

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: P293096

Luminaire Tested: **24GR-LD5-34-F1-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293096
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-LD5-34-F1-UNV-L92765-W2A1-U-5700K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3291.0 lumens
Efficiency: N/A
Efficacy: 138.8 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

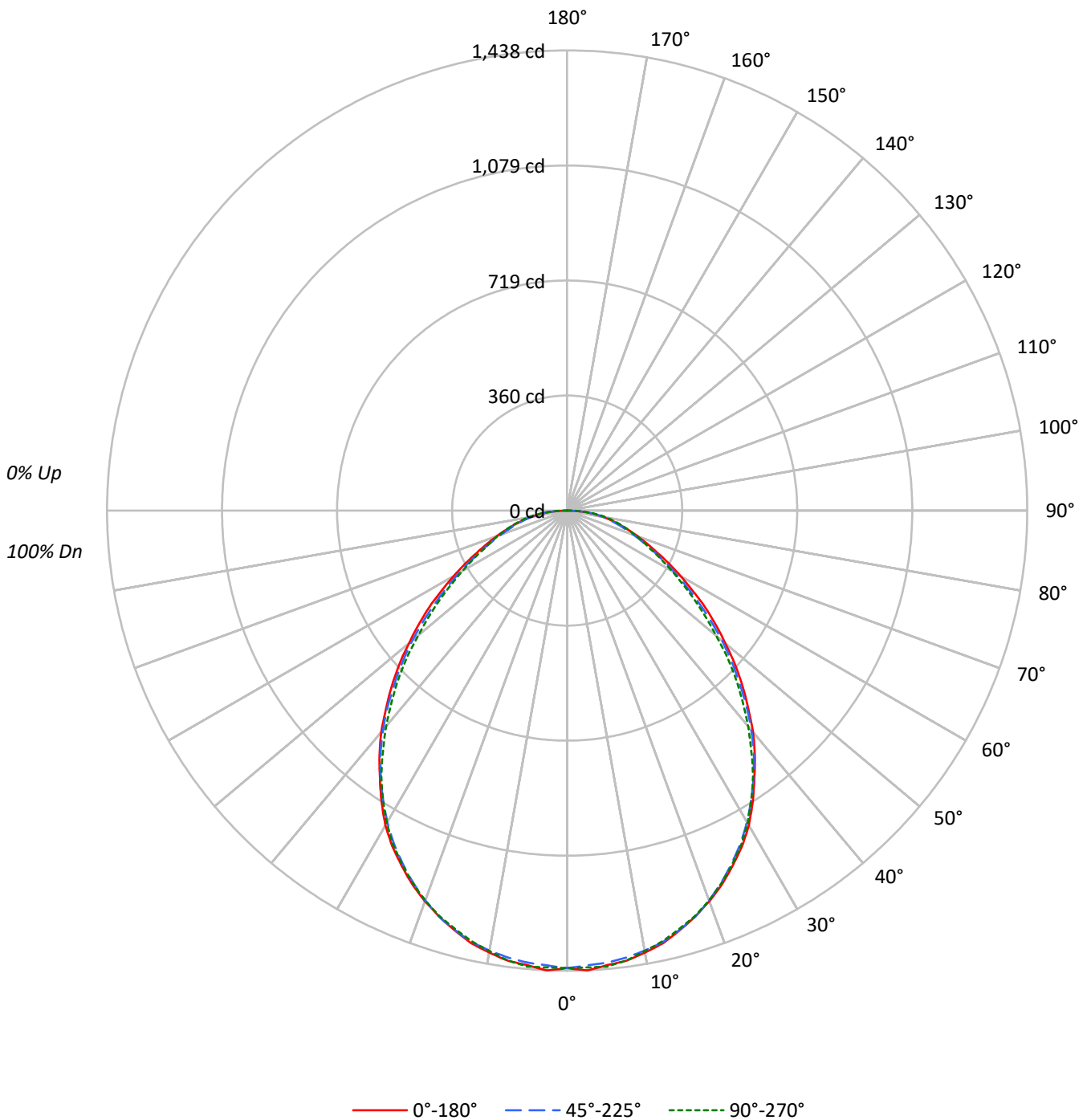
Input Watts (W): 23.715
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1923 | 1923 | 1923 |
| 5° | 1926 | 1915 | 1932 |
| 10° | 1916 | 1908 | 1909 |
| 15° | 1892 | 1890 | 1885 |
| 20° | 1860 | 1856 | 1856 |
| 25° | 1817 | 1807 | 1811 |
| 30° | 1764 | 1746 | 1752 |
| 35° | 1676 | 1668 | 1664 |
| 40° | 1587 | 1573 | 1545 |
| 45° | 1475 | 1449 | 1421 |
| 50° | 1351 | 1321 | 1272 |
| 55° | 1234 | 1178 | 1138 |
| 60° | 1100 | 1047 | 1019 |
| 65° | 990 | 938 | 925 |
| 70° | 919 | 862 | 897 |
| 75° | 879 | 840 | 910 |
| 80° | 879 | 879 | 973 |
| 85° | 912 | 922 | 1027 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 135.0 | 4.1 |
| 10°-20° | 382.0 | 11.6 |
| 20°-30° | 560.7 | 17.0 |
| 30°-40° | 633.9 | 19.3 |
| 40°-50° | 585.9 | 17.8 |
| 50°-60° | 451.4 | 13.7 |
| 60°-70° | 298.9 | 9.1 |
| 70°-80° | 177.9 | 5.4 |
| 80°-90° | 65.2 | 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° | 1077.8 | 32.7 |
| 0°-40° | 1711.7 | 52.0 |
| 0°-60° | 2749.0 | 83.5 |
| 0°-90° | 3291.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3291.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1430 | 1430 | 1430 | 1430 | 1430 | |
| 5° | 1426 | 1426 | 1418 | 1419 | 1430 | 136 |
| 15° | 1358 | 1356 | 1357 | 1356 | 1354 | 383 |
| 25° | 1224 | 1220 | 1217 | 1216 | 1220 | 564 |
| 35° | 1020 | 1019 | 1016 | 1011 | 1013 | 638 |
| 45° | 775 | 770 | 762 | 748 | 747 | 597 |
| 55° | 526 | 515 | 502 | 489 | 485 | 469 |
| 65° | 311 | 306 | 295 | 292 | 290 | 312 |
| 75° | 169 | 165 | 162 | 169 | 175 | 180 |
