

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: P292243

Luminaire Tested: **22GR-LD5-36-A-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292243
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-LD5-36-A-UNV-L93050-W2A1-U-3000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2807.0 lumens
Efficiency: N/A
Efficacy: 97.7 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

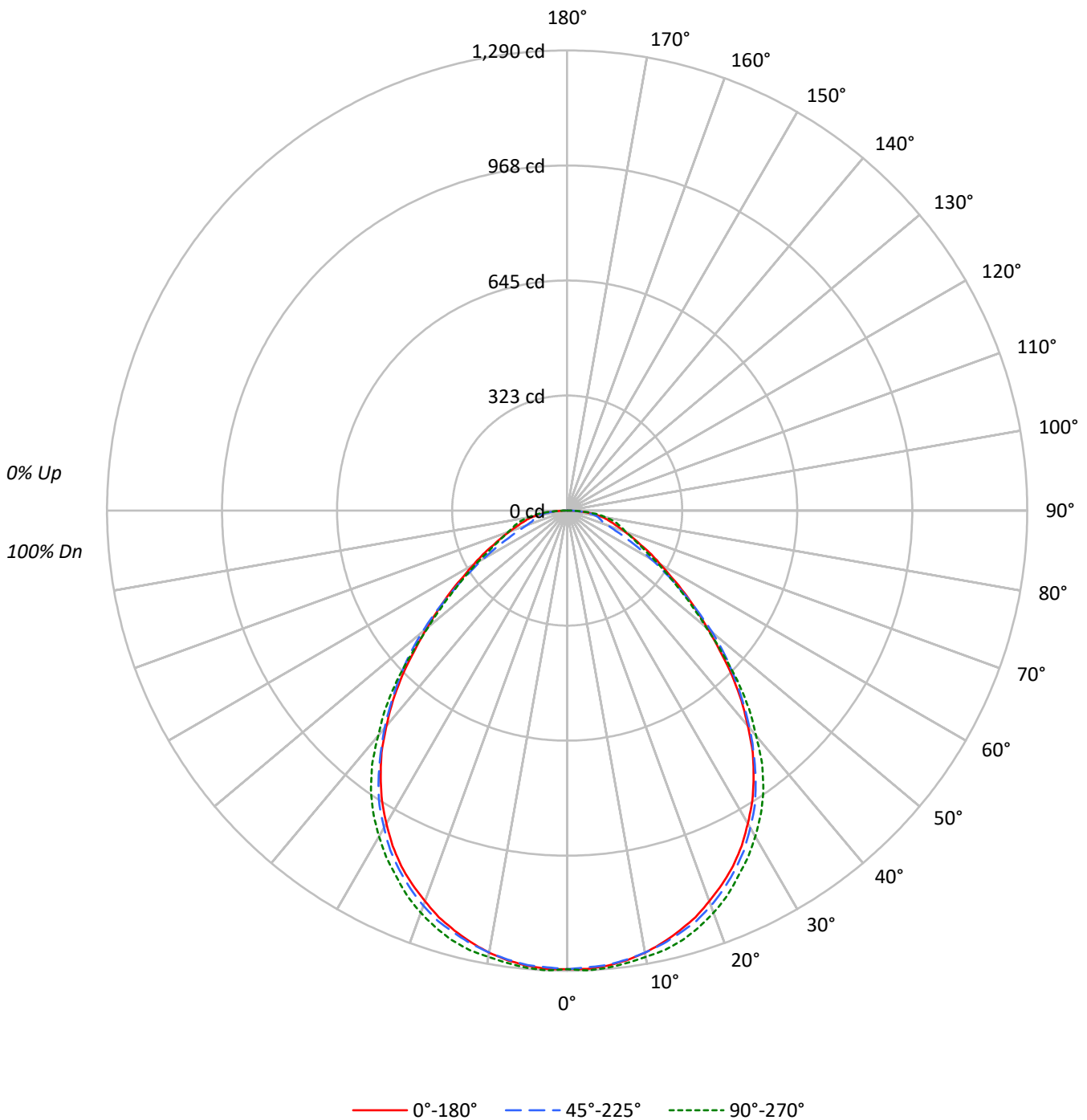
Input Watts (W): 28.737
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292243

