

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: P293104

Luminaire Tested: **24GR-LD5-38-F1-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-12)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-38-F1-UNV-L92765-W2A1-U-5500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3612.0 lumens
Efficiency: N/A
Efficacy: 138.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.25
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

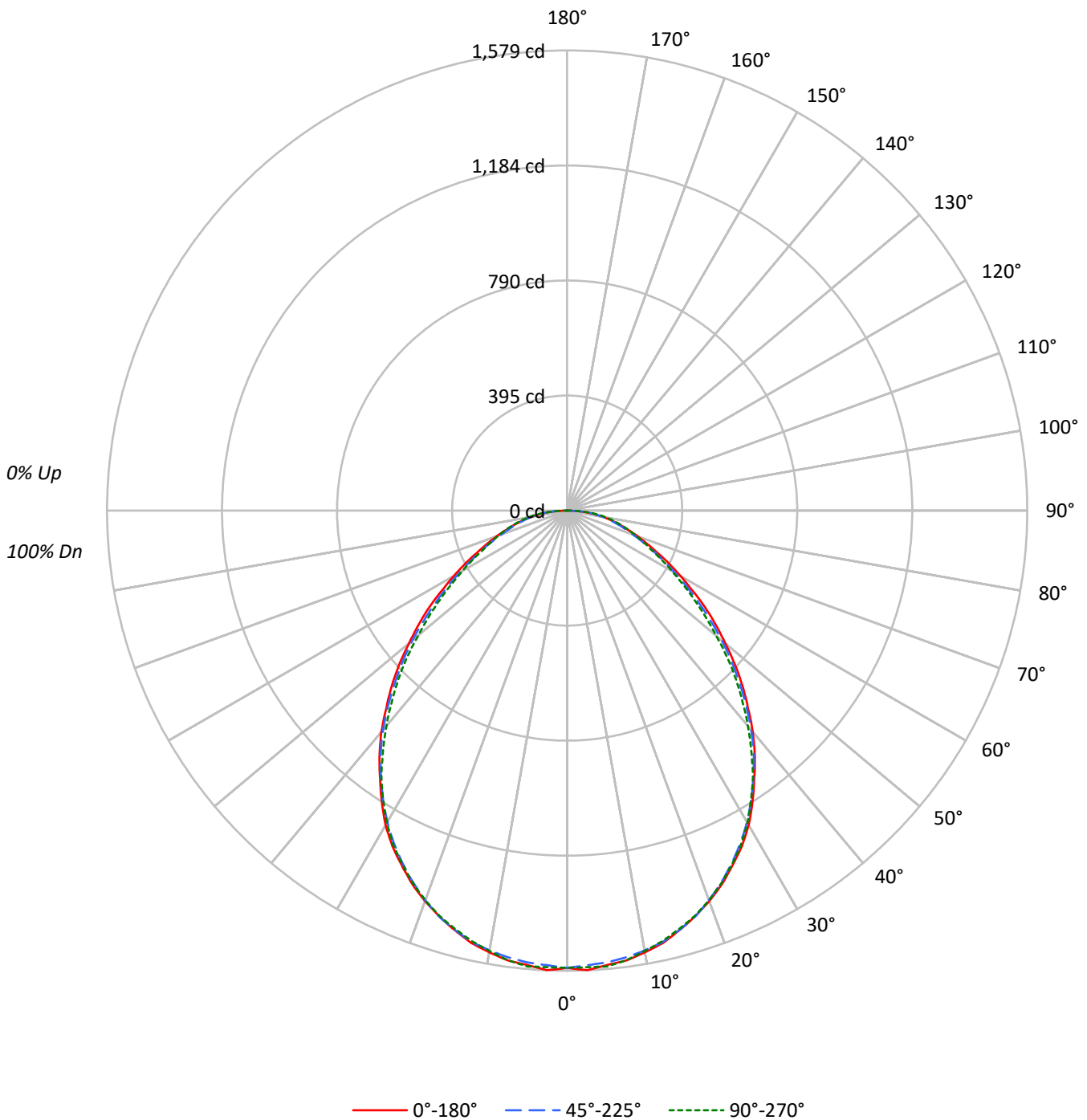
Input Watts (W): 26.133
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 | | | | | 62 | | | |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | 47 | | | |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | 42 | | | |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 | | | | | 34 | | | |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2111 | 2111 | 2111 |
| 5° | 2114 | 2102 | 2120 |
| 10° | 2103 | 2094 | 2096 |
| 15° | 2076 | 2075 | 2069 |
| 20° | 2042 | 2037 | 2037 |
| 25° | 1994 | 1983 | 1988 |
| 30° | 1936 | 1917 | 1922 |
| 35° | 1839 | 1831 | 1826 |
| 40° | 1742 | 1726 | 1696 |
| 45° | 1619 | 1591 | 1559 |
| 50° | 1483 | 1450 | 1396 |
| 55° | 1354 | 1293 | 1250 |
| 60° | 1207 | 1149 | 1119 |
| 65° | 1086 | 1029 | 1015 |
| 70° | 1008 | 947 | 985 |
| 75° | 964 | 922 | 999 |
| 80° | 964 | 964 | 1068 |
| 85° | 1000 | 1013 | 1127 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 148.2 | 4.1 |
| 10°-20° | 419.3 | 11.6 |
| 20°-30° | 615.4 | 17.0 |
| 30°-40° | 695.8 | 19.3 |
| 40°-50° | 643.0 | 17.8 |
| 50°-60° | 495.4 | 13.7 |
| 60°-70° | 328.1 | 9.1 |
| 70°-80° | 195.3 | 5.4 |
| 80°-90° | 71.5 | 2.0 |
| 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° | 1182.9 | 32.7 |
| 0°-40° | 1878.7 | 52.0 |
| 0°-60° | 3017.1 | 83.5 |
| 0°-90° | 3612.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3612.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1569 | 1569 | 1569 | 1569 | 1569 | |
| 5° | 1565 | 1565 | 1556 | 1557 | 1570 | 149 |
| 15° | 1491 | 1488 | 1489 | 1488 | 1486 | 420 |
| 25° | 1343 | 1340 | 1336 | 1334 | 1339 | 618 |
| 35° | 1120 | 1118 | 1114 | 1109 | 1112 | 701 |
| 45° | 851 | 845 | 836 | 821 | 820 | 655 |
| 55° | 577 | 566 | 551 | 536 | 533 | 515 |
| 65° | 341 | 336 | 323 | 320 | 319 | 342 |
| 75° | 186 | 181 | 177 | 186 | 192 | 198 |
| 85° | 65 | 61 | 66 | 72 | 73 | 69 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293104

