

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: P476166

Luminaire Tested: **22GR-LD5-70-FGW080-UNV-L850-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476166
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-70-FGW080-UNV-L850-CD1-U
Description: GR 2'X2' LED TROFFER w/ FGW080 LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6119.3 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

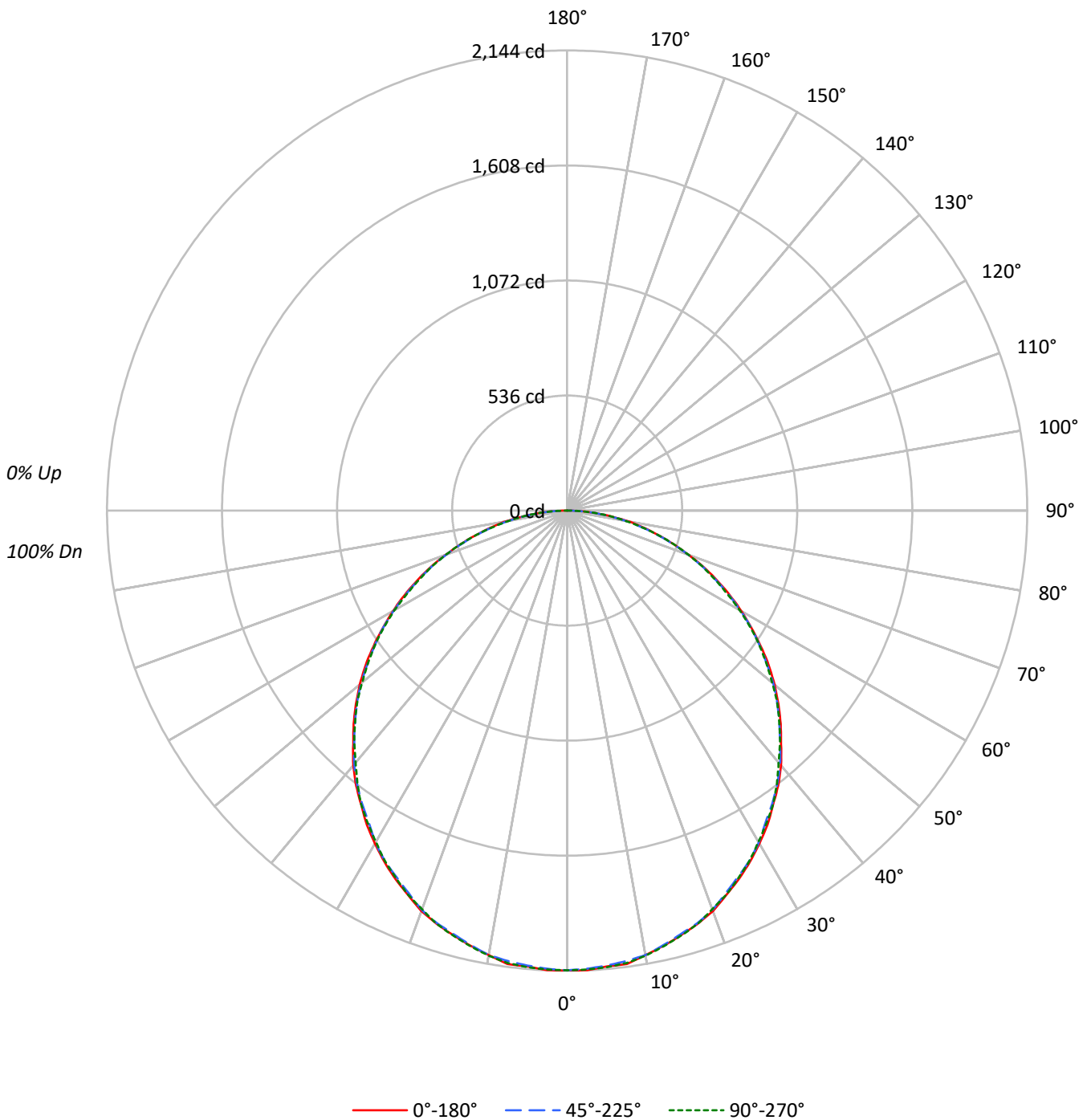
Input Watts (W): 52.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5764 | 5764 | 5764 |
| 5° | 5757 | 5747 | 5767 |
| 10° | 5745 | 5745 | 5755 |
| 15° | 5707 | 5692 | 5712 |
| 20° | 5686 | 5670 | 5660 |
| 25° | 5623 | 5591 | 5607 |
| 30° | 5566 | 5549 | 5538 |
| 35° | 5496 | 5472 | 5496 |
| 40° | 5447 | 5422 | 5384 |
| 45° | 5354 | 5320 | 5320 |
| 50° | 5280 | 5250 | 5220 |
| 55° | 5168 | 5134 | 5126 |
| 60° | 5048 | 5019 | 4999 |
| 65° | 4918 | 4861 | 4839 |
| 70° | 4722 | 4708 | 4722 |
| 75° | 4558 | 4502 | 4539 |
| 80° | 4508 | 4285 | 4257 |
| 85° | 3998 | 3887 | 3943 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 202.6 | 3.3 |
| 10°-20° | 578.1 | 9.4 |
| 20°-30° | 870.5 | 14.2 |
| 30°-40° | 1044.7 | 17.1 |
| 40°-50° | 1080.9 | 17.7 |
| 50°-60° | 979.6 | 16.0 |
| 60°-70° | 759.3 | 12.4 |
| 70°-80° | 460.9 | 7.5 |
| 80°-90° | 142.7 | 2.3 |
| 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° | 1651.2 | 27.0 |
| 0°-40° | 2695.9 | 44.1 |
| 0°-60° | 4756.4 | 77.7 |
| 0°-90° | 6119.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6119.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2142 | 2142 | 2142 | 2142 | 2142 | |
| 5° | 2131 | 2131 | 2128 | 2133 | 2135 | 203 |
| 15° | 2048 | 2048 | 2043 | 2052 | 2050 | 579 |
| 25° | 1894 | 1890 | 1883 | 1890 | 1888 | 873 |
| 35° | 1673 | 1673 | 1666 | 1668 | 1673 | 1049 |
| 45° | 1407 | 1405 | 1398 | 1398 | 1398 | 1086 |
| 55° | 1102 | 1100 | 1094 | 1093 | 1093 | 985 |
| 65° | 772 | 772 | 763 | 767 | 760 | 764 |
| 75° | 438 | 437 | 433 | 433 | 437 | 466 |
| 85° | 130 | 128 | 126 | 126 | 128 | 147 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476166

