

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: P294324

Luminaire Tested: **24GR-LD5-56-FGW080-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294324
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-LD5-56-FGW080-UNV-L93050-W2A1-U-5000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4589.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

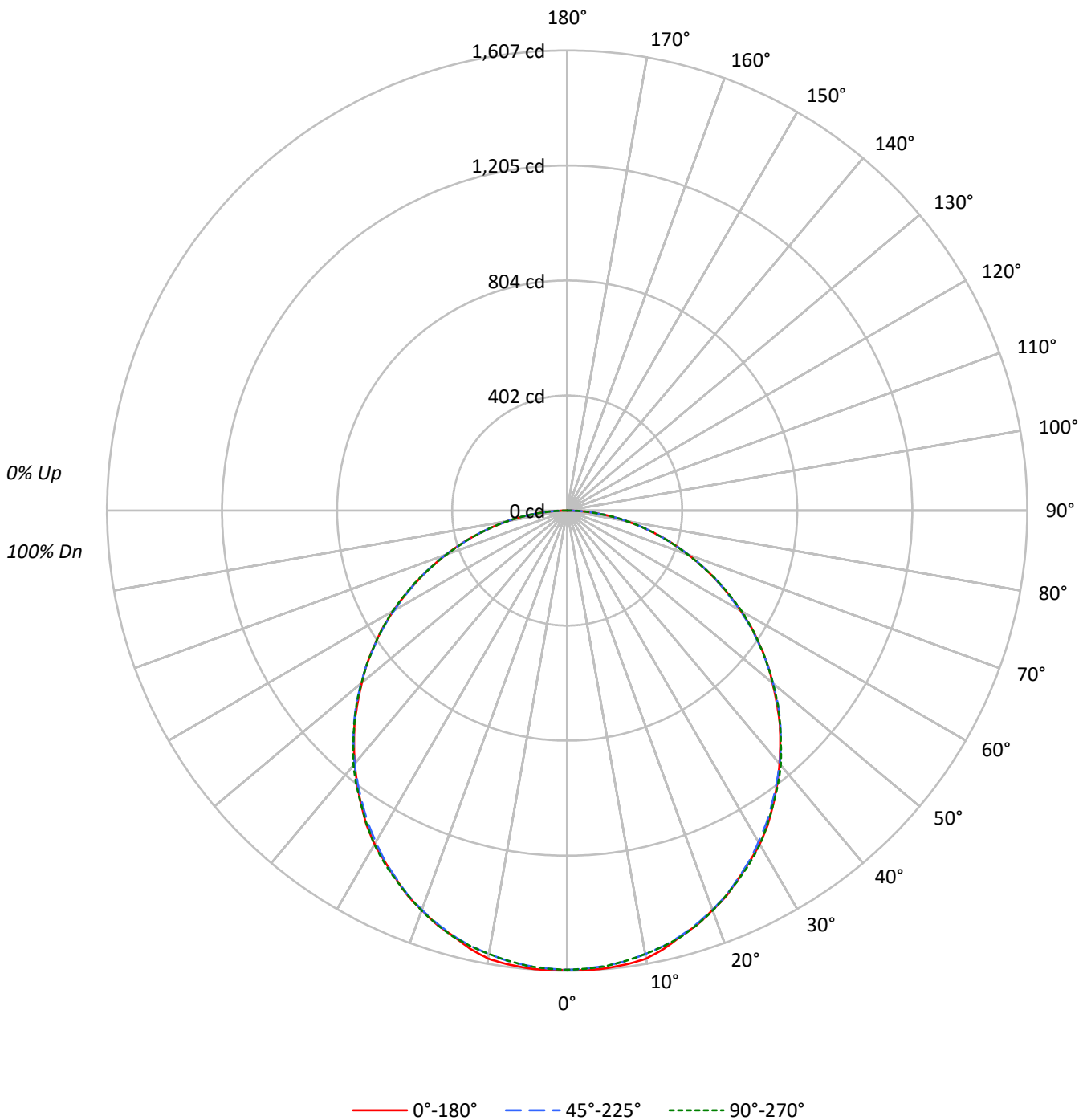
Input Watts (W): 40.603614
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2158 | 2158 | 2158 |
| 5° | 2166 | 2155 | 2156 |
| 10° | 2171 | 2148 | 2148 |
| 15° | 2142 | 2141 | 2145 |
| 20° | 2126 | 2125 | 2129 |
| 25° | 2103 | 2102 | 2108 |
| 30° | 2090 | 2077 | 2092 |
| 35° | 2060 | 2050 | 2060 |
| 40° | 2026 | 2028 | 2040 |
| 45° | 1998 | 2004 | 2000 |
| 50° | 1960 | 1966 | 1962 |
| 55° | 1929 | 1924 | 1929 |
| 60° | 1884 | 1879 | 1896 |
| 65° | 1826 | 1833 | 1840 |
| 70° | 1767 | 1775 | 1763 |
| 75° | 1705 | 1705 | 1705 |
| 80° | 1610 | 1610 | 1627 |
| 85° | 1487 | 1504 | 1454 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 151.7 | 3.3 |
| 10°-20° | 433.5 | 9.4 |
| 20°-30° | 653.3 | 14.2 |
| 30°-40° | 782.5 | 17.1 |
| 40°-50° | 810.0 | 17.7 |
| 50°-60° | 734.5 | 16.0 |
| 60°-70° | 569.4 | 12.4 |
| 70°-80° | 346.3 | 7.5 |
| 80°-90° | 107.7 | 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° | 1238.6 | 27.0 |
| 0°-40° | 2021.1 | 44.0 |
| 0°-60° | 3565.6 | 77.7 |
| 0°-90° | 4589.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4589.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1604 | 1604 | 1604 | 1604 | 1604 | |
| 5° | 1604 | 1594 | 1595 | 1593 | 1596 | 153 |
| 15° | 1538 | 1539 | 1537 | 1531 | 1540 | 435 |
| 25° | 1417 | 1417 | 1416 | 1420 | 1420 | 654 |
| 35° | 1254 | 1246 | 1248 | 1253 | 1254 | 785 |
| 45° | 1050 | 1052 | 1053 | 1049 | 1051 | 809 |
| 55° | 822 | 818 | 820 | 824 | 822 | 735 |
| 65° | 574 | 577 | 576 | 574 | 578 | 569 |
| 75° | 328 | 327 | 328 | 327 | 328 | 346 |
