

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: P292725

Luminaire Tested: **22GR-LD5-28-FGW080-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292725
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-LD5-28-FGW080-UNV-L83050-W2A1-U-4000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2559.0 lumens
Efficiency: N/A
Efficacy: 113.7 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

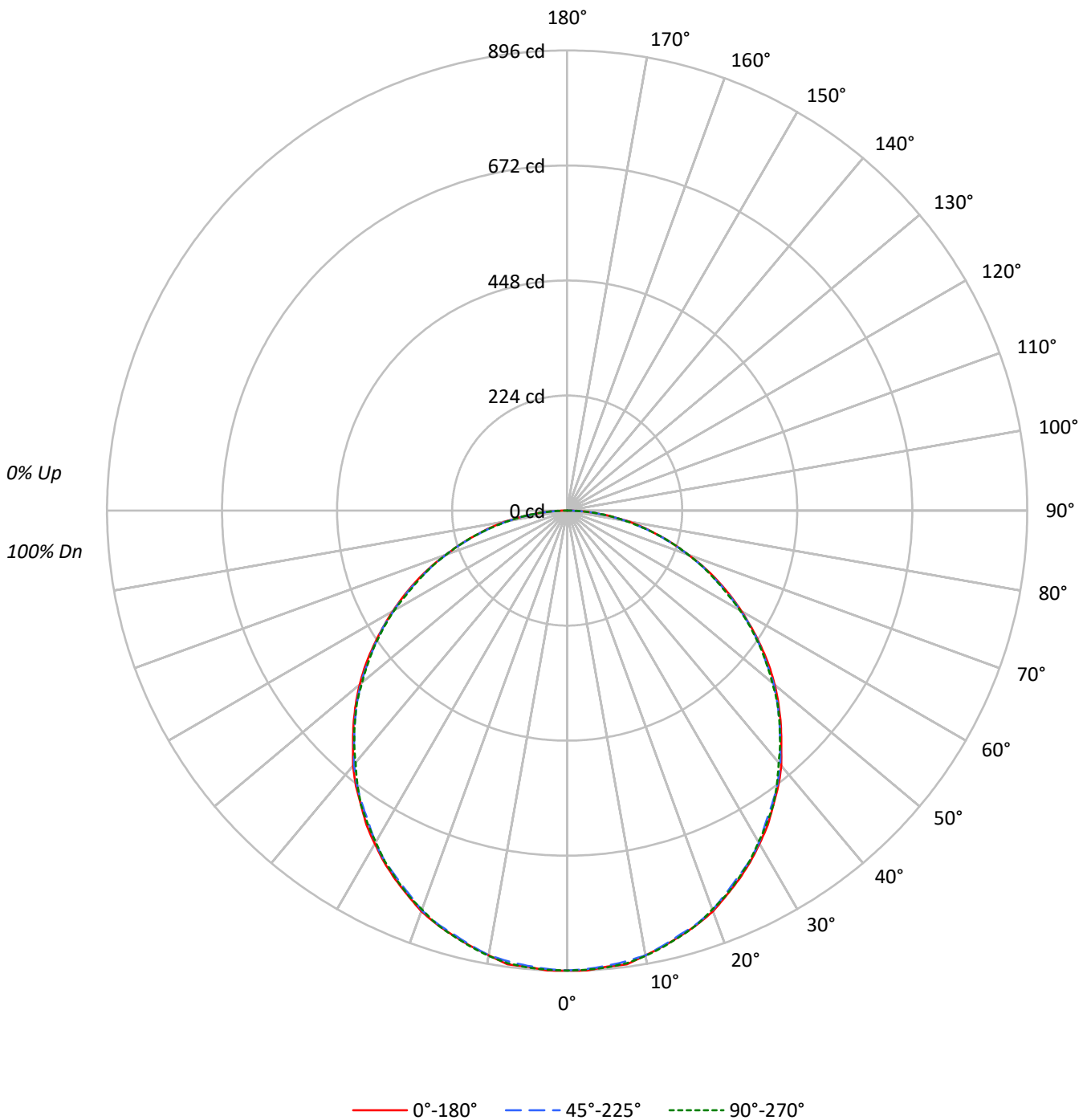
Input Watts (W): 22.506
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292725

