

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: P291555

Luminaire Tested: **14GR-LD5-32-FGW080-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291555  
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-LD5-32-FGW080-UNV-L83050-W2A1-U-4500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2651.0 lumens  
Efficiency: N/A  
Efficacy: 98.3 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

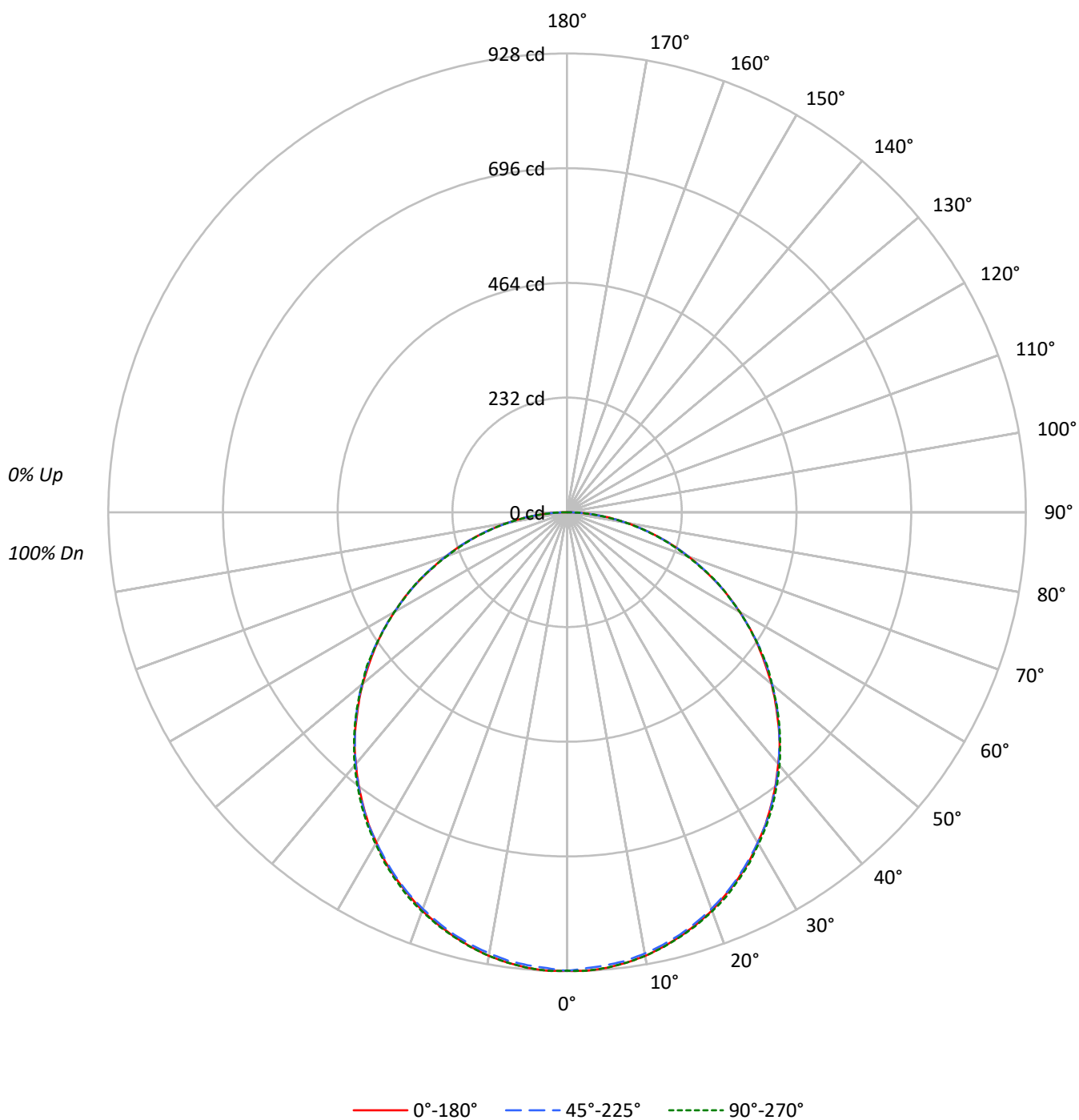
Input Watts (W): 26.97  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 93  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  |
| 6   | 70  | 56  | 47  | 40  | 68  | 55  | 47  | 40  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  |  | 40  | 33  | 28  |  | 39  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2495 | 2495 | 2495 |
| 5°  | 2498 | 2484 | 2498 |
| 10° | 2489 | 2475 | 2489 |
| 15° | 2472 | 2462 | 2474 |
| 20° | 2454 | 2444 | 2458 |
| 25° | 2428 | 2423 | 2436 |
| 30° | 2396 | 2396 | 2407 |
| 35° | 2366 | 2369 | 2380 |
| 40° | 2334 | 2337 | 2349 |
| 45° | 2299 | 2306 | 2309 |
| 50° | 2260 | 2267 | 2264 |
| 55° | 2214 | 2227 | 2222 |
| 60° | 2171 | 2171 | 2171 |
| 65° | 2120 | 2120 | 2131 |
| 70° | 2054 | 2054 | 2034 |
| 75° | 1983 | 1973 | 1965 |
| 80° | 1891 | 1878 | 1864 |
| 85° | 1778 | 1754 | 1701 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.7   | 3.3       |
| 10°-20°   | 250.2  | 9.4       |
| 20°-30°   | 377.1  | 14.2      |
| 30°-40°   | 451.9  | 17.0      |
| 40°-50°   | 467.2  | 17.6      |
| 50°-60°   | 423.7  | 16.0      |
| 60°-70°   | 329.3  | 12.4      |
| 70°-80°   | 201.1  | 7.6       |
| 80°-90°   | 63.0   | 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°    | 714.9  | 27.0      |
| 0°-40°    | 1166.8 | 44.0      |
| 0°-60°    | 2057.7 | 77.6      |
| 0°-90°    | 2651.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2651.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 927 | 927   | 927 | 927   | 927 |      |
| 5°  | 925 | 924   | 920 | 924   | 925 | 88   |
| 15° | 887 | 887   | 884 | 888   | 888 | 250  |
| 25° | 818 | 818   | 816 | 821   | 820 | 377  |
| 35° | 720 | 721   | 721 | 725   | 725 | 451  |
