

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: P293138

Luminaire Tested: **24GR-LD5-64-F1-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293138
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-LD5-64-F1-UNV-L92765-W2A1-U-4500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5798.0 lumens
Efficiency: N/A
Efficacy: 123.9 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

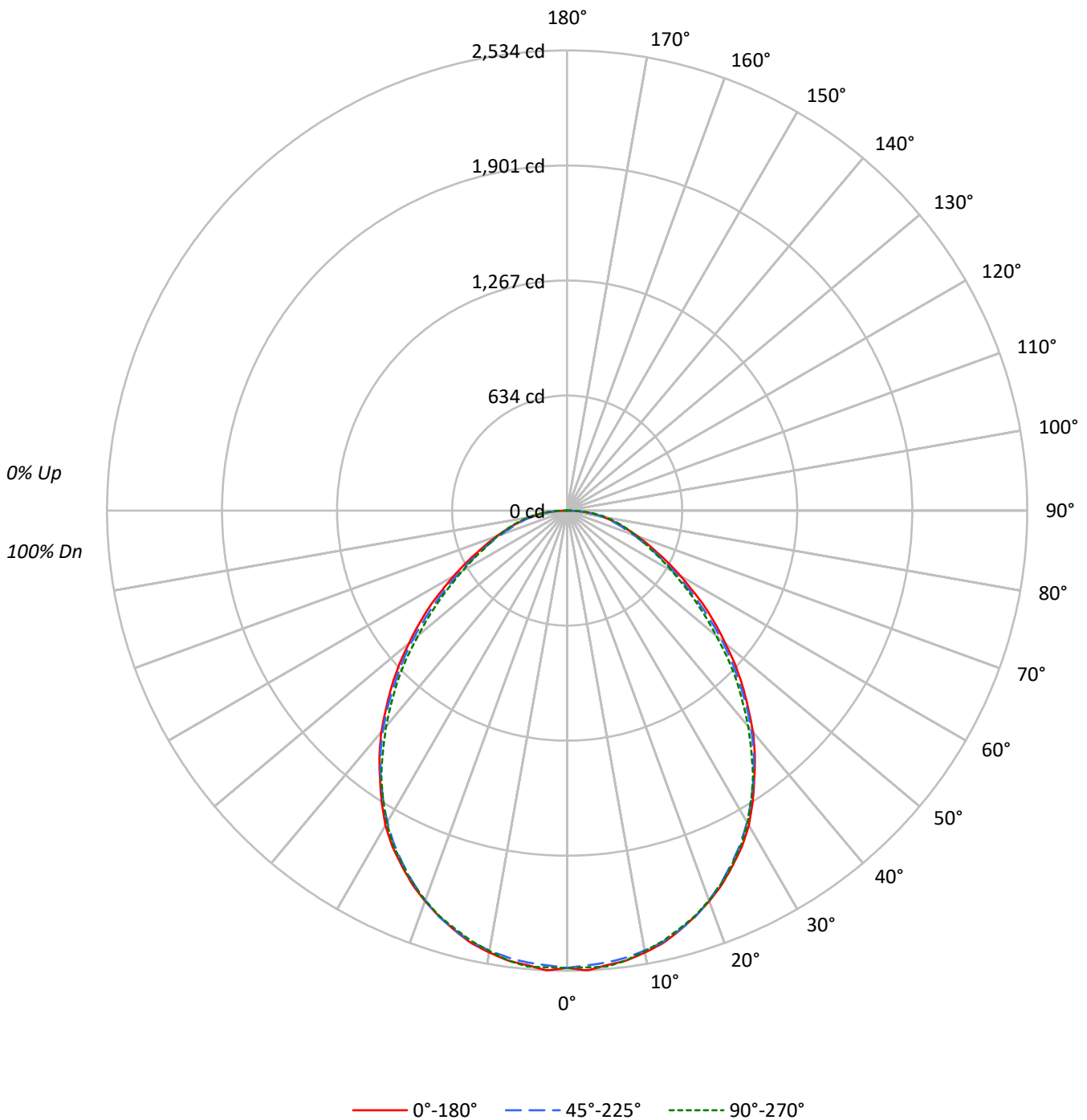
Input Watts (W): 46.779
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3389 | 3389 | 3389 |
| 5° | 3393 | 3374 | 3403 |
| 10° | 3376 | 3361 | 3364 |
| 15° | 3333 | 3330 | 3322 |
| 20° | 3277 | 3270 | 3270 |
| 25° | 3201 | 3183 | 3190 |
| 30° | 3108 | 3077 | 3086 |
| 35° | 2952 | 2939 | 2931 |
| 40° | 2796 | 2771 | 2722 |
| 45° | 2599 | 2553 | 2503 |
| 50° | 2381 | 2328 | 2240 |
| 55° | 2174 | 2076 | 2006 |
| 60° | 1937 | 1844 | 1796 |
| 65° | 1744 | 1652 | 1629 |
| 70° | 1618 | 1520 | 1581 |
| 75° | 1548 | 1480 | 1604 |
| 80° | 1547 | 1547 | 1714 |
| 85° | 1606 | 1624 | 1809 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 237.8 | 4.1 |
| 10°-20° | 673.1 | 11.6 |
| 20°-30° | 987.9 | 17.0 |
| 30°-40° | 1116.8 | 19.3 |
| 40°-50° | 1032.2 | 17.8 |
| 50°-60° | 795.3 | 13.7 |
| 60°-70° | 526.6 | 9.1 |
| 70°-80° | 313.5 | 5.4 |
| 80°-90° | 114.8 | 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° | 1898.8 | 32.7 |
| 0°-40° | 3015.6 | 52.0 |
| 0°-60° | 4843.1 | 83.5 |
| 0°-90° | 5798.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5798.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2518 | 2518 | 2518 | 2518 | 2518 | |
| 5° | 2512 | 2512 | 2498 | 2499 | 2520 | 239 |
| 15° | 2393 | 2388 | 2391 | 2389 | 2385 | 674 |
| 25° | 2156 | 2150 | 2144 | 2142 | 2149 | 993 |
| 35° | 1797 | 1795 | 1789 | 1781 | 1784 | 1125 |
| 45° | 1366 | 1356 | 1342 | 1318 | 1316 | 1052 |
| 55° | 927 | 908 | 885 | 861 | 855 | 827 |
| 65° | 548 | 539 | 519 | 514 | 512 | 549 |
| 75° | 298 | 291 | 285 | 298 | 308 | 318 |
| 85° | 104 | 98 | 105 | 116 | 117 | 110 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293138

