

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: P292274

Luminaire Tested: **22GR-LD5-24-A-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292274
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33296)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-24-A-UNV-L92765-W2A1-U-5700K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (168) 90 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2293.0 lumens
Efficiency: N/A
Efficacy: 122.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

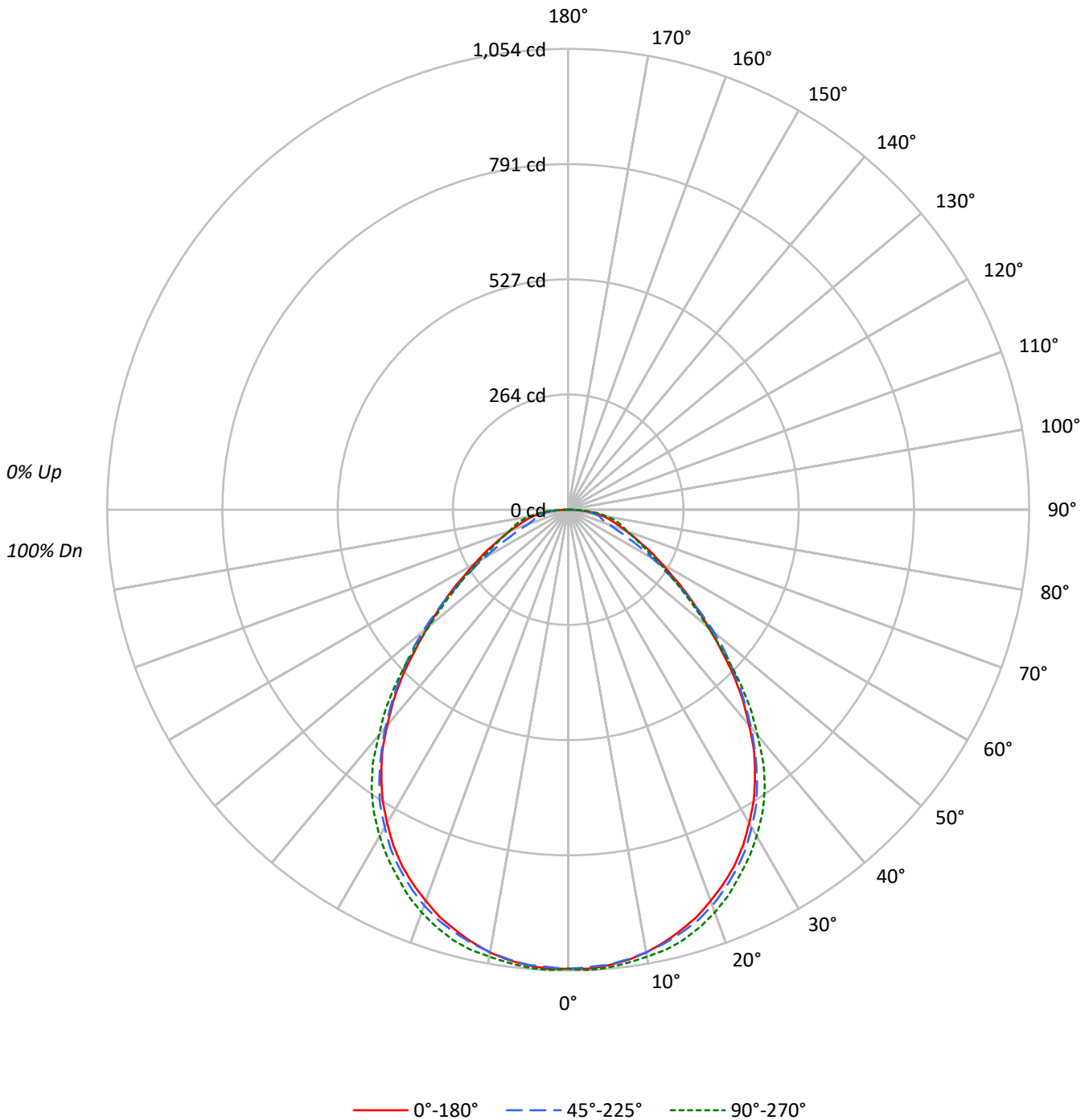
Input Watts (W): 18.693
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 94 | 87 | 82 | 99 | 92 | 86 | 81 | 88 | 84 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 84 | 76 | 70 | 91 | 82 | 75 | 70 | 79 | 73 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 60 | 71 | 65 | 60 | 69 | 63 | 59 | 67 | 62 | 58 | 56 |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 36 |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 30 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2826 | 2826 | 2826 |
| 5° | 2827 | 2822 | 2840 |
| 10° | 2810 | 2808 | 2836 |
| 15° | 2774 | 2789 | 2838 |
| 20° | 2726 | 2758 | 2807 |
| 25° | 2668 | 2698 | 2747 |
| 30° | 2572 | 2606 | 2678 |
| 35° | 2445 | 2473 | 2573 |
| 40° | 2261 | 2285 | 2366 |
| 45° | 2031 | 2067 | 2100 |
| 50° | 1756 | 1818 | 1738 |
| 55° | 1532 | 1492 | 1472 |
| 60° | 1327 | 1195 | 1275 |
| 65° | 1186 | 938 | 1145 |
| 70° | 1100 | 777 | 1129 |
| 75° | 1099 | 821 | 1254 |
| 80° | 1215 | 1034 | 1413 |
| 85° | 1269 | 1121 | 1599 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 99.4 | 4.3 |
| 10°-20° | 283.0 | 12.3 |
| 20°-30° | 418.6 | 18.3 |
| 30°-40° | 472.4 | 20.6 |
| 40°-50° | 416.4 | 18.2 |
| 50°-60° | 285.7 | 12.5 |
| 60°-70° | 168.6 | 7.4 |
| 70°-80° | 105.2 | 4.6 |
| 80°-90° | 43.9 | 1.9 |
| 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° | 801.0 | 34.9 |
| 0°-40° | 1273.4 | 55.5 |
| 0°-60° | 1975.4 | 86.1 |
| 0°-90° | 2293.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2293.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1050 | 1050 | 1050 | 1050 | 1050 | |
| 5° | 1046 | 1044 | 1045 | 1048 | 1051 | 99 |
