

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: P475926

Luminaire Tested: **22GR-LD5-70-F1-UNV-L850-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475926
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-70-F1-UNV-L850-CD1-U
Description: GR 2'X2' LED TROFFER w/ F1 LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7196.9 lumens
Efficiency: N/A
Efficacy: 137.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.17 / 1.24
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

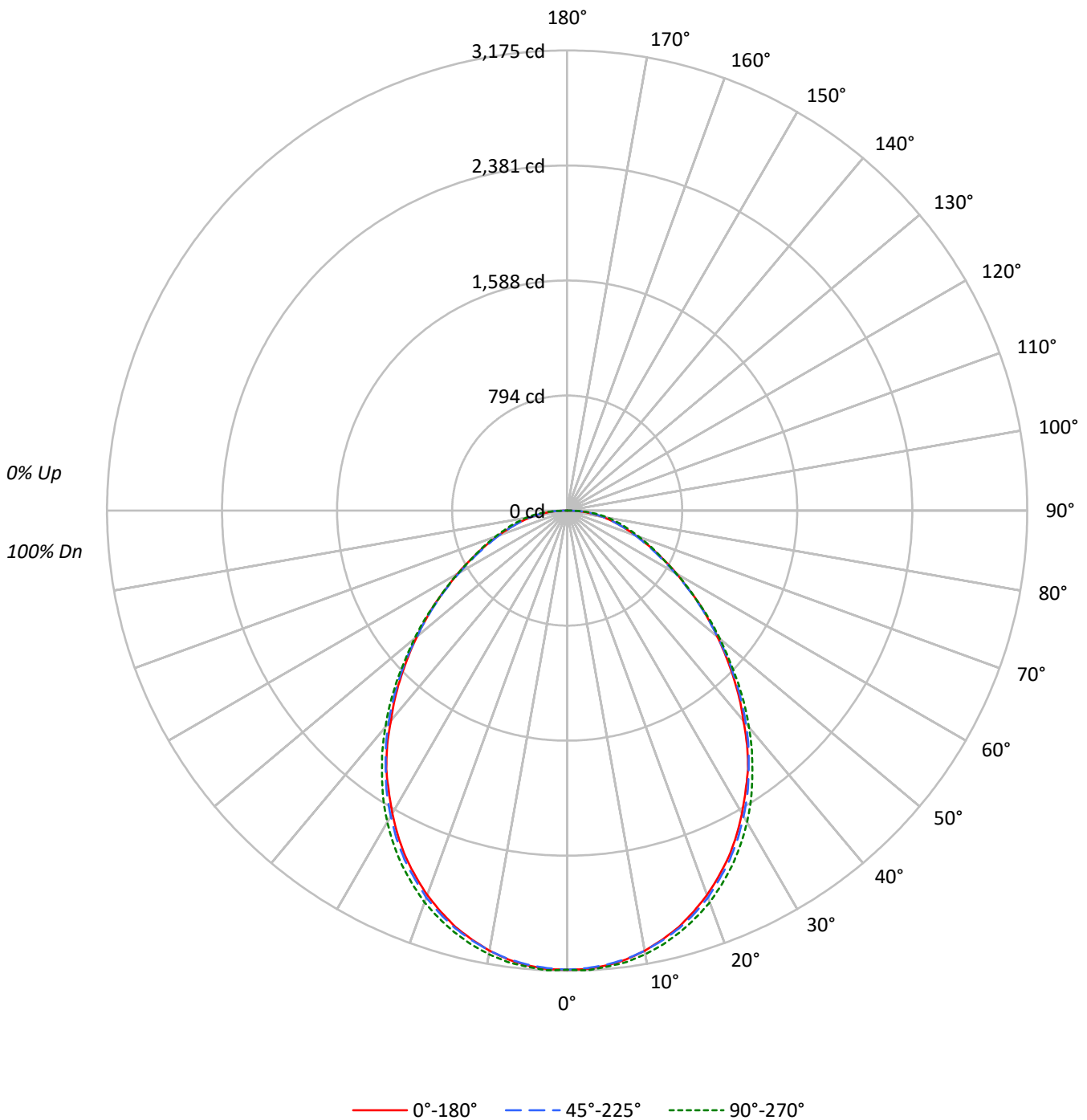
Input Watts (W): 52.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 94 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 90 | 80 | 73 | 68 | 78 | 71 | 66 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 82 | 72 | 64 | 58 | 70 | 63 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8527 | 8527 | 8527 |
| 5° | 8510 | 8494 | 8535 |
| 10° | 8426 | 8426 | 8492 |
| 15° | 8286 | 8312 | 8388 |
| 20° | 8083 | 8135 | 8239 |
| 25° | 7831 | 7885 | 8011 |
| 30° | 7498 | 7563 | 7714 |
| 35° | 7149 | 7169 | 7318 |
| 40° | 6642 | 6738 | 6855 |
| 45° | 6168 | 6226 | 6318 |
| 50° | 5667 | 5667 | 5756 |
| 55° | 5197 | 5141 | 5169 |
| 60° | 4704 | 4623 | 4688 |
| 65° | 4290 | 4194 | 4329 |
| 70° | 3964 | 3940 | 4131 |
| 75° | 3818 | 3787 | 4165 |
| 80° | 3857 | 3857 | 4421 |
| 85° | 4029 | 4218 | 5060 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 298.8 | 4.2 |
| 10°-20° | 841.1 | 11.7 |
| 20°-30° | 1223.0 | 17.0 |
| 30°-40° | 1368.9 | 19.0 |
| 40°-50° | 1263.5 | 17.6 |
| 50°-60° | 986.0 | 13.7 |
| 60°-70° | 667.4 | 9.3 |
| 70°-80° | 398.5 | 5.5 |
| 80°-90° | 149.7 | 2.1 |
| 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° | 2362.9 | 32.8 |
| 0°-40° | 3731.8 | 51.9 |
| 0°-60° | 5981.2 | 83.1 |
| 0°-90° | 7196.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 7196.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3169 | 3169 | 3169 | 3169 | 3169 | |
| 5° | 3150 | 3144 | 3144 | 3156 | 3160 | 299 |
| 15° | 2974 | 2974 | 2984 | 3002 | 3011 | 837 |
| 25° | 2638 | 2638 | 2656 | 2683 | 2698 | 1211 |
| 35° | 2176 | 2173 | 2182 | 2216 | 2228 | 1354 |
| 45° | 1621 | 1630 | 1636 | 1648 | 1660 | 1250 |
| 55° | 1108 | 1099 | 1096 | 1102 | 1102 | 988 |
| 65° | 674 | 668 | 659 | 671 | 680 | 671 |
| 75° | 367 | 364 | 364 | 386 | 401 | 390 |
| 85° | 130 | 128 | 137 | 158 | 164 | 139 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P475926

