

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: P291965

Luminaire Tested: **22GR-LD5-20-F125-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291965
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33295)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-20-F125-UNV-L82765-W2A1-U-3000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH F125 LENS
Light Source: (168) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1963.0 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.24
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

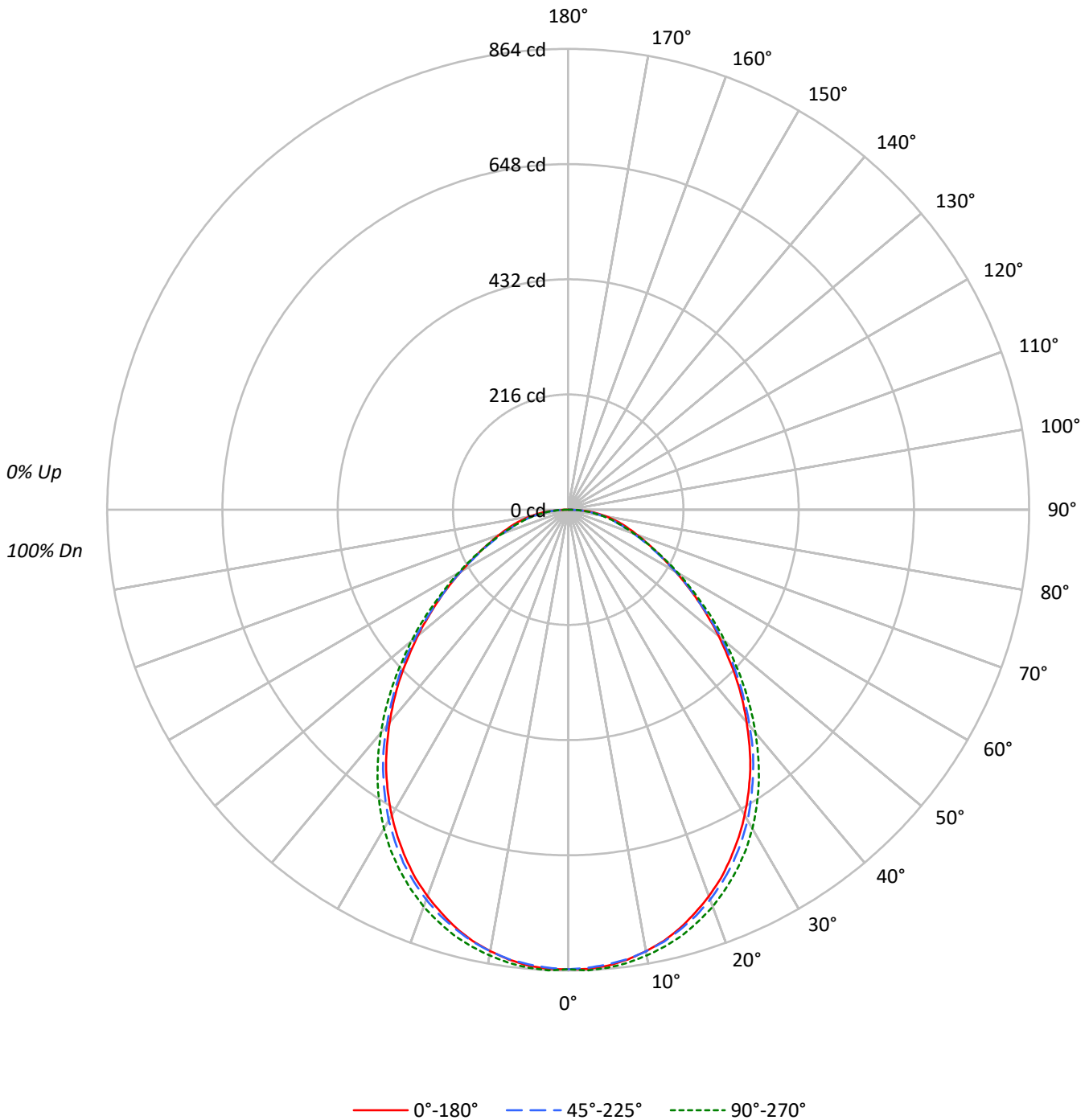
Input Watts (W): 15.345
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 62 |
| 4 | 85 | 74 | 65 | 59 | 83 | 72 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 58 | 52 | 76 | 65 | 57 | 51 | 63 | 56 | 51 | 61 | 55 | 50 | 59 | 54 | 50 | 48 |
| 6 | 73 | 60 | 52 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 45 | 54 | 49 | 44 | 42 |
| 7 | 68 | 55 | 46 | 41 | 66 | 54 | 46 | 40 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 63 | 50 | 42 | 36 | 62 | 50 | 42 | 36 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 40 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2319 | 2319 | 2319 |
| 5° | 2318 | 2312 | 2328 |
| 10° | 2296 | 2297 | 2319 |
| 15° | 2261 | 2269 | 2302 |
| 20° | 2208 | 2228 | 2268 |
| 25° | 2140 | 2169 | 2216 |
| 30° | 2055 | 2090 | 2146 |
| 35° | 1954 | 1986 | 2047 |
| 40° | 1827 | 1858 | 1918 |
| 45° | 1692 | 1718 | 1768 |
| 50° | 1541 | 1565 | 1605 |
| 55° | 1391 | 1395 | 1436 |
| 60° | 1248 | 1252 | 1282 |
| 65° | 1137 | 1114 | 1140 |
| 70° | 1083 | 1021 | 1039 |
| 75° | 1090 | 985 | 990 |
| 80° | 1130 | 995 | 989 |
| 85° | 1238 | 1056 | 997 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 81.4 | 4.1 |
| 10°-20° | 230.0 | 11.7 |
| 20°-30° | 336.6 | 17.1 |
| 30°-40° | 378.5 | 19.3 |
| 40°-50° | 349.0 | 17.8 |
| 50°-60° | 269.0 | 13.7 |
| 60°-70° | 177.5 | 9.0 |
| 70°-80° | 103.3 | 5.3 |
| 80°-90° | 37.6 | 1.9 |
| 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° | 648.0 | 33.0 |
| 0°-40° | 1026.5 | 52.3 |
| 0°-60° | 1644.5 | 83.8 |
| 0°-90° | 1963.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1963.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 862 | 862 | 862 | 862 | 862 | |
