

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: P294226

Luminaire Tested: **24GR-LD5-34-FGW080-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294226
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-LD5-34-FGW080-UNV-L82765-W2A1-U-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3038.0 lumens
Efficiency: N/A
Efficacy: 130.7 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

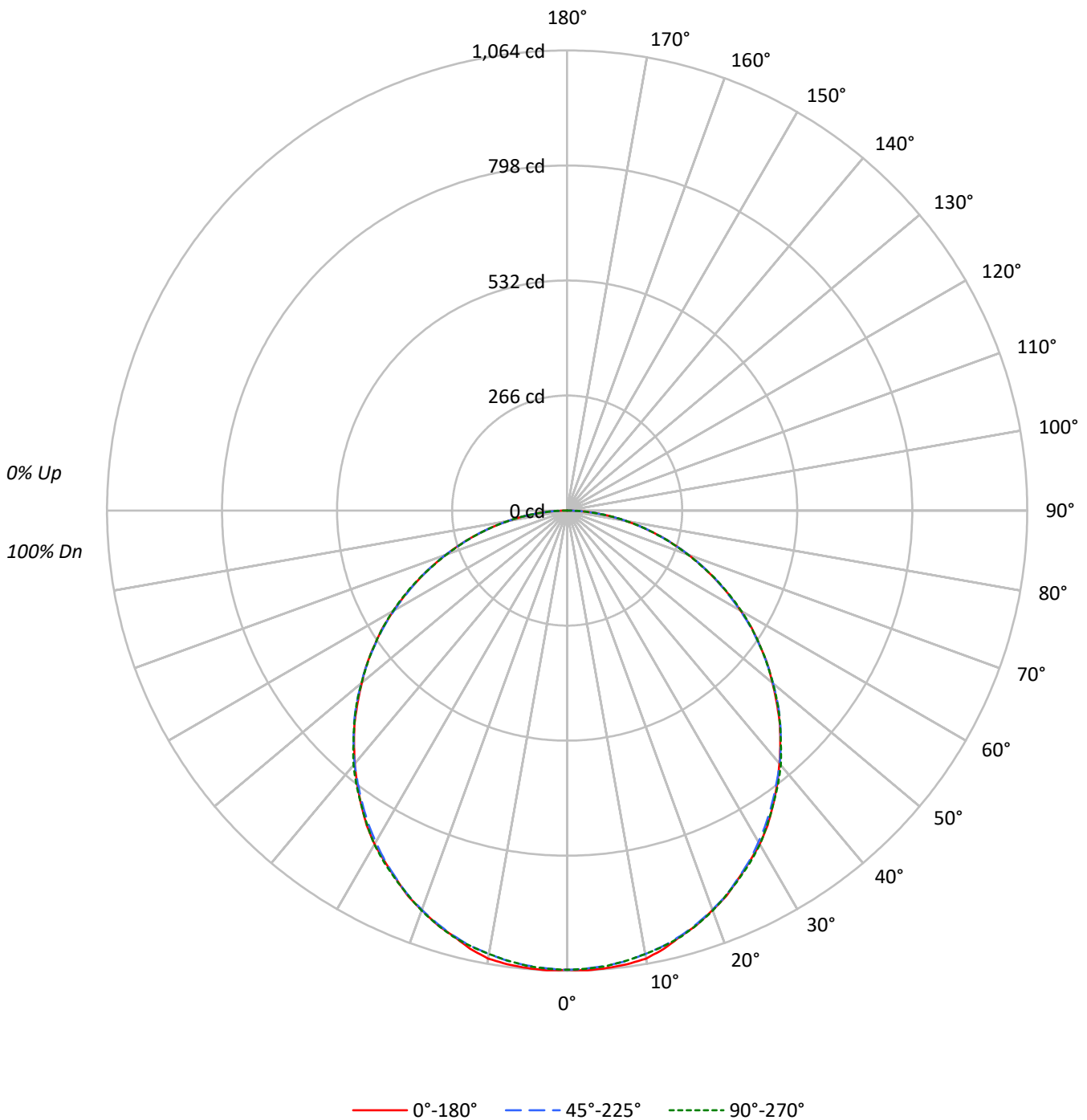
Input Watts (W): 23.25
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1429 | 1429 | 1429 |
| 5° | 1434 | 1426 | 1427 |
| 10° | 1437 | 1422 | 1422 |
| 15° | 1418 | 1417 | 1420 |
| 20° | 1407 | 1406 | 1410 |
| 25° | 1392 | 1391 | 1396 |
| 30° | 1384 | 1375 | 1385 |
| 35° | 1364 | 1357 | 1364 |
| 40° | 1342 | 1343 | 1350 |
| 45° | 1322 | 1326 | 1324 |
| 50° | 1297 | 1302 | 1299 |
| 55° | 1277 | 1274 | 1277 |
| 60° | 1248 | 1244 | 1255 |
| 65° | 1209 | 1214 | 1218 |
| 70° | 1170 | 1175 | 1167 |
| 75° | 1129 | 1129 | 1129 |
| 80° | 1066 | 1066 | 1077 |
| 85° | 985 | 996 | 962 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.4 | 3.3 |
| 10°-20° | 287.0 | 9.4 |
| 20°-30° | 432.5 | 14.2 |
| 30°-40° | 518.1 | 17.1 |
| 40°-50° | 536.3 | 17.7 |
| 50°-60° | 486.2 | 16.0 |
| 60°-70° | 377.0 | 12.4 |
| 70°-80° | 229.3 | 7.5 |
| 80°-90° | 71.3 | 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° | 819.9 | 27.0 |
| 0°-40° | 1338.0 | 44.0 |
| 0°-60° | 2360.5 | 77.7 |
| 0°-90° | 3038.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3038.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1062 | 1062 | 1062 | 1062 | 1062 | |
| 5° | 1062 | 1055 | 1056 | 1055 | 1057 | 101 |
| 15° | 1018 | 1019 | 1017 | 1014 | 1020 | 288 |
| 25° | 938 | 938 | 937 | 940 | 940 | 433 |
| 35° | 830 | 825 | 826 | 830 | 830 | 519 |
| 45° | 695 | 696 | 697 | 694 | 696 | 535 |
| 55° | 544 | 542 | 543 | 545 | 544 | 487 |
| 65° | 380 | 382 | 381 | 380 | 383 | 377 |
| 75° | 217 | 216 | 217 | 216 | 217 | 229 |
