

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: P293312

Luminaire Tested: **24GR-LD5-56-F125-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293312
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33304)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-56-F125-UNV-L93050-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F125 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4384.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.27
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

