

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: P292921

Luminaire Tested: **24GR-LD5-38-F1-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292921
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-L83050-W2A1-U-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4040.0 lumens
Efficiency: N/A
Efficacy: 155.7 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

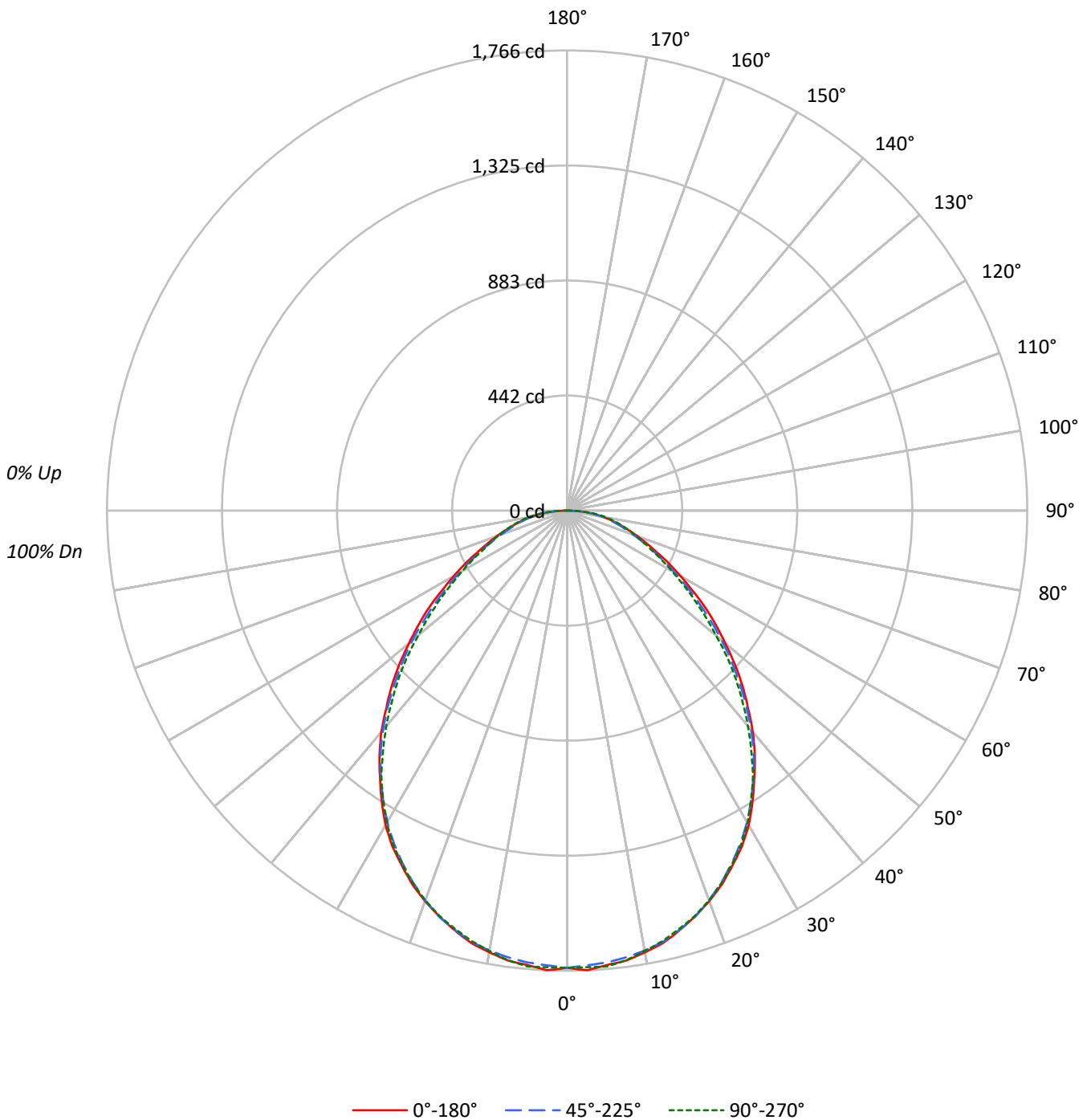
Input Watts (W): 25.947
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2361 | 2361 | 2361 |
| 5° | 2365 | 2351 | 2371 |
| 10° | 2352 | 2342 | 2344 |
| 15° | 2323 | 2320 | 2315 |
| 20° | 2284 | 2279 | 2279 |
| 25° | 2230 | 2218 | 2223 |
| 30° | 2166 | 2144 | 2150 |
| 35° | 2057 | 2048 | 2042 |
| 40° | 1948 | 1930 | 1897 |
| 45° | 1811 | 1779 | 1744 |
| 50° | 1659 | 1622 | 1561 |
| 55° | 1515 | 1446 | 1398 |
| 60° | 1350 | 1285 | 1251 |
| 65° | 1215 | 1151 | 1135 |
| 70° | 1127 | 1059 | 1102 |
| 75° | 1079 | 1031 | 1118 |
| 80° | 1079 | 1079 | 1195 |
| 85° | 1119 | 1132 | 1261 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 165.7 | 4.1 |
| 10°-20° | 469.0 | 11.6 |
| 20°-30° | 688.3 | 17.0 |
| 30°-40° | 778.2 | 19.3 |
| 40°-50° | 719.2 | 17.8 |
| 50°-60° | 554.1 | 13.7 |
| 60°-70° | 366.9 | 9.1 |
| 70°-80° | 218.4 | 5.4 |
| 80°-90° | 80.0 | 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° | 1323.1 | 32.7 |
| 0°-40° | 2101.3 | 52.0 |
| 0°-60° | 3374.6 | 83.5 |
| 0°-90° | 4040.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4040.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1755 | 1755 | 1755 | 1755 | 1755 | |
| 5° | 1751 | 1751 | 1741 | 1742 | 1756 | 166 |
| 15° | 1667 | 1664 | 1666 | 1665 | 1662 | 470 |
| 25° | 1502 | 1498 | 1494 | 1492 | 1497 | 692 |
| 35° | 1252 | 1251 | 1247 | 1241 | 1243 | 784 |
| 45° | 952 | 945 | 935 | 918 | 917 | 733 |
| 55° | 646 | 632 | 617 | 600 | 596 | 576 |
| 65° | 382 | 376 | 362 | 358 | 357 | 383 |
| 75° | 208 | 202 | 198 | 208 | 215 | 221 |
| 85° | 72 | 68 | 73 | 81 | 82 | 77 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292921

