

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: P292166

Luminaire Tested: **22GR-LD5-20-A-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292166
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-LD5-20-A-UNV-L82765-W2A1-U-5500K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2155.0 lumens
Efficiency: N/A
Efficacy: 135.5 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

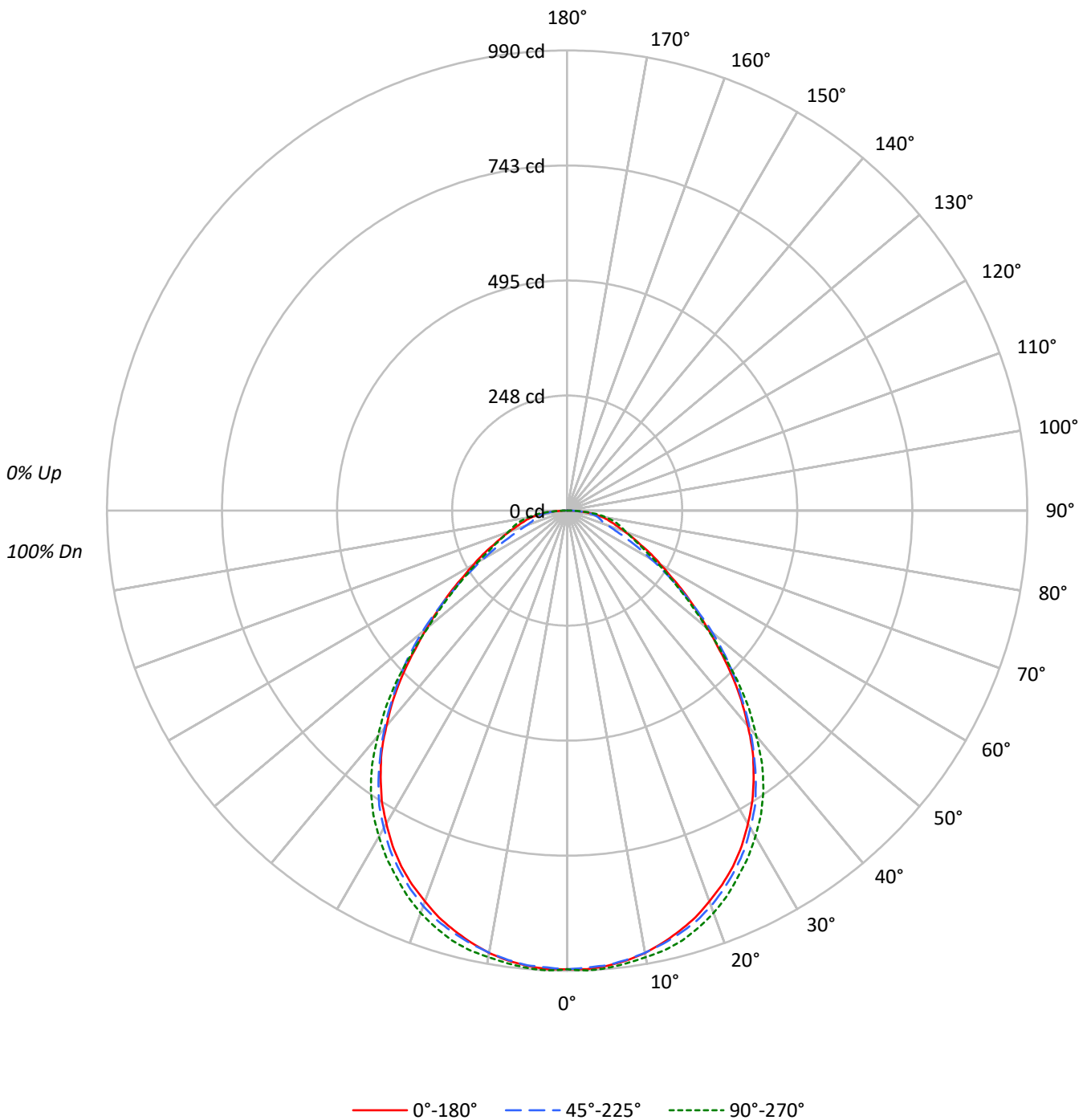
Input Watts (W): 15.903
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292166

