

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: P294349

Luminaire Tested: **24GR-LD5-34-FGW080-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294349
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-L92765-W2A1-U-2700K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2385.0 lumens
Efficiency: N/A
Efficacy: 104.2 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

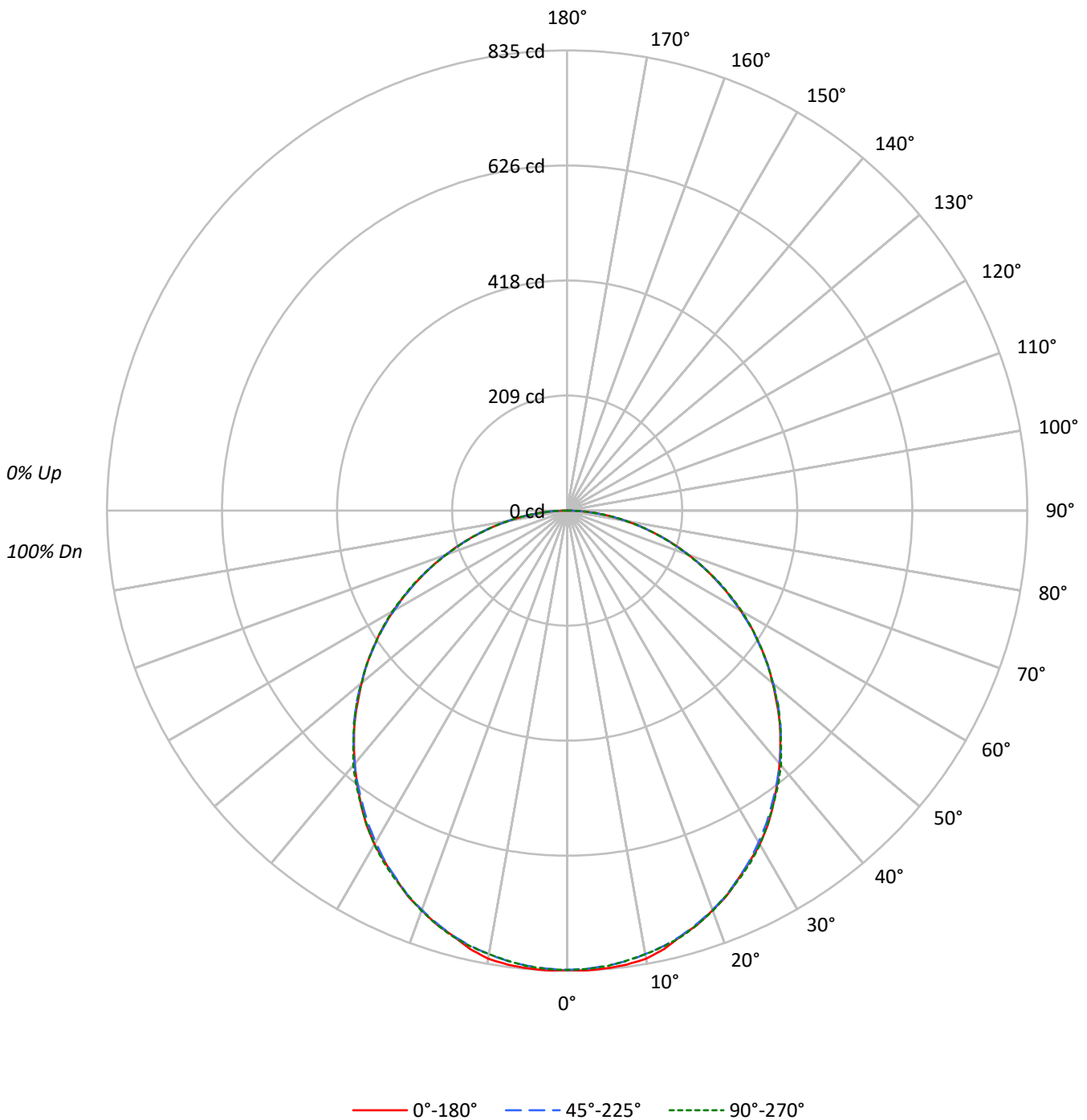
Input Watts (W): 22.878
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1122 | 1122 | 1122 |
| 5° | 1126 | 1120 | 1120 |
| 10° | 1128 | 1117 | 1117 |
| 15° | 1113 | 1113 | 1115 |
| 20° | 1105 | 1104 | 1107 |
| 25° | 1093 | 1092 | 1096 |
| 30° | 1086 | 1079 | 1087 |
| 35° | 1071 | 1065 | 1071 |
| 40° | 1053 | 1054 | 1060 |
| 45° | 1038 | 1041 | 1039 |
| 50° | 1018 | 1022 | 1020 |
| 55° | 1003 | 1000 | 1003 |
| 60° | 979 | 976 | 985 |
| 65° | 949 | 953 | 956 |
| 70° | 918 | 923 | 916 |
| 75° | 886 | 886 | 886 |
| 80° | 837 | 837 | 845 |
| 85° | 773 | 781 | 755 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.8 | 3.3 |
| 10°-20° | 225.3 | 9.4 |
| 20°-30° | 339.6 | 14.2 |
| 30°-40° | 406.7 | 17.1 |
| 40°-50° | 421.0 | 17.7 |
| 50°-60° | 381.7 | 16.0 |
| 60°-70° | 295.9 | 12.4 |
| 70°-80° | 180.0 | 7.5 |
| 80°-90° | 56.0 | 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° | 643.7 | 27.0 |
| 0°-40° | 1050.4 | 44.0 |
| 0°-60° | 1853.1 | 77.7 |
| 0°-90° | 2385.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2385.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 834 | 834 | 834 | 834 | 834 | |
| 5° | 834 | 828 | 829 | 828 | 830 | 79 |
| 15° | 799 | 800 | 799 | 796 | 800 | 226 |
| 25° | 736 | 736 | 736 | 738 | 738 | 340 |
| 35° | 652 | 647 | 648 | 651 | 652 | 408 |
| 45° | 546 | 547 | 547 | 545 | 546 | 420 |
| 55° | 428 | 425 | 426 | 428 | 428 | 382 |
| 65° | 298 | 300 | 299 | 298 | 300 | 296 |
| 75° | 170 | 170 | 170 | 170 | 170 | 180 |