| 45° | 604 | 605   | 606 | 607   | 607 | 466  |
| 55° | 472 | 474   | 475 | 475   | 474 | 422  |
| 65° | 333 | 333   | 333 | 331   | 335 | 329  |
| 75° | 191 | 191   | 190 | 189   | 189 | 202  |
| 85° | 58  | 56    | 57  | 55    | 55  | 64   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 927.1 | 927.1 | 927.1 | 927.1 | 927.1 |
| 2.5°  | 928.0 | 927.1 | 922.9 | 927.1 | 928.0 |
| 5°    | 924.6 | 923.7 | 919.5 | 923.7 | 924.6 |
| 7.5°  | 918.6 | 918.6 | 914.4 | 918.6 | 918.6 |
| 10°   | 911.0 | 910.2 | 905.9 | 910.2 | 911.0 |
| 12.5° | 900.0 | 900.0 | 895.8 | 900.0 | 900.8 |
| 15°   | 887.3 | 887.3 | 883.9 | 888.1 | 888.1 |
| 17.5° | 872.9 | 873.7 | 869.5 | 874.6 | 874.6 |
| 20°   | 856.8 | 855.9 | 853.4 | 857.6 | 858.5 |
| 22.5° | 837.3 | 838.1 | 835.6 | 840.7 | 841.5 |
| 25°   | 817.8 | 817.8 | 816.1 | 821.2 | 820.3 |
| 27.5° | 796.6 | 796.6 | 794.1 | 798.3 | 799.1 |
| 30°   | 771.2 | 772.0 | 771.2 | 775.4 | 774.6 |
| 32.5° | 747.4 | 748.3 | 748.3 | 750.0 | 750.8 |
| 35°   | 720.3 | 721.2 | 721.2 | 724.6 | 724.6 |
| 37.5° | 693.2 | 693.2 | 694.1 | 696.6 | 696.6 |
| 40°   | 664.4 | 665.2 | 665.2 | 667.8 | 668.6 |
| 42.5° | 636.4 | 634.7 | 635.6 | 638.1 | 638.1 |
| 45°   | 604.2 | 605.1 | 605.9 | 606.8 | 606.8 |
| 47.5° | 572.0 | 573.7 | 574.6 | 575.4 | 574.6 |
| 50°   | 539.8 | 541.5 | 541.5 | 540.7 | 540.7 |
| 52.5° | 505.1 | 509.3 | 508.5 | 508.5 | 510.2 |
| 55°   | 472.0 | 473.7 | 474.6 | 474.6 | 473.7 |
| 57.5° | 439.0 | 440.7 | 439.0 | 439.8 | 438.1 |
| 60°   | 403.4 | 404.2 | 403.4 | 403.4 | 403.4 |
| 62.5° | 368.6 | 369.5 | 367.8 | 367.8 | 367.8 |
| 65°   | 333.0 | 333.0 | 333.0 | 331.4 | 334.7 |
| 67.5° | 295.8 | 297.5 | 297.5 | 298.3 | 294.9 |
| 70°   | 261.0 | 261.9 | 261.0 | 260.2 | 258.5 |
| 72.5° | 226.3 | 227.1 | 228.0 | 224.6 | 223.7 |
| 75°   | 190.7 | 190.7 | 189.8 | 189.0 | 189.0 |
| 77.5° | 155.9 | 155.9 | 155.9 | 154.2 | 154.2 |
| 80°   | 122.0 | 122.9 | 121.2 | 121.2 | 120.3 |
| 82.5° | 89.0  | 89.0  | 89.0  | 88.1  | 86.4  |
| 85°   | 57.6  | 55.9  | 56.8  | 55.1  | 55.1  |
| 87.5° | 26.3  | 26.3  | 26.3  | 24.6  | 28.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)