

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: P293115

Luminaire Tested: **24GR-LD5-42-F1-UNV-L92765-W2A1-U-6500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293115
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-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: 3979.0 lumens
Efficiency: N/A
Efficacy: 135.8 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

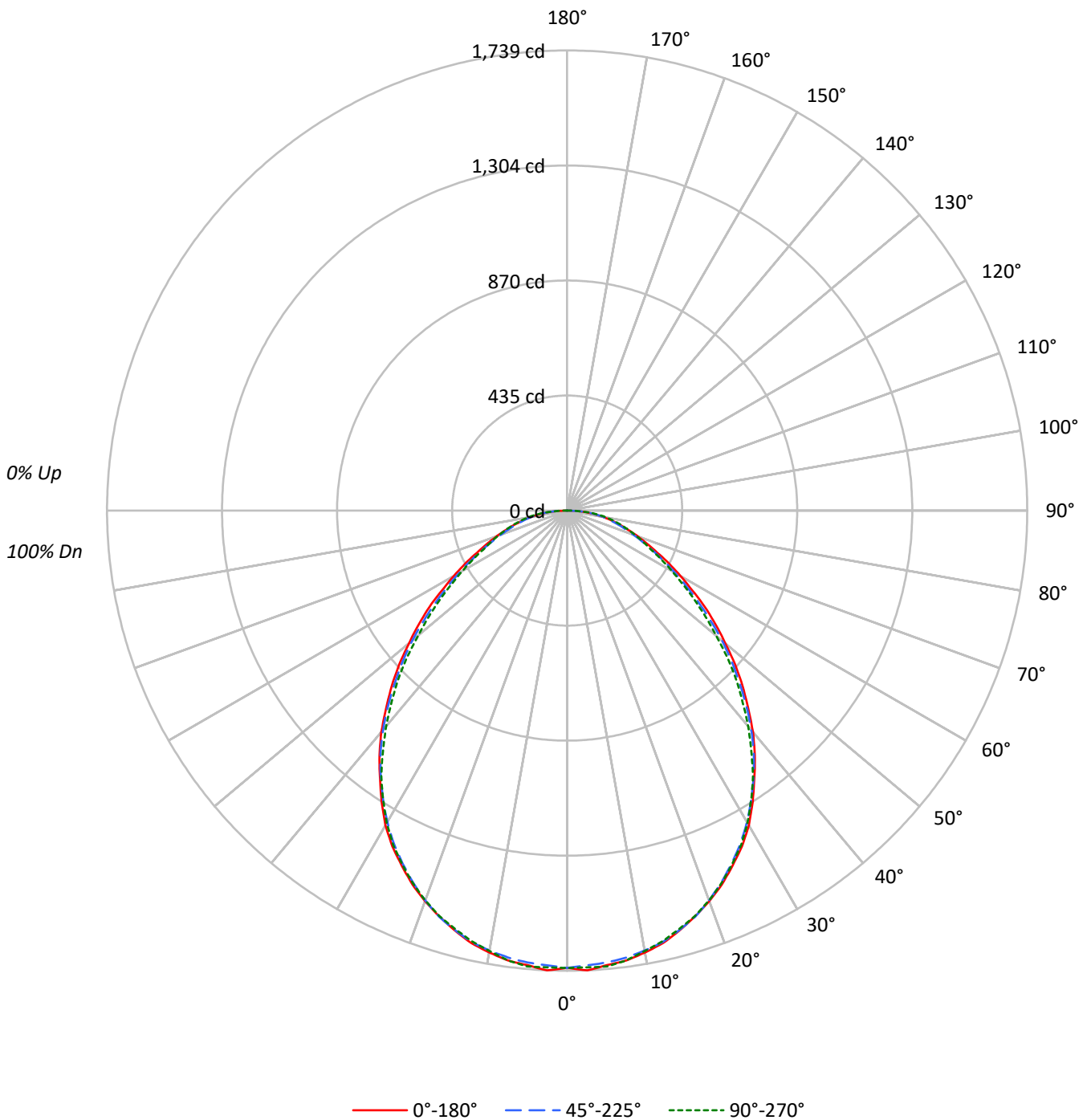
Input Watts (W): 29.295
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2326 | 2326 | 2326 |
| 5° | 2329 | 2316 | 2336 |
| 10° | 2317 | 2306 | 2309 |
| 15° | 2288 | 2285 | 2280 |
| 20° | 2249 | 2244 | 2244 |
| 25° | 2197 | 2185 | 2189 |
| 30° | 2133 | 2112 | 2118 |
| 35° | 2026 | 2017 | 2011 |
| 40° | 1919 | 1901 | 1868 |
| 45° | 1783 | 1752 | 1718 |
| 50° | 1634 | 1598 | 1537 |
| 55° | 1492 | 1425 | 1377 |
| 60° | 1330 | 1266 | 1232 |
| 65° | 1197 | 1134 | 1118 |
| 70° | 1111 | 1043 | 1085 |
| 75° | 1063 | 1015 | 1101 |
| 80° | 1062 | 1062 | 1176 |
| 85° | 1102 | 1115 | 1241 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 163.2 | 4.1 |
| 10°-20° | 461.9 | 11.6 |
| 20°-30° | 677.9 | 17.0 |
| 30°-40° | 766.5 | 19.3 |
| 40°-50° | 708.4 | 17.8 |
| 50°-60° | 545.8 | 13.7 |
| 60°-70° | 361.4 | 9.1 |
| 70°-80° | 215.1 | 5.4 |
| 80°-90° | 78.8 | 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° | 1303.1 | 32.7 |
| 0°-40° | 2069.5 | 52.0 |
| 0°-60° | 3323.7 | 83.5 |
| 0°-90° | 3979.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3979.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1728 | 1728 | 1728 | 1728 | 1728 | |
| 5° | 1724 | 1724 | 1714 | 1715 | 1729 | 164 |
| 15° | 1642 | 1639 | 1641 | 1640 | 1636 | 463 |
| 25° | 1480 | 1476 | 1472 | 1470 | 1475 | 681 |
| 35° | 1234 | 1232 | 1228 | 1222 | 1224 | 772 |
| 45° | 937 | 931 | 921 | 904 | 903 | 722 |
| 55° | 636 | 623 | 607 | 591 | 587 | 567 |
| 65° | 376 | 370 | 356 | 353 | 351 | 377 |
| 75° | 204 | 199 | 195 | 204 | 212 | 218 |
| 85° | 71 | 67 | 72 | 80 | 80 | 76 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293115

