

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: P476069

Luminaire Tested: **22GR-LD5-60-A-UNV-L850-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476069
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-60-A-UNV-L850-CD1-U
Description: GR 2'X2' LED TROFFER w/ A LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5907.7 lumens
Efficiency: N/A
Efficacy: 133.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

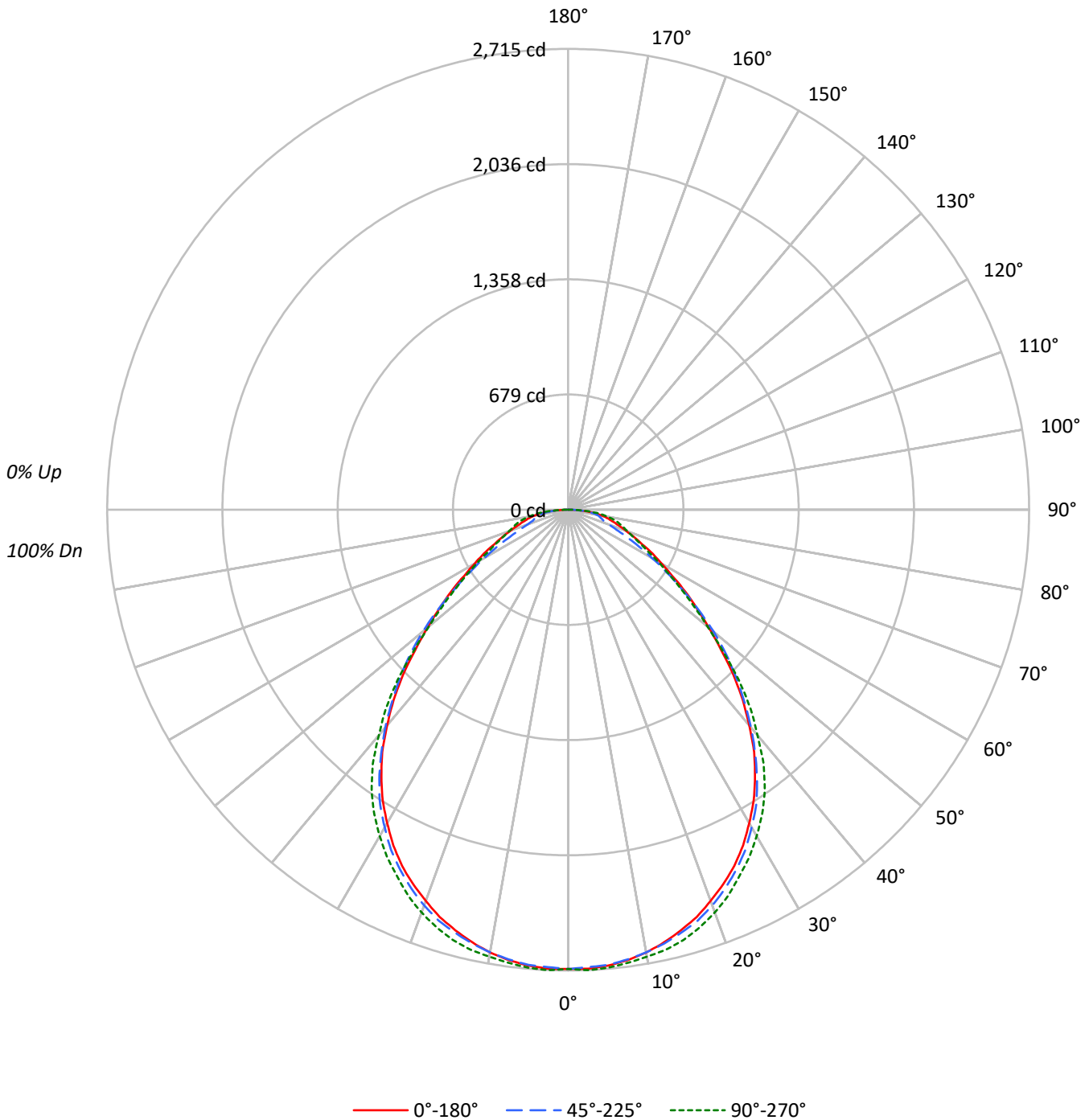
Input Watts (W): 44.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 94 | 87 | 82 | 99 | 92 | 86 | 81 | 88 | 84 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 84 | 76 | 70 | 91 | 82 | 75 | 70 | 79 | 73 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 60 | 71 | 65 | 60 | 69 | 63 | 59 | 67 | 62 | 58 | 56 |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 36 |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 30 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7280 | 7280 | 7280 |
| 5° | 7282 | 7272 | 7316 |
| 10° | 7238 | 7235 | 7306 |
| 15° | 7147 | 7185 | 7311 |
| 20° | 7023 | 7106 | 7232 |
| 25° | 6874 | 6952 | 7078 |
| 30° | 6625 | 6715 | 6898 |
| 35° | 6300 | 6372 | 6630 |
| 40° | 5825 | 5887 | 6094 |
| 45° | 5232 | 5326 | 5410 |
| 50° | 4523 | 4685 | 4477 |
| 55° | 3947 | 3843 | 3792 |
| 60° | 3419 | 3078 | 3285 |
| 65° | 3055 | 2416 | 2951 |
| 70° | 2833 | 2001 | 2911 |
| 75° | 2829 | 2115 | 3230 |
| 80° | 3135 | 2661 | 3642 |
| 85° | 3270 | 2887 | 4122 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 256.0 | 4.3 |
| 10°-20° | 729.2 | 12.3 |
| 20°-30° | 1078.5 | 18.3 |
| 30°-40° | 1217.0 | 20.6 |
| 40°-50° | 1072.8 | 18.2 |
| 50°-60° | 735.9 | 12.5 |
| 60°-70° | 434.3 | 7.4 |
| 70°-80° | 271.0 | 4.6 |
| 80°-90° | 113.0 | 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° | 2063.7 | 34.9 |
| 0°-40° | 3280.7 | 55.5 |
| 0°-60° | 5089.4 | 86.1 |
| 0°-90° | 5907.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5907.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2705 | 2705 | 2705 | 2705 | 2705 | |
| 5° | 2696 | 2690 | 2692 | 2701 | 2708 | 256 |
| 15° | 2565 | 2568 | 2579 | 2611 | 2624 | 723 |
| 25° | 2315 | 2323 | 2341 | 2371 | 2384 | 1063 |
| 35° | 1918 | 1934 | 1940 | 1987 | 2018 | 1195 |
| 45° | 1375 | 1382 | 1399 | 1408 | 1422 | 1056 |
| 55° | 841 | 821 | 819 | 792 | 808 | 755 |
| 65° | 480 | 422 | 379 | 439 | 463 | 483 |
| 75° | 272 | 245 | 203 | 284 | 311 | 292 |
| 85° | 106 | 99 | 94 | 122 | 134 | 114 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476069