| 85° | 64 | 63 | 64 | 64 | 62 | 71 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1061.8 | 1061.8 | 1061.8 | 1061.8 | 1061.8 |
| 2.5° | 1064.0 | 1059.7 | 1059.7 | 1058.2 | 1060.4 |
| 5° | 1061.8 | 1055.4 | 1056.1 | 1054.7 | 1056.8 |
| 7.5° | 1058.2 | 1049.6 | 1050.4 | 1048.9 | 1049.6 |
| 10° | 1051.8 | 1041.8 | 1041.0 | 1040.3 | 1041.0 |
| 12.5° | 1037.5 | 1031.7 | 1031.0 | 1029.6 | 1031.7 |
| 15° | 1018.1 | 1018.8 | 1017.4 | 1013.8 | 1019.5 |
| 17.5° | 1003.1 | 1002.3 | 1000.9 | 997.3 | 1003.1 |
| 20° | 983.0 | 983.7 | 982.3 | 980.9 | 984.4 |
| 22.5° | 963.7 | 961.5 | 962.2 | 961.5 | 962.2 |
| 25° | 937.9 | 937.9 | 937.1 | 940.0 | 940.0 |
| 27.5° | 914.2 | 911.4 | 912.8 | 915.7 | 917.1 |
| 30° | 890.6 | 883.4 | 884.8 | 887.7 | 891.3 |
| 32.5° | 862.6 | 855.5 | 856.9 | 859.8 | 861.2 |
| 35° | 830.4 | 824.7 | 826.1 | 829.7 | 830.4 |
| 37.5° | 797.4 | 793.9 | 795.3 | 798.2 | 800.3 |
| 40° | 763.8 | 762.3 | 764.5 | 763.8 | 768.8 |
| 42.5° | 729.4 | 728.7 | 730.8 | 730.8 | 731.5 |
| 45° | 695.0 | 696.4 | 697.1 | 694.3 | 695.7 |
| 47.5° | 657.0 | 657.7 | 660.6 | 659.2 | 659.9 |
| 50° | 619.8 | 619.0 | 621.9 | 622.6 | 620.5 |
| 52.5° | 583.9 | 580.3 | 583.2 | 584.6 | 583.2 |
| 55° | 544.5 | 541.7 | 543.1 | 545.2 | 544.5 |
| 57.5° | 505.8 | 503.0 | 503.7 | 507.3 | 505.8 |
| 60° | 463.6 | 462.8 | 462.1 | 465.0 | 466.4 |
| 62.5° | 422.0 | 421.3 | 419.9 | 422.7 | 424.2 |
| 65° | 379.7 | 381.9 | 381.2 | 379.7 | 382.6 |
| 67.5° | 339.6 | 341.8 | 339.6 | 338.2 | 338.2 |
| 70° | 297.3 | 299.5 | 298.8 | 297.3 | 296.6 |
| 72.5° | 257.9 | 257.9 | 256.5 | 255.8 | 256.5 |
| 75° | 217.1 | 216.4 | 217.1 | 216.4 | 217.1 |
| 77.5° | 177.0 | 177.7 | 177.7 | 177.7 | 177.0 |
| 80° | 137.6 | 137.6 | 137.6 | 138.3 | 139.0 |
| 82.5° | 101.0 | 98.9 | 101.0 | 99.6 | 100.3 |
| 85° | 63.8 | 63.0 | 64.5 | 63.8 | 62.3 |
| 87.5° | 28.7 | 29.4 | 29.4 | 30.1 | 30.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)