

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: P292784

Luminaire Tested: **22GR-LD5-36-FGW080-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292784  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-26)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-36-FGW080-UNV-L82765-W2A1-U-2700K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2773.0 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

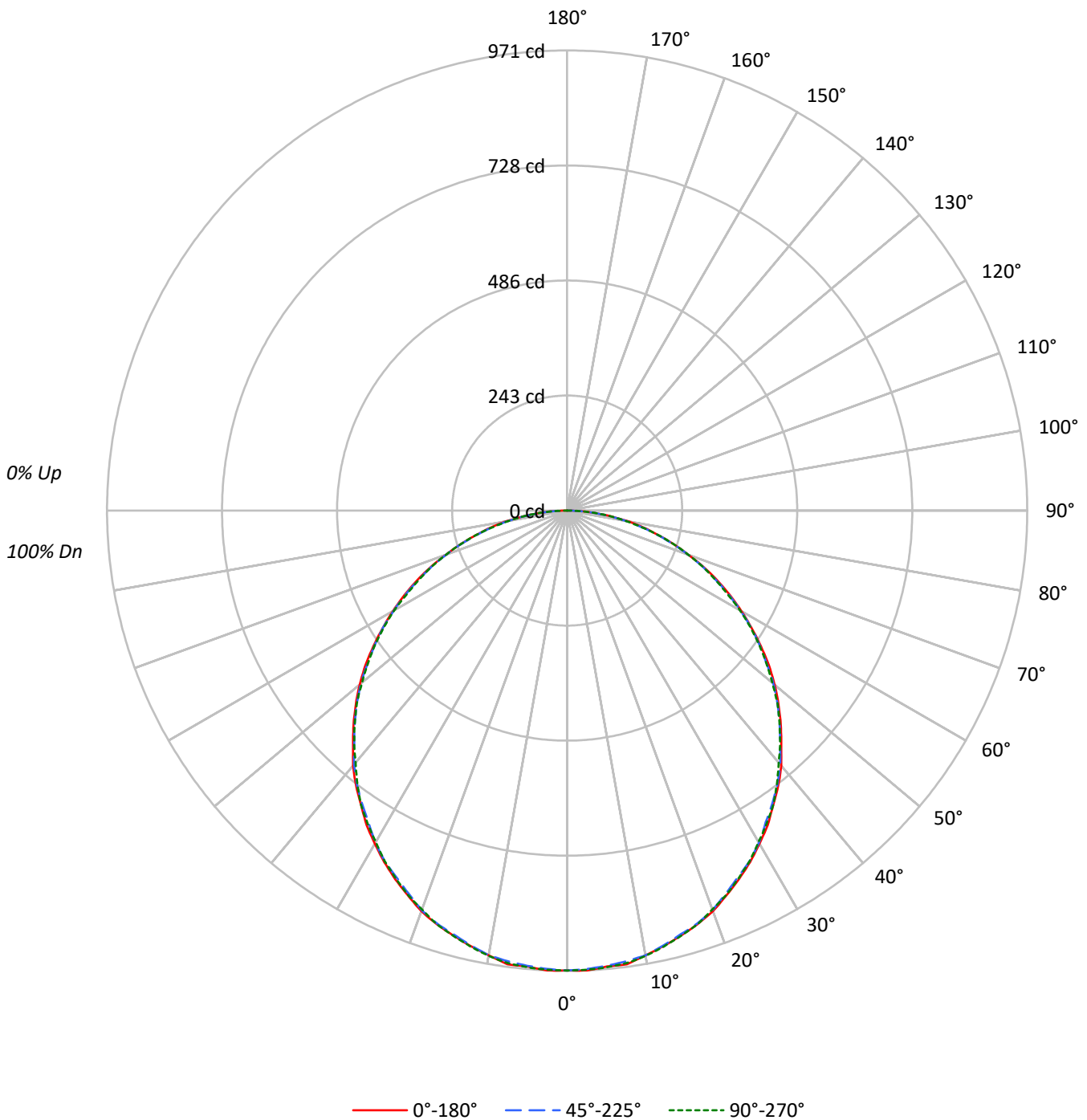
Input Watts (W): 28.086  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 74  |  | 81  | 77  | 73  |  | 78  | 74  | 71  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  | 49  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  | 44  | 39  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  | 40  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  | 36  | 31  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  |  | 40  | 33  | 28  |  | 39  | 33  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2612 | 2612 | 2612 |
| 5°  | 2609 | 2604 | 2613 |
| 10° | 2603 | 2603 | 2608 |
| 15° | 2586 | 2579 | 2588 |
| 20° | 2576 | 2570 | 2565 |
| 25° | 2548 | 2534 | 2541 |
| 30° | 2522 | 2515 | 2510 |
| 35° | 2490 | 2480 | 2490 |
| 40° | 2468 | 2457 | 2440 |
| 45° | 2426 | 2411 | 2411 |
| 50° | 2393 | 2379 | 2366 |
| 55° | 2342 | 2327 | 2323 |
| 60° | 2287 | 2274 | 2266 |
| 65° | 2229 | 2204 | 2193 |
| 70° | 2140 | 2133 | 2140 |
| 75° | 2066 | 2040 | 2058 |
| 80° | 2044 | 1943 | 1931 |
| 85° | 1809 | 1760 | 1785 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 91.8   | 3.3       |
| 10°-20°   | 262.0  | 9.4       |
| 20°-30°   | 394.5  | 14.2      |
| 30°-40°   | 473.4  | 17.1      |
| 40°-50°   | 489.8  | 17.7      |
| 50°-60°   | 443.9  | 16.0      |
| 60°-70°   | 344.1  | 12.4      |
| 70°-80°   | 208.9  | 7.5       |
| 80°-90°   | 64.6   | 2.3       |
| 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°    | 748.3  | 27.0      |
| 0°-40°    | 1221.7 | 44.1      |
| 0°-60°    | 2155.4 | 77.7      |
| 0°-90°    | 2773.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2773.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 971 | 971   | 971 | 971   | 971 |      |
| 5°  | 966 | 966   | 964 | 966   | 967 | 92   |
| 15° | 928 | 928   | 926 | 930   | 929 | 262  |
