

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: P292904

Luminaire Tested: **22GR-LD5-43-FGW080-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292904
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-LD5-43-FGW080-UNV-L92765-W2A1-U-4500K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3295.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

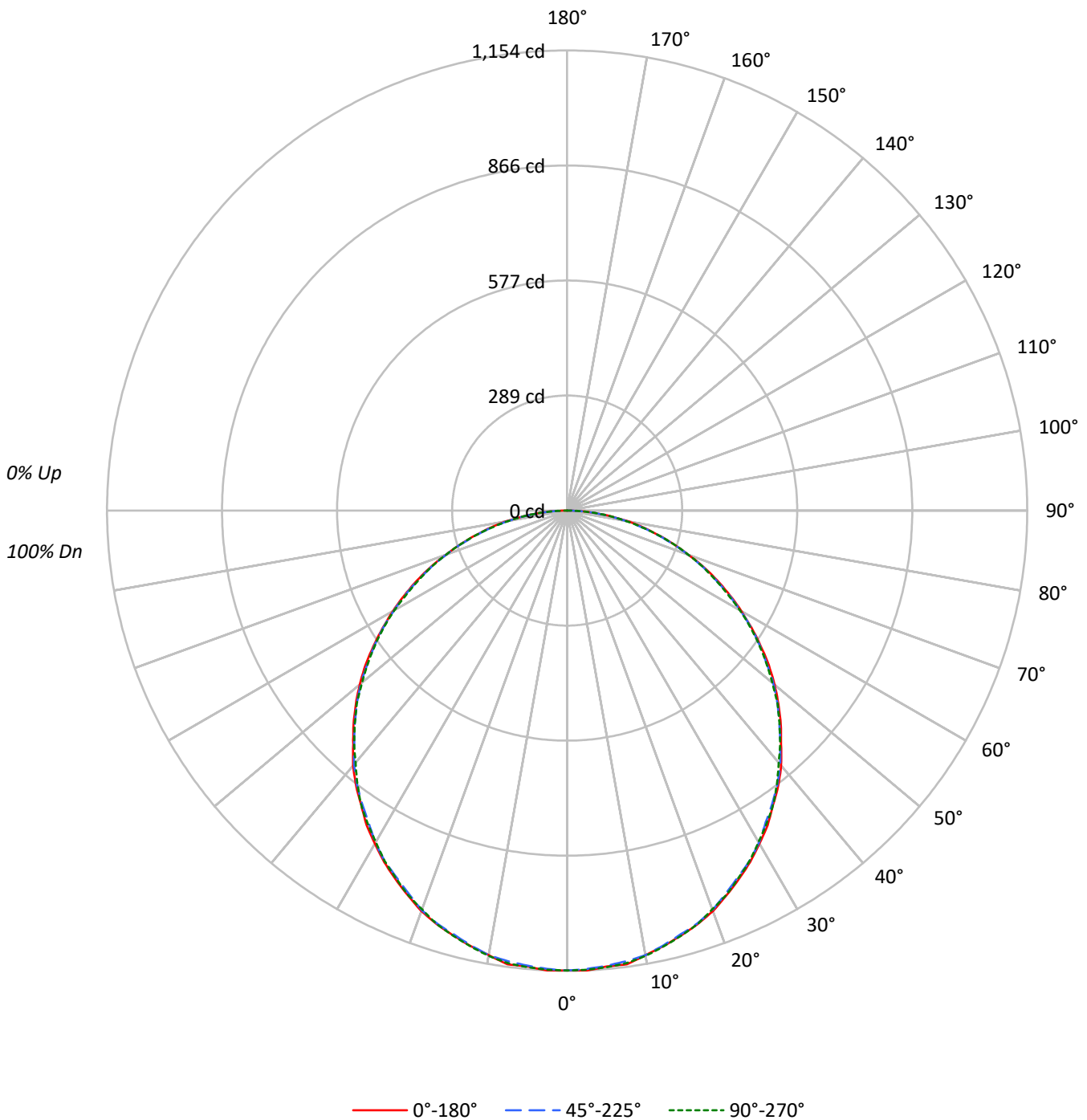
Input Watts (W): 35.805
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 3104 | 3104 | 3104 |
| 5° | 3100 | 3094 | 3105 |
| 10° | 3093 | 3093 | 3098 |
| 15° | 3073 | 3065 | 3075 |
| 20° | 3062 | 3053 | 3048 |
| 25° | 3028 | 3011 | 3019 |
| 30° | 2997 | 2988 | 2982 |
| 35° | 2959 | 2946 | 2959 |
| 40° | 2933 | 2920 | 2899 |
| 45° | 2883 | 2864 | 2864 |
| 50° | 2843 | 2827 | 2811 |
| 55° | 2783 | 2764 | 2760 |
| 60° | 2718 | 2702 | 2692 |
| 65° | 2649 | 2618 | 2606 |
| 70° | 2543 | 2535 | 2543 |
| 75° | 2455 | 2425 | 2444 |
| 80° | 2428 | 2309 | 2294 |
| 85° | 2152 | 2090 | 2121 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 109.1 | 3.3 |
| 10°-20° | 311.3 | 9.4 |
| 20°-30° | 468.7 | 14.2 |
| 30°-40° | 562.5 | 17.1 |
| 40°-50° | 582.1 | 17.7 |
| 50°-60° | 527.4 | 16.0 |
| 60°-70° | 408.8 | 12.4 |
| 70°-80° | 248.2 | 7.5 |
| 80°-90° | 76.8 | 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° | 889.1 | 27.0 |
| 0°-40° | 1451.7 | 44.1 |
| 0°-60° | 2561.1 | 77.7 |
| 0°-90° | 3295.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3295.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1153 | 1153 | 1153 | 1153 | 1153 | |
| 5° | 1148 | 1148 | 1146 | 1148 | 1149 | 109 |
| 15° | 1103 | 1103 | 1100 | 1105 | 1104 | 312 |
| 25° | 1020 | 1018 | 1014 | 1018 | 1017 | 470 |
| 35° | 901 | 901 | 897 | 898 | 901 | 565 |
| 45° | 758 | 757 | 753 | 753 | 753 | 585 |
| 55° | 593 | 592 | 589 | 588 | 588 | 530 |
| 65° | 416 | 416 | 411 | 413 | 409 | 411 |
| 75° | 236 | 235 | 233 | 233 | 235 | 251 |
| 85° | 70 | 69 | 68 | 68 | 69 | 79 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292904