| 15° | 996 | 997 | 1001 | 1013 | 1019 | 281 |
| 25° | 899 | 902 | 909 | 920 | 925 | 413 |
| 35° | 744 | 751 | 753 | 771 | 783 | 464 |
| 45° | 534 | 536 | 543 | 546 | 552 | 410 |
| 55° | 327 | 319 | 318 | 307 | 314 | 293 |
| 65° | 186 | 164 | 147 | 170 | 180 | 188 |
| 75° | 106 | 95 | 79 | 110 | 121 | 113 |
| 85° | 41 | 38 | 36 | 48 | 52 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1050.1 | 1050.1 | 1050.1 | 1050.1 | 1050.1 |
| 2.5° | 1050.6 | 1048.0 | 1046.9 | 1051.2 | 1053.8 |
| 5° | 1046.4 | 1044.2 | 1044.8 | 1048.5 | 1051.2 |
| 7.5° | 1038.9 | 1037.3 | 1037.3 | 1042.6 | 1045.3 |
| 10° | 1028.2 | 1027.7 | 1027.7 | 1034.1 | 1037.8 |
| 12.5° | 1013.3 | 1013.8 | 1016.0 | 1024.5 | 1030.9 |
| 15° | 995.7 | 996.8 | 1001.0 | 1013.3 | 1018.6 |
| 17.5° | 976.5 | 976.5 | 985.0 | 994.6 | 1001.0 |
| 20° | 951.9 | 953.5 | 963.1 | 973.8 | 980.2 |
| 22.5° | 926.9 | 929.5 | 937.5 | 949.8 | 955.7 |
| 25° | 898.6 | 901.8 | 908.7 | 920.4 | 925.3 |
| 27.5° | 865.5 | 869.8 | 877.2 | 885.8 | 895.9 |
| 30° | 827.6 | 834.0 | 838.8 | 850.5 | 861.8 |
| 32.5° | 789.2 | 795.1 | 800.4 | 812.7 | 825.5 |
| 35° | 744.4 | 750.8 | 752.9 | 771.0 | 783.3 |
| 37.5° | 698.5 | 701.1 | 702.2 | 720.4 | 733.7 |
| 40° | 643.5 | 648.8 | 650.4 | 664.9 | 673.4 |
| 42.5° | 590.7 | 592.8 | 596.0 | 606.7 | 616.8 |
| 45° | 533.6 | 536.3 | 543.2 | 546.4 | 551.7 |
| 47.5° | 473.8 | 481.8 | 489.8 | 479.7 | 480.2 |
| 50° | 419.4 | 425.8 | 434.3 | 415.1 | 415.1 |
| 52.5° | 370.8 | 374.0 | 374.6 | 358.6 | 361.8 |
| 55° | 326.6 | 318.6 | 318.0 | 307.3 | 313.8 |
| 57.5° | 282.3 | 271.6 | 267.9 | 264.7 | 272.1 |
| 60° | 246.5 | 227.3 | 222.0 | 226.8 | 236.9 |
| 62.5° | 217.2 | 192.6 | 182.5 | 194.8 | 203.8 |
| 65° | 186.2 | 163.8 | 147.3 | 170.2 | 179.8 |
| 67.5° | 162.2 | 140.9 | 119.5 | 152.1 | 159.0 |
| 70° | 139.8 | 123.3 | 98.7 | 138.2 | 143.5 |
| 72.5° | 121.7 | 108.9 | 85.4 | 124.9 | 131.3 |
| 75° | 105.7 | 95.0 | 79.0 | 110.5 | 120.6 |
| 77.5° | 92.8 | 81.1 | 73.6 | 95.5 | 107.8 |
| 80° | 78.4 | 66.7 | 66.7 | 80.0 | 91.2 |
| 82.5° | 61.9 | 52.3 | 53.9 | 65.1 | 73.1 |
| 85° | 41.1 | 38.4 | 36.3 | 47.5 | 51.8 |
| 87.5° | 20.8 | 21.3 | 19.2 | 24.5 | 25.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)