

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: P292173

Luminaire Tested: **22GR-LD5-24-A-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292173
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-L82765-W2A1-U-4500K
Description: GRLED 2x2 TUNABLE WHITE TROFFER WITH A LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2471.0 lumens
Efficiency: N/A
Efficacy: 133.5 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

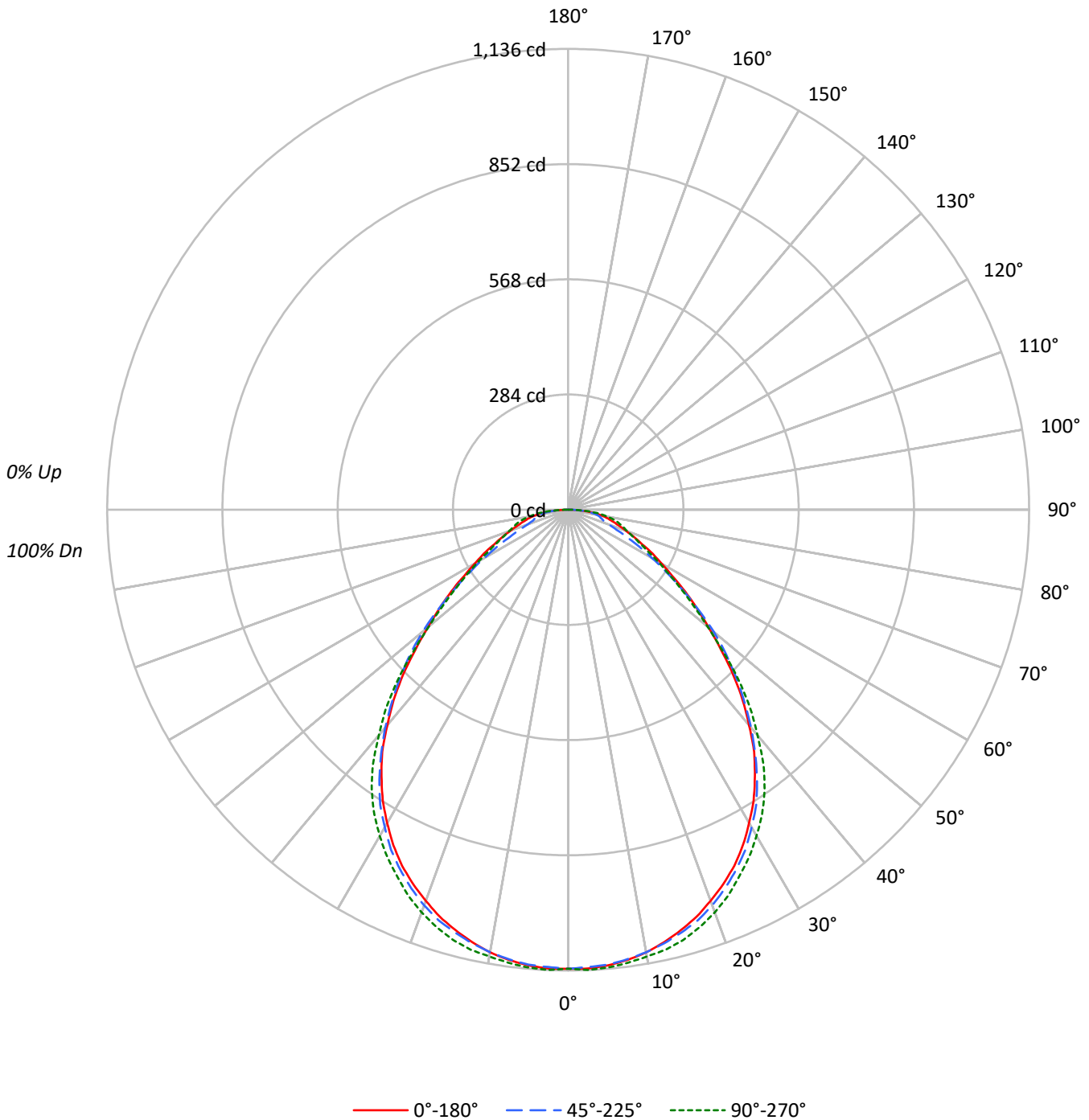
Input Watts (W): 18.507
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 3045 | 3045 | 3045 |
| 5° | 3046 | 3041 | 3060 |
| 10° | 3028 | 3026 | 3056 |
| 15° | 2989 | 3005 | 3058 |
| 20° | 2938 | 2972 | 3025 |
| 25° | 2875 | 2907 | 2961 |
| 30° | 2771 | 2809 | 2885 |
| 35° | 2635 | 2665 | 2773 |
| 40° | 2436 | 2462 | 2549 |
| 45° | 2188 | 2228 | 2263 |
| 50° | 1892 | 1960 | 1873 |
| 55° | 1651 | 1608 | 1586 |
| 60° | 1430 | 1287 | 1374 |
| 65° | 1278 | 1011 | 1234 |
| 70° | 1186 | 837 | 1217 |
| 75° | 1184 | 885 | 1352 |
| 80° | 1309 | 1114 | 1523 |
| 85° | 1368 | 1207 | 1723 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.1 | 4.3 |
| 10°-20° | 305.0 | 12.3 |
| 20°-30° | 451.1 | 18.3 |
| 30°-40° | 509.0 | 20.6 |
| 40°-50° | 448.7 | 18.2 |
| 50°-60° | 307.8 | 12.5 |
| 60°-70° | 181.6 | 7.4 |
| 70°-80° | 113.4 | 4.6 |
| 80°-90° | 47.3 | 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° | 863.2 | 34.9 |
| 0°-40° | 1372.2 | 55.5 |
| 0°-60° | 2128.8 | 86.1 |
| 0°-90° | 2471.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2471.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1132 | 1132 | 1132 | 1132 | 1132 | |
| 5° | 1128 | 1125 | 1126 | 1130 | 1133 | 107 |
| 15° | 1073 | 1074 | 1079 | 1092 | 1098 | 302 |
| 25° | 968 | 972 | 979 | 992 | 997 | 445 |
| 35° | 802 | 809 | 811 | 831 | 844 | 500 |
| 45° | 575 | 578 | 585 | 589 | 595 | 442 |
| 55° | 352 | 343 | 343 | 331 | 338 | 316 |
| 65° | 201 | 176 | 159 | 183 | 194 | 202 |
| 75° | 114 | 102 | 85 | 119 | 130 | 122 |
| 85° | 44 | 41 | 39 | 51 | 56 | 48 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------------|---------------|---------------|---------------|---------------|
