

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: P294404

Luminaire Tested: **24GR-LD5-72-FGW080-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294404
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-72-FGW080-UNV-L92765-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5137.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

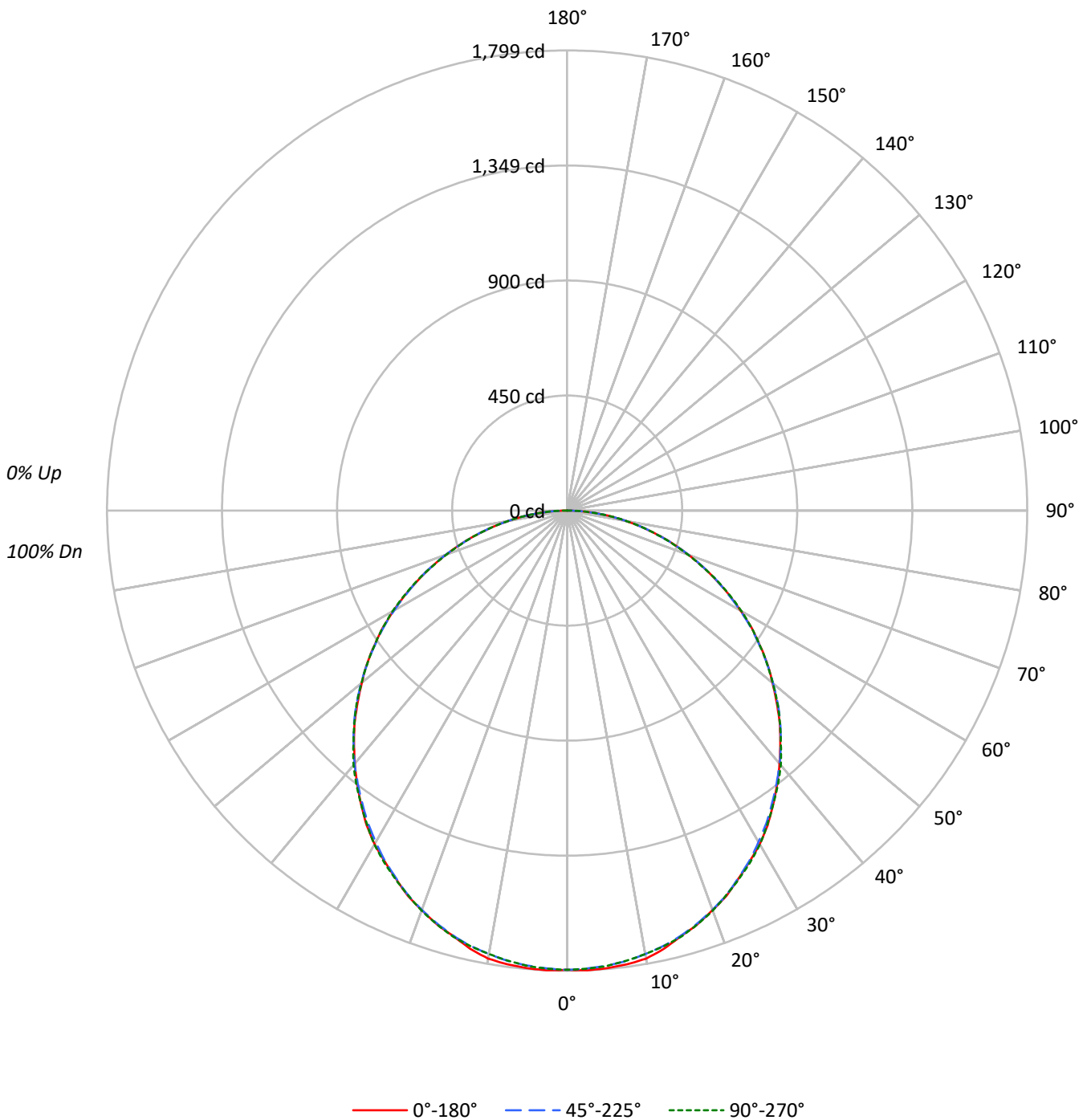
Input Watts (W): 52.08
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 84 | 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° | 2416 | 2416 | 2416 |
| 5° | 2425 | 2412 | 2414 |
| 10° | 2430 | 2405 | 2405 |
| 15° | 2398 | 2396 | 2401 |
| 20° | 2380 | 2378 | 2383 |
| 25° | 2354 | 2352 | 2360 |
| 30° | 2340 | 2325 | 2341 |
| 35° | 2306 | 2294 | 2306 |
| 40° | 2268 | 2271 | 2283 |
| 45° | 2236 | 2243 | 2238 |
| 50° | 2193 | 2201 | 2196 |
| 55° | 2160 | 2154 | 2160 |
| 60° | 2109 | 2103 | 2122 |
| 65° | 2044 | 2052 | 2060 |
| 70° | 1978 | 1987 | 1973 |
| 75° | 1908 | 1908 | 1908 |
| 80° | 1802 | 1802 | 1821 |
| 85° | 1664 | 1683 | 1627 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 169.8 | 3.3 |
| 10°-20° | 485.3 | 9.4 |
| 20°-30° | 731.4 | 14.2 |
| 30°-40° | 876.0 | 17.1 |
| 40°-50° | 906.7 | 17.7 |
| 50°-60° | 822.2 | 16.0 |
| 60°-70° | 637.4 | 12.4 |
| 70°-80° | 387.6 | 7.5 |
| 80°-90° | 120.6 | 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° | 1386.5 | 27.0 |
| 0°-40° | 2262.4 | 44.0 |
| 0°-60° | 3991.3 | 77.7 |
| 0°-90° | 5137.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5137.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1795 | 1795 | 1795 | 1795 | 1795 | |
| 5° | 1795 | 1784 | 1786 | 1783 | 1787 | 171 |
| 15° | 1722 | 1723 | 1720 | 1714 | 1724 | 487 |
| 25° | 1586 | 1586 | 1585 | 1590 | 1590 | 732 |
| 35° | 1404 | 1394 | 1397 | 1403 | 1404 | 878 |
| 45° | 1175 | 1178 | 1179 | 1174 | 1176 | 905 |
| 55° | 921 | 916 | 918 | 922 | 921 | 823 |
| 65° | 642 | 646 | 644 | 642 | 647 | 637 |
| 75° | 367 | 366 | 367 | 366 | 367 | 388 |
| 85° | 108 | 107 | 109 | 108 | 105 | 121 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P294404