| 5° | 858 | 856 | 856 | 860 | 862 | 81 |
| 15° | 812 | 812 | 814 | 822 | 826 | 228 |
| 25° | 721 | 724 | 731 | 741 | 746 | 331 |
| 35° | 595 | 598 | 604 | 617 | 623 | 371 |
| 45° | 444 | 445 | 451 | 460 | 465 | 342 |
| 55° | 296 | 296 | 297 | 302 | 306 | 266 |
| 65° | 178 | 178 | 175 | 176 | 179 | 179 |
| 75° | 105 | 100 | 95 | 93 | 95 | 110 |
| 85° | 40 | 40 | 34 | 31 | 32 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 861.8 | 861.8 | 861.8 | 861.8 | 861.8 |
| 2.5° | 861.8 | 859.9 | 859.5 | 862.7 | 864.5 |
| 5° | 858.1 | 856.3 | 855.8 | 859.9 | 861.8 |
| 7.5° | 850.8 | 849.5 | 849.9 | 854.5 | 856.8 |
| 10° | 840.4 | 839.9 | 840.8 | 845.8 | 848.6 |
| 12.5° | 828.1 | 827.6 | 829.4 | 834.9 | 838.5 |
| 15° | 811.7 | 811.7 | 814.4 | 821.7 | 826.2 |
| 17.5° | 792.1 | 793.4 | 797.5 | 804.8 | 809.8 |
| 20° | 771.1 | 772.5 | 778.0 | 786.2 | 792.1 |
| 22.5° | 747.9 | 749.7 | 755.2 | 765.2 | 770.2 |
| 25° | 720.6 | 724.2 | 730.6 | 740.6 | 746.5 |
| 27.5° | 692.3 | 696.4 | 702.3 | 714.6 | 720.1 |
| 30° | 661.4 | 664.1 | 672.7 | 684.1 | 690.5 |
| 32.5° | 628.6 | 631.3 | 638.6 | 652.2 | 657.7 |
| 35° | 594.9 | 597.6 | 604.4 | 616.7 | 623.1 |
| 37.5° | 558.4 | 560.7 | 568.9 | 578.5 | 585.3 |
| 40° | 520.2 | 523.3 | 528.8 | 540.2 | 546.1 |
| 42.5° | 482.8 | 484.2 | 490.1 | 501.5 | 506.0 |
| 45° | 444.5 | 445.0 | 451.4 | 460.5 | 464.6 |
| 47.5° | 404.9 | 405.8 | 413.6 | 419.0 | 423.1 |
| 50° | 368.0 | 368.5 | 373.9 | 379.0 | 383.5 |
| 52.5° | 331.1 | 331.1 | 333.9 | 339.3 | 345.3 |
| 55° | 296.5 | 296.1 | 297.4 | 302.4 | 306.1 |
| 57.5° | 263.7 | 263.3 | 265.1 | 268.3 | 271.0 |
| 60° | 231.8 | 230.9 | 232.7 | 234.6 | 238.2 |
| 62.5° | 203.6 | 204.5 | 202.2 | 205.0 | 207.7 |
| 65° | 178.5 | 177.6 | 174.9 | 176.3 | 179.0 |
| 67.5° | 157.1 | 155.8 | 151.2 | 152.1 | 155.3 |
| 70° | 137.6 | 134.8 | 129.8 | 129.8 | 132.1 |
| 72.5° | 119.8 | 117.1 | 110.7 | 111.1 | 112.0 |
| 75° | 104.8 | 100.2 | 94.7 | 92.9 | 95.2 |
| 77.5° | 88.4 | 84.7 | 79.7 | 78.3 | 79.3 |
| 80° | 72.9 | 70.1 | 64.2 | 62.4 | 63.8 |
| 82.5° | 57.8 | 55.6 | 48.7 | 47.4 | 47.8 |
| 85° | 40.1 | 39.6 | 34.2 | 31.4 | 32.3 |
| 87.5° | 21.4 | 21.9 | 17.8 | 15.9 | 16.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)