

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: P294320

Luminaire Tested: **24GR-LD5-56-FGW080-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294320
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-56-FGW080-UNV-L93050-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3823.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

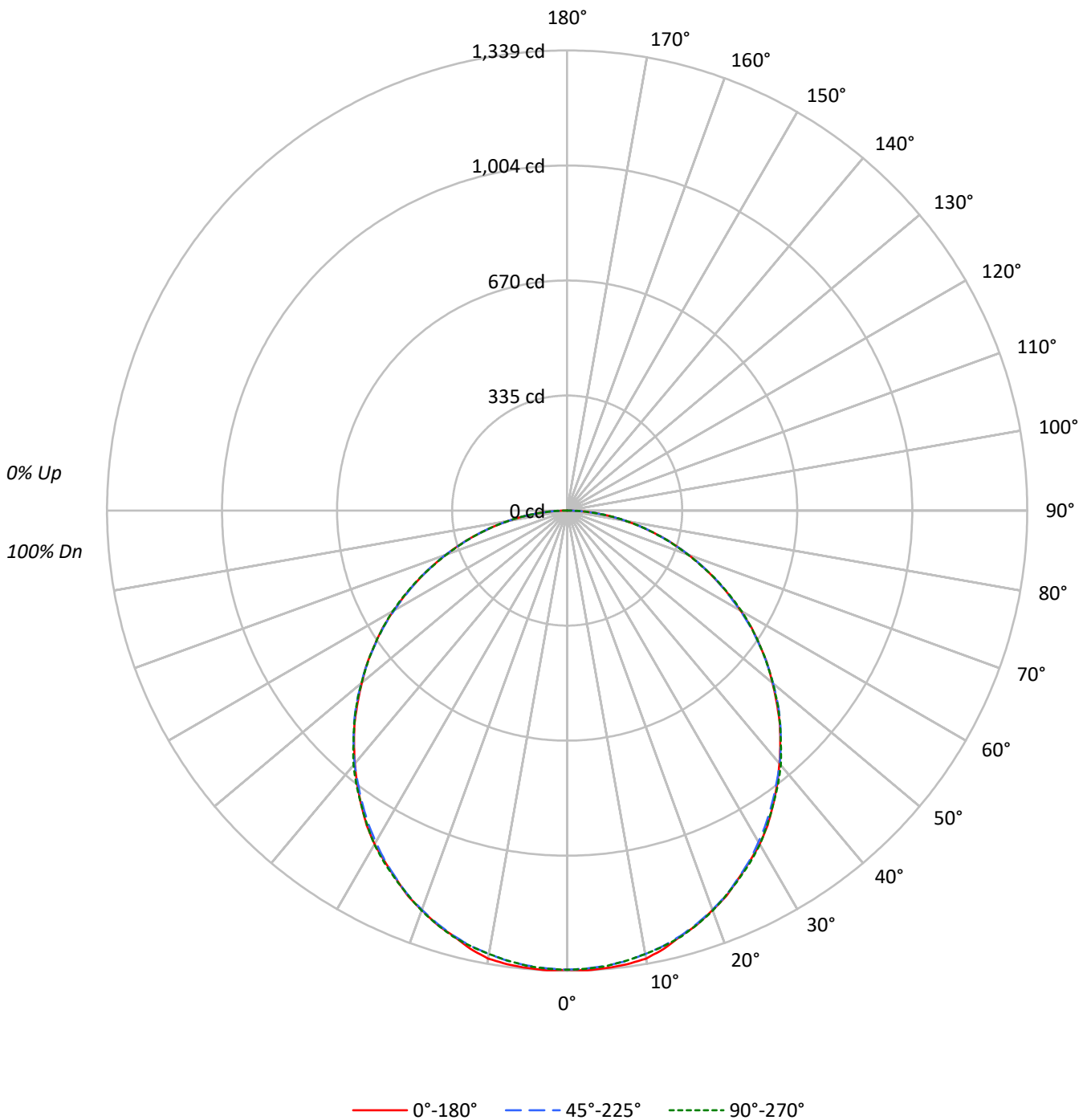
Input Watts (W): 39.863241
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P294320

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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 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1798 | 1798 | 1798 |
| 5° | 1805 | 1795 | 1796 |
| 10° | 1808 | 1790 | 1790 |
| 15° | 1785 | 1783 | 1787 |
| 20° | 1771 | 1770 | 1774 |
| 25° | 1752 | 1751 | 1756 |
| 30° | 1741 | 1730 | 1743 |
| 35° | 1716 | 1708 | 1716 |
| 40° | 1688 | 1690 | 1699 |
| 45° | 1664 | 1669 | 1666 |
| 50° | 1632 | 1638 | 1634 |
| 55° | 1607 | 1603 | 1607 |
| 60° | 1570 | 1565 | 1579 |
| 65° | 1521 | 1527 | 1533 |
| 70° | 1472 | 1479 | 1469 |
| 75° | 1420 | 1420 | 1420 |
| 80° | 1341 | 1341 | 1355 |
| 85° | 1238 | 1252 | 1210 |