CATALOG NUMBER: 24GR-LD5-72-FGW080-UNV-L92765-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1795.4 | 1795.4 | 1795.4 | 1795.4 | 1795.4 |
| 2.5° | 1799.1 | 1791.8 | 1791.8 | 1789.4 | 1793.0 |
| 5° | 1795.4 | 1784.5 | 1785.7 | 1783.3 | 1787.0 |
| 7.5° | 1789.4 | 1774.8 | 1776.1 | 1773.6 | 1774.8 |
| 10° | 1778.5 | 1761.5 | 1760.3 | 1759.1 | 1760.3 |
| 12.5° | 1754.2 | 1744.6 | 1743.3 | 1740.9 | 1744.6 |
| 15° | 1721.5 | 1722.8 | 1720.3 | 1714.3 | 1724.0 |
| 17.5° | 1696.1 | 1694.9 | 1692.5 | 1686.4 | 1696.1 |
| 20° | 1662.2 | 1663.4 | 1661.0 | 1658.5 | 1664.6 |
| 22.5° | 1629.5 | 1625.8 | 1627.0 | 1625.8 | 1627.0 |
| 25° | 1585.9 | 1585.9 | 1584.6 | 1589.5 | 1589.5 |
| 27.5° | 1545.9 | 1541.0 | 1543.4 | 1548.3 | 1550.7 |
| 30° | 1505.9 | 1493.8 | 1496.2 | 1501.0 | 1507.1 |
| 32.5° | 1458.6 | 1446.5 | 1449.0 | 1453.8 | 1456.2 |
| 35° | 1404.1 | 1394.4 | 1396.9 | 1402.9 | 1404.1 |
| 37.5° | 1348.4 | 1342.3 | 1344.8 | 1349.6 | 1353.2 |
| 40° | 1291.5 | 1289.0 | 1292.7 | 1291.5 | 1299.9 |
| 42.5° | 1233.3 | 1232.1 | 1235.7 | 1235.7 | 1236.9 |
| 45° | 1175.2 | 1177.6 | 1178.8 | 1173.9 | 1176.4 |
| 47.5° | 1110.9 | 1112.2 | 1117.0 | 1114.6 | 1115.8 |
| 50° | 1047.9 | 1046.7 | 1051.6 | 1052.8 | 1049.2 |
| 52.5° | 987.4 | 981.3 | 986.2 | 988.6 | 986.2 |
| 55° | 920.7 | 915.9 | 918.3 | 922.0 | 920.7 |
| 57.5° | 855.3 | 850.5 | 851.7 | 857.7 | 855.3 |
| 60° | 783.8 | 782.6 | 781.4 | 786.3 | 788.7 |
| 62.5° | 713.6 | 712.4 | 709.9 | 714.8 | 717.2 |
| 65° | 642.1 | 645.7 | 644.5 | 642.1 | 646.9 |
| 67.5° | 574.3 | 577.9 | 574.3 | 571.8 | 571.8 |
| 70° | 502.8 | 506.4 | 505.2 | 502.8 | 501.6 |
| 72.5° | 436.1 | 436.1 | 433.7 | 432.5 | 433.7 |
| 75° | 367.1 | 365.9 | 367.1 | 365.9 | 367.1 |
| 77.5° | 299.2 | 300.5 | 300.5 | 300.5 | 299.2 |
| 80° | 232.6 | 232.6 | 232.6 | 233.8 | 235.0 |
| 82.5° | 170.8 | 167.2 | 170.8 | 168.4 | 169.6 |
| 85° | 107.8 | 106.6 | 109.0 | 107.8 | 105.4 |
| 87.5° | 48.5 | 49.7 | 49.7 | 50.9 | 50.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)