

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: P476182

Luminaire Tested: **14GR-LD5-36-F1-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476182
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-36-F1-UNV-L835-CD1-U
Description: GR 1'X4' LED TROFFER w/ F1 LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3714.6 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.24 / 1.2
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

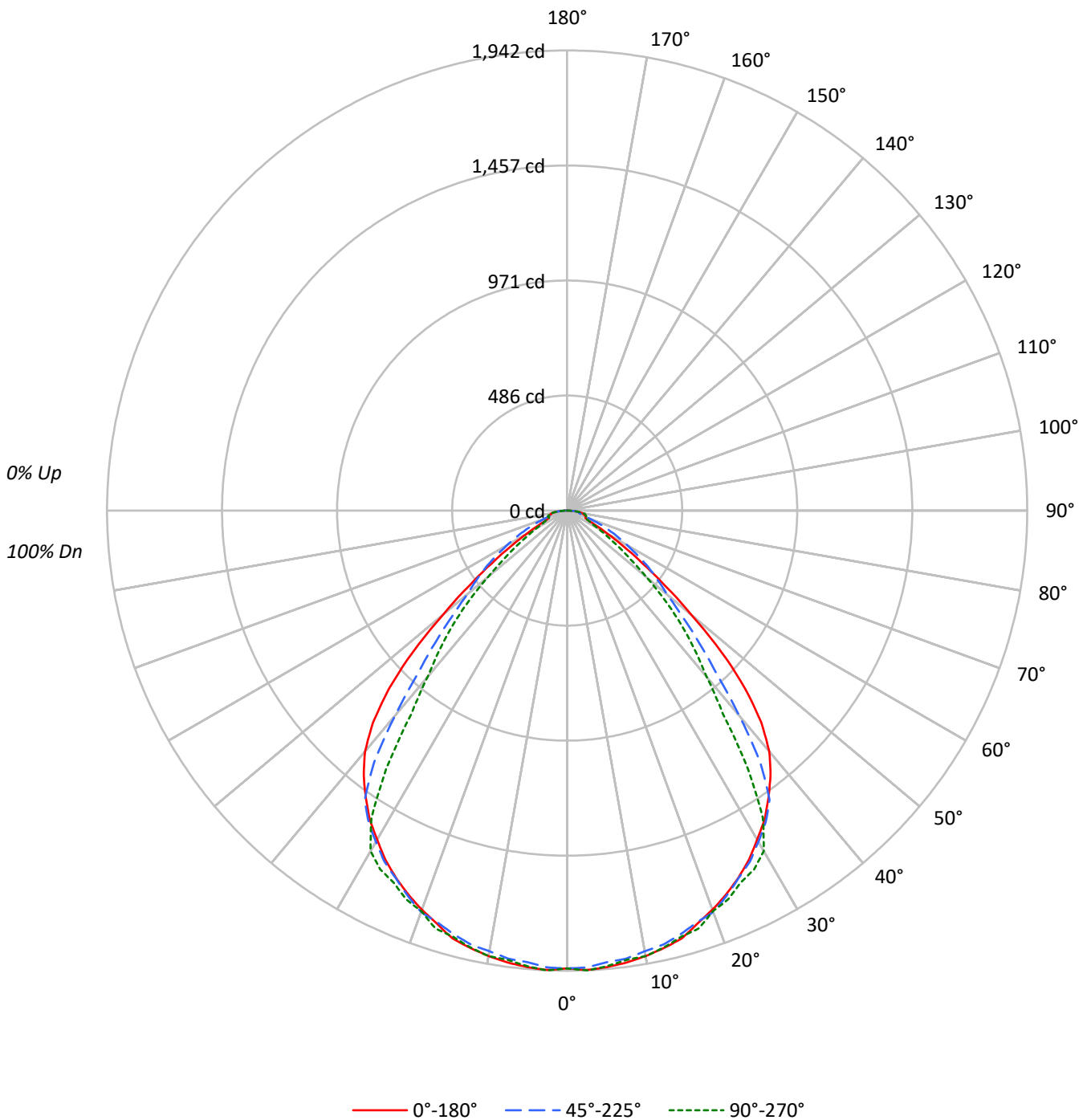
Input Watts (W): 29
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 91 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 87 | 80 | 75 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 74 | 70 | 68 | | | | | 68 | | | |
| 4 | 89 | 79 | 71 | 65 | 87 | 77 | 70 | 65 | 75 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 63 | 61 | | | | | 61 | | | |
| 5 | 82 | 71 | 64 | 58 | 81 | 70 | 63 | 58 | 68 | 62 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 6 | 77 | 65 | 57 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 49 | | | | | 49 | | | |
| 7 | 72 | 60 | 52 | 47 | 70 | 59 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | | 44 | | | |
| 8 | 67 | 55 | 48 | 42 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | | | 40 | | | |
| 9 | 63 | 51 | 44 | 39 | 62 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | 36 | | | |
| 10 | 59 | 47 | 40 | 35 | 58 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 | | | | | 33 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5199 | 5199 | 5199 |
| 5° | 5224 | 5168 | 5213 |
| 10° | 5216 | 5159 | 5216 |
| 15° | 5208 | 5156 | 5185 |
| 20° | 5133 | 5163 | 5151 |
| 25° | 5075 | 5081 | 5143 |
| 30° | 4982 | 5014 | 5156 |
| 35° | 4864 | 4891 | 4372 |
| 40° | 4660 | 3967 | 3214 |
| 45° | 4044 | 2992 | 2596 |
| 50° | 2873 | 2298 | 1819 |
| 55° | 1825 | 1971 | 1219 |
| 60° | 1074 | 1578 | 806 |
| 65° | 635 | 1231 | 622 |
| 70° | 655 | 835 | 638 |
| 75° | 800 | 649 | 843 |
| 80° | 1031 | 806 | 1128 |
| 85° | 1093 | 1093 | 1093 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 183.2 | 4.9 |
| 10°-20° | 524.6 | 14.1 |
| 20°-30° | 793.3 | 21.4 |
| 30°-40° | 883.4 | 23.8 |
| 40°-50° | 646.6 | 17.4 |
| 50°-60° | 356.4 | 9.6 |
| 60°-70° | 182.2 | 4.9 |
| 70°-80° | 103.7 | 2.8 |
| 80°-90° | 41.3 | 1.1 |
| 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° | 1501.0 | 40.4 |
| 0°-40° | 2384.4 | 64.2 |
| 0°-60° | 3387.4 | 91.2 |
| 0°-90° | 3714.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3714.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1932 | 1932 | 1932 | 1932 | 1932 | |
| 5° | 1934 | 1934 | 1913 | 1926 | 1930 | 184 |
| 15° | 1870 | 1849 | 1851 | 1874 | 1861 | 525 |
| 25° | 1709 | 1705 | 1711 | 1740 | 1732 | 787 |
| 35° | 1481 | 1483 | 1489 | 1387 | 1331 | 924 |
| 45° | 1063 | 979 | 786 | 715 | 682 | 800 |
| 55° | 389 | 458 | 420 | 360 | 260 | 363 |
| 65° | 100 | 237 | 193 | 185 | 98 | 115 |
| 75° | 77 | 133 | 62 | 118 | 81 | 81 |
| 85° | 35 | 44 | 35 | 48 | 35 | 38 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476182