| 25° | 858 | 857   | 853 | 857   | 856 | 396  |
| 35° | 758 | 758   | 755 | 756   | 758 | 475  |
| 45° | 638 | 637   | 634 | 634   | 634 | 492  |
| 55° | 499 | 498   | 496 | 495   | 495 | 446  |
| 65° | 350 | 350   | 346 | 348   | 344 | 346  |
| 75° | 199 | 198   | 196 | 196   | 198 | 211  |
| 85° | 59  | 58    | 57  | 57    | 58  | 67   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 970.6 | 970.6 | 970.6 | 970.6 | 970.6 |
| 2.5°  | 971.4 | 967.3 | 968.1 | 969.8 | 969.8 |
| 5°    | 965.7 | 965.7 | 964.1 | 966.5 | 967.3 |
| 7.5°  | 965.7 | 961.6 | 959.2 | 961.6 | 963.2 |
| 10°   | 952.7 | 951.0 | 952.7 | 951.8 | 954.3 |
| 12.5° | 941.3 | 939.6 | 939.6 | 942.1 | 942.1 |
| 15°   | 928.2 | 928.2 | 925.8 | 929.9 | 929.0 |
| 17.5° | 915.2 | 915.2 | 913.6 | 913.6 | 915.2 |
| 20°   | 899.7 | 895.7 | 897.3 | 896.5 | 895.7 |
| 22.5° | 878.6 | 876.1 | 874.5 | 876.9 | 877.8 |
| 25°   | 858.2 | 856.6 | 853.3 | 856.6 | 855.8 |
| 27.5° | 836.2 | 834.6 | 833.8 | 832.2 | 833.8 |
| 30°   | 811.8 | 810.2 | 809.4 | 807.7 | 807.7 |
| 32.5° | 787.4 | 784.1 | 780.0 | 784.1 | 783.3 |
| 35°   | 758.1 | 758.1 | 754.8 | 755.6 | 758.1 |
| 37.5° | 732.0 | 730.4 | 728.7 | 726.3 | 727.1 |
| 40°   | 702.7 | 700.2 | 699.4 | 697.8 | 694.5 |
| 42.5° | 668.5 | 668.5 | 665.2 | 666.0 | 665.2 |
| 45°   | 637.6 | 636.7 | 633.5 | 633.5 | 633.5 |
| 47.5° | 605.0 | 604.2 | 601.7 | 600.1 | 601.7 |
| 50°   | 571.6 | 568.3 | 568.3 | 565.9 | 565.1 |
| 52.5° | 536.6 | 534.1 | 530.9 | 531.7 | 530.1 |
| 55°   | 499.1 | 498.3 | 495.9 | 495.1 | 495.1 |
| 57.5° | 461.7 | 462.5 | 460.9 | 457.6 | 458.4 |
| 60°   | 425.0 | 424.2 | 422.6 | 421.0 | 421.0 |
| 62.5° | 387.6 | 387.6 | 384.3 | 384.3 | 381.1 |
| 65°   | 350.1 | 350.1 | 346.1 | 347.7 | 344.4 |
| 67.5° | 312.7 | 311.9 | 309.4 | 308.6 | 309.4 |
| 70°   | 272.0 | 272.8 | 271.1 | 271.1 | 272.0 |
| 72.5° | 235.3 | 234.5 | 233.7 | 233.7 | 235.3 |
| 75°   | 198.7 | 197.9 | 196.2 | 196.2 | 197.9 |
| 77.5° | 165.3 | 161.2 | 160.4 | 162.0 | 159.6 |
| 80°   | 131.9 | 126.2 | 125.4 | 124.6 | 124.6 |
| 82.5° | 92.8  | 90.4  | 91.2  | 90.4  | 92.0  |
| 85°   | 58.6  | 57.8  | 57.0  | 57.0  | 57.8  |
| 87.5° | 27.7  | 26.1  | 26.1  | 25.2  | 25.2  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)