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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° | 2410 | 2410 | 2410 |
| 5° | 2407 | 2403 | 2411 |
| 10° | 2402 | 2402 | 2406 |
| 15° | 2386 | 2380 | 2389 |
| 20° | 2378 | 2371 | 2367 |
| 25° | 2352 | 2338 | 2345 |
| 30° | 2328 | 2321 | 2316 |
| 35° | 2298 | 2288 | 2298 |
| 40° | 2278 | 2268 | 2251 |
| 45° | 2239 | 2225 | 2225 |
| 50° | 2208 | 2196 | 2183 |
| 55° | 2161 | 2147 | 2144 |
| 60° | 2111 | 2099 | 2091 |
| 65° | 2057 | 2033 | 2024 |
| 70° | 1975 | 1969 | 1975 |
| 75° | 1906 | 1883 | 1899 |
| 80° | 1886 | 1793 | 1782 |
| 85° | 1670 | 1624 | 1646 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.7 | 3.3 |
| 10°-20° | 241.8 | 9.4 |
| 20°-30° | 364.0 | 14.2 |
| 30°-40° | 436.9 | 17.1 |
| 40°-50° | 452.0 | 17.7 |
| 50°-60° | 409.6 | 16.0 |
| 60°-70° | 317.5 | 12.4 |
| 70°-80° | 192.8 | 7.5 |
| 80°-90° | 59.6 | 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° | 690.5 | 27.0 |
| 0°-40° | 1127.4 | 44.1 |
| 0°-60° | 1989.1 | 77.7 |
| 0°-90° | 2559.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2559.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 896 | 896 | 896 | 896 | 896 | |
| 5° | 891 | 891 | 890 | 892 | 893 | 85 |
| 15° | 857 | 857 | 854 | 858 | 857 | 242 |
| 25° | 792 | 790 | 788 | 790 | 790 | 365 |
| 35° | 700 | 700 | 697 | 697 | 700 | 439 |
| 45° | 588 | 588 | 585 | 585 | 585 | 454 |
| 55° | 461 | 460 | 458 | 457 | 457 | 412 |
| 65° | 323 | 323 | 319 | 321 | 318 | 319 |
| 75° | 183 | 183 | 181 | 181 | 183 | 195 |
| 85° | 54 | 53 | 53 | 53 | 53 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292725

CATALOG NUMBER: 22GR-LD5-28-FGW080-UNV-L83050-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 895.7 | 895.7 | 895.7 | 895.7 | 895.7 |
| 2.5° | 896.4 | 892.7 | 893.4 | 894.9 | 894.9 |
| 5° | 891.2 | 891.2 | 889.7 | 891.9 | 892.7 |
| 7.5° | 891.2 | 887.4 | 885.2 | 887.4 | 888.9 |
| 10° | 879.1 | 877.6 | 879.1 | 878.4 | 880.6 |
| 12.5° | 868.6 | 867.1 | 867.1 | 869.4 | 869.4 |
| 15° | 856.6 | 856.6 | 854.3 | 858.1 | 857.4 |
| 17.5° | 844.6 | 844.6 | 843.1 | 843.1 | 844.6 |
| 20° | 830.3 | 826.5 | 828.0 | 827.3 | 826.5 |
| 22.5° | 810.8 | 808.5 | 807.0 | 809.3 | 810.0 |
| 25° | 792.0 | 790.5 | 787.5 | 790.5 | 789.7 |
| 27.5° | 771.7 | 770.2 | 769.4 | 767.9 | 769.4 |
| 30° | 749.2 | 747.6 | 746.9 | 745.4 | 745.4 |
| 32.5° | 726.6 | 723.6 | 719.8 | 723.6 | 722.9 |
| 35° | 699.6 | 699.6 | 696.6 | 697.3 | 699.6 |
| 37.5° | 675.5 | 674.0 | 672.5 | 670.3 | 671.0 |
| 40° | 648.5 | 646.2 | 645.5 | 644.0 | 640.9 |
| 42.5° | 616.9 | 616.9 | 613.9 | 614.6 | 613.9 |
| 45° | 588.3 | 587.6 | 584.6 | 584.6 | 584.6 |
| 47.5° | 558.3 | 557.5 | 555.3 | 553.8 | 555.3 |
| 50° | 527.5 | 524.5 | 524.5 | 522.2 | 521.5 |
| 52.5° | 495.2 | 492.9 | 489.9 | 490.7 | 489.2 |
| 55° | 460.6 | 459.9 | 457.6 | 456.9 | 456.9 |
| 57.5° | 426.0 | 426.8 | 425.3 | 422.3 | 423.0 |
| 60° | 392.2 | 391.5 | 390.0 | 388.5 | 388.5 |
| 62.5° | 357.7 | 357.7 | 354.7 | 354.7 | 351.7 |
| 65° | 323.1 | 323.1 | 319.3 | 320.8 | 317.8 |
| 67.5° | 288.5 | 287.8 | 285.5 | 284.8 | 285.5 |
| 70° | 251.0 | 251.7 | 250.2 | 250.2 | 251.0 |
| 72.5° | 217.2 | 216.4 | 215.7 | 215.7 | 217.2 |
| 75° | 183.3 | 182.6 | 181.1 | 181.1 | 182.6 |
| 77.5° | 152.5 | 148.8 | 148.0 | 149.5 | 147.3 |
| 80° | 121.7 | 116.5 | 115.7 | 115.0 | 115.0 |
| 82.5° | 85.7 | 83.4 | 84.2 | 83.4 | 84.9 |
| 85° | 54.1 | 53.3 | 52.6 | 52.6 | 53.3 |
| 87.5° | 25.5 | 24.0 | 24.0 | 23.3 | 23.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)