

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: P292924

Luminaire Tested: **24GR-LD5-42-F1-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292924
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-L83050-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3961.0 lumens
Efficiency: N/A
Efficacy: 142.0 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

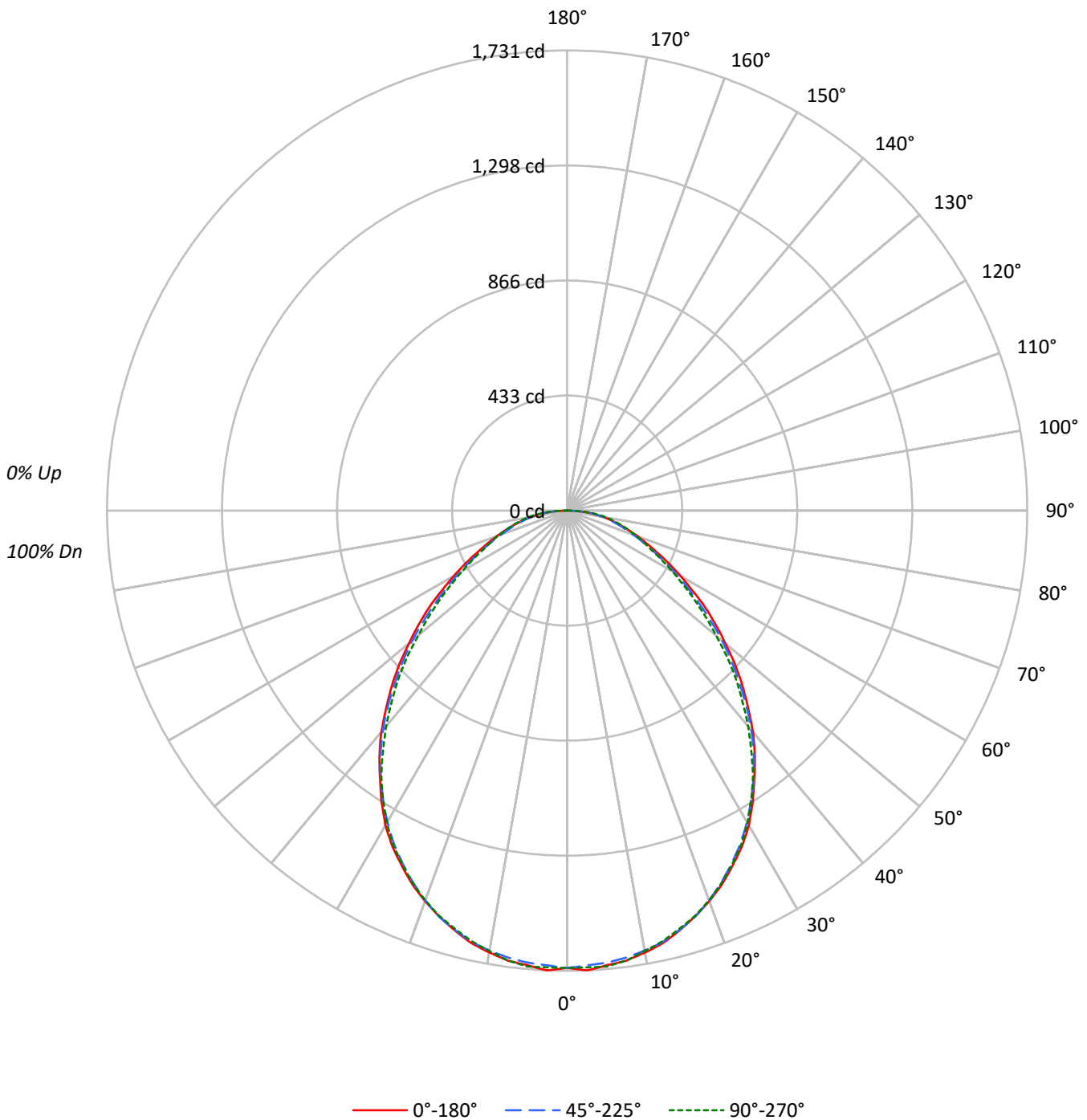
Input Watts (W): 27.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292924