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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° | 3459 | 3459 | 3459 |
| 5° | 3460 | 3455 | 3476 |
| 10° | 3439 | 3438 | 3472 |
| 15° | 3396 | 3414 | 3474 |
| 20° | 3337 | 3376 | 3436 |
| 25° | 3266 | 3303 | 3363 |
| 30° | 3148 | 3191 | 3278 |
| 35° | 2993 | 3028 | 3150 |
| 40° | 2767 | 2797 | 2896 |
| 45° | 2486 | 2531 | 2570 |
| 50° | 2149 | 2226 | 2128 |
| 55° | 1876 | 1826 | 1802 |
| 60° | 1624 | 1462 | 1561 |
| 65° | 1452 | 1148 | 1401 |
| 70° | 1346 | 950 | 1382 |
| 75° | 1344 | 1005 | 1535 |
| 80° | 1488 | 1266 | 1731 |
| 85° | 1553 | 1371 | 1958 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.7 | 4.3 |
| 10°-20° | 346.5 | 12.3 |
| 20°-30° | 512.4 | 18.3 |
| 30°-40° | 578.2 | 20.6 |
| 40°-50° | 509.7 | 18.2 |
| 50°-60° | 349.7 | 12.5 |
| 60°-70° | 206.3 | 7.4 |
| 70°-80° | 128.8 | 4.6 |
| 80°-90° | 53.7 | 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° | 980.5 | 34.9 |
| 0°-40° | 1558.8 | 55.5 |
| 0°-60° | 2418.2 | 86.1 |
| 0°-90° | 2807.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2807.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1286 | 1286 | 1286 | 1286 | 1286 | |
| 5° | 1281 | 1278 | 1279 | 1284 | 1287 | 122 |
| 15° | 1219 | 1220 | 1225 | 1240 | 1247 | 344 |
| 25° | 1100 | 1104 | 1112 | 1127 | 1133 | 505 |
| 35° | 911 | 919 | 922 | 944 | 959 | 568 |
| 45° | 653 | 656 | 665 | 669 | 675 | 502 |
| 55° | 400 | 390 | 389 | 376 | 384 | 359 |
| 65° | 228 | 200 | 180 | 208 | 220 | 230 |
| 75° | 129 | 116 | 97 | 135 | 148 | 139 |
| 85° | 50 | 47 | 44 | 58 | 63 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1285.5 | 1285.5 | 1285.5 | 1285.5 | 1285.5 |
| 2.5° | 1286.2 | 1282.9 | 1281.6 | 1286.8 | 1290.1 |
| 5° | 1280.9 | 1278.3 | 1279.0 | 1283.5 | 1286.8 |
| 7.5° | 1271.8 | 1269.8 | 1269.8 | 1276.4 | 1279.6 |
| 10° | 1258.7 | 1258.1 | 1258.1 | 1265.9 | 1270.5 |
| 12.5° | 1240.4 | 1241.1 | 1243.7 | 1254.2 | 1262.0 |
| 15° | 1218.9 | 1220.2 | 1225.4 | 1240.4 | 1247.0 |
| 17.5° | 1195.4 | 1195.4 | 1205.8 | 1217.6 | 1225.4 |
| 20° | 1165.3 | 1167.3 | 1179.0 | 1192.1 | 1199.9 |
| 22.5° | 1134.6 | 1137.9 | 1147.7 | 1162.7 | 1169.9 |
| 25° | 1100.0 | 1103.9 | 1112.4 | 1126.8 | 1132.7 |
| 27.5° | 1059.5 | 1064.7 | 1073.9 | 1084.3 | 1096.7 |
| 30° | 1013.1 | 1021.0 | 1026.8 | 1041.2 | 1054.9 |
| 32.5° | 966.1 | 973.3 | 979.8 | 994.8 | 1010.5 |
| 35° | 911.2 | 919.1 | 921.7 | 943.9 | 958.9 |
| 37.5° | 855.0 | 858.3 | 859.6 | 881.8 | 898.2 |
| 40° | 787.8 | 794.3 | 796.3 | 813.9 | 824.3 |
| 42.5° | 723.1 | 725.7 | 729.6 | 742.7 | 755.1 |
| 45° | 653.2 | 656.5 | 665.0 | 668.9 | 675.4 |
| 47.5° | 580.0 | 589.8 | 599.6 | 587.2 | 587.9 |
| 50° | 513.4 | 521.3 | 531.7 | 508.2 | 508.2 |
| 52.5° | 454.0 | 457.9 | 458.5 | 439.0 | 442.9 |
| 55° | 399.8 | 390.0 | 389.3 | 376.2 | 384.1 |
| 57.5° | 345.5 | 332.5 | 327.9 | 324.0 | 333.1 |
| 60° | 301.8 | 278.3 | 271.7 | 277.6 | 290.0 |
| 62.5° | 265.9 | 235.8 | 223.4 | 238.4 | 249.5 |
| 65° | 228.0 | 200.5 | 180.3 | 208.4 | 220.1 |
| 67.5° | 198.6 | 172.4 | 146.3 | 186.2 | 194.7 |
| 70° | 171.1 | 150.9 | 120.8 | 169.2 | 175.7 |
| 72.5° | 148.9 | 133.3 | 104.5 | 152.8 | 160.7 |
| 75° | 129.3 | 116.3 | 96.7 | 135.2 | 147.6 |
| 77.5° | 113.7 | 99.3 | 90.1 | 116.9 | 131.9 |
| 80° | 96.0 | 81.7 | 81.7 | 98.0 | 111.7 |
| 82.5° | 75.8 | 64.0 | 66.0 | 79.7 | 89.5 |
| 85° | 50.3 | 47.0 | 44.4 | 58.1 | 63.4 |
| 87.5° | 25.5 | 26.1 | 23.5 | 30.0 | 30.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)