

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: P476059

Luminaire Tested: **22GR-LD5-85-A-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476059
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-85-A-UNV-L840-CD1-U
Description: GR 2'X2' LED TROFFER w/ A LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8447.1 lumens
Efficiency: N/A
Efficacy: 130.4 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

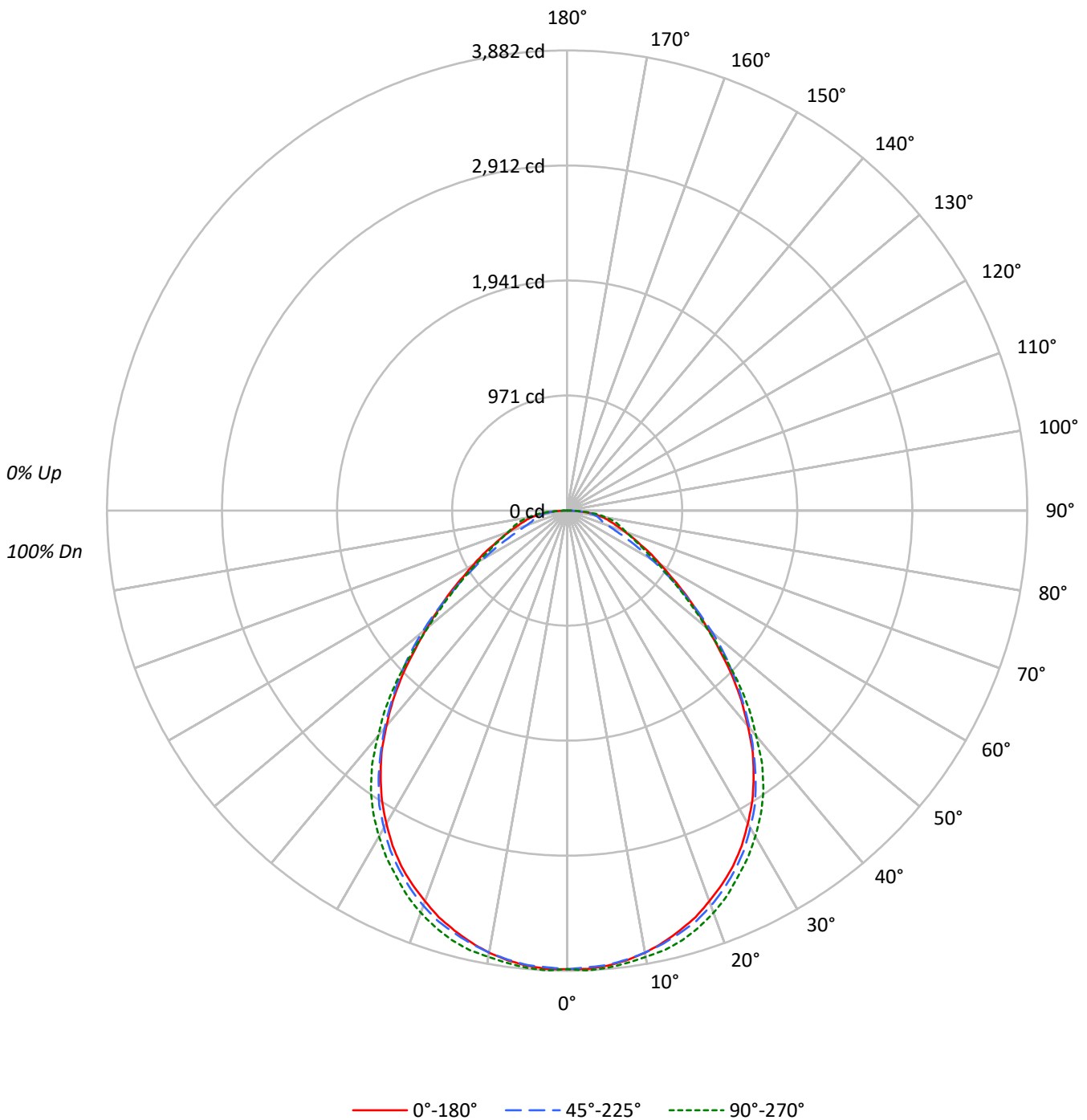
Input Watts (W): 64.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 10410 | 10410 | 10410 |
| 5° | 10413 | 10397 | 10461 |
| 10° | 10350 | 10345 | 10447 |
| 15° | 10219 | 10274 | 10454 |
| 20° | 10042 | 10160 | 10340 |
| 25° | 9829 | 9940 | 10120 |
| 30° | 9473 | 9602 | 9864 |
| 35° | 9008 | 9111 | 9480 |
| 40° | 8328 | 8418 | 8714 |
| 45° | 7480 | 7615 | 7736 |
| 50° | 6467 | 6698 | 6402 |
| 55° | 5644 | 5496 | 5423 |
| 60° | 4888 | 4401 | 4697 |
| 65° | 4369 | 3454 | 4220 |
| 70° | 4051 | 2861 | 4162 |
| 75° | 4046 | 3023 | 4618 |
| 80° | 4482 | 3804 | 5207 |
| 85° | 4675 | 4128 | 5894 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 366.1 | 4.3 |
| 10°-20° | 1042.6 | 12.3 |
| 20°-30° | 1542.0 | 18.3 |
| 30°-40° | 1740.1 | 20.6 |
| 40°-50° | 1534.0 | 18.2 |
| 50°-60° | 1052.3 | 12.5 |
| 60°-70° | 621.0 | 7.4 |
| 70°-80° | 387.5 | 4.6 |
| 80°-90° | 161.5 | 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° | 2950.7 | 34.9 |
| 0°-40° | 4690.9 | 55.5 |
| 0°-60° | 7277.1 | 86.1 |
| 0°-90° | 8447.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 8447.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3868 | 3868 | 3868 | 3868 | 3868 | |
| 5° | 3855 | 3847 | 3849 | 3863 | 3872 | 366 |
| 15° | 3668 | 3672 | 3688 | 3733 | 3752 | 1034 |
| 25° | 3310 | 3322 | 3348 | 3391 | 3408 | 1520 |
| 35° | 2742 | 2766 | 2773 | 2840 | 2886 | 1709 |
| 45° | 1966 | 1976 | 2001 | 2013 | 2033 | 1510 |
| 55° | 1203 | 1173 | 1171 | 1132 | 1156 | 1079 |
| 65° | 686 | 603 | 542 | 627 | 663 | 691 |
| 75° | 389 | 350 | 291 | 407 | 444 | 418 |
| 85° | 151 | 142 | 134 | 175 | 191 | 163 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476059

