

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: P293106

Luminaire Tested: **24GR-LD5-38-F1-UNV-L92765-W2A1-U-6500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293106
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-6500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 6500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3652.0 lumens
Efficiency: N/A
Efficacy: 137.3 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

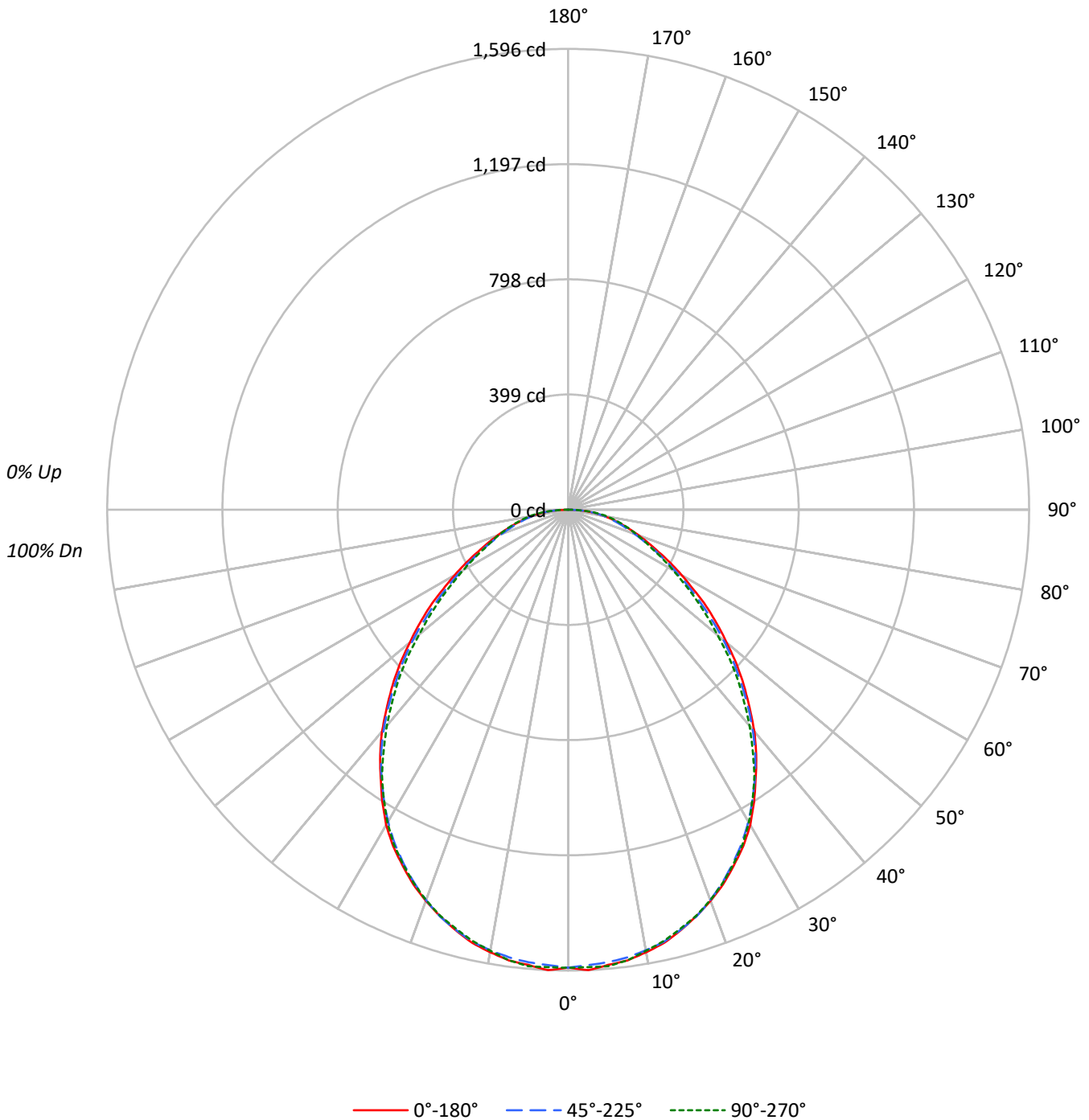
Input Watts (W): 26.598
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2134 | 2134 | 2134 |
| 5° | 2138 | 2125 | 2144 |
| 10° | 2126 | 2117 | 2119 |
| 15° | 2100 | 2097 | 2092 |
| 20° | 2064 | 2060 | 2060 |
| 25° | 2016 | 2005 | 2010 |
| 30° | 1958 | 1938 | 1944 |
| 35° | 1860 | 1851 | 1846 |
| 40° | 1761 | 1745 | 1715 |
| 45° | 1637 | 1608 | 1577 |
| 50° | 1499 | 1466 | 1411 |
| 55° | 1369 | 1308 | 1263 |
| 60° | 1220 | 1161 | 1131 |
| 65° | 1098 | 1041 | 1026 |
| 70° | 1019 | 957 | 996 |
| 75° | 975 | 932 | 1010 |
| 80° | 975 | 975 | 1080 |
| 85° | 1011 | 1024 | 1139 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 149.8 | 4.1 |
| 10°-20° | 424.0 | 11.6 |
| 20°-30° | 622.2 | 17.0 |
| 30°-40° | 703.5 | 19.3 |
| 40°-50° | 650.1 | 17.8 |
| 50°-60° | 500.9 | 13.7 |
| 60°-70° | 331.7 | 9.1 |
| 70°-80° | 197.5 | 5.4 |
| 80°-90° | 72.3 | 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° | 1196.0 | 32.7 |
| 0°-40° | 1899.5 | 52.0 |
| 0°-60° | 3050.5 | 83.5 |
| 0°-90° | 3652.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3652.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1586 | 1586 | 1586 | 1586 | 1586 | |
| 5° | 1583 | 1583 | 1574 | 1574 | 1587 | 150 |
| 15° | 1507 | 1504 | 1506 | 1505 | 1502 | 425 |
| 25° | 1358 | 1354 | 1351 | 1349 | 1354 | 625 |
| 35° | 1132 | 1131 | 1127 | 1122 | 1124 | 708 |
| 45° | 860 | 854 | 845 | 830 | 829 | 663 |
| 55° | 584 | 572 | 557 | 542 | 539 | 521 |
| 65° | 345 | 340 | 327 | 324 | 322 | 346 |