CATALOG NUMBER: 22GR-LD5-70-F1-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3168.6 | 3168.6 | 3168.6 | 3168.6 | 3168.6 |
| 2.5° | 3165.6 | 3159.5 | 3159.5 | 3168.6 | 3174.7 |
| 5° | 3150.4 | 3144.3 | 3144.3 | 3156.5 | 3159.5 |
| 7.5° | 3123.1 | 3120.0 | 3120.0 | 3132.2 | 3141.3 |
| 10° | 3083.6 | 3080.6 | 3083.6 | 3095.8 | 3107.9 |
| 12.5° | 3032.0 | 3032.0 | 3038.1 | 3053.3 | 3065.4 |
| 15° | 2974.4 | 2974.4 | 2983.5 | 3001.7 | 3010.8 |
| 17.5° | 2901.5 | 2904.6 | 2916.7 | 2937.9 | 2947.0 |
| 20° | 2822.6 | 2828.7 | 2840.8 | 2859.0 | 2877.2 |
| 22.5° | 2731.6 | 2737.6 | 2749.8 | 2777.1 | 2789.2 |
| 25° | 2637.5 | 2637.5 | 2655.7 | 2683.0 | 2698.2 |
| 27.5° | 2528.2 | 2531.2 | 2549.4 | 2579.8 | 2595.0 |
| 30° | 2412.9 | 2422.0 | 2434.1 | 2461.4 | 2482.7 |
| 32.5° | 2291.5 | 2300.6 | 2315.8 | 2346.1 | 2361.3 |
| 35° | 2176.1 | 2173.1 | 2182.2 | 2215.6 | 2227.7 |
| 37.5° | 2039.6 | 2042.6 | 2054.7 | 2079.0 | 2094.2 |
| 40° | 1890.8 | 1906.0 | 1918.2 | 1936.4 | 1951.5 |
| 42.5° | 1760.3 | 1769.4 | 1778.5 | 1796.8 | 1808.9 |
| 45° | 1620.7 | 1629.8 | 1635.9 | 1648.0 | 1660.2 |
| 47.5° | 1484.1 | 1487.2 | 1496.3 | 1502.4 | 1511.5 |
| 50° | 1353.6 | 1356.7 | 1353.6 | 1362.7 | 1374.9 |
| 52.5° | 1226.2 | 1223.1 | 1223.1 | 1226.2 | 1244.4 |
| 55° | 1107.8 | 1098.7 | 1095.7 | 1101.7 | 1101.7 |
| 57.5° | 977.3 | 974.3 | 974.3 | 971.2 | 986.4 |
| 60° | 874.1 | 865.0 | 858.9 | 865.0 | 871.1 |
| 62.5° | 767.9 | 758.8 | 752.7 | 764.8 | 764.8 |
| 65° | 673.8 | 667.7 | 658.6 | 670.7 | 679.9 |
| 67.5° | 582.7 | 576.7 | 573.6 | 588.8 | 600.9 |
| 70° | 503.8 | 500.8 | 500.8 | 516.0 | 525.1 |
| 72.5° | 431.0 | 427.9 | 427.9 | 449.2 | 458.3 |
| 75° | 367.2 | 364.2 | 364.2 | 385.5 | 400.6 |
| 77.5° | 303.5 | 300.5 | 309.6 | 327.8 | 343.0 |
| 80° | 248.9 | 245.8 | 248.9 | 273.2 | 285.3 |
| 82.5° | 188.2 | 188.2 | 194.2 | 218.5 | 230.7 |
| 85° | 130.5 | 127.5 | 136.6 | 157.8 | 163.9 |
| 87.5° | 66.8 | 69.8 | 72.8 | 85.0 | 85.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)