

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: P475567

Luminaire Tested: **24GR-LD5-34-F1-UNV-L850-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475567
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-34-F1-UNV-L850-CD1-U
Description: GR 2'X4' LED TROFFER w/ F1 LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

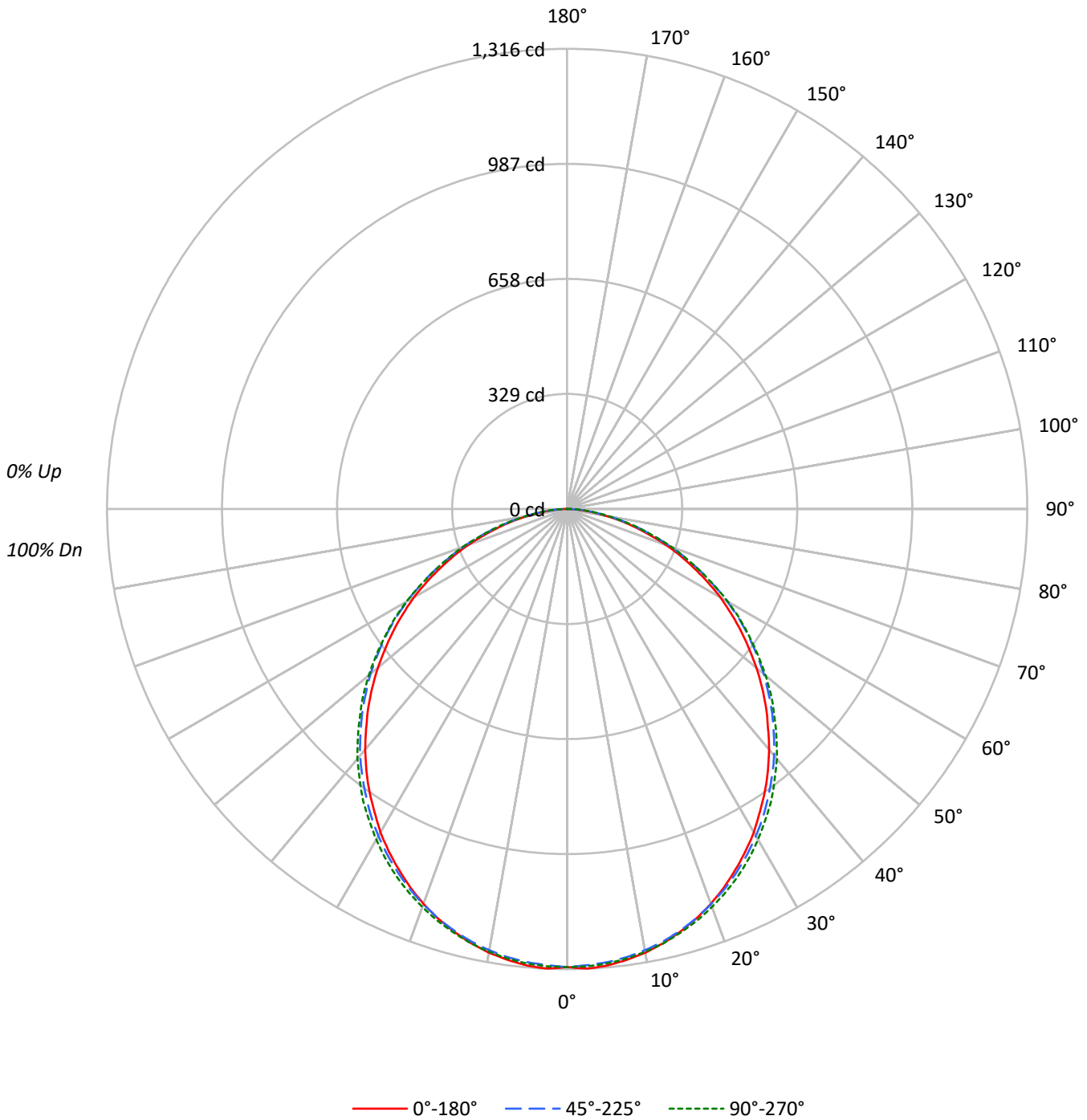
Lumens per Lamp: N/A
Luminaire Lumens: 3520.9 lumens
Efficiency: N/A
Efficacy: 146.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.24 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 24
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 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 59 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1763 | 1763 | 1763 |
| 5° | 1770 | 1758 | 1762 |
| 10° | 1760 | 1751 | 1757 |
| 15° | 1743 | 1739 | 1747 |
| 20° | 1720 | 1723 | 1734 |
| 25° | 1690 | 1701 | 1719 |
| 30° | 1659 | 1678 | 1696 |
| 35° | 1620 | 1647 | 1672 |
| 40° | 1579 | 1618 | 1639 |
| 45° | 1532 | 1578 | 1595 |
| 50° | 1479 | 1537 | 1550 |
| 55° | 1422 | 1485 | 1493 |
| 60° | 1363 | 1424 | 1429 |
| 65° | 1277 | 1338 | 1335 |
| 70° | 1183 | 1238 | 1250 |
| 75° | 1049 | 1109 | 1117 |
| 80° | 872 | 937 | 958 |
| 85° | 661 | 726 | 815 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 123.8 | 3.5 |
| 10°-20° | 352.5 | 10.0 |
| 20°-30° | 528.2 | 15.0 |
| 30°-40° | 626.7 | 17.8 |
| 40°-50° | 636.4 | 18.1 |
| 50°-60° | 560.5 | 15.9 |
| 60°-70° | 411.8 | 11.7 |
| 70°-80° | 224.0 | 6.4 |
| 80°-90° | 57.1 | 1.6 |
| 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° | 1004.5 | 28.5 |
| 0°-40° | 1631.2 | 46.3 |
| 0°-60° | 2828.0 | 80.3 |
| 0°-90° | 3520.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3520.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1310 | 1310 | 1310 | 1310 | 1310 | |
| 5° | 1311 | 1305 | 1301 | 1301 | 1305 | 124 |
| 15° | 1251 | 1249 | 1249 | 1250 | 1254 | 353 |
| 25° | 1138 | 1140 | 1146 | 1153 | 1158 | 525 |
| 35° | 986 | 992 | 1003 | 1013 | 1018 | 616 |
| 45° | 805 | 812 | 829 | 839 | 838 | 620 |
| 55° | 606 | 615 | 633 | 639 | 636 | 542 |
| 65° | 401 | 408 | 420 | 423 | 419 | 398 |
| 75° | 202 | 206 | 213 | 214 | 215 | 215 |
| 85° | 43 | 44 | 47 | 51 | 53 | 52 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P475567