CATALOG NUMBER: 24GR-LD5-42-F1-UNV-L83050-W2A1-U-3000K

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° | 2315 | 2315 | 2315 |
| 5° | 2318 | 2305 | 2325 |
| 10° | 2306 | 2296 | 2298 |
| 15° | 2277 | 2275 | 2269 |
| 20° | 2239 | 2234 | 2234 |
| 25° | 2187 | 2175 | 2180 |
| 30° | 2124 | 2102 | 2108 |
| 35° | 2017 | 2008 | 2002 |
| 40° | 1910 | 1893 | 1860 |
| 45° | 1775 | 1744 | 1710 |
| 50° | 1626 | 1590 | 1531 |
| 55° | 1485 | 1418 | 1370 |
| 60° | 1323 | 1260 | 1227 |
| 65° | 1191 | 1129 | 1113 |
| 70° | 1105 | 1038 | 1080 |
| 75° | 1057 | 1011 | 1096 |
| 80° | 1057 | 1057 | 1171 |
| 85° | 1098 | 1110 | 1237 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 162.5 | 4.1 |
| 10°-20° | 459.8 | 11.6 |
| 20°-30° | 674.9 | 17.0 |
| 30°-40° | 763.0 | 19.3 |
| 40°-50° | 705.2 | 17.8 |
| 50°-60° | 543.3 | 13.7 |
| 60°-70° | 359.8 | 9.1 |
| 70°-80° | 214.1 | 5.4 |
| 80°-90° | 78.4 | 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° | 1297.2 | 32.7 |
| 0°-40° | 2060.2 | 52.0 |
| 0°-60° | 3308.6 | 83.5 |
| 0°-90° | 3961.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3961.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1721 | 1721 | 1721 | 1721 | 1721 | |
| 5° | 1716 | 1716 | 1707 | 1708 | 1721 | 163 |
| 15° | 1635 | 1632 | 1633 | 1632 | 1629 | 461 |
| 25° | 1473 | 1469 | 1465 | 1463 | 1468 | 678 |
| 35° | 1228 | 1226 | 1222 | 1216 | 1219 | 768 |
| 45° | 933 | 926 | 917 | 900 | 899 | 719 |
| 55° | 633 | 620 | 605 | 588 | 584 | 565 |
| 65° | 374 | 368 | 355 | 351 | 350 | 375 |
| 75° | 203 | 198 | 194 | 203 | 211 | 217 |
| 85° | 71 | 67 | 72 | 79 | 80 | 75 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292924

CATALOG NUMBER: 24GR-LD5-42-F1-UNV-L83050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1720.6 | 1720.6 | 1720.6 | 1720.6 | 1720.6 |
| 2.5° | 1731.2 | 1722.2 | 1712.4 | 1712.4 | 1719.7 |
| 5° | 1716.5 | 1716.5 | 1706.7 | 1707.5 | 1721.4 |
| 7.5° | 1707.5 | 1702.6 | 1696.1 | 1696.1 | 1706.7 |
| 10° | 1687.9 | 1683.8 | 1680.5 | 1678.9 | 1682.2 |
| 12.5° | 1666.6 | 1660.1 | 1662.6 | 1660.1 | 1659.3 |
| 15° | 1634.8 | 1631.5 | 1633.1 | 1632.3 | 1629.1 |
| 17.5° | 1600.5 | 1598.8 | 1602.1 | 1596.4 | 1598.8 |
| 20° | 1563.7 | 1558.8 | 1560.4 | 1557.2 | 1560.4 |
| 22.5° | 1522.0 | 1518.8 | 1514.7 | 1510.6 | 1517.1 |
| 25° | 1473.0 | 1468.9 | 1464.8 | 1463.2 | 1468.1 |
| 27.5° | 1424.0 | 1417.5 | 1411.7 | 1410.1 | 1417.5 |
| 30° | 1366.8 | 1359.5 | 1352.9 | 1351.3 | 1357.0 |
| 32.5° | 1299.0 | 1297.4 | 1289.2 | 1285.9 | 1288.4 |
| 35° | 1227.9 | 1226.3 | 1222.2 | 1216.5 | 1218.9 |
| 37.5° | 1160.1 | 1159.3 | 1153.6 | 1143.8 | 1137.2 |
| 40° | 1087.4 | 1081.7 | 1077.6 | 1063.7 | 1058.8 |
| 42.5° | 1007.3 | 1005.7 | 998.4 | 982.8 | 977.1 |
| 45° | 933.0 | 926.5 | 916.7 | 900.3 | 898.7 |
| 47.5° | 856.2 | 847.2 | 838.2 | 817.8 | 817.0 |
| 50° | 777.0 | 770.4 | 759.8 | 739.4 | 731.2 |
| 52.5° | 703.4 | 694.4 | 679.7 | 660.1 | 656.0 |
| 55° | 633.2 | 620.1 | 604.6 | 588.2 | 584.1 |
| 57.5° | 558.0 | 552.3 | 533.5 | 520.4 | 515.5 |
| 60° | 491.8 | 486.9 | 468.1 | 455.9 | 455.9 |
| 62.5° | 432.2 | 424.8 | 408.5 | 400.3 | 400.3 |
| 65° | 374.2 | 368.5 | 354.6 | 351.3 | 349.7 |
| 67.5° | 324.3 | 317.0 | 307.2 | 306.4 | 310.5 |
| 70° | 281.0 | 272.1 | 263.9 | 272.1 | 274.5 |
| 72.5° | 240.2 | 234.5 | 227.1 | 237.7 | 242.6 |
| 75° | 203.4 | 198.5 | 194.4 | 203.4 | 210.8 |
| 77.5° | 169.9 | 165.0 | 165.0 | 174.8 | 181.4 |
| 80° | 136.4 | 133.2 | 136.4 | 144.6 | 151.1 |
| 82.5° | 104.6 | 102.1 | 106.2 | 114.4 | 118.5 |
| 85° | 71.1 | 67.0 | 71.9 | 79.2 | 80.1 |
| 87.5° | 33.5 | 32.7 | 35.9 | 40.8 | 40.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)