| 85° | 59 | 56 | 60 | 66 | 66 | 63 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1429.5 | 1429.5 | 1429.5 | 1429.5 | 1429.5 |
| 2.5° | 1438.4 | 1430.9 | 1422.7 | 1422.7 | 1428.9 |
| 5° | 1426.1 | 1426.1 | 1418.0 | 1418.7 | 1430.2 |
| 7.5° | 1418.7 | 1414.6 | 1409.2 | 1409.2 | 1418.0 |
| 10° | 1402.4 | 1399.0 | 1396.3 | 1394.9 | 1397.6 |
| 12.5° | 1384.7 | 1379.3 | 1381.3 | 1379.3 | 1378.6 |
| 15° | 1358.3 | 1355.5 | 1356.9 | 1356.2 | 1353.5 |
| 17.5° | 1329.8 | 1328.4 | 1331.1 | 1326.4 | 1328.4 |
| 20° | 1299.2 | 1295.1 | 1296.5 | 1293.8 | 1296.5 |
| 22.5° | 1264.6 | 1261.9 | 1258.5 | 1255.1 | 1260.5 |
| 25° | 1223.9 | 1220.5 | 1217.1 | 1215.7 | 1219.8 |
| 27.5° | 1183.1 | 1177.7 | 1172.9 | 1171.6 | 1177.7 |
| 30° | 1135.6 | 1129.5 | 1124.1 | 1122.7 | 1127.5 |
| 32.5° | 1079.3 | 1077.9 | 1071.1 | 1068.4 | 1070.5 |
| 35° | 1020.2 | 1018.9 | 1015.5 | 1010.7 | 1012.8 |
| 37.5° | 963.9 | 963.2 | 958.5 | 950.3 | 944.9 |
| 40° | 903.5 | 898.7 | 895.3 | 883.8 | 879.7 |
| 42.5° | 836.9 | 835.6 | 829.5 | 816.6 | 811.8 |
| 45° | 775.2 | 769.7 | 761.6 | 748.0 | 746.7 |
| 47.5° | 711.4 | 703.9 | 696.4 | 679.5 | 678.8 |
| 50° | 645.5 | 640.1 | 631.3 | 614.3 | 607.5 |
| 52.5° | 584.4 | 577.0 | 564.8 | 548.5 | 545.1 |
| 55° | 526.1 | 515.2 | 502.3 | 488.7 | 485.3 |
| 57.5° | 463.6 | 458.9 | 443.3 | 432.4 | 428.3 |
| 60° | 408.6 | 404.6 | 388.9 | 378.8 | 378.8 |
| 62.5° | 359.1 | 353.0 | 339.4 | 332.6 | 332.6 |
| 65° | 310.9 | 306.1 | 294.6 | 291.9 | 290.5 |
| 67.5° | 269.5 | 263.4 | 255.2 | 254.5 | 257.9 |
| 70° | 233.5 | 226.0 | 219.2 | 226.0 | 228.1 |
| 72.5° | 199.6 | 194.8 | 188.7 | 197.5 | 201.6 |
| 75° | 169.0 | 164.9 | 161.6 | 169.0 | 175.1 |
| 77.5° | 141.2 | 137.1 | 137.1 | 145.3 | 150.7 |
| 80° | 113.4 | 110.6 | 113.4 | 120.1 | 125.6 |
| 82.5° | 86.9 | 84.8 | 88.2 | 95.0 | 98.4 |
| 85° | 59.1 | 55.7 | 59.7 | 65.8 | 66.5 |
| 87.5° | 27.8 | 27.2 | 29.9 | 33.9 | 33.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)