CATALOG NUMBER: 24GR-LD5-34-F1-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1310.1 | 1310.1 | 1310.1 | 1310.1 | 1310.1 |
| 2.5° | 1315.6 | 1310.4 | 1305.9 | 1305.9 | 1309.0 |
| 5° | 1310.8 | 1305.2 | 1301.4 | 1301.4 | 1304.9 |
| 7.5° | 1300.8 | 1296.3 | 1293.2 | 1293.2 | 1297.0 |
| 10° | 1288.3 | 1283.8 | 1281.4 | 1281.8 | 1285.9 |
| 12.5° | 1271.7 | 1267.6 | 1266.6 | 1267.3 | 1272.4 |
| 15° | 1251.0 | 1248.6 | 1248.6 | 1250.3 | 1254.1 |
| 17.5° | 1227.9 | 1225.5 | 1227.2 | 1229.6 | 1234.5 |
| 20° | 1201.6 | 1199.9 | 1203.0 | 1206.8 | 1211.3 |
| 22.5° | 1171.6 | 1170.9 | 1176.1 | 1181.3 | 1185.8 |
| 25° | 1138.5 | 1139.8 | 1146.1 | 1152.6 | 1157.8 |
| 27.5° | 1104.3 | 1105.7 | 1114.3 | 1121.2 | 1126.4 |
| 30° | 1068.0 | 1068.7 | 1079.8 | 1088.0 | 1091.8 |
| 32.5° | 1025.9 | 1031.4 | 1043.2 | 1051.1 | 1054.6 |
| 35° | 986.2 | 991.7 | 1002.8 | 1012.8 | 1017.9 |
| 37.5° | 943.0 | 947.9 | 962.4 | 973.1 | 974.8 |
| 40° | 898.8 | 903.3 | 921.3 | 930.2 | 933.0 |
| 42.5° | 850.5 | 859.1 | 875.3 | 884.3 | 886.0 |
| 45° | 804.9 | 811.5 | 829.4 | 839.1 | 838.0 |
| 47.5° | 756.2 | 763.5 | 781.1 | 790.4 | 792.1 |
| 50° | 706.8 | 715.1 | 734.1 | 740.3 | 740.7 |
| 52.5° | 655.0 | 665.7 | 683.0 | 691.3 | 688.5 |
| 55° | 606.0 | 614.6 | 632.9 | 638.8 | 636.4 |
| 57.5° | 555.6 | 565.3 | 582.2 | 585.3 | 585.6 |
| 60° | 506.6 | 514.5 | 529.0 | 532.1 | 531.1 |
| 62.5° | 452.7 | 460.6 | 473.8 | 476.9 | 474.4 |
| 65° | 401.2 | 407.8 | 420.2 | 423.3 | 419.2 |
| 67.5° | 350.1 | 356.7 | 366.4 | 371.2 | 366.7 |
| 70° | 300.8 | 305.9 | 314.6 | 317.3 | 317.7 |
| 72.5° | 248.3 | 257.6 | 263.8 | 263.5 | 262.4 |
| 75° | 201.7 | 205.8 | 213.4 | 214.1 | 214.8 |
| 77.5° | 157.1 | 158.1 | 166.1 | 168.2 | 166.8 |
| 80° | 112.6 | 116.4 | 120.9 | 123.3 | 123.6 |
| 82.5° | 74.2 | 77.0 | 80.8 | 84.9 | 84.9 |
| 85° | 42.8 | 43.9 | 47.0 | 51.1 | 52.8 |
| 87.5° | 17.3 | 19.0 | 22.1 | 25.2 | 25.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)