

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: P291737

Luminaire Tested: **22GR-LD5-20-F1-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291737
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-LD5-20-F1-UNV-L83050-W2A1-U-5000K
Description: GRLED 2x2 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2204.0 lumens
Efficiency: N/A
Efficacy: 136.2 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

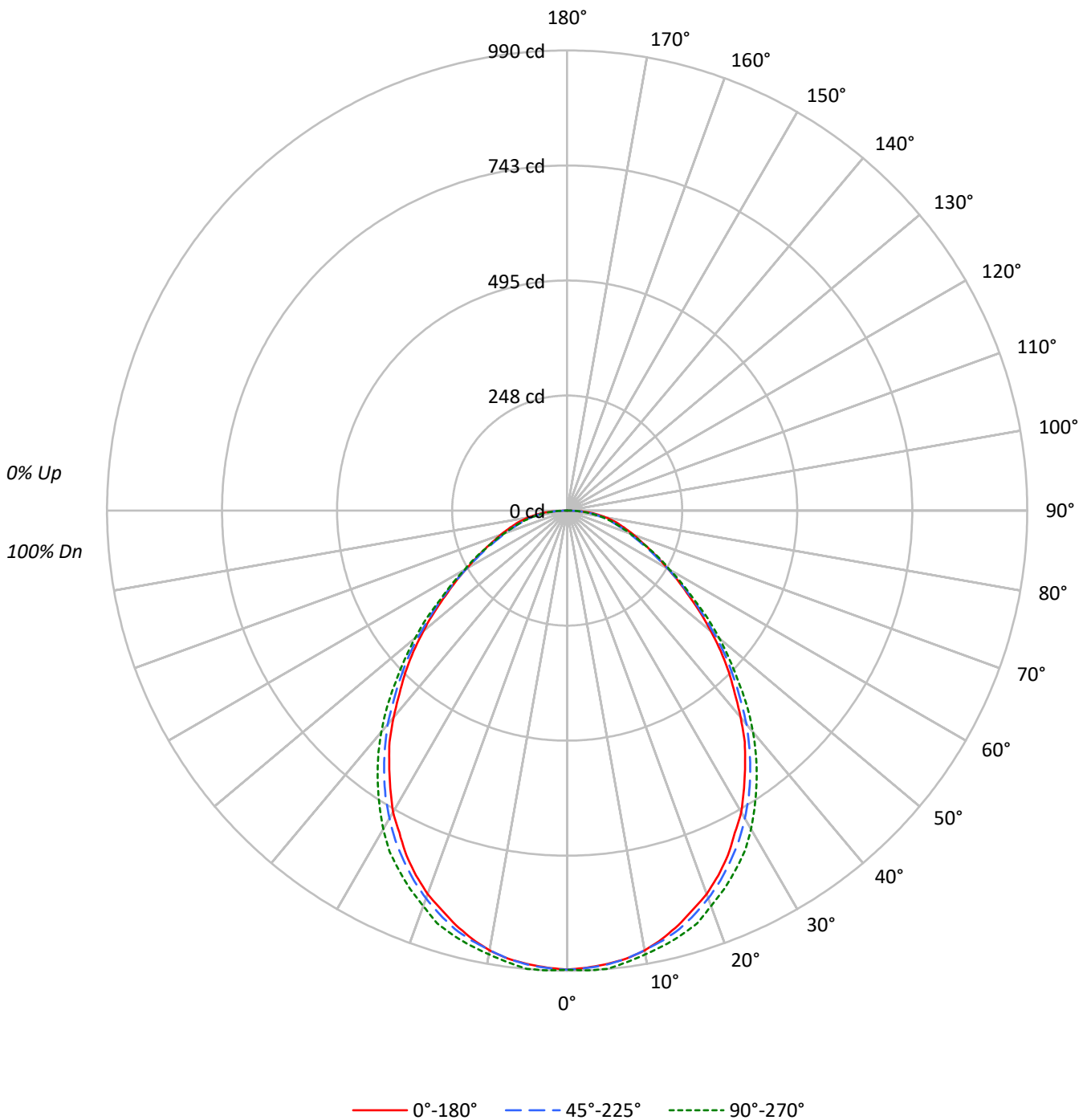
Input Watts (W): 16.182
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P291737

CATALOG NUMBER: 22GR-LD5-20-F1-UNV-L83050-W2A1-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P291737

CATALOG NUMBER: 22GR-LD5-20-F1-UNV-L83050-W2A1-U-5000K

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° | 2658 | 2658 | 2658 |
| 5° | 2646 | 2649 | 2673 |
| 10° | 2625 | 2624 | 2649 |
| 15° | 2573 | 2598 | 2636 |
| 20° | 2514 | 2543 | 2592 |
| 25° | 2431 | 2469 | 2539 |
| 30° | 2328 | 2375 | 2458 |
| 35° | 2192 | 2255 | 2335 |
| 40° | 2040 | 2109 | 2186 |
| 45° | 1873 | 1926 | 1986 |
| 50° | 1689 | 1732 | 1787 |
| 55° | 1498 | 1534 | 1560 |
| 60° | 1343 | 1346 | 1373 |
| 65° | 1238 | 1196 | 1238 |
| 70° | 1195 | 1107 | 1139 |
| 75° | 1215 | 1084 | 1105 |
| 80° | 1309 | 1137 | 1137 |
| 85° | 1454 | 1204 | 1189 |