CATALOG NUMBER: 22GR-LD5-60-A-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2705.4 | 2705.4 | 2705.4 | 2705.4 | 2705.4 |
| 2.5° | 2706.9 | 2699.9 | 2697.4 | 2708.3 | 2715.2 |
| 5° | 2695.9 | 2690.5 | 2691.9 | 2701.4 | 2708.3 |
| 7.5° | 2676.7 | 2672.7 | 2672.7 | 2686.1 | 2693.0 |
| 10° | 2649.0 | 2647.9 | 2647.9 | 2664.3 | 2673.7 |
| 12.5° | 2610.8 | 2611.9 | 2617.4 | 2639.6 | 2655.9 |
| 15° | 2565.3 | 2567.9 | 2579.2 | 2610.8 | 2624.3 |
| 17.5° | 2515.9 | 2515.9 | 2537.7 | 2562.4 | 2579.2 |
| 20° | 2452.6 | 2456.6 | 2481.3 | 2509.0 | 2525.3 |
| 22.5° | 2387.8 | 2394.7 | 2415.5 | 2447.1 | 2462.0 |
| 25° | 2315.1 | 2323.4 | 2341.3 | 2371.4 | 2383.8 |
| 27.5° | 2229.9 | 2240.9 | 2260.1 | 2282.0 | 2308.2 |
| 30° | 2132.1 | 2148.8 | 2161.2 | 2191.4 | 2220.1 |
| 32.5° | 2033.1 | 2048.4 | 2062.2 | 2093.9 | 2126.6 |
| 35° | 1917.8 | 1934.2 | 1939.6 | 1986.6 | 2018.2 |
| 37.5° | 1799.6 | 1806.5 | 1809.1 | 1856.0 | 1890.2 |
| 40° | 1658.1 | 1671.5 | 1675.9 | 1713.0 | 1734.8 |
| 42.5° | 1521.7 | 1527.5 | 1535.5 | 1563.1 | 1589.3 |
| 45° | 1374.7 | 1381.6 | 1399.4 | 1407.8 | 1421.6 |
| 47.5° | 1220.8 | 1241.6 | 1261.9 | 1235.7 | 1237.2 |
| 50° | 1080.4 | 1097.1 | 1119.0 | 1069.5 | 1069.5 |
| 52.5° | 955.3 | 963.6 | 965.1 | 924.0 | 932.0 |
| 55° | 841.4 | 820.7 | 819.2 | 791.9 | 808.3 |
| 57.5° | 727.2 | 699.9 | 690.1 | 681.7 | 701.0 |
| 60° | 635.2 | 585.7 | 571.9 | 584.2 | 610.4 |
| 62.5° | 559.5 | 496.2 | 470.0 | 501.6 | 525.3 |
| 65° | 479.8 | 422.0 | 379.4 | 438.7 | 463.4 |
| 67.5° | 418.0 | 363.0 | 308.1 | 391.8 | 409.6 |
| 70° | 360.1 | 317.6 | 254.3 | 356.1 | 370.0 |
| 72.5° | 313.6 | 280.5 | 220.1 | 321.6 | 338.3 |
| 75° | 272.1 | 244.8 | 203.4 | 284.5 | 310.7 |
| 77.5° | 239.4 | 208.8 | 189.9 | 245.9 | 277.6 |
| 80° | 202.3 | 171.7 | 171.7 | 206.3 | 235.0 |
| 82.5° | 159.3 | 134.6 | 139.0 | 167.7 | 188.4 |
| 85° | 105.9 | 98.9 | 93.5 | 122.2 | 133.5 |
| 87.5° | 53.5 | 54.9 | 49.5 | 63.3 | 64.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)