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L92765-W2A1-U-5500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1569.0 | 1569.0 | 1569.0 | 1569.0 | 1569.0 |
| 2.5° | 1578.7 | 1570.5 | 1561.5 | 1561.5 | 1568.2 |
| 5° | 1565.2 | 1565.2 | 1556.3 | 1557.0 | 1569.7 |
| 7.5° | 1557.0 | 1552.6 | 1546.6 | 1546.6 | 1556.3 |
| 10° | 1539.2 | 1535.4 | 1532.5 | 1531.0 | 1534.0 |
| 12.5° | 1519.8 | 1513.8 | 1516.1 | 1513.8 | 1513.1 |
| 15° | 1490.7 | 1487.8 | 1489.3 | 1488.5 | 1485.5 |
| 17.5° | 1459.5 | 1458.0 | 1460.9 | 1455.7 | 1458.0 |
| 20° | 1425.9 | 1421.5 | 1422.9 | 1420.0 | 1422.9 |
| 22.5° | 1387.9 | 1385.0 | 1381.2 | 1377.5 | 1383.5 |
| 25° | 1343.2 | 1339.5 | 1335.8 | 1334.3 | 1338.8 |
| 27.5° | 1298.5 | 1292.6 | 1287.4 | 1285.9 | 1292.6 |
| 30° | 1246.4 | 1239.7 | 1233.7 | 1232.2 | 1237.4 |
| 32.5° | 1184.5 | 1183.1 | 1175.6 | 1172.6 | 1174.9 |
| 35° | 1119.7 | 1118.2 | 1114.5 | 1109.3 | 1111.5 |
| 37.5° | 1057.9 | 1057.2 | 1051.9 | 1043.0 | 1037.0 |
| 40° | 991.6 | 986.4 | 982.7 | 970.0 | 965.5 |
| 42.5° | 918.6 | 917.1 | 910.4 | 896.2 | 891.0 |
| 45° | 850.8 | 844.8 | 835.9 | 821.0 | 819.5 |
| 47.5° | 780.8 | 772.6 | 764.4 | 745.7 | 745.0 |
| 50° | 708.5 | 702.5 | 692.8 | 674.2 | 666.8 |
| 52.5° | 641.4 | 633.2 | 619.8 | 602.0 | 598.2 |
| 55° | 577.4 | 565.5 | 551.3 | 536.4 | 532.7 |
| 57.5° | 508.8 | 503.6 | 486.5 | 474.6 | 470.1 |
| 60° | 448.5 | 444.0 | 426.9 | 415.7 | 415.7 |
| 62.5° | 394.1 | 387.4 | 372.5 | 365.0 | 365.0 |
| 65° | 341.2 | 336.0 | 323.3 | 320.3 | 318.9 |
| 67.5° | 295.8 | 289.1 | 280.1 | 279.4 | 283.1 |
| 70° | 256.3 | 248.1 | 240.6 | 248.1 | 250.3 |
| 72.5° | 219.0 | 213.8 | 207.1 | 216.8 | 221.3 |
| 75° | 185.5 | 181.0 | 177.3 | 185.5 | 192.2 |
| 77.5° | 155.0 | 150.5 | 150.5 | 159.4 | 165.4 |
| 80° | 124.4 | 121.4 | 124.4 | 131.9 | 137.8 |
| 82.5° | 95.4 | 93.1 | 96.8 | 104.3 | 108.0 |
| 85° | 64.8 | 61.1 | 65.6 | 72.3 | 73.0 |
| 87.5° | 30.5 | 29.8 | 32.8 | 37.2 | 36.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)