TEST NUMBER: P291737

CATALOG NUMBER: 22GR-LD5-20-F1-UNV-L83050-W2A1-U-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 93.2 | 4.2 |
| 10°-20° | 262.8 | 11.9 |
| 20°-30° | 383.5 | 17.4 |
| 30°-40° | 429.4 | 19.5 |
| 40°-50° | 390.8 | 17.7 |
| 50°-60° | 294.1 | 13.3 |
| 60°-70° | 191.9 | 8.7 |
| 70°-80° | 115.1 | 5.2 |
| 80°-90° | 43.2 | 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° | 739.5 | 33.6 |
| 0°-40° | 1168.9 | 53.0 |
| 0°-60° | 1853.8 | 84.1 |
| 0°-90° | 2204.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2204.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 988 | 988 | 988 | 988 | 988 | |
| 5° | 980 | 978 | 981 | 984 | 990 | 93 |
| 15° | 923 | 924 | 932 | 940 | 946 | 260 |
| 25° | 819 | 821 | 832 | 847 | 855 | 376 |
| 35° | 667 | 673 | 686 | 703 | 711 | 417 |
| 45° | 492 | 497 | 506 | 517 | 522 | 379 |
| 55° | 319 | 324 | 327 | 332 | 333 | 289 |
| 65° | 194 | 192 | 188 | 191 | 194 | 194 |
| 75° | 117 | 113 | 104 | 105 | 106 | 124 |
| 85° | 47 | 46 | 39 | 37 | 38 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P291737

CATALOG NUMBER: 22GR-LD5-20-F1-UNV-L83050-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 987.7 | 987.7 | 987.7 | 987.7 | 987.7 |
| 2.5° | 984.1 | 983.6 | 985.1 | 987.7 | 990.2 |
| 5° | 979.6 | 978.0 | 980.6 | 984.1 | 989.7 |
| 7.5° | 972.5 | 972.5 | 972.5 | 979.1 | 980.1 |
| 10° | 960.8 | 961.8 | 960.3 | 966.9 | 969.4 |
| 12.5° | 944.1 | 944.6 | 947.7 | 954.2 | 958.8 |
| 15° | 923.4 | 924.4 | 932.5 | 940.1 | 946.1 |
| 17.5° | 900.1 | 903.6 | 911.2 | 923.4 | 931.0 |
| 20° | 877.8 | 881.9 | 887.9 | 901.1 | 905.1 |
| 22.5° | 849.5 | 854.0 | 861.6 | 873.3 | 881.9 |
| 25° | 818.6 | 821.1 | 831.7 | 846.9 | 855.0 |
| 27.5° | 781.6 | 787.2 | 800.4 | 816.0 | 827.2 |
| 30° | 749.2 | 752.3 | 764.4 | 782.6 | 791.2 |
| 32.5° | 708.2 | 717.3 | 727.5 | 743.7 | 751.8 |
| 35° | 667.2 | 673.3 | 686.5 | 702.7 | 710.8 |
| 37.5° | 627.7 | 631.3 | 644.4 | 658.1 | 668.2 |
| 40° | 580.6 | 587.2 | 600.4 | 615.1 | 622.2 |
| 42.5° | 533.6 | 543.2 | 551.8 | 566.5 | 574.1 |
| 45° | 492.1 | 497.1 | 506.2 | 516.9 | 521.9 |
| 47.5° | 448.5 | 451.1 | 461.7 | 468.3 | 473.8 |
| 50° | 403.5 | 406.5 | 413.6 | 420.2 | 426.8 |
| 52.5° | 362.0 | 364.5 | 369.0 | 375.1 | 381.7 |
| 55° | 319.4 | 324.0 | 327.0 | 331.6 | 332.6 |
| 57.5° | 285.0 | 284.5 | 286.5 | 290.1 | 293.6 |
| 60° | 249.6 | 250.6 | 250.1 | 253.6 | 255.1 |
| 62.5° | 220.2 | 219.7 | 216.7 | 221.7 | 225.8 |
| 65° | 194.4 | 192.4 | 187.8 | 190.8 | 194.4 |
| 67.5° | 170.6 | 169.6 | 162.0 | 164.5 | 167.6 |
| 70° | 151.9 | 148.3 | 140.7 | 142.3 | 144.8 |
| 72.5° | 133.6 | 129.6 | 122.0 | 122.5 | 124.0 |
| 75° | 116.9 | 112.9 | 104.3 | 104.8 | 106.3 |
| 77.5° | 101.2 | 96.2 | 88.6 | 87.6 | 88.6 |
| 80° | 84.5 | 80.0 | 73.4 | 70.4 | 73.4 |
| 82.5° | 67.3 | 64.8 | 57.2 | 54.2 | 55.2 |
| 85° | 47.1 | 45.6 | 39.0 | 37.0 | 38.5 |
| 87.5° | 21.8 | 23.3 | 19.7 | 18.2 | 18.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)