

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: P234094

Luminaire Tested: **22GR-LD5-85-F1-UNV-L935-CD1-U**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P234094
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33295)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/12/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-85-F1-UNV-L935-CD1-U
Description: METALUX 2X2 GRLED TROFFER
WITH F1 LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7270.9 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.24
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')
CIE Type: Direct

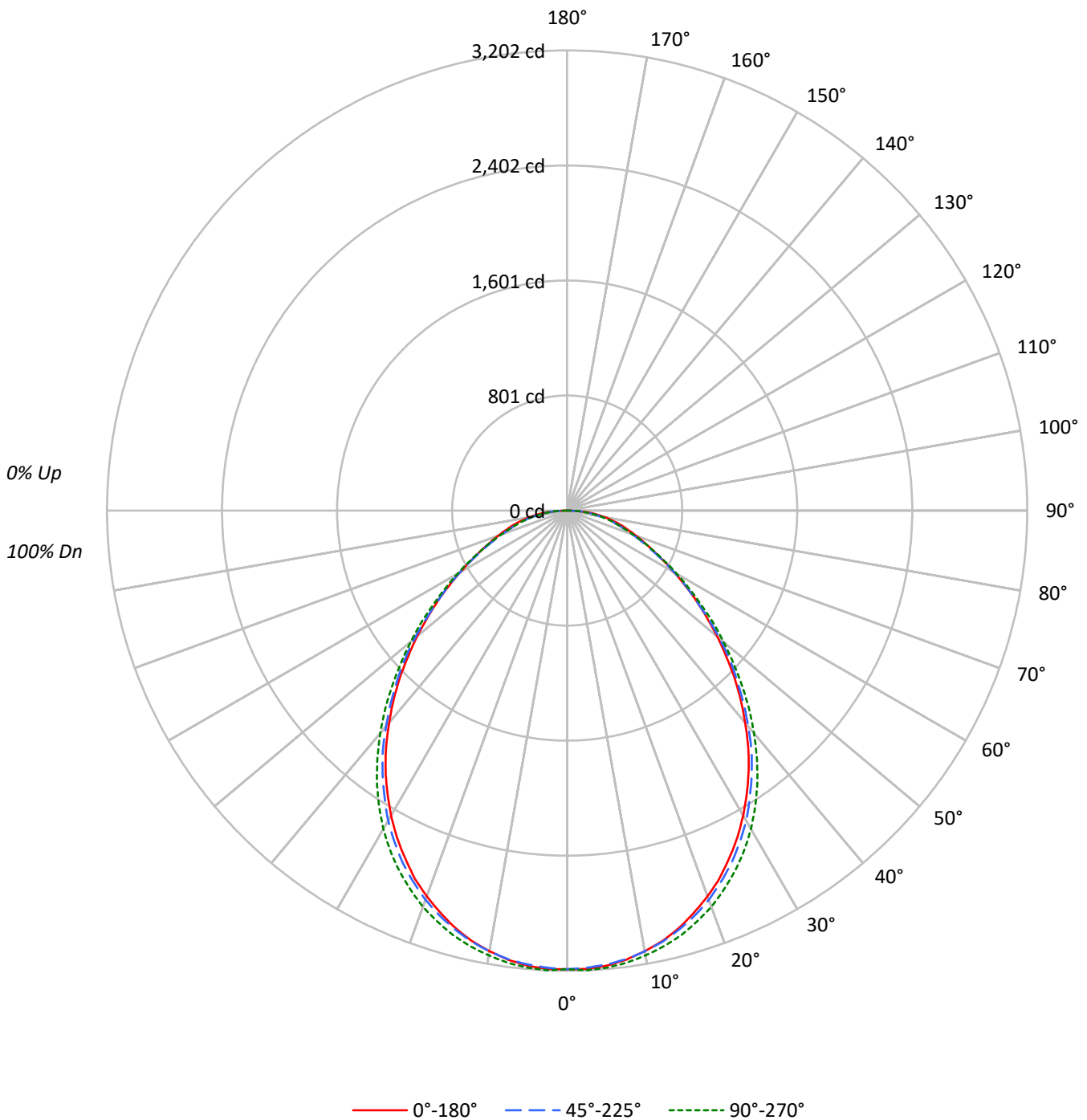
Input Watts (W): 81.06
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 10222 | 10222 | 10222 |
| 5° | 10218 | 10191 | 10261 |
| 10° | 10122 | 10127 | 10221 |
| 15° | 9968 | 10001 | 10146 |
| 20° | 9734 | 9820 | 9999 |
| 25° | 9431 | 9562 | 9771 |
| 30° | 9058 | 9214 | 9458 |
| 35° | 8614 | 8752 | 9023 |
| 40° | 8054 | 8188 | 8456 |
| 45° | 7457 | 7572 | 7794 |
| 50° | 6791 | 6901 | 7077 |
| 55° | 6132 | 6151 | 6330 |
| 60° | 5501 | 5522 | 5652 |
| 65° | 5011 | 4910 | 5024 |
| 70° | 4771 | 4502 | 4582 |
| 75° | 4801 | 4342 | 4363 |
| 80° | 4979 | 4387 | 4356 |
| 85° | 5457 | 4652 | 4402 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 301.6 | 4.1 |
| 10°-20° | 851.9 | 11.7 |
| 20°-30° | 1246.8 | 17.1 |
| 30°-40° | 1401.9 | 19.3 |
| 40°-50° | 1292.8 | 17.8 |
| 50°-60° | 996.4 | 13.7 |
| 60°-70° | 657.5 | 9.0 |
| 70°-80° | 382.7 | 5.3 |
| 80°-90° | 139.4 | 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° | 2400.3 | 33.0 |
| 0°-40° | 3802.1 | 52.3 |
| 0°-60° | 6091.3 | 83.8 |
| 0°-90° | 7270.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 7270.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3192 | 3192 | 3192 | 3192 | 3192 | |
| 5° | 3178 | 3172 | 3170 | 3185 | 3192 | 301 |
| 15° | 3006 | 3006 | 3016 | 3044 | 3060 | 846 |
| 25° | 2669 | 2682 | 2706 | 2743 | 2765 | 1228 |
| 35° | 2203 | 2214 | 2239 | 2284 | 2308 | 1374 |
| 45° | 1647 | 1648 | 1672 | 1706 | 1721 | 1268 |
| 55° | 1098 | 1097 | 1102 | 1120 | 1134 | 985 |
| 65° | 661 | 658 | 648 | 653 | 663 | 663 |
| 75° | 388 | 371 | 351 | 344 | 353 | 409 |
| 85° | 148 | 147 | 127 | 116 | 120 | 157 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P234094

