

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: P291778

Luminaire Tested: **22GR-LD5-24-F1-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291778
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-24-F1-UNV-L82765-W2A1-U-3000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (168) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2304.0 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.19 / 1.24
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

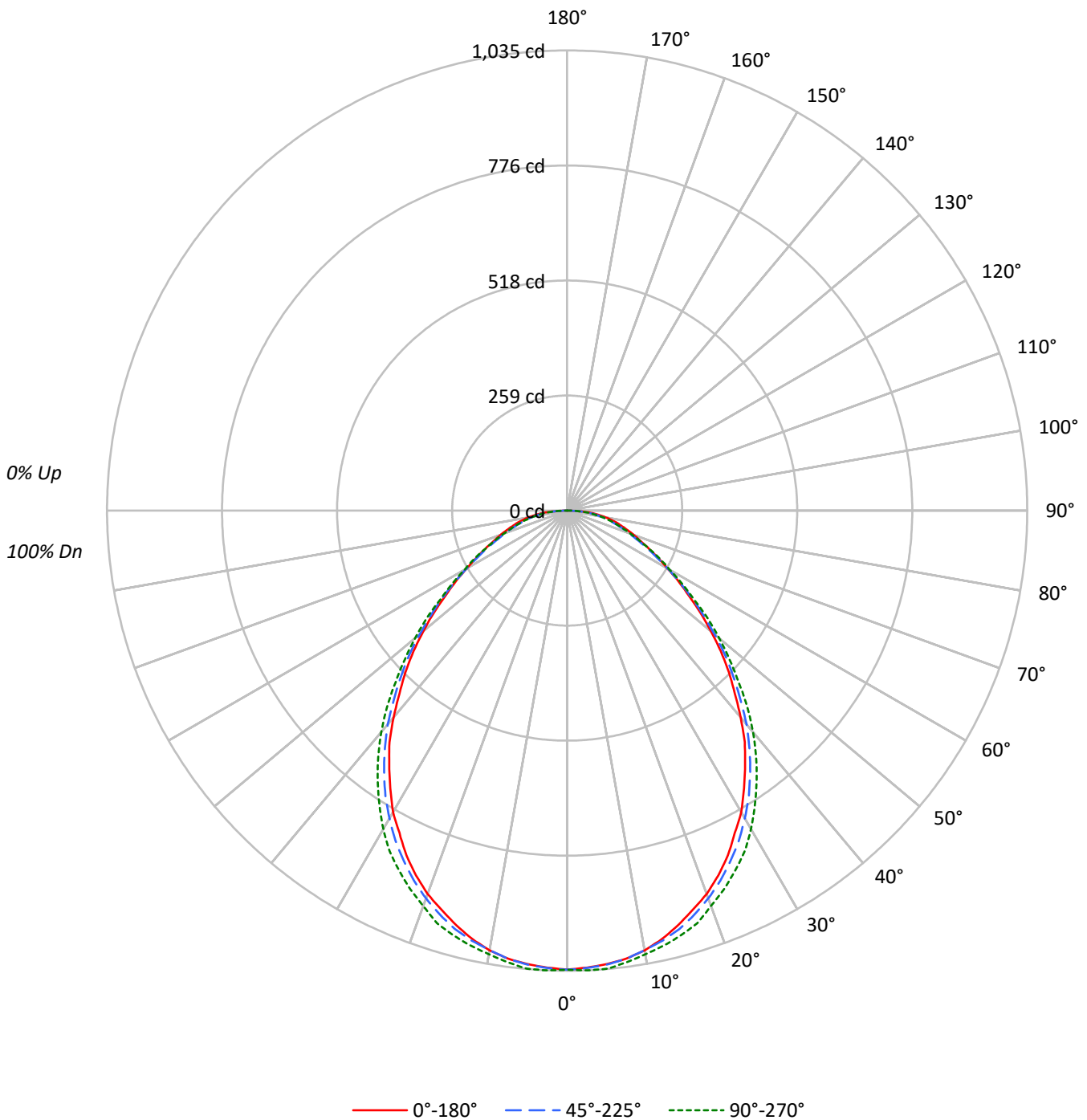
Input Watts (W): 18.042
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P291778

