

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: P294240

Luminaire Tested: **24GR-LD5-38-FGW080-UNV-L82765-W2A1-U-6500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294240
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-38-FGW080-UNV-L82765-W2A1-U-6500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 6500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3507.0 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

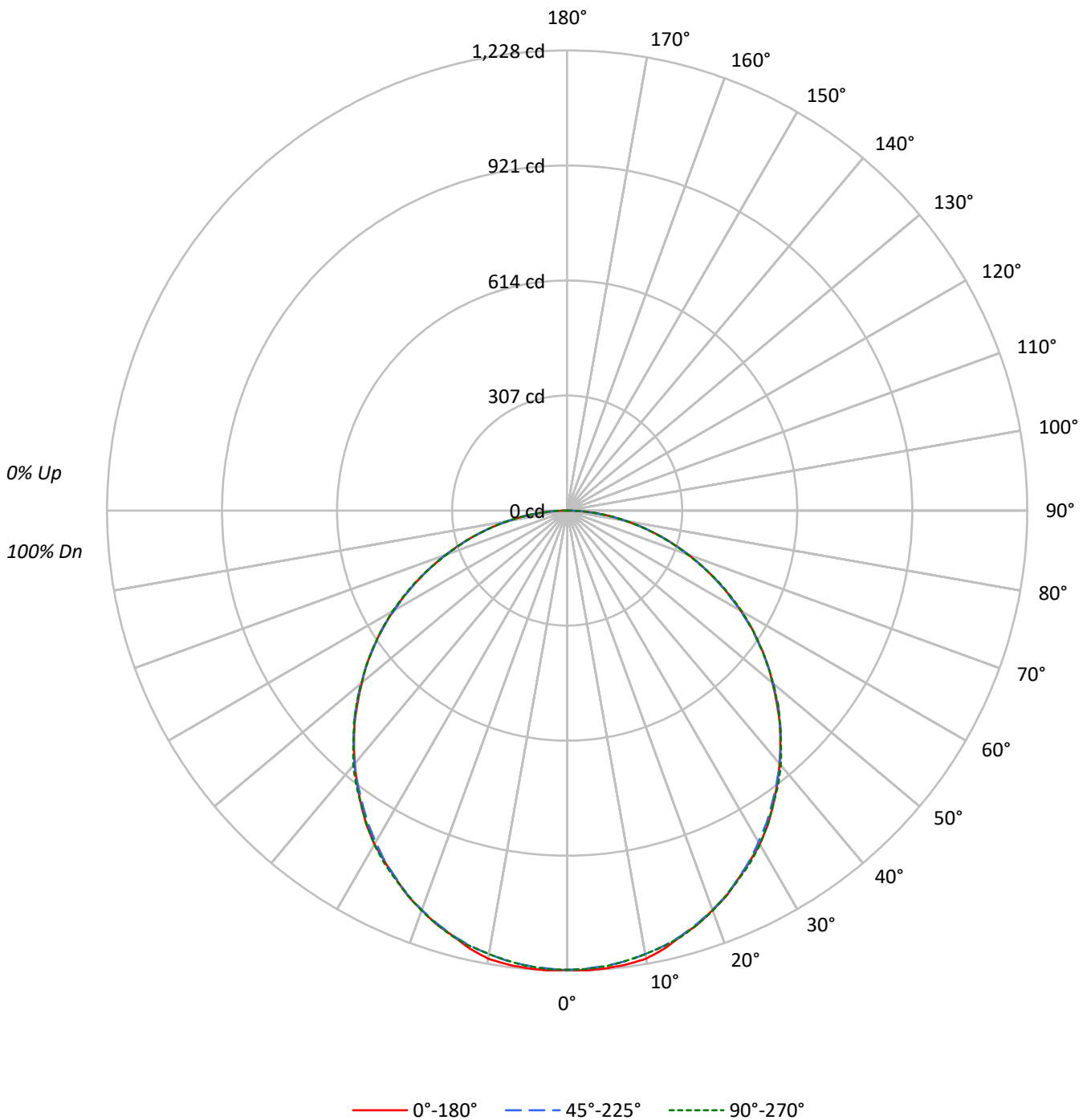
Input Watts (W): 26.505
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1649 | 1649 | 1649 |
| 5° | 1655 | 1647 | 1648 |
| 10° | 1659 | 1642 | 1642 |
| 15° | 1637 | 1636 | 1639 |
| 20° | 1625 | 1624 | 1627 |
| 25° | 1607 | 1606 | 1611 |
| 30° | 1597 | 1587 | 1599 |
| 35° | 1575 | 1566 | 1575 |
| 40° | 1549 | 1550 | 1559 |
| 45° | 1527 | 1531 | 1528 |
| 50° | 1497 | 1503 | 1499 |
| 55° | 1475 | 1471 | 1475 |
| 60° | 1440 | 1436 | 1449 |
| 65° | 1396 | 1401 | 1406 |
| 70° | 1350 | 1357 | 1347 |
| 75° | 1303 | 1303 | 1303 |
| 80° | 1230 | 1230 | 1244 |
| 85° | 1136 | 1149 | 1112 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 115.9 | 3.3 |
| 10°-20° | 331.3 | 9.4 |
| 20°-30° | 499.3 | 14.2 |
| 30°-40° | 598.0 | 17.1 |
| 40°-50° | 619.0 | 17.7 |
| 50°-60° | 561.3 | 16.0 |
| 60°-70° | 435.2 | 12.4 |
| 70°-80° | 264.6 | 7.5 |
| 80°-90° | 82.3 | 2.3 |
| 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° | 946.5 | 27.0 |
| 0°-40° | 1544.6 | 44.0 |
| 0°-60° | 2724.9 | 77.7 |
| 0°-90° | 3507.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3507.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1226 | 1226 | 1226 | 1226 | 1226 | |
| 5° | 1226 | 1218 | 1219 | 1218 | 1220 | 117 |
| 15° | 1175 | 1176 | 1174 | 1170 | 1177 | 332 |
| 25° | 1083 | 1083 | 1082 | 1085 | 1085 | 500 |
| 35° | 959 | 952 | 954 | 958 | 959 | 600 |
| 45° | 802 | 804 | 805 | 801 | 803 | 618 |
| 55° | 629 | 625 | 627 | 629 | 629 | 562 |
| 65° | 438 | 441 | 440 | 438 | 442 | 435 |
