

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: P293131

Luminaire Tested: **24GR-LD5-56-F1-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293131
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-LD5-56-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: 5289.0 lumens
Efficiency: N/A
Efficacy: 132.0 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

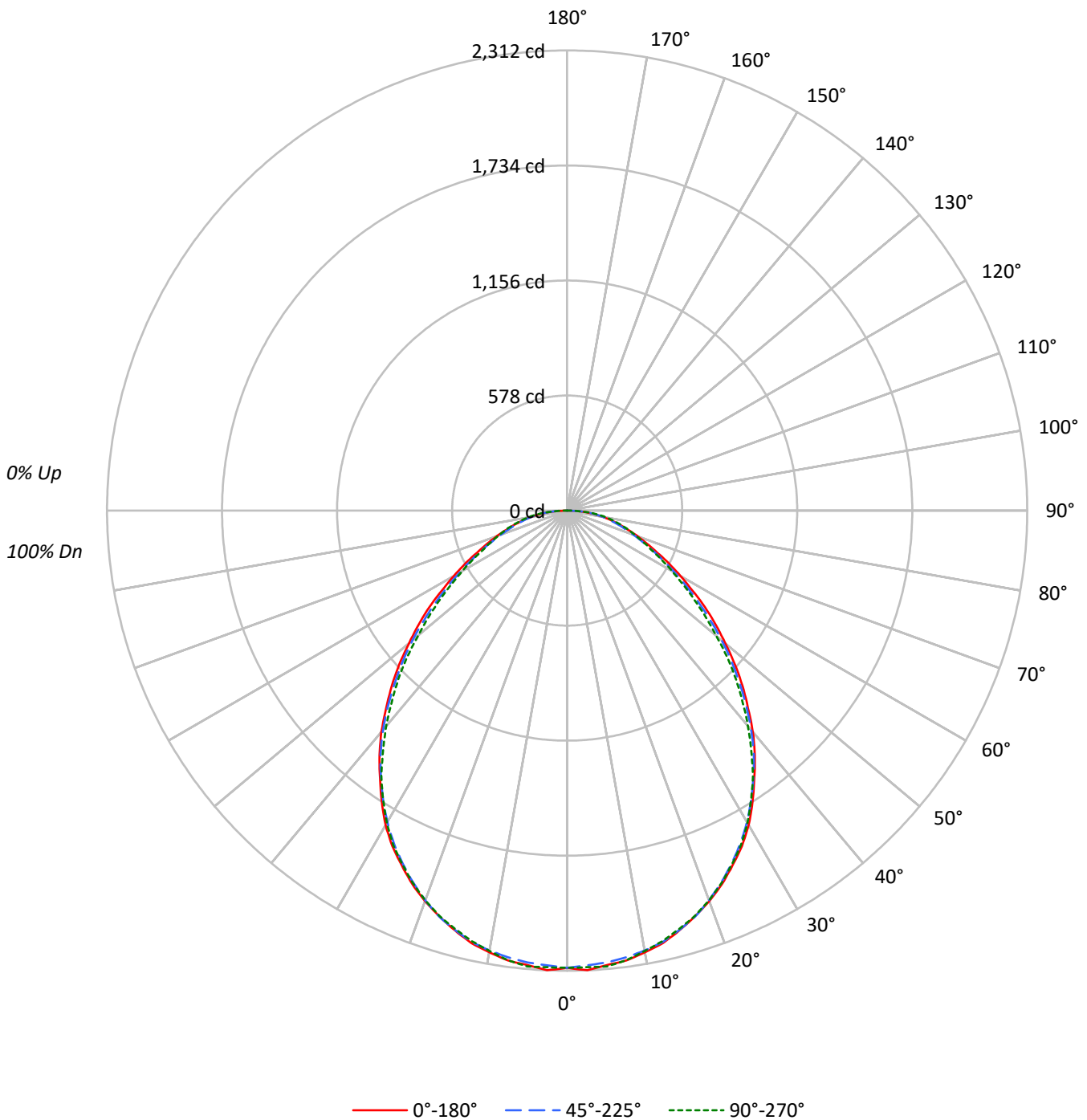
Input Watts (W): 40.083
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P293131

CATALOG NUMBER: 24GR-LD5-56-F1-UNV-L92765-W2A1-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P293131

CATALOG NUMBER: 24GR-LD5-56-F1-UNV-L92765-W2A1-U-5500K

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° | 3091 | 3091 | 3091 |
| 5° | 3096 | 3078 | 3104 |
| 10° | 3079 | 3066 | 3069 |
| 15° | 3041 | 3038 | 3030 |
| 20° | 2990 | 2983 | 2983 |
| 25° | 2920 | 2904 | 2910 |
| 30° | 2836 | 2807 | 2815 |
| 35° | 2693 | 2681 | 2673 |
| 40° | 2550 | 2527 | 2483 |
| 45° | 2371 | 2329 | 2283 |
| 50° | 2171 | 2124 | 2044 |
| 55° | 1983 | 1894 | 1830 |
| 60° | 1767 | 1682 | 1638 |
| 65° | 1591 | 1507 | 1486 |
| 70° | 1476 | 1386 | 1442 |
| 75° | 1412 | 1350 | 1463 |
| 80° | 1412 | 1412 | 1564 |
| 85° | 1465 | 1482 | 1650 |