CATALOG NUMBER: 14GR-LD5-36-F1-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1931.9 | 1931.9 | 1931.9 | 1931.9 | 1931.9 |
| 2.5° | 1940.2 | 1940.2 | 1929.8 | 1942.3 | 1942.3 |
| 5° | 1933.9 | 1933.9 | 1913.1 | 1925.6 | 1929.8 |
| 7.5° | 1923.5 | 1923.5 | 1906.9 | 1917.3 | 1913.1 |
| 10° | 1909.0 | 1898.6 | 1888.2 | 1917.3 | 1909.0 |
| 12.5° | 1890.3 | 1869.5 | 1875.7 | 1873.6 | 1888.2 |
| 15° | 1869.5 | 1848.7 | 1850.8 | 1873.6 | 1861.2 |
| 17.5° | 1827.9 | 1830.0 | 1821.6 | 1838.3 | 1848.7 |
| 20° | 1792.5 | 1798.8 | 1802.9 | 1813.3 | 1798.8 |
| 22.5° | 1753.0 | 1755.1 | 1759.3 | 1773.8 | 1775.9 |
| 25° | 1709.4 | 1705.2 | 1711.4 | 1740.5 | 1732.2 |
| 27.5° | 1661.5 | 1659.4 | 1669.8 | 1694.8 | 1707.3 |
| 30° | 1603.3 | 1611.6 | 1613.7 | 1659.4 | 1659.4 |
| 32.5° | 1549.2 | 1549.2 | 1559.6 | 1582.5 | 1536.8 |
| 35° | 1480.6 | 1482.7 | 1488.9 | 1387.0 | 1330.9 |
| 37.5° | 1409.9 | 1403.7 | 1339.2 | 1154.1 | 1079.3 |
| 40° | 1326.7 | 1312.2 | 1129.2 | 962.8 | 915.0 |
| 42.5° | 1212.4 | 1168.7 | 931.6 | 831.8 | 796.5 |
| 45° | 1062.6 | 979.4 | 786.1 | 715.4 | 682.1 |
| 47.5° | 883.8 | 806.8 | 653.0 | 605.1 | 559.4 |
| 50° | 686.2 | 669.6 | 549.0 | 507.4 | 434.6 |
| 52.5° | 522.0 | 555.2 | 482.4 | 428.4 | 334.8 |
| 55° | 388.9 | 457.5 | 420.1 | 359.8 | 259.9 |
| 57.5° | 284.9 | 380.5 | 353.5 | 305.7 | 195.5 |
| 60° | 199.6 | 322.3 | 293.2 | 257.9 | 149.7 |
| 62.5° | 141.4 | 278.7 | 241.2 | 220.4 | 114.4 |
| 65° | 99.8 | 237.1 | 193.4 | 185.1 | 97.7 |
| 67.5° | 83.2 | 199.6 | 147.6 | 164.3 | 83.2 |
| 70° | 83.2 | 166.4 | 106.1 | 145.6 | 81.1 |
| 72.5° | 83.2 | 145.6 | 79.0 | 133.1 | 85.3 |
| 75° | 76.9 | 133.1 | 62.4 | 118.5 | 81.1 |
| 77.5° | 70.7 | 112.3 | 54.1 | 101.9 | 79.0 |
| 80° | 66.5 | 81.1 | 52.0 | 83.2 | 72.8 |
| 82.5° | 54.1 | 58.2 | 47.8 | 64.5 | 56.1 |
| 85° | 35.4 | 43.7 | 35.4 | 47.8 | 35.4 |
| 87.5° | 16.6 | 22.9 | 16.6 | 20.8 | 14.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)