CATALOG NUMBER: 22GR-LD5-85-A-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3868.3 | 3868.3 | 3868.3 | 3868.3 | 3868.3 |
| 2.5° | 3870.4 | 3860.5 | 3856.9 | 3872.5 | 3882.3 |
| 5° | 3854.8 | 3847.0 | 3849.1 | 3862.6 | 3872.5 |
| 7.5° | 3827.2 | 3821.5 | 3821.5 | 3840.7 | 3850.6 |
| 10° | 3787.7 | 3786.1 | 3786.1 | 3809.5 | 3823.1 |
| 12.5° | 3733.1 | 3734.6 | 3742.4 | 3774.2 | 3797.6 |
| 15° | 3668.0 | 3671.7 | 3687.8 | 3733.1 | 3752.3 |
| 17.5° | 3597.3 | 3597.3 | 3628.5 | 3663.9 | 3687.8 |
| 20° | 3506.8 | 3512.5 | 3547.9 | 3587.4 | 3610.8 |
| 22.5° | 3414.2 | 3424.1 | 3453.7 | 3499.0 | 3520.3 |
| 25° | 3310.2 | 3322.2 | 3347.6 | 3390.8 | 3408.5 |
| 27.5° | 3188.5 | 3204.1 | 3231.6 | 3262.9 | 3300.3 |
| 30° | 3048.6 | 3072.5 | 3090.2 | 3133.3 | 3174.4 |
| 32.5° | 2907.1 | 2928.9 | 2948.7 | 2993.9 | 3040.8 |
| 35° | 2742.2 | 2765.6 | 2773.4 | 2840.5 | 2885.8 |
| 37.5° | 2573.1 | 2583.0 | 2586.7 | 2653.8 | 2702.7 |
| 40° | 2370.8 | 2390.1 | 2396.3 | 2449.4 | 2480.6 |
| 42.5° | 2175.8 | 2184.1 | 2195.5 | 2235.1 | 2272.5 |
| 45° | 1965.6 | 1975.5 | 2001.0 | 2013.0 | 2032.7 |
| 47.5° | 1745.6 | 1775.2 | 1804.4 | 1766.9 | 1769.0 |
| 50° | 1544.8 | 1568.8 | 1600.0 | 1529.2 | 1529.2 |
| 52.5° | 1365.9 | 1377.9 | 1379.9 | 1321.2 | 1332.6 |
| 55° | 1203.1 | 1173.4 | 1171.4 | 1132.4 | 1155.8 |
| 57.5° | 1039.8 | 1000.8 | 986.7 | 974.7 | 1002.3 |
| 60° | 908.2 | 837.4 | 817.7 | 835.3 | 872.8 |
| 62.5° | 800.0 | 709.5 | 672.0 | 717.3 | 751.1 |
| 65° | 686.1 | 603.4 | 542.5 | 627.3 | 662.7 |
| 67.5° | 597.6 | 519.1 | 440.6 | 560.2 | 585.7 |
| 70° | 514.9 | 454.1 | 363.6 | 509.2 | 529.0 |
| 72.5° | 448.4 | 401.0 | 314.7 | 459.8 | 483.7 |
| 75° | 389.1 | 350.1 | 290.8 | 406.8 | 444.2 |
| 77.5° | 342.3 | 298.6 | 271.5 | 351.6 | 396.9 |
| 80° | 289.2 | 245.5 | 245.5 | 294.9 | 336.0 |
| 82.5° | 227.8 | 192.5 | 198.7 | 239.8 | 269.4 |
| 85° | 151.4 | 141.5 | 133.7 | 174.8 | 190.9 |
| 87.5° | 76.5 | 78.5 | 70.7 | 90.5 | 92.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)