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CATALOG NUMBER: 24GR-LD5-56-FGW080-UNV-L93050-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 126.3 | 3.3 |
| 10°-20° | 361.2 | 9.4 |
| 20°-30° | 544.3 | 14.2 |
| 30°-40° | 651.9 | 17.1 |
| 40°-50° | 674.8 | 17.7 |
| 50°-60° | 611.8 | 16.0 |
| 60°-70° | 474.4 | 12.4 |
| 70°-80° | 288.5 | 7.5 |
| 80°-90° | 89.7 | 2.3 |
| 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° | 1031.8 | 27.0 |
| 0°-40° | 1683.7 | 44.0 |
| 0°-60° | 2970.4 | 77.7 |
| 0°-90° | 3823.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3823.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1336 | 1336 | 1336 | 1336 | 1336 | |
| 5° | 1336 | 1328 | 1329 | 1327 | 1330 | 127 |
| 15° | 1281 | 1282 | 1280 | 1276 | 1283 | 362 |
| 25° | 1180 | 1180 | 1179 | 1183 | 1183 | 545 |
| 35° | 1045 | 1038 | 1040 | 1044 | 1045 | 654 |
| 45° | 875 | 876 | 877 | 874 | 876 | 674 |
| 55° | 685 | 682 | 683 | 686 | 685 | 612 |
| 65° | 478 | 481 | 480 | 478 | 482 | 474 |
| 75° | 273 | 272 | 273 | 272 | 273 | 289 |
| 85° | 80 | 79 | 81 | 80 | 78 | 90 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P294320

CATALOG NUMBER: 24GR-LD5-56-FGW080-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1336.2 | 1336.2 | 1336.2 | 1336.2 | 1336.2 |
| 2.5° | 1338.9 | 1333.5 | 1333.5 | 1331.7 | 1334.4 |
| 5° | 1336.2 | 1328.1 | 1329.0 | 1327.2 | 1329.9 |
| 7.5° | 1331.7 | 1320.9 | 1321.8 | 1320.0 | 1320.9 |
| 10° | 1323.6 | 1310.9 | 1310.0 | 1309.1 | 1310.0 |
| 12.5° | 1305.5 | 1298.3 | 1297.4 | 1295.6 | 1298.3 |
| 15° | 1281.2 | 1282.1 | 1280.3 | 1275.8 | 1283.0 |
| 17.5° | 1262.3 | 1261.3 | 1259.5 | 1255.0 | 1262.3 |
| 20° | 1237.0 | 1237.9 | 1236.1 | 1234.3 | 1238.8 |
| 22.5° | 1212.7 | 1210.0 | 1210.9 | 1210.0 | 1210.9 |
| 25° | 1180.2 | 1180.2 | 1179.3 | 1182.9 | 1182.9 |
| 27.5° | 1150.5 | 1146.8 | 1148.6 | 1152.3 | 1154.1 |
| 30° | 1120.7 | 1111.7 | 1113.5 | 1117.1 | 1121.6 |
| 32.5° | 1085.5 | 1076.5 | 1078.3 | 1081.9 | 1083.7 |
| 35° | 1045.0 | 1037.8 | 1039.6 | 1044.1 | 1045.0 |
| 37.5° | 1003.5 | 999.0 | 1000.8 | 1004.4 | 1007.1 |
| 40° | 961.1 | 959.3 | 962.0 | 961.1 | 967.4 |
| 42.5° | 917.8 | 916.9 | 919.6 | 919.6 | 920.5 |
| 45° | 874.6 | 876.4 | 877.3 | 873.7 | 875.5 |
| 47.5° | 826.8 | 827.7 | 831.3 | 829.5 | 830.4 |
| 50° | 779.9 | 779.0 | 782.6 | 783.5 | 780.8 |
| 52.5° | 734.8 | 730.3 | 733.9 | 735.7 | 733.9 |
| 55° | 685.2 | 681.6 | 683.4 | 686.1 | 685.2 |
| 57.5° | 636.5 | 632.9 | 633.8 | 638.3 | 636.5 |
| 60° | 583.3 | 582.4 | 581.5 | 585.1 | 586.9 |
| 62.5° | 531.0 | 530.1 | 528.3 | 531.9 | 533.8 |
| 65° | 477.9 | 480.6 | 479.7 | 477.9 | 481.5 |
| 67.5° | 427.4 | 430.1 | 427.4 | 425.6 | 425.6 |
| 70° | 374.2 | 376.9 | 376.0 | 374.2 | 373.3 |
| 72.5° | 324.6 | 324.6 | 322.8 | 321.9 | 322.8 |
| 75° | 273.2 | 272.3 | 273.2 | 272.3 | 273.2 |
| 77.5° | 222.7 | 223.6 | 223.6 | 223.6 | 222.7 |
| 80° | 173.1 | 173.1 | 173.1 | 174.0 | 174.9 |
| 82.5° | 127.1 | 124.4 | 127.1 | 125.3 | 126.2 |
| 85° | 80.2 | 79.3 | 81.1 | 80.2 | 78.4 |
| 87.5° | 36.1 | 37.0 | 37.0 | 37.9 | 37.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)