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1728.4 | 1728.4 | 1728.4 | 1728.4 | 1728.4 |
| 2.5° | 1739.1 | 1730.0 | 1720.2 | 1720.2 | 1727.6 |
| 5° | 1724.3 | 1724.3 | 1714.4 | 1715.3 | 1729.2 |
| 7.5° | 1715.3 | 1710.3 | 1703.8 | 1703.8 | 1714.4 |
| 10° | 1695.6 | 1691.5 | 1688.2 | 1686.5 | 1689.8 |
| 12.5° | 1674.2 | 1667.7 | 1670.1 | 1667.7 | 1666.8 |
| 15° | 1642.2 | 1638.9 | 1640.6 | 1639.7 | 1636.5 |
| 17.5° | 1607.7 | 1606.1 | 1609.4 | 1603.6 | 1606.1 |
| 20° | 1570.8 | 1565.9 | 1567.5 | 1564.2 | 1567.5 |
| 22.5° | 1529.0 | 1525.7 | 1521.6 | 1517.5 | 1524.0 |
| 25° | 1479.7 | 1475.6 | 1471.5 | 1469.9 | 1474.8 |
| 27.5° | 1430.5 | 1423.9 | 1418.2 | 1416.5 | 1423.9 |
| 30° | 1373.0 | 1365.6 | 1359.1 | 1357.4 | 1363.2 |
| 32.5° | 1304.9 | 1303.3 | 1295.1 | 1291.8 | 1294.2 |
| 35° | 1233.5 | 1231.9 | 1227.8 | 1222.0 | 1224.5 |
| 37.5° | 1165.4 | 1164.6 | 1158.8 | 1149.0 | 1142.4 |
| 40° | 1092.3 | 1086.6 | 1082.5 | 1068.5 | 1063.6 |
| 42.5° | 1011.9 | 1010.3 | 1002.9 | 987.3 | 981.6 |
| 45° | 937.2 | 930.7 | 920.8 | 904.4 | 902.8 |
| 47.5° | 860.1 | 851.1 | 842.0 | 821.5 | 820.7 |
| 50° | 780.5 | 773.9 | 763.2 | 742.7 | 734.5 |
| 52.5° | 706.6 | 697.6 | 682.8 | 663.1 | 659.0 |
| 55° | 636.0 | 622.9 | 607.3 | 590.9 | 586.8 |
| 57.5° | 560.5 | 554.8 | 535.9 | 522.8 | 517.9 |
| 60° | 494.1 | 489.1 | 470.3 | 457.9 | 457.9 |
| 62.5° | 434.1 | 426.8 | 410.3 | 402.1 | 402.1 |
| 65° | 375.9 | 370.1 | 356.2 | 352.9 | 351.3 |
| 67.5° | 325.8 | 318.4 | 308.6 | 307.8 | 311.9 |
| 70° | 282.3 | 273.3 | 265.1 | 273.3 | 275.8 |
| 72.5° | 241.3 | 235.5 | 228.2 | 238.8 | 243.7 |
| 75° | 204.4 | 199.4 | 195.3 | 204.4 | 211.7 |
| 77.5° | 170.7 | 165.8 | 165.8 | 175.6 | 182.2 |
| 80° | 137.1 | 133.8 | 137.1 | 145.3 | 151.8 |
| 82.5° | 105.0 | 102.6 | 106.7 | 114.9 | 119.0 |
| 85° | 71.4 | 67.3 | 72.2 | 79.6 | 80.4 |
| 87.5° | 33.6 | 32.8 | 36.1 | 41.0 | 40.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)