CATALOG NUMBER: 22GR-LD5-85-F1-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3191.9 | 3191.9 | 3191.9 | 3191.9 | 3191.9 |
| 2.5° | 3191.9 | 3185.2 | 3183.5 | 3195.3 | 3202.1 |
| 5° | 3178.5 | 3171.7 | 3170.0 | 3185.2 | 3191.9 |
| 7.5° | 3151.5 | 3146.4 | 3148.1 | 3165.0 | 3173.4 |
| 10° | 3112.7 | 3111.0 | 3114.3 | 3132.9 | 3143.0 |
| 12.5° | 3067.1 | 3065.4 | 3072.2 | 3092.4 | 3105.9 |
| 15° | 3006.4 | 3006.4 | 3016.5 | 3043.5 | 3060.3 |
| 17.5° | 2933.9 | 2938.9 | 2954.1 | 2981.0 | 2999.6 |
| 20° | 2856.3 | 2861.3 | 2881.5 | 2911.9 | 2933.9 |
| 22.5° | 2770.2 | 2777.0 | 2797.2 | 2834.3 | 2852.9 |
| 25° | 2669.0 | 2682.4 | 2706.1 | 2743.2 | 2765.1 |
| 27.5° | 2564.4 | 2579.6 | 2601.5 | 2647.1 | 2667.3 |
| 30° | 2449.6 | 2459.7 | 2491.8 | 2534.0 | 2557.6 |
| 32.5° | 2328.2 | 2338.3 | 2365.3 | 2415.9 | 2436.2 |
| 35° | 2203.3 | 2213.5 | 2238.7 | 2284.3 | 2307.9 |
| 37.5° | 2068.4 | 2076.8 | 2107.2 | 2142.6 | 2167.9 |
| 40° | 1926.6 | 1938.4 | 1958.7 | 2000.9 | 2022.8 |
| 42.5° | 1788.3 | 1793.3 | 1815.3 | 1857.5 | 1874.3 |
| 45° | 1646.6 | 1648.2 | 1671.9 | 1705.6 | 1720.8 |
| 47.5° | 1499.8 | 1503.2 | 1531.9 | 1552.1 | 1567.3 |
| 50° | 1363.1 | 1364.8 | 1385.1 | 1403.7 | 1420.5 |
| 52.5° | 1226.5 | 1226.5 | 1236.7 | 1256.9 | 1278.8 |
| 55° | 1098.3 | 1096.6 | 1101.7 | 1120.2 | 1133.7 |
| 57.5° | 976.8 | 975.1 | 981.9 | 993.6 | 1003.8 |
| 60° | 858.8 | 855.4 | 862.1 | 868.9 | 882.4 |
| 62.5° | 754.1 | 757.5 | 749.1 | 759.2 | 769.3 |
| 65° | 661.3 | 658.0 | 647.9 | 652.9 | 663.0 |
| 67.5° | 582.1 | 577.0 | 560.2 | 563.5 | 575.3 |
| 70° | 509.5 | 499.4 | 480.8 | 480.8 | 489.3 |
| 72.5° | 443.7 | 433.6 | 410.0 | 411.7 | 415.1 |
| 75° | 388.0 | 371.2 | 350.9 | 344.2 | 352.6 |
| 77.5° | 327.3 | 313.8 | 295.2 | 290.2 | 293.6 |
| 80° | 270.0 | 259.8 | 237.9 | 231.1 | 236.2 |
| 82.5° | 214.3 | 205.8 | 180.5 | 175.4 | 177.1 |
| 85° | 148.5 | 146.8 | 126.6 | 116.4 | 119.8 |
| 87.5° | 79.3 | 81.0 | 65.8 | 59.1 | 62.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)