

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: P292972

Luminaire Tested: **24GR-LD5-38-F1-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292972
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-L82765-W2A1-U-2700K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3531.0 lumens
Efficiency: N/A
Efficacy: 139.1 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

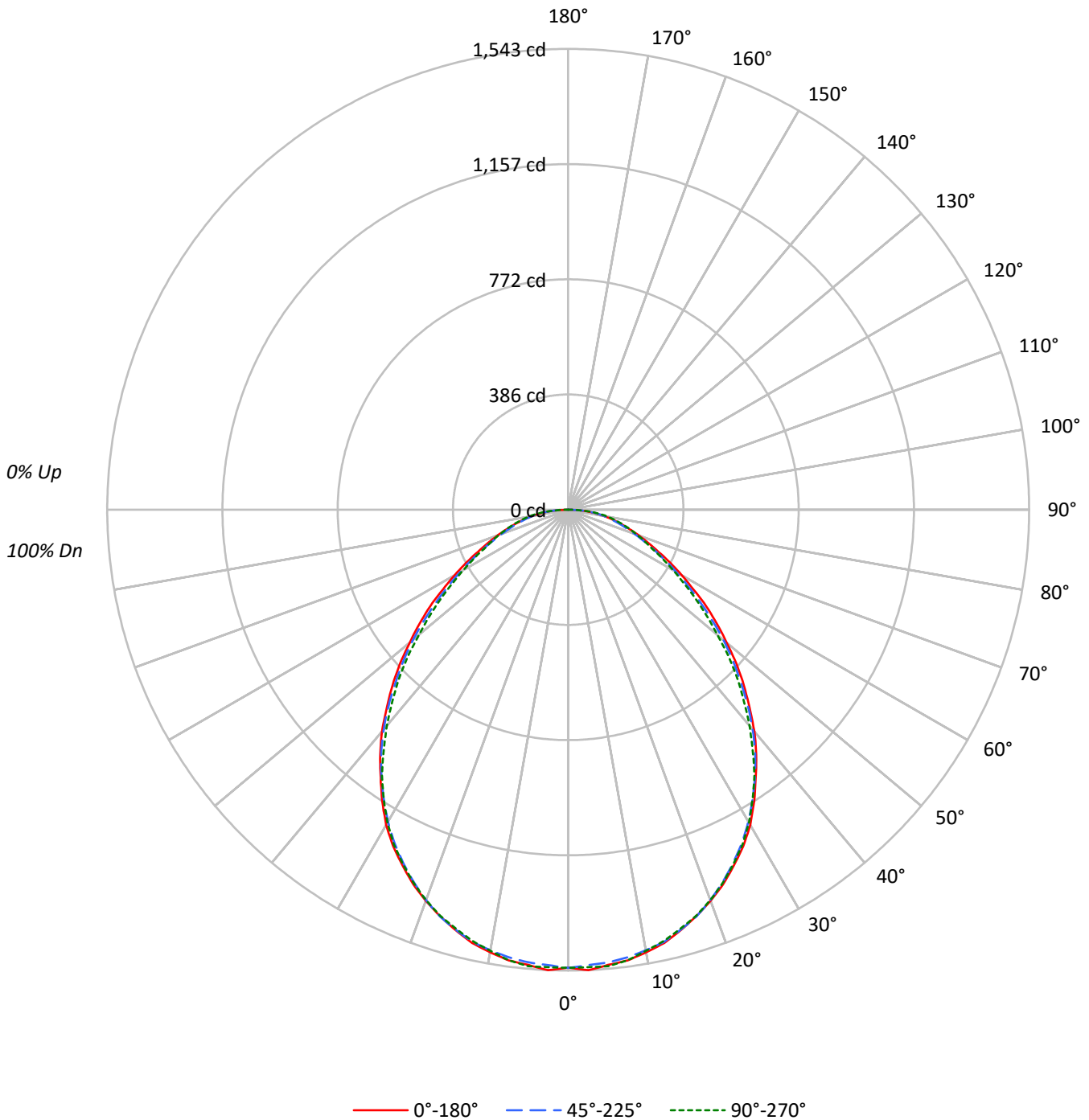
Input Watts (W): 25.389
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292972