CATALOG NUMBER: 22GR-LD5-43-FGW080-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1153.3 | 1153.3 | 1153.3 | 1153.3 | 1153.3 |
| 2.5° | 1154.2 | 1149.4 | 1150.4 | 1152.3 | 1152.3 |
| 5° | 1147.5 | 1147.5 | 1145.5 | 1148.4 | 1149.4 |
| 7.5° | 1147.5 | 1142.6 | 1139.7 | 1142.6 | 1144.6 |
| 10° | 1132.0 | 1130.1 | 1132.0 | 1131.0 | 1133.9 |
| 12.5° | 1118.5 | 1116.5 | 1116.5 | 1119.4 | 1119.4 |
| 15° | 1103.0 | 1103.0 | 1100.1 | 1104.9 | 1103.9 |
| 17.5° | 1087.5 | 1087.5 | 1085.6 | 1085.6 | 1087.5 |
| 20° | 1069.1 | 1064.3 | 1066.2 | 1065.2 | 1064.3 |
| 22.5° | 1044.0 | 1041.0 | 1039.1 | 1042.0 | 1043.0 |
| 25° | 1019.8 | 1017.8 | 1014.0 | 1017.8 | 1016.9 |
| 27.5° | 993.6 | 991.7 | 990.7 | 988.8 | 990.7 |
| 30° | 964.6 | 962.7 | 961.7 | 959.8 | 959.8 |
| 32.5° | 935.6 | 931.7 | 926.9 | 931.7 | 930.8 |
| 35° | 900.8 | 900.8 | 896.9 | 897.9 | 900.8 |
| 37.5° | 869.8 | 867.9 | 865.9 | 863.0 | 864.0 |
| 40° | 835.0 | 832.1 | 831.1 | 829.2 | 825.3 |
| 42.5° | 794.3 | 794.3 | 790.5 | 791.4 | 790.5 |
| 45° | 757.6 | 756.6 | 752.7 | 752.7 | 752.7 |
| 47.5° | 718.9 | 717.9 | 715.0 | 713.1 | 715.0 |
| 50° | 679.2 | 675.3 | 675.3 | 672.4 | 671.5 |
| 52.5° | 637.6 | 634.7 | 630.8 | 631.8 | 629.9 |
| 55° | 593.1 | 592.1 | 589.2 | 588.3 | 588.3 |
| 57.5° | 548.6 | 549.5 | 547.6 | 543.7 | 544.7 |
| 60° | 505.0 | 504.1 | 502.1 | 500.2 | 500.2 |
| 62.5° | 460.5 | 460.5 | 456.7 | 456.7 | 452.8 |
| 65° | 416.0 | 416.0 | 411.2 | 413.1 | 409.3 |
| 67.5° | 371.5 | 370.6 | 367.7 | 366.7 | 367.7 |
| 70° | 323.2 | 324.1 | 322.2 | 322.2 | 323.2 |
| 72.5° | 279.6 | 278.6 | 277.7 | 277.7 | 279.6 |
| 75° | 236.1 | 235.1 | 233.2 | 233.2 | 235.1 |
| 77.5° | 196.4 | 191.6 | 190.6 | 192.5 | 189.6 |
| 80° | 156.7 | 150.0 | 149.0 | 148.0 | 148.0 |
| 82.5° | 110.3 | 107.4 | 108.4 | 107.4 | 109.3 |
| 85° | 69.7 | 68.7 | 67.7 | 67.7 | 68.7 |
| 87.5° | 32.9 | 31.0 | 31.0 | 30.0 | 30.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)