

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: P293113

Luminaire Tested: **24GR-LD5-42-F1-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293113
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-LD5-42-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: 3935.0 lumens
Efficiency: N/A
Efficacy: 136.9 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

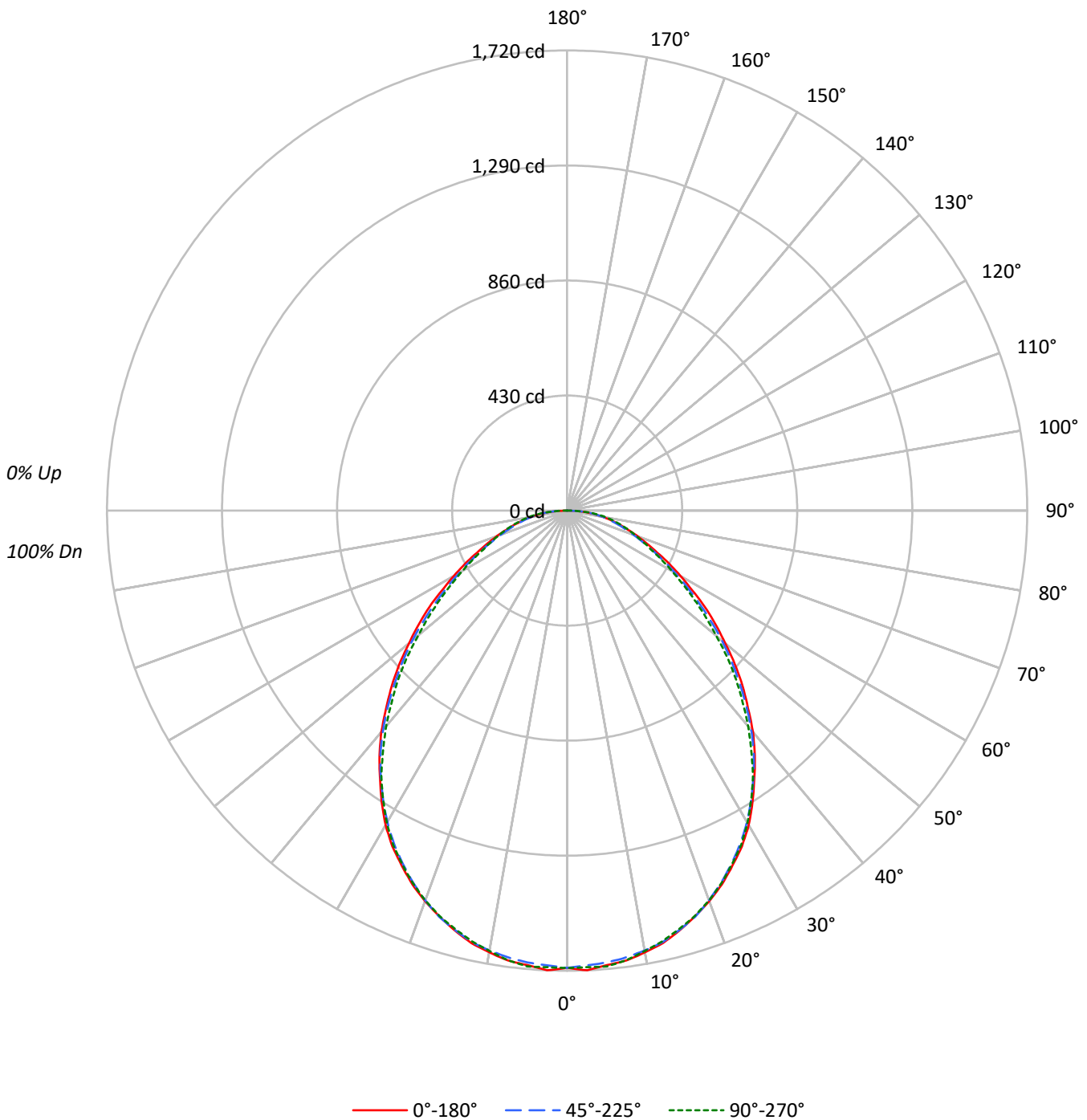
Input Watts (W): 28.737
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2300 | 2300 | 2300 |
| 5° | 2303 | 2290 | 2310 |
| 10° | 2291 | 2281 | 2283 |
| 15° | 2262 | 2260 | 2254 |
| 20° | 2224 | 2220 | 2220 |
| 25° | 2173 | 2160 | 2165 |
| 30° | 2110 | 2088 | 2094 |
| 35° | 2004 | 1994 | 1989 |
| 40° | 1897 | 1880 | 1848 |
| 45° | 1764 | 1733 | 1699 |
| 50° | 1616 | 1580 | 1521 |
| 55° | 1476 | 1409 | 1361 |
| 60° | 1315 | 1252 | 1219 |
| 65° | 1183 | 1121 | 1106 |
| 70° | 1098 | 1031 | 1073 |
| 75° | 1051 | 1004 | 1089 |
| 80° | 1050 | 1050 | 1163 |
| 85° | 1090 | 1102 | 1227 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 161.4 | 4.1 |
| 10°-20° | 456.8 | 11.6 |
| 20°-30° | 670.4 | 17.0 |
| 30°-40° | 758.0 | 19.3 |
| 40°-50° | 700.5 | 17.8 |
| 50°-60° | 539.7 | 13.7 |
| 60°-70° | 357.4 | 9.1 |
| 70°-80° | 212.8 | 5.4 |
| 80°-90° | 77.9 | 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° | 1288.7 | 32.7 |
| 0°-40° | 2046.7 | 52.0 |
| 0°-60° | 3286.9 | 83.5 |
| 0°-90° | 3935.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3935.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1709 | 1709 | 1709 | 1709 | 1709 | |
| 5° | 1705 | 1705 | 1696 | 1696 | 1710 | 162 |
| 15° | 1624 | 1621 | 1622 | 1622 | 1618 | 458 |
| 25° | 1463 | 1459 | 1455 | 1454 | 1458 | 674 |
| 35° | 1220 | 1218 | 1214 | 1208 | 1211 | 763 |
| 45° | 927 | 920 | 911 | 894 | 893 | 714 |
| 55° | 629 | 616 | 601 | 584 | 580 | 561 |
| 65° | 372 | 366 | 352 | 349 | 347 | 373 |
| 75° | 202 | 197 | 193 | 202 | 209 | 215 |