| 0° | 1131.6 | 1131.6 | 1131.6 | 1131.6 | <i>1131.6</i> |
| 2.5° | <i>1132.2</i> | <i>1129.3</i> | <i>1128.2</i> | <i>1132.8</i> | <i>1135.7</i> |
| 5° | 1127.6 | 1125.3 | 1125.9 | 1129.9 | <i>1132.8</i> |
| 7.5° | 1119.6 | 1117.8 | 1117.8 | 1123.6 | <i>1126.5</i> |
| 10° | 1108.1 | 1107.5 | 1107.5 | 1114.4 | <i>1118.4</i> |
| 12.5° | 1092.0 | 1092.5 | 1094.8 | 1104.0 | <i>1110.9</i> |
| 15° | 1073.0 | 1074.1 | 1078.7 | 1092.0 | <i>1097.7</i> |
| 17.5° | 1052.3 | 1052.3 | 1061.5 | 1071.8 | <i>1078.7</i> |
| 20° | 1025.8 | 1027.6 | 1037.9 | 1049.4 | <i>1056.3</i> |
| 22.5° | 998.8 | 1001.7 | 1010.3 | 1023.5 | <i>1029.9</i> |
| 25° | 968.3 | 971.8 | 979.2 | 991.9 | <i>997.1</i> |
| 27.5° | 932.7 | 937.3 | 945.3 | 954.5 | <i>965.4</i> |
| 30° | 891.8 | 898.7 | 903.9 | 916.6 | <i>928.6</i> |
| 32.5° | 850.4 | 856.8 | 862.5 | 875.7 | <i>889.5</i> |
| 35° | 802.1 | 809.0 | 811.3 | 830.9 | <i>844.1</i> |
| 37.5° | 752.7 | 755.6 | 756.7 | 776.3 | <i>790.6</i> |
| 40° | 693.5 | 699.2 | 700.9 | 716.5 | <i>725.7</i> |
| 42.5° | 636.5 | 638.8 | 642.3 | 653.8 | <i>664.7</i> |
| 45° | 575.0 | 577.9 | 585.4 | 588.8 | <i>594.6</i> |
| 47.5° | 510.6 | 519.2 | 527.9 | 516.9 | <i>517.5</i> |
| 50° | 452.0 | 458.9 | 468.1 | 447.4 | <i>447.4</i> |
| 52.5° | 399.6 | 403.1 | 403.7 | 386.4 | <i>389.9</i> |
| 55° | 351.9 | 343.3 | 342.7 | 331.2 | <i>338.1</i> |
| 57.5° | 304.2 | 292.7 | 288.7 | 285.2 | <i>293.3</i> |
| 60° | 265.7 | 245.0 | 239.2 | 244.4 | <i>255.3</i> |
| 62.5° | 234.0 | 207.6 | 196.7 | 209.9 | <i>219.7</i> |
| 65° | 200.7 | 176.5 | 158.7 | 183.4 | <i>193.8</i> |
| 67.5° | 174.8 | 151.8 | 128.8 | 163.9 | <i>171.4</i> |
| 70° | 150.7 | 132.8 | 106.4 | 148.9 | <i>154.7</i> |
| 72.5° | 131.1 | 117.3 | 92.0 | 134.6 | <i>141.5</i> |
| 75° | 113.9 | 102.4 | 85.1 | 119.0 | <i>130.0</i> |
| 77.5° | 100.1 | 87.4 | 79.4 | 102.9 | <i>116.2</i> |
| 80° | 84.5 | 71.9 | 71.9 | 86.3 | <i>98.3</i> |
| 82.5° | 66.7 | 56.4 | 58.1 | 70.2 | <i>78.8</i> |
| 85° | 44.3 | 41.4 | 39.1 | 51.2 | <i>55.8</i> |
| 87.5° | 22.4 | 23.0 | 20.7 | 26.5 | <i>27.0</i> |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | <i>0.0</i> |

(END OF REPORT)