CATALOG NUMBER: 24GR-LD5-64-F1-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2518.5 | 2518.5 | 2518.5 | 2518.5 | 2518.5 |
| 2.5° | 2534.1 | 2520.9 | 2506.6 | 2506.6 | 2517.3 |
| 5° | 2512.5 | 2512.5 | 2498.2 | 2499.4 | 2519.7 |
| 7.5° | 2499.4 | 2492.2 | 2482.6 | 2482.6 | 2498.2 |
| 10° | 2470.7 | 2464.7 | 2459.9 | 2457.5 | 2462.3 |
| 12.5° | 2439.6 | 2430.0 | 2433.6 | 2430.0 | 2428.8 |
| 15° | 2392.9 | 2388.2 | 2390.6 | 2389.4 | 2384.6 |
| 17.5° | 2342.7 | 2340.3 | 2345.1 | 2336.7 | 2340.3 |
| 20° | 2288.9 | 2281.7 | 2284.1 | 2279.3 | 2284.1 |
| 22.5° | 2227.9 | 2223.1 | 2217.2 | 2211.2 | 2220.7 |
| 25° | 2156.2 | 2150.2 | 2144.2 | 2141.8 | 2149.0 |
| 27.5° | 2084.4 | 2074.8 | 2066.5 | 2064.1 | 2074.8 |
| 30° | 2000.7 | 1989.9 | 1980.4 | 1978.0 | 1986.3 |
| 32.5° | 1901.4 | 1899.1 | 1887.1 | 1882.3 | 1885.9 |
| 35° | 1797.4 | 1795.0 | 1789.0 | 1780.7 | 1784.2 |
| 37.5° | 1698.1 | 1696.9 | 1688.6 | 1674.2 | 1664.7 |
| 40° | 1591.7 | 1583.3 | 1577.4 | 1557.0 | 1549.9 |
| 42.5° | 1474.5 | 1472.1 | 1461.4 | 1438.6 | 1430.3 |
| 45° | 1365.7 | 1356.1 | 1341.8 | 1317.9 | 1315.5 |
| 47.5° | 1253.3 | 1240.1 | 1227.0 | 1197.1 | 1195.9 |
| 50° | 1137.3 | 1127.7 | 1112.2 | 1082.3 | 1070.3 |
| 52.5° | 1029.6 | 1016.5 | 995.0 | 966.3 | 960.3 |
| 55° | 926.8 | 907.7 | 884.9 | 861.0 | 855.1 |
| 57.5° | 816.8 | 808.4 | 780.9 | 761.8 | 754.6 |
| 60° | 719.9 | 712.7 | 685.2 | 667.3 | 667.3 |
| 62.5° | 632.6 | 621.9 | 597.9 | 586.0 | 586.0 |
| 65° | 547.7 | 539.3 | 519.0 | 514.2 | 511.8 |
| 67.5° | 474.8 | 464.0 | 449.6 | 448.5 | 454.4 |
| 70° | 411.4 | 398.2 | 386.3 | 398.2 | 401.8 |
| 72.5° | 351.6 | 343.2 | 332.5 | 348.0 | 355.2 |
| 75° | 297.8 | 290.6 | 284.6 | 297.8 | 308.5 |
| 77.5° | 248.7 | 241.6 | 241.6 | 255.9 | 265.5 |
| 80° | 199.7 | 194.9 | 199.7 | 211.7 | 221.2 |
| 82.5° | 153.1 | 149.5 | 155.5 | 167.4 | 173.4 |
| 85° | 104.0 | 98.1 | 105.2 | 116.0 | 117.2 |
| 87.5° | 49.0 | 47.8 | 52.6 | 59.8 | 58.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)