| 85° | 71 | 67 | 71 | 79 | 80 | 75 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1709.3 | 1709.3 | 1709.3 | 1709.3 | 1709.3 |
| 2.5° | 1719.8 | 1710.9 | 1701.2 | 1701.2 | 1708.5 |
| 5° | 1705.2 | 1705.2 | 1695.5 | 1696.3 | 1710.1 |
| 7.5° | 1696.3 | 1691.4 | 1684.9 | 1684.9 | 1695.5 |
| 10° | 1676.8 | 1672.7 | 1669.5 | 1667.9 | 1671.1 |
| 12.5° | 1655.7 | 1649.2 | 1651.6 | 1649.2 | 1648.4 |
| 15° | 1624.1 | 1620.8 | 1622.4 | 1621.6 | 1618.4 |
| 17.5° | 1590.0 | 1588.3 | 1591.6 | 1585.9 | 1588.3 |
| 20° | 1553.4 | 1548.6 | 1550.2 | 1546.9 | 1550.2 |
| 22.5° | 1512.0 | 1508.8 | 1504.7 | 1500.7 | 1507.2 |
| 25° | 1463.4 | 1459.3 | 1455.2 | 1453.6 | 1458.5 |
| 27.5° | 1414.7 | 1408.2 | 1402.5 | 1400.9 | 1408.2 |
| 30° | 1357.8 | 1350.5 | 1344.0 | 1342.4 | 1348.1 |
| 32.5° | 1290.5 | 1288.9 | 1280.7 | 1277.5 | 1279.9 |
| 35° | 1219.9 | 1218.2 | 1214.2 | 1208.5 | 1210.9 |
| 37.5° | 1152.5 | 1151.7 | 1146.0 | 1136.3 | 1129.8 |
| 40° | 1080.3 | 1074.6 | 1070.5 | 1056.7 | 1051.9 |
| 42.5° | 1000.7 | 999.1 | 991.8 | 976.4 | 970.7 |
| 45° | 926.9 | 920.4 | 910.6 | 894.4 | 892.8 |
| 47.5° | 850.6 | 841.6 | 832.7 | 812.4 | 811.6 |
| 50° | 771.9 | 765.4 | 754.8 | 734.5 | 726.4 |
| 52.5° | 698.8 | 689.9 | 675.3 | 655.8 | 651.7 |
| 55° | 629.0 | 616.0 | 600.6 | 584.4 | 580.3 |
| 57.5° | 554.3 | 548.7 | 530.0 | 517.0 | 512.1 |
| 60° | 488.6 | 483.7 | 465.1 | 452.9 | 452.9 |
| 62.5° | 429.3 | 422.0 | 405.8 | 397.7 | 397.7 |
| 65° | 371.7 | 366.0 | 352.2 | 349.0 | 347.4 |
| 67.5° | 322.2 | 314.9 | 305.2 | 304.4 | 308.4 |
| 70° | 279.2 | 270.3 | 262.2 | 270.3 | 272.7 |
| 72.5° | 238.6 | 232.9 | 225.6 | 236.2 | 241.1 |
| 75° | 202.1 | 197.2 | 193.2 | 202.1 | 209.4 |
| 77.5° | 168.8 | 163.9 | 163.9 | 173.7 | 180.2 |
| 80° | 135.5 | 132.3 | 135.5 | 143.7 | 150.1 |
| 82.5° | 103.9 | 101.5 | 105.5 | 113.6 | 117.7 |
| 85° | 70.6 | 66.6 | 71.4 | 78.7 | 79.5 |
| 87.5° | 33.3 | 32.5 | 35.7 | 40.6 | 39.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)