| 85° | 96 | 95 | 97 | 96 | 94 | 108 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1603.9 | 1603.9 | 1603.9 | 1603.9 | 1603.9 |
| 2.5° | 1607.2 | 1600.7 | 1600.7 | 1598.5 | 1601.7 |
| 5° | 1603.9 | 1594.2 | 1595.3 | 1593.1 | 1596.3 |
| 7.5° | 1598.5 | 1585.5 | 1586.6 | 1584.4 | 1585.5 |
| 10° | 1588.8 | 1573.6 | 1572.5 | 1571.4 | 1572.5 |
| 12.5° | 1567.1 | 1558.5 | 1557.4 | 1555.2 | 1558.5 |
| 15° | 1537.9 | 1539.0 | 1536.8 | 1531.4 | 1540.1 |
| 17.5° | 1515.2 | 1514.1 | 1511.9 | 1506.5 | 1515.2 |
| 20° | 1484.9 | 1485.9 | 1483.8 | 1481.6 | 1487.0 |
| 22.5° | 1455.6 | 1452.4 | 1453.5 | 1452.4 | 1453.5 |
| 25° | 1416.7 | 1416.7 | 1415.6 | 1419.9 | 1419.9 |
| 27.5° | 1381.0 | 1376.6 | 1378.8 | 1383.1 | 1385.3 |
| 30° | 1345.2 | 1334.4 | 1336.6 | 1340.9 | 1346.3 |
| 32.5° | 1303.0 | 1292.2 | 1294.4 | 1298.7 | 1300.9 |
| 35° | 1254.3 | 1245.7 | 1247.8 | 1253.3 | 1254.3 |
| 37.5° | 1204.6 | 1199.1 | 1201.3 | 1205.6 | 1208.9 |
| 40° | 1153.7 | 1151.5 | 1154.8 | 1153.7 | 1161.3 |
| 42.5° | 1101.7 | 1100.7 | 1103.9 | 1103.9 | 1105.0 |
| 45° | 1049.8 | 1052.0 | 1053.0 | 1048.7 | 1050.9 |
| 47.5° | 992.4 | 993.5 | 997.8 | 995.7 | 996.8 |
| 50° | 936.2 | 935.1 | 939.4 | 940.5 | 937.2 |
| 52.5° | 882.0 | 876.6 | 881.0 | 883.1 | 881.0 |
| 55° | 822.5 | 818.2 | 820.4 | 823.6 | 822.5 |
| 57.5° | 764.1 | 759.7 | 760.8 | 766.2 | 764.1 |
| 60° | 700.2 | 699.1 | 698.1 | 702.4 | 704.6 |
| 62.5° | 637.5 | 636.4 | 634.2 | 638.5 | 640.7 |
| 65° | 573.6 | 576.8 | 575.8 | 573.6 | 577.9 |
| 67.5° | 513.0 | 516.2 | 513.0 | 510.8 | 510.8 |
| 70° | 449.1 | 452.4 | 451.3 | 449.1 | 448.1 |
| 72.5° | 389.6 | 389.6 | 387.4 | 386.4 | 387.4 |
| 75° | 327.9 | 326.8 | 327.9 | 326.8 | 327.9 |
| 77.5° | 267.3 | 268.4 | 268.4 | 268.4 | 267.3 |
| 80° | 207.8 | 207.8 | 207.8 | 208.9 | 210.0 |
| 82.5° | 152.6 | 149.4 | 152.6 | 150.4 | 151.5 |
| 85° | 96.3 | 95.2 | 97.4 | 96.3 | 94.2 |
| 87.5° | 43.3 | 44.4 | 44.4 | 45.5 | 45.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)