TEST NUMBER: P293131

CATALOG NUMBER: 24GR-LD5-56-F1-UNV-L92765-W2A1-U-5500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 217.0 | 4.1 |
| 10°-20° | 614.0 | 11.6 |
| 20°-30° | 901.1 | 17.0 |
| 30°-40° | 1018.8 | 19.3 |
| 40°-50° | 941.6 | 17.8 |
| 50°-60° | 725.4 | 13.7 |
| 60°-70° | 480.4 | 9.1 |
| 70°-80° | 286.0 | 5.4 |
| 80°-90° | 104.8 | 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° | 1732.1 | 32.7 |
| 0°-40° | 2750.9 | 52.0 |
| 0°-60° | 4417.9 | 83.5 |
| 0°-90° | 5289.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5289.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2297 | 2297 | 2297 | 2297 | 2297 | |
| 5° | 2292 | 2292 | 2279 | 2280 | 2298 | 218 |
| 15° | 2183 | 2178 | 2181 | 2180 | 2175 | 615 |
| 25° | 1967 | 1961 | 1956 | 1954 | 1960 | 906 |
| 35° | 1640 | 1637 | 1632 | 1624 | 1628 | 1026 |
| 45° | 1246 | 1237 | 1224 | 1202 | 1200 | 960 |
| 55° | 845 | 828 | 807 | 785 | 780 | 754 |
| 65° | 500 | 492 | 473 | 469 | 467 | 501 |
| 75° | 272 | 265 | 260 | 272 | 281 | 290 |
| 85° | 95 | 90 | 96 | 106 | 107 | 101 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293131

CATALOG NUMBER: 24GR-LD5-56-F1-UNV-L92765-W2A1-U-5500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2297.4 | 2297.4 | 2297.4 | 2297.4 | 2297.4 |
| 2.5° | 2311.6 | 2299.6 | 2286.5 | 2286.5 | 2296.3 |
| 5° | 2292.0 | 2292.0 | 2278.9 | 2280.0 | 2298.5 |
| 7.5° | 2280.0 | 2273.4 | 2264.7 | 2264.7 | 2278.9 |
| 10° | 2253.8 | 2248.3 | 2244.0 | 2241.8 | 2246.1 |
| 12.5° | 2225.4 | 2216.7 | 2220.0 | 2216.7 | 2215.6 |
| 15° | 2182.9 | 2178.5 | 2180.7 | 2179.6 | 2175.2 |
| 17.5° | 2137.1 | 2134.9 | 2139.2 | 2131.6 | 2134.9 |
| 20° | 2088.0 | 2081.4 | 2083.6 | 2079.2 | 2083.6 |
| 22.5° | 2032.3 | 2028.0 | 2022.5 | 2017.1 | 2025.8 |
| 25° | 1966.9 | 1961.4 | 1956.0 | 1953.8 | 1960.3 |
| 27.5° | 1901.4 | 1892.7 | 1885.1 | 1882.9 | 1892.7 |
| 30° | 1825.1 | 1815.2 | 1806.5 | 1804.3 | 1812.0 |
| 32.5° | 1734.5 | 1732.3 | 1721.4 | 1717.1 | 1720.3 |
| 35° | 1639.6 | 1637.4 | 1632.0 | 1624.3 | 1627.6 |
| 37.5° | 1549.1 | 1548.0 | 1540.3 | 1527.2 | 1518.5 |
| 40° | 1452.0 | 1444.3 | 1438.9 | 1420.3 | 1413.8 |
| 42.5° | 1345.1 | 1342.9 | 1333.1 | 1312.3 | 1304.7 |
| 45° | 1245.8 | 1237.1 | 1224.0 | 1202.2 | 1200.0 |
| 47.5° | 1143.3 | 1131.3 | 1119.3 | 1092.0 | 1090.9 |
| 50° | 1037.4 | 1028.7 | 1014.5 | 987.3 | 976.3 |
| 52.5° | 939.3 | 927.3 | 907.6 | 881.4 | 876.0 |
| 55° | 845.4 | 828.0 | 807.3 | 785.4 | 780.0 |
| 57.5° | 745.1 | 737.4 | 712.4 | 694.9 | 688.4 |
| 60° | 656.7 | 650.2 | 625.1 | 608.7 | 608.7 |
| 62.5° | 577.1 | 567.3 | 545.4 | 534.5 | 534.5 |
| 65° | 499.6 | 492.0 | 473.4 | 469.1 | 466.9 |
| 67.5° | 433.1 | 423.3 | 410.2 | 409.1 | 414.5 |
| 70° | 375.3 | 363.3 | 352.4 | 363.3 | 366.5 |
| 72.5° | 320.7 | 313.1 | 303.3 | 317.4 | 324.0 |
| 75° | 271.6 | 265.1 | 259.6 | 271.6 | 281.4 |
| 77.5° | 226.9 | 220.4 | 220.4 | 233.5 | 242.2 |
| 80° | 182.2 | 177.8 | 182.2 | 193.1 | 201.8 |
| 82.5° | 139.6 | 136.4 | 141.8 | 152.7 | 158.2 |
| 85° | 94.9 | 89.5 | 96.0 | 105.8 | 106.9 |
| 87.5° | 44.7 | 43.6 | 48.0 | 54.5 | 53.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)