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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 | 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 | | | | | 100 | | | |
| 1 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 94 | 87 | 82 | 99 | 92 | 86 | 81 | 88 | 84 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 | | | | | 74 | | | |
| 3 | 93 | 84 | 76 | 70 | 91 | 82 | 75 | 70 | 79 | 73 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 | | | | | 64 | | | |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 60 | 71 | 65 | 60 | 69 | 63 | 59 | 67 | 62 | 58 | 56 | | | | | 56 | | | |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 | | | | | 49 | | | |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 44 | | | | | 44 | | | |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 | | | | | 39 | | | |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 36 | | | | | 36 | | | |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | | 32 | | | |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 30 | | | | | 30 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2656 | 2656 | 2656 |
| 5° | 2656 | 2652 | 2669 |
| 10° | 2641 | 2639 | 2665 |
| 15° | 2607 | 2621 | 2667 |
| 20° | 2562 | 2592 | 2638 |
| 25° | 2507 | 2536 | 2582 |
| 30° | 2417 | 2449 | 2517 |
| 35° | 2298 | 2325 | 2418 |
| 40° | 2125 | 2147 | 2223 |
| 45° | 1909 | 1943 | 1973 |
| 50° | 1650 | 1709 | 1634 |
| 55° | 1440 | 1402 | 1384 |
| 60° | 1247 | 1123 | 1199 |
| 65° | 1114 | 881 | 1076 |
| 70° | 1034 | 730 | 1061 |
| 75° | 1032 | 771 | 1178 |
| 80° | 1142 | 972 | 1330 |
| 85° | 1192 | 1053 | 1501 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 93.4 | 4.3 |
| 10°-20° | 266.0 | 12.3 |
| 20°-30° | 393.4 | 18.3 |
| 30°-40° | 443.9 | 20.6 |
| 40°-50° | 391.3 | 18.2 |
| 50°-60° | 268.5 | 12.5 |
| 60°-70° | 158.4 | 7.4 |
| 70°-80° | 98.9 | 4.6 |
| 80°-90° | 41.2 | 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° | 752.8 | 34.9 |
| 0°-40° | 1196.7 | 55.5 |
| 0°-60° | 1856.5 | 86.1 |
| 0°-90° | 2155.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2155.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 987 | 987 | 987 | 987 | 987 | |
| 5° | 983 | 981 | 982 | 985 | 988 | 93 |
| 15° | 936 | 937 | 941 | 952 | 957 | 264 |
| 25° | 844 | 848 | 854 | 865 | 870 | 388 |
| 35° | 700 | 706 | 708 | 725 | 736 | 436 |
| 45° | 502 | 504 | 510 | 514 | 518 | 385 |
| 55° | 307 | 299 | 299 | 289 | 295 | 275 |
| 65° | 175 | 154 | 138 | 160 | 169 | 176 |
| 75° | 99 | 89 | 74 | 104 | 113 | 106 |
| 85° | 39 | 36 | 34 | 45 | 49 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 986.9 | 986.9 | 986.9 | 986.9 | 986.9 |
| 2.5° | 987.4 | 984.9 | 983.9 | 987.9 | 990.4 |
| 5° | 983.4 | 981.4 | 981.9 | 985.4 | 987.9 |
| 7.5° | 976.4 | 974.9 | 974.9 | 979.9 | 982.4 |
| 10° | 966.4 | 965.8 | 965.8 | 971.9 | 975.4 |
| 12.5° | 952.3 | 952.8 | 954.8 | 962.8 | 968.9 |
| 15° | 935.8 | 936.8 | 940.8 | 952.3 | 957.3 |
| 17.5° | 917.7 | 917.7 | 925.7 | 934.8 | 940.8 |
| 20° | 894.6 | 896.1 | 905.2 | 915.2 | 921.2 |
| 22.5° | 871.1 | 873.6 | 881.1 | 892.6 | 898.2 |
| 25° | 844.5 | 847.5 | 854.0 | 865.1 | 869.6 |
| 27.5° | 813.4 | 817.4 | 824.4 | 832.5 | 842.0 |
| 30° | 777.8 | 783.8 | 788.3 | 799.4 | 809.9 |
| 32.5° | 741.7 | 747.2 | 752.2 | 763.8 | 775.8 |
| 35° | 699.6 | 705.6 | 707.6 | 724.6 | 736.2 |
| 37.5° | 656.4 | 658.9 | 659.9 | 677.0 | 689.5 |
| 40° | 604.8 | 609.8 | 611.3 | 624.8 | 632.9 |
| 42.5° | 555.1 | 557.1 | 560.2 | 570.2 | 579.7 |
| 45° | 501.5 | 504.0 | 510.5 | 513.5 | 518.5 |
| 47.5° | 445.3 | 452.8 | 460.4 | 450.8 | 451.3 |
| 50° | 394.2 | 400.2 | 408.2 | 390.2 | 390.2 |
| 52.5° | 348.5 | 351.5 | 352.0 | 337.0 | 340.0 |
| 55° | 306.9 | 299.4 | 298.9 | 288.9 | 294.9 |
| 57.5° | 265.3 | 255.3 | 251.7 | 248.7 | 255.8 |
| 60° | 231.7 | 213.6 | 208.6 | 213.1 | 222.7 |
| 62.5° | 204.1 | 181.0 | 171.5 | 183.0 | 191.6 |
| 65° | 175.0 | 154.0 | 138.4 | 160.0 | 169.0 |
| 67.5° | 152.4 | 132.4 | 112.3 | 142.9 | 149.4 |
| 70° | 131.4 | 115.8 | 92.8 | 129.9 | 134.9 |
| 72.5° | 114.3 | 102.3 | 80.2 | 117.3 | 123.4 |
| 75° | 99.3 | 89.3 | 74.2 | 103.8 | 113.3 |
| 77.5° | 87.3 | 76.2 | 69.2 | 89.8 | 101.3 |
| 80° | 73.7 | 62.7 | 62.7 | 75.2 | 85.8 |
| 82.5° | 58.2 | 49.1 | 50.6 | 61.2 | 68.7 |
| 85° | 38.6 | 36.1 | 34.1 | 44.6 | 48.6 |
| 87.5° | 19.6 | 20.1 | 18.1 | 23.1 | 23.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)