| 75° | 251 | 250 | 251 | 250 | 251 | 265 |
| 85° | 74 | 73 | 74 | 74 | 72 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1225.7 | 1225.7 | 1225.7 | 1225.7 | 1225.7 |
| 2.5° | 1228.2 | 1223.3 | 1223.3 | 1221.6 | 1224.1 |
| 5° | 1225.7 | 1218.3 | 1219.1 | 1217.5 | 1219.9 |
| 7.5° | 1221.6 | 1211.7 | 1212.5 | 1210.8 | 1211.7 |
| 10° | 1214.2 | 1202.6 | 1201.8 | 1200.9 | 1201.8 |
| 12.5° | 1197.6 | 1191.0 | 1190.2 | 1188.5 | 1191.0 |
| 15° | 1175.3 | 1176.1 | 1174.5 | 1170.3 | 1176.9 |
| 17.5° | 1157.9 | 1157.1 | 1155.4 | 1151.3 | 1157.9 |
| 20° | 1134.8 | 1135.6 | 1133.9 | 1132.3 | 1136.4 |
| 22.5° | 1112.4 | 1109.9 | 1110.8 | 1109.9 | 1110.8 |
| 25° | 1082.7 | 1082.7 | 1081.8 | 1085.1 | 1085.1 |
| 27.5° | 1055.4 | 1052.0 | 1053.7 | 1057.0 | 1058.7 |
| 30° | 1028.1 | 1019.8 | 1021.4 | 1024.8 | 1028.9 |
| 32.5° | 995.8 | 987.5 | 989.2 | 992.5 | 994.2 |
| 35° | 958.6 | 952.0 | 953.6 | 957.8 | 958.6 |
| 37.5° | 920.5 | 916.4 | 918.1 | 921.4 | 923.9 |
| 40° | 881.7 | 880.0 | 882.5 | 881.7 | 887.5 |
| 42.5° | 842.0 | 841.1 | 843.6 | 843.6 | 844.5 |
| 45° | 802.3 | 803.9 | 804.8 | 801.4 | 803.1 |
| 47.5° | 758.4 | 759.3 | 762.6 | 760.9 | 761.7 |
| 50° | 715.4 | 714.6 | 717.9 | 718.7 | 716.3 |
| 52.5° | 674.1 | 669.9 | 673.2 | 674.9 | 673.2 |
| 55° | 628.6 | 625.3 | 626.9 | 629.4 | 628.6 |
| 57.5° | 583.9 | 580.6 | 581.4 | 585.6 | 583.9 |
| 60° | 535.1 | 534.3 | 533.5 | 536.8 | 538.4 |
| 62.5° | 487.2 | 486.3 | 484.7 | 488.0 | 489.6 |
| 65° | 438.4 | 440.8 | 440.0 | 438.4 | 441.7 |
| 67.5° | 392.0 | 394.5 | 392.0 | 390.4 | 390.4 |
| 70° | 343.2 | 345.7 | 344.9 | 343.2 | 342.4 |
| 72.5° | 297.7 | 297.7 | 296.1 | 295.3 | 296.1 |
| 75° | 250.6 | 249.8 | 250.6 | 249.8 | 250.6 |
| 77.5° | 204.3 | 205.1 | 205.1 | 205.1 | 204.3 |
| 80° | 158.8 | 158.8 | 158.8 | 159.6 | 160.5 |
| 82.5° | 116.6 | 114.1 | 116.6 | 115.0 | 115.8 |
| 85° | 73.6 | 72.8 | 74.4 | 73.6 | 72.0 |
| 87.5° | 33.1 | 33.9 | 33.9 | 34.7 | 34.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)