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L82765-W2A1-U-2700K

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° | 2064 | 2064 | 2064 |
| 5° | 2067 | 2055 | 2073 |
| 10° | 2056 | 2047 | 2049 |
| 15° | 2030 | 2028 | 2023 |
| 20° | 1996 | 1992 | 1992 |
| 25° | 1949 | 1939 | 1943 |
| 30° | 1893 | 1874 | 1879 |
| 35° | 1798 | 1790 | 1785 |
| 40° | 1703 | 1687 | 1658 |
| 45° | 1583 | 1555 | 1524 |
| 50° | 1450 | 1418 | 1364 |
| 55° | 1324 | 1264 | 1221 |
| 60° | 1180 | 1123 | 1094 |
| 65° | 1062 | 1006 | 992 |
| 70° | 985 | 925 | 963 |
| 75° | 943 | 901 | 977 |
| 80° | 942 | 942 | 1044 |
| 85° | 979 | 990 | 1102 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 144.9 | 4.1 |
| 10°-20° | 409.9 | 11.6 |
| 20°-30° | 601.6 | 17.0 |
| 30°-40° | 680.2 | 19.3 |
| 40°-50° | 628.6 | 17.8 |
| 50°-60° | 484.3 | 13.7 |
| 60°-70° | 320.7 | 9.1 |
| 70°-80° | 190.9 | 5.4 |
| 80°-90° | 69.9 | 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° | 1156.4 | 32.7 |
| 0°-40° | 1836.5 | 52.0 |
| 0°-60° | 2949.4 | 83.5 |
| 0°-90° | 3531.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3531.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1534 | 1534 | 1534 | 1534 | 1534 | |
| 5° | 1530 | 1530 | 1521 | 1522 | 1534 | 145 |
| 15° | 1457 | 1454 | 1456 | 1455 | 1452 | 411 |
| 25° | 1313 | 1310 | 1306 | 1304 | 1309 | 605 |
| 35° | 1095 | 1093 | 1090 | 1084 | 1087 | 685 |
| 45° | 832 | 826 | 817 | 803 | 801 | 641 |
| 55° | 564 | 553 | 539 | 524 | 521 | 503 |
| 65° | 334 | 328 | 316 | 313 | 312 | 334 |
| 75° | 181 | 177 | 173 | 181 | 188 | 193 |
| 85° | 63 | 60 | 64 | 71 | 71 | 67 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292972

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L82765-W2A1-U-2700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1533.8 | 1533.8 | 1533.8 | 1533.8 | 1533.8 |
| 2.5° | 1543.3 | 1535.2 | 1526.5 | 1526.5 | 1533.1 |
| 5° | 1530.1 | 1530.1 | 1521.4 | 1522.1 | 1534.5 |
| 7.5° | 1522.1 | 1517.8 | 1511.9 | 1511.9 | 1521.4 |
| 10° | 1504.7 | 1501.0 | 1498.1 | 1496.6 | 1499.6 |
| 12.5° | 1485.7 | 1479.9 | 1482.1 | 1479.9 | 1479.2 |
| 15° | 1457.3 | 1454.4 | 1455.9 | 1455.1 | 1452.2 |
| 17.5° | 1426.7 | 1425.3 | 1428.2 | 1423.1 | 1425.3 |
| 20° | 1394.0 | 1389.6 | 1391.0 | 1388.1 | 1391.0 |
| 22.5° | 1356.8 | 1353.9 | 1350.3 | 1346.6 | 1352.4 |
| 25° | 1313.1 | 1309.5 | 1305.8 | 1304.4 | 1308.7 |
| 27.5° | 1269.4 | 1263.6 | 1258.5 | 1257.0 | 1263.6 |
| 30° | 1218.4 | 1211.9 | 1206.1 | 1204.6 | 1209.7 |
| 32.5° | 1158.0 | 1156.5 | 1149.2 | 1146.3 | 1148.5 |
| 35° | 1094.6 | 1093.2 | 1089.5 | 1084.4 | 1086.6 |
| 37.5° | 1034.2 | 1033.4 | 1028.3 | 1019.6 | 1013.8 |
| 40° | 969.4 | 964.3 | 960.6 | 948.2 | 943.9 |
| 42.5° | 898.0 | 896.5 | 890.0 | 876.1 | 871.0 |
| 45° | 831.7 | 825.9 | 817.1 | 802.6 | 801.1 |
| 47.5° | 763.2 | 755.2 | 747.2 | 729.0 | 728.3 |
| 50° | 692.6 | 686.8 | 677.3 | 659.1 | 651.8 |
| 52.5° | 627.1 | 619.0 | 605.9 | 588.5 | 584.8 |
| 55° | 564.4 | 552.8 | 538.9 | 524.4 | 520.7 |
| 57.5° | 497.4 | 492.3 | 475.6 | 463.9 | 459.6 |
| 60° | 438.4 | 434.1 | 417.3 | 406.4 | 406.4 |
| 62.5° | 385.3 | 378.7 | 364.1 | 356.9 | 356.9 |
| 65° | 333.6 | 328.5 | 316.1 | 313.2 | 311.7 |
| 67.5° | 289.1 | 282.6 | 273.8 | 273.1 | 276.8 |
| 70° | 250.5 | 242.5 | 235.2 | 242.5 | 244.7 |
| 72.5° | 214.1 | 209.0 | 202.5 | 211.9 | 216.3 |
| 75° | 181.3 | 177.0 | 173.3 | 181.3 | 187.9 |
| 77.5° | 151.5 | 147.1 | 147.1 | 155.9 | 161.7 |
| 80° | 121.6 | 118.7 | 121.6 | 128.9 | 134.7 |
| 82.5° | 93.2 | 91.0 | 94.7 | 102.0 | 105.6 |
| 85° | 63.4 | 59.7 | 64.1 | 70.6 | 71.4 |
| 87.5° | 29.9 | 29.1 | 32.0 | 36.4 | 35.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)