| 85° | 50 | 50 | 51 | 50 | 49 | 56 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 833.6 | 833.6 | 833.6 | 833.6 | 833.6 |
| 2.5° | 835.3 | 831.9 | 831.9 | 830.8 | 832.5 |
| 5° | 833.6 | 828.5 | 829.1 | 828.0 | 829.6 |
| 7.5° | 830.8 | 824.0 | 824.6 | 823.5 | 824.0 |
| 10° | 825.7 | 817.8 | 817.3 | 816.7 | 817.3 |
| 12.5° | 814.5 | 810.0 | 809.4 | 808.3 | 810.0 |
| 15° | 799.3 | 799.8 | 798.7 | 795.9 | 800.4 |
| 17.5° | 787.5 | 786.9 | 785.8 | 783.0 | 787.5 |
| 20° | 771.7 | 772.3 | 771.2 | 770.0 | 772.8 |
| 22.5° | 756.5 | 754.8 | 755.4 | 754.8 | 755.4 |
| 25° | 736.3 | 736.3 | 735.7 | 738.0 | 738.0 |
| 27.5° | 717.7 | 715.5 | 716.6 | 718.8 | 720.0 |
| 30° | 699.2 | 693.5 | 694.7 | 696.9 | 699.7 |
| 32.5° | 677.2 | 671.6 | 672.7 | 675.0 | 676.1 |
| 35° | 651.9 | 647.4 | 648.5 | 651.3 | 651.9 |
| 37.5° | 626.0 | 623.2 | 624.3 | 626.6 | 628.3 |
| 40° | 599.6 | 598.5 | 600.2 | 599.6 | 603.5 |
| 42.5° | 572.6 | 572.0 | 573.7 | 573.7 | 574.3 |
| 45° | 545.6 | 546.7 | 547.3 | 545.0 | 546.2 |
| 47.5° | 515.8 | 516.4 | 518.6 | 517.5 | 518.0 |
| 50° | 486.5 | 486.0 | 488.2 | 488.8 | 487.1 |
| 52.5° | 458.4 | 455.6 | 457.9 | 459.0 | 457.9 |
| 55° | 427.5 | 425.2 | 426.4 | 428.0 | 427.5 |
| 57.5° | 397.1 | 394.9 | 395.4 | 398.2 | 397.1 |
| 60° | 363.9 | 363.4 | 362.8 | 365.0 | 366.2 |
| 62.5° | 331.3 | 330.7 | 329.6 | 331.9 | 333.0 |
| 65° | 298.1 | 299.8 | 299.2 | 298.1 | 300.4 |
| 67.5° | 266.6 | 268.3 | 266.6 | 265.5 | 265.5 |
| 70° | 233.4 | 235.1 | 234.6 | 233.4 | 232.9 |
| 72.5° | 202.5 | 202.5 | 201.4 | 200.8 | 201.4 |
| 75° | 170.4 | 169.9 | 170.4 | 169.9 | 170.4 |
| 77.5° | 138.9 | 139.5 | 139.5 | 139.5 | 138.9 |
| 80° | 108.0 | 108.0 | 108.0 | 108.6 | 109.1 |
| 82.5° | 79.3 | 77.6 | 79.3 | 78.2 | 78.7 |
| 85° | 50.1 | 49.5 | 50.6 | 50.1 | 48.9 |
| 87.5° | 22.5 | 23.1 | 23.1 | 23.6 | 23.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)