

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: P292248

Luminaire Tested: **22GR-LD5-40-A-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292248
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-LD5-40-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: 3163.0 lumens
Efficiency: N/A
Efficacy: 95.5 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

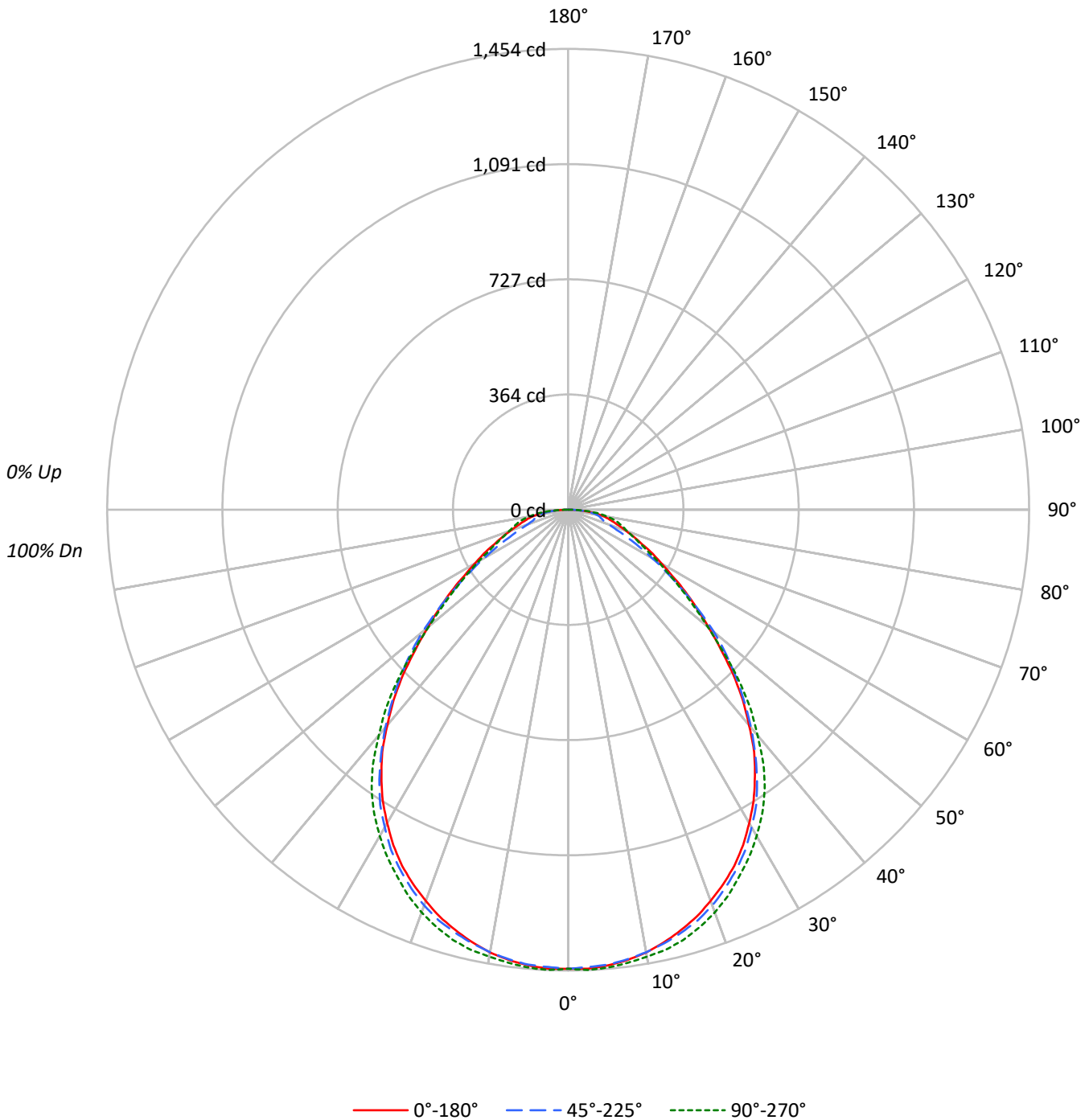
Input Watts (W): 33.108
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 3898 | 3898 | 3898 |
| 5° | 3899 | 3893 | 3917 |
| 10° | 3876 | 3874 | 3912 |
| 15° | 3826 | 3847 | 3914 |
| 20° | 3760 | 3805 | 3872 |
| 25° | 3680 | 3722 | 3790 |
| 30° | 3547 | 3595 | 3694 |
| 35° | 3373 | 3412 | 3550 |
| 40° | 3118 | 3152 | 3263 |
| 45° | 2801 | 2852 | 2896 |
| 50° | 2422 | 2508 | 2397 |
| 55° | 2114 | 2058 | 2031 |
| 60° | 1830 | 1648 | 1759 |
| 65° | 1636 | 1293 | 1579 |
| 70° | 1517 | 1072 | 1558 |
| 75° | 1515 | 1132 | 1729 |
| 80° | 1677 | 1426 | 1951 |
| 85° | 1751 | 1547 | 2205 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.1 | 4.3 |
| 10°-20° | 390.4 | 12.3 |
| 20°-30° | 577.4 | 18.3 |
| 30°-40° | 651.6 | 20.6 |
| 40°-50° | 574.4 | 18.2 |
| 50°-60° | 394.0 | 12.5 |
| 60°-70° | 232.5 | 7.4 |
| 70°-80° | 145.1 | 4.6 |
| 80°-90° | 60.5 | 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° | 1104.9 | 34.9 |
| 0°-40° | 1756.5 | 55.5 |
| 0°-60° | 2724.9 | 86.1 |
| 0°-90° | 3163.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3163.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1448 | 1448 | 1448 | 1448 | 1448 | |
| 5° | 1443 | 1440 | 1441 | 1446 | 1450 | 137 |
| 15° | 1374 | 1375 | 1381 | 1398 | 1405 | 387 |
| 25° | 1240 | 1244 | 1254 | 1270 | 1276 | 569 |
| 35° | 1027 | 1036 | 1039 | 1064 | 1080 | 640 |
| 45° | 736 | 740 | 749 | 754 | 761 | 565 |
| 55° | 450 | 439 | 439 | 424 | 433 | 404 |
| 65° | 257 | 226 | 203 | 235 | 248 | 259 |
| 75° | 146 | 131 | 109 | 152 | 166 | 156 |
| 85° | 57 | 53 | 50 | 66 | 71 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292248