CATALOG NUMBER: 22GR-LD5-70-FGW080-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2142.0 | 2142.0 | 2142.0 | 2142.0 | 2142.0 |
| 2.5° | 2143.8 | 2134.8 | 2136.6 | 2140.2 | 2140.2 |
| 5° | 2131.2 | 2131.2 | 2127.6 | 2133.0 | 2134.8 |
| 7.5° | 2131.2 | 2122.2 | 2116.8 | 2122.2 | 2125.8 |
| 10° | 2102.4 | 2098.8 | 2102.4 | 2100.6 | 2106.0 |
| 12.5° | 2077.2 | 2073.6 | 2073.6 | 2079.0 | 2079.0 |
| 15° | 2048.5 | 2048.5 | 2043.1 | 2052.1 | 2050.3 |
| 17.5° | 2019.7 | 2019.7 | 2016.1 | 2016.1 | 2019.7 |
| 20° | 1985.5 | 1976.5 | 1980.1 | 1978.3 | 1976.5 |
| 22.5° | 1938.7 | 1933.4 | 1929.8 | 1935.2 | 1936.9 |
| 25° | 1893.8 | 1890.2 | 1883.0 | 1890.2 | 1888.4 |
| 27.5° | 1845.2 | 1841.6 | 1839.8 | 1836.2 | 1839.8 |
| 30° | 1791.3 | 1787.7 | 1785.9 | 1782.3 | 1782.3 |
| 32.5° | 1737.3 | 1730.1 | 1721.1 | 1730.1 | 1728.3 |
| 35° | 1673.0 | 1673.0 | 1665.8 | 1667.6 | 1673.0 |
| 37.5° | 1615.5 | 1611.9 | 1608.3 | 1602.9 | 1604.7 |
| 40° | 1550.7 | 1545.3 | 1543.5 | 1539.9 | 1532.7 |
| 42.5° | 1475.2 | 1475.2 | 1468.0 | 1469.8 | 1468.0 |
| 45° | 1406.9 | 1405.1 | 1397.9 | 1397.9 | 1397.9 |
| 47.5° | 1334.9 | 1333.1 | 1327.7 | 1324.1 | 1327.7 |
| 50° | 1261.2 | 1254.0 | 1254.0 | 1248.6 | 1246.8 |
| 52.5° | 1184.3 | 1178.9 | 1171.7 | 1173.5 | 1169.9 |
| 55° | 1101.6 | 1099.8 | 1094.4 | 1092.6 | 1092.6 |
| 57.5° | 1018.8 | 1020.6 | 1017.0 | 1009.8 | 1011.6 |
| 60° | 937.9 | 936.1 | 932.5 | 928.9 | 928.9 |
| 62.5° | 855.2 | 855.2 | 848.0 | 848.0 | 840.8 |
| 65° | 772.4 | 772.4 | 763.4 | 767.0 | 759.9 |
| 67.5° | 690.2 | 688.4 | 683.0 | 681.2 | 683.0 |
| 70° | 600.2 | 602.0 | 598.4 | 598.4 | 600.2 |
| 72.5° | 519.3 | 517.5 | 515.7 | 515.7 | 519.3 |
| 75° | 438.4 | 436.6 | 433.0 | 433.0 | 436.6 |
| 77.5° | 364.6 | 355.6 | 353.8 | 357.4 | 352.1 |
| 80° | 290.9 | 278.3 | 276.5 | 274.7 | 274.7 |
| 82.5° | 205.0 | 199.6 | 201.4 | 199.6 | 203.2 |
| 85° | 129.5 | 127.7 | 125.9 | 125.9 | 127.7 |
| 87.5° | 61.1 | 57.6 | 57.6 | 55.8 | 55.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)