| 75° | 188 | 183 | 179 | 188 | 194 | 200 |
| 85° | 66 | 62 | 66 | 73 | 74 | 70 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1586.3 | 1586.3 | 1586.3 | 1586.3 | 1586.3 |
| 2.5° | 1596.1 | 1587.8 | 1578.8 | 1578.8 | 1585.6 |
| 5° | 1582.6 | 1582.6 | 1573.5 | 1574.3 | 1587.1 |
| 7.5° | 1574.3 | 1569.8 | 1563.7 | 1563.7 | 1573.5 |
| 10° | 1556.2 | 1552.4 | 1549.4 | 1547.9 | 1550.9 |
| 12.5° | 1536.6 | 1530.6 | 1532.9 | 1530.6 | 1529.8 |
| 15° | 1507.3 | 1504.2 | 1505.7 | 1505.0 | 1502.0 |
| 17.5° | 1475.6 | 1474.1 | 1477.1 | 1471.8 | 1474.1 |
| 20° | 1441.7 | 1437.2 | 1438.7 | 1435.7 | 1438.7 |
| 22.5° | 1403.3 | 1400.3 | 1396.5 | 1392.8 | 1398.8 |
| 25° | 1358.1 | 1354.3 | 1350.6 | 1349.1 | 1353.6 |
| 27.5° | 1312.9 | 1306.9 | 1301.6 | 1300.1 | 1306.9 |
| 30° | 1260.2 | 1253.4 | 1247.4 | 1245.9 | 1251.1 |
| 32.5° | 1197.7 | 1196.2 | 1188.6 | 1185.6 | 1187.9 |
| 35° | 1132.1 | 1130.6 | 1126.9 | 1121.6 | 1123.8 |
| 37.5° | 1069.6 | 1068.9 | 1063.6 | 1054.5 | 1048.5 |
| 40° | 1002.6 | 997.3 | 993.5 | 980.7 | 976.2 |
| 42.5° | 928.8 | 927.2 | 920.5 | 906.2 | 900.9 |
| 45° | 860.2 | 854.2 | 845.1 | 830.1 | 828.6 |
| 47.5° | 789.4 | 781.1 | 772.8 | 754.0 | 753.2 |
| 50° | 716.3 | 710.3 | 700.5 | 681.7 | 674.2 |
| 52.5° | 648.5 | 640.3 | 626.7 | 608.6 | 604.9 |
| 55° | 583.8 | 571.7 | 557.4 | 542.3 | 538.6 |
| 57.5° | 514.5 | 509.2 | 491.9 | 479.8 | 475.3 |
| 60° | 453.5 | 448.9 | 431.6 | 420.3 | 420.3 |
| 62.5° | 398.5 | 391.7 | 376.6 | 369.1 | 369.1 |
| 65° | 345.0 | 339.7 | 326.9 | 323.9 | 322.4 |
| 67.5° | 299.0 | 292.3 | 283.2 | 282.5 | 286.2 |
| 70° | 259.1 | 250.8 | 243.3 | 250.8 | 253.1 |
| 72.5° | 221.5 | 216.2 | 209.4 | 219.2 | 223.7 |
| 75° | 187.6 | 183.0 | 179.3 | 187.6 | 194.3 |
| 77.5° | 156.7 | 152.2 | 152.2 | 161.2 | 167.2 |
| 80° | 125.8 | 122.8 | 125.8 | 133.3 | 139.4 |
| 82.5° | 96.4 | 94.2 | 97.9 | 105.5 | 109.2 |
| 85° | 65.5 | 61.8 | 66.3 | 73.1 | 73.8 |
| 87.5° | 30.9 | 30.1 | 33.1 | 37.7 | 36.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)