 | 724.4 |
| 7.5°  | 719.7 | 719.7 | 716.4 | 719.7 | 719.7 |
| 10°   | 713.8 | 713.1 | 709.8 | 713.1 | 713.8 |
| 12.5° | 705.1 | 705.1 | 701.8 | 705.1 | 705.8 |
| 15°   | 695.2 | 695.2 | 692.5 | 695.8 | 695.8 |
| 17.5° | 683.9 | 684.5 | 681.2 | 685.2 | 685.2 |
| 20°   | 671.3 | 670.6 | 668.6 | 671.9 | 672.6 |
| 22.5° | 656.0 | 656.7 | 654.7 | 658.6 | 659.3 |
| 25°   | 640.7 | 640.7 | 639.4 | 643.4 | 642.7 |
| 27.5° | 624.1 | 624.1 | 622.1 | 625.4 | 626.1 |
| 30°   | 604.2 | 604.9 | 604.2 | 607.5 | 606.9 |
| 32.5° | 585.6 | 586.3 | 586.3 | 587.6 | 588.3 |
| 35°   | 564.4 | 565.0 | 565.0 | 567.7 | 567.7 |
| 37.5° | 543.1 | 543.1 | 543.8 | 545.8 | 545.8 |
| 40°   | 520.5 | 521.2 | 521.2 | 523.2 | 523.9 |
| 42.5° | 498.6 | 497.3 | 498.0 | 500.0 | 500.0 |
| 45°   | 473.4 | 474.1 | 474.7 | 475.4 | 475.4 |
| 47.5° | 448.2 | 449.5 | 450.2 | 450.8 | 450.2 |
| 50°   | 422.9 | 424.3 | 424.3 | 423.6 | 423.6 |
| 52.5° | 395.7 | 399.0 | 398.4 | 398.4 | 399.7 |
| 55°   | 369.8 | 371.2 | 371.8 | 371.8 | 371.2 |
| 57.5° | 343.9 | 345.3 | 343.9 | 344.6 | 343.3 |
| 60°   | 316.0 | 316.7 | 316.0 | 316.0 | 316.0 |
| 62.5° | 288.8 | 289.5 | 288.2 | 288.2 | 288.2 |
| 65°   | 260.9 | 260.9 | 260.9 | 259.6 | 262.3 |
| 67.5° | 231.7 | 233.0 | 233.0 | 233.7 | 231.1 |
| 70°   | 204.5 | 205.2 | 204.5 | 203.8 | 202.5 |
| 72.5° | 177.3 | 177.9 | 178.6 | 175.9 | 175.3 |
| 75°   | 149.4 | 149.4 | 148.7 | 148.1 | 148.1 |
| 77.5° | 122.2 | 122.2 | 122.2 | 120.8 | 120.8 |
| 80°   | 95.6  | 96.3  | 94.9  | 94.9  | 94.3  |
| 82.5° | 69.7  | 69.7  | 69.7  | 69.1  | 67.7  |
| 85°   | 45.1  | 43.8  | 44.5  | 43.2  | 43.2  |
| 87.5° | 20.6  | 20.6  | 20.6  | 19.3  | 21.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)