CATALOG NUMBER: 22GR-LD5-40-A-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1448.5 | 1448.5 | 1448.5 | 1448.5 | 1448.5 |
| 2.5° | 1449.3 | 1445.6 | 1444.1 | 1450.0 | 1453.7 |
| 5° | 1443.4 | 1440.4 | 1441.2 | 1446.3 | 1450.0 |
| 7.5° | 1433.1 | 1430.9 | 1430.9 | 1438.2 | 1441.9 |
| 10° | 1418.4 | 1417.6 | 1417.6 | 1426.5 | 1431.6 |
| 12.5° | 1397.8 | 1398.5 | 1401.4 | 1413.2 | 1422.0 |
| 15° | 1373.5 | 1374.9 | 1380.8 | 1397.8 | 1405.1 |
| 17.5° | 1347.0 | 1347.0 | 1358.7 | 1372.0 | 1380.8 |
| 20° | 1313.1 | 1315.3 | 1328.6 | 1343.3 | 1352.1 |
| 22.5° | 1278.5 | 1282.2 | 1293.2 | 1310.2 | 1318.3 |
| 25° | 1239.5 | 1243.9 | 1253.5 | 1269.7 | 1276.3 |
| 27.5° | 1193.9 | 1199.8 | 1210.1 | 1221.8 | 1235.8 |
| 30° | 1141.6 | 1150.4 | 1157.1 | 1173.3 | 1188.7 |
| 32.5° | 1088.6 | 1096.7 | 1104.1 | 1121.0 | 1138.7 |
| 35° | 1026.8 | 1035.6 | 1038.6 | 1063.6 | 1080.5 |
| 37.5° | 963.5 | 967.2 | 968.6 | 993.7 | 1012.1 |
| 40° | 887.7 | 895.0 | 897.2 | 917.1 | 928.9 |
| 42.5° | 814.8 | 817.7 | 822.2 | 836.9 | 850.9 |
| 45° | 736.0 | 739.7 | 749.3 | 753.7 | 761.1 |
| 47.5° | 653.6 | 664.7 | 675.7 | 661.7 | 662.4 |
| 50° | 578.5 | 587.4 | 599.1 | 572.6 | 572.6 |
| 52.5° | 511.6 | 516.0 | 516.7 | 494.6 | 499.0 |
| 55° | 450.5 | 439.4 | 438.7 | 424.0 | 432.8 |
| 57.5° | 389.4 | 374.6 | 369.5 | 365.1 | 375.4 |
| 60° | 340.1 | 313.6 | 306.2 | 312.8 | 326.8 |
| 62.5° | 299.6 | 265.7 | 251.7 | 268.7 | 281.2 |
| 65° | 256.9 | 226.0 | 203.1 | 234.8 | 248.0 |
| 67.5° | 223.8 | 194.3 | 164.9 | 209.8 | 219.3 |
| 70° | 192.8 | 170.0 | 136.2 | 190.6 | 198.0 |
| 72.5° | 167.8 | 150.2 | 117.8 | 172.2 | 181.1 |
| 75° | 145.7 | 131.0 | 108.9 | 152.4 | 166.3 |
| 77.5° | 128.1 | 111.9 | 101.6 | 131.8 | 148.7 |
| 80° | 108.2 | 92.0 | 92.0 | 110.4 | 125.9 |
| 82.5° | 85.4 | 72.1 | 74.3 | 89.8 | 100.8 |
| 85° | 56.7 | 53.0 | 50.1 | 65.5 | 71.4 |
| 87.5° | 28.7 | 29.4 | 26.5 | 33.9 | 34.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)