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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 | 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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 87 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | 63 | | | |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 | | | | | 55 | | | |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 63 | 56 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 | | | | | 48 | | | |
| 6 | 73 | 60 | 52 | 46 | 71 | 59 | 51 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | 43 | | | |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | | | 34 | | | |
| 9 | 59 | 47 | 39 | 33 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2778 | 2778 | 2778 |
| 5° | 2766 | 2769 | 2795 |
| 10° | 2745 | 2743 | 2769 |
| 15° | 2689 | 2716 | 2756 |
| 20° | 2628 | 2658 | 2710 |
| 25° | 2541 | 2582 | 2654 |
| 30° | 2434 | 2483 | 2570 |
| 35° | 2291 | 2357 | 2441 |
| 40° | 2132 | 2205 | 2285 |
| 45° | 1958 | 2014 | 2076 |
| 50° | 1766 | 1810 | 1868 |
| 55° | 1567 | 1604 | 1631 |
| 60° | 1404 | 1407 | 1435 |
| 65° | 1294 | 1250 | 1294 |
| 70° | 1249 | 1157 | 1191 |
| 75° | 1271 | 1133 | 1155 |
| 80° | 1370 | 1189 | 1189 |
| 85° | 1519 | 1257 | 1241 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.4 | 4.2 |
| 10°-20° | 274.7 | 11.9 |
| 20°-30° | 400.9 | 17.4 |
| 30°-40° | 448.9 | 19.5 |
| 40°-50° | 408.5 | 17.7 |
| 50°-60° | 307.5 | 13.3 |
| 60°-70° | 200.6 | 8.7 |
| 70°-80° | 120.3 | 5.2 |
| 80°-90° | 45.1 | 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° | 773.0 | 33.6 |
| 0°-40° | 1221.9 | 53.0 |
| 0°-60° | 1937.9 | 84.1 |
| 0°-90° | 2304.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2304.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1032 | 1032 | 1032 | 1032 | 1032 | |
| 5° | 1024 | 1022 | 1025 | 1029 | 1035 | 97 |
| 15° | 965 | 966 | 975 | 983 | 989 | 272 |
| 25° | 856 | 858 | 870 | 885 | 894 | 393 |
| 35° | 698 | 704 | 718 | 734 | 743 | 436 |
| 45° | 514 | 520 | 529 | 540 | 546 | 396 |
| 55° | 334 | 339 | 342 | 347 | 348 | 302 |
| 65° | 203 | 201 | 196 | 200 | 203 | 203 |
| 75° | 122 | 118 | 109 | 110 | 111 | 130 |
| 85° | 49 | 48 | 41 | 39 | 40 | 51 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P291778

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1032.5 | 1032.5 | 1032.5 | 1032.5 | 1032.5 |
| 2.5° | 1028.8 | 1028.2 | 1029.8 | 1032.5 | 1035.1 |
| 5° | 1024.0 | 1022.4 | 1025.1 | 1028.8 | 1034.6 |
| 7.5° | 1016.6 | 1016.6 | 1016.6 | 1023.5 | 1024.5 |
| 10° | 1004.4 | 1005.5 | 1003.9 | 1010.8 | 1013.4 |
| 12.5° | 987.0 | 987.5 | 990.7 | 997.5 | 1002.3 |
| 15° | 965.3 | 966.3 | 974.8 | 982.7 | 989.1 |
| 17.5° | 940.9 | 944.6 | 952.6 | 965.3 | 973.2 |
| 20° | 917.6 | 921.9 | 928.2 | 942.0 | 946.2 |
| 22.5° | 888.0 | 892.8 | 900.7 | 912.9 | 921.9 |
| 25° | 855.7 | 858.4 | 869.5 | 885.4 | 893.8 |
| 27.5° | 817.1 | 822.9 | 836.7 | 853.1 | 864.7 |
| 30° | 783.2 | 786.4 | 799.1 | 818.1 | 827.1 |
| 32.5° | 740.4 | 749.9 | 760.5 | 777.4 | 785.9 |
| 35° | 697.5 | 703.8 | 717.6 | 734.5 | 743.0 |
| 37.5° | 656.2 | 659.9 | 673.7 | 688.0 | 698.5 |
| 40° | 607.0 | 613.9 | 627.6 | 643.0 | 650.4 |
| 42.5° | 557.8 | 567.8 | 576.8 | 592.2 | 600.1 |
| 45° | 514.4 | 519.7 | 529.2 | 540.3 | 545.6 |
| 47.5° | 468.9 | 471.5 | 482.6 | 489.5 | 495.3 |
| 50° | 421.8 | 424.9 | 432.4 | 439.2 | 446.1 |
| 52.5° | 378.4 | 381.0 | 385.8 | 392.1 | 399.0 |
| 55° | 333.9 | 338.7 | 341.9 | 346.6 | 347.7 |
| 57.5° | 297.9 | 297.4 | 299.5 | 303.2 | 306.9 |
| 60° | 260.9 | 262.0 | 261.4 | 265.1 | 266.7 |
| 62.5° | 230.2 | 229.7 | 226.5 | 231.8 | 236.0 |
| 65° | 203.2 | 201.1 | 196.3 | 199.5 | 203.2 |
| 67.5° | 178.3 | 177.3 | 169.3 | 172.0 | 175.2 |
| 70° | 158.8 | 155.1 | 147.1 | 148.7 | 151.4 |
| 72.5° | 139.7 | 135.5 | 127.5 | 128.1 | 129.7 |
| 75° | 122.2 | 118.0 | 109.0 | 109.5 | 111.1 |
| 77.5° | 105.8 | 100.5 | 92.6 | 91.6 | 92.6 |
| 80° | 88.4 | 83.6 | 76.7 | 73.6 | 76.7 |
| 82.5° | 70.4 | 67.7 | 59.8 | 56.6 | 57.7 |
| 85° | 49.2 | 47.6 | 40.7 | 38.6 | 40.2 |
| 87.5° | 22.8 | 24.3 | 20.6 | 19.1 | 19.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)