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 |
| 2.5° | 1765.7 | 1756.5 | 1746.5 | 1746.5 | 1754.0 |
| 5° | 1750.7 | 1750.7 | 1740.7 | 1741.5 | 1755.7 |
| 7.5° | 1741.5 | 1736.5 | 1729.9 | 1729.9 | 1740.7 |
| 10° | 1721.5 | 1717.4 | 1714.0 | 1712.4 | 1715.7 |
| 12.5° | 1699.9 | 1693.2 | 1695.7 | 1693.2 | 1692.4 |
| 15° | 1667.4 | 1664.1 | 1665.7 | 1664.9 | 1661.6 |
| 17.5° | 1632.4 | 1630.7 | 1634.1 | 1628.2 | 1630.7 |
| 20° | 1594.9 | 1589.9 | 1591.6 | 1588.2 | 1591.6 |
| 22.5° | 1552.4 | 1549.1 | 1544.9 | 1540.7 | 1547.4 |
| 25° | 1502.4 | 1498.2 | 1494.1 | 1492.4 | 1497.4 |
| 27.5° | 1452.4 | 1445.7 | 1439.9 | 1438.2 | 1445.7 |
| 30° | 1394.1 | 1386.6 | 1379.9 | 1378.2 | 1384.1 |
| 32.5° | 1324.9 | 1323.2 | 1314.9 | 1311.6 | 1314.1 |
| 35° | 1252.4 | 1250.7 | 1246.6 | 1240.7 | 1243.2 |
| 37.5° | 1183.3 | 1182.4 | 1176.6 | 1166.6 | 1159.9 |
| 40° | 1109.1 | 1103.3 | 1099.1 | 1084.9 | 1079.9 |
| 42.5° | 1027.4 | 1025.8 | 1018.3 | 1002.4 | 996.6 |
| 45° | 951.6 | 944.9 | 934.9 | 918.3 | 916.6 |
| 47.5° | 873.3 | 864.1 | 854.9 | 834.1 | 833.3 |
| 50° | 792.4 | 785.8 | 774.9 | 754.1 | 745.8 |
| 52.5° | 717.5 | 708.3 | 693.3 | 673.3 | 669.1 |
| 55° | 645.8 | 632.5 | 616.6 | 600.0 | 595.8 |
| 57.5° | 569.1 | 563.3 | 544.1 | 530.8 | 525.8 |
| 60° | 501.6 | 496.6 | 477.5 | 465.0 | 465.0 |
| 62.5° | 440.8 | 433.3 | 416.6 | 408.3 | 408.3 |
| 65° | 381.6 | 375.8 | 361.6 | 358.3 | 356.6 |
| 67.5° | 330.8 | 323.3 | 313.3 | 312.5 | 316.6 |
| 70° | 286.6 | 277.5 | 269.1 | 277.5 | 280.0 |
| 72.5° | 245.0 | 239.2 | 231.7 | 242.5 | 247.5 |
| 75° | 207.5 | 202.5 | 198.3 | 207.5 | 215.0 |
| 77.5° | 173.3 | 168.3 | 168.3 | 178.3 | 185.0 |
| 80° | 139.2 | 135.8 | 139.2 | 147.5 | 154.2 |
| 82.5° | 106.7 | 104.2 | 108.3 | 116.7 | 120.8 |
| 85° | 72.5 | 68.3 | 73.3 | 80.8 | 81.7 |
| 87.5° | 34.2 | 33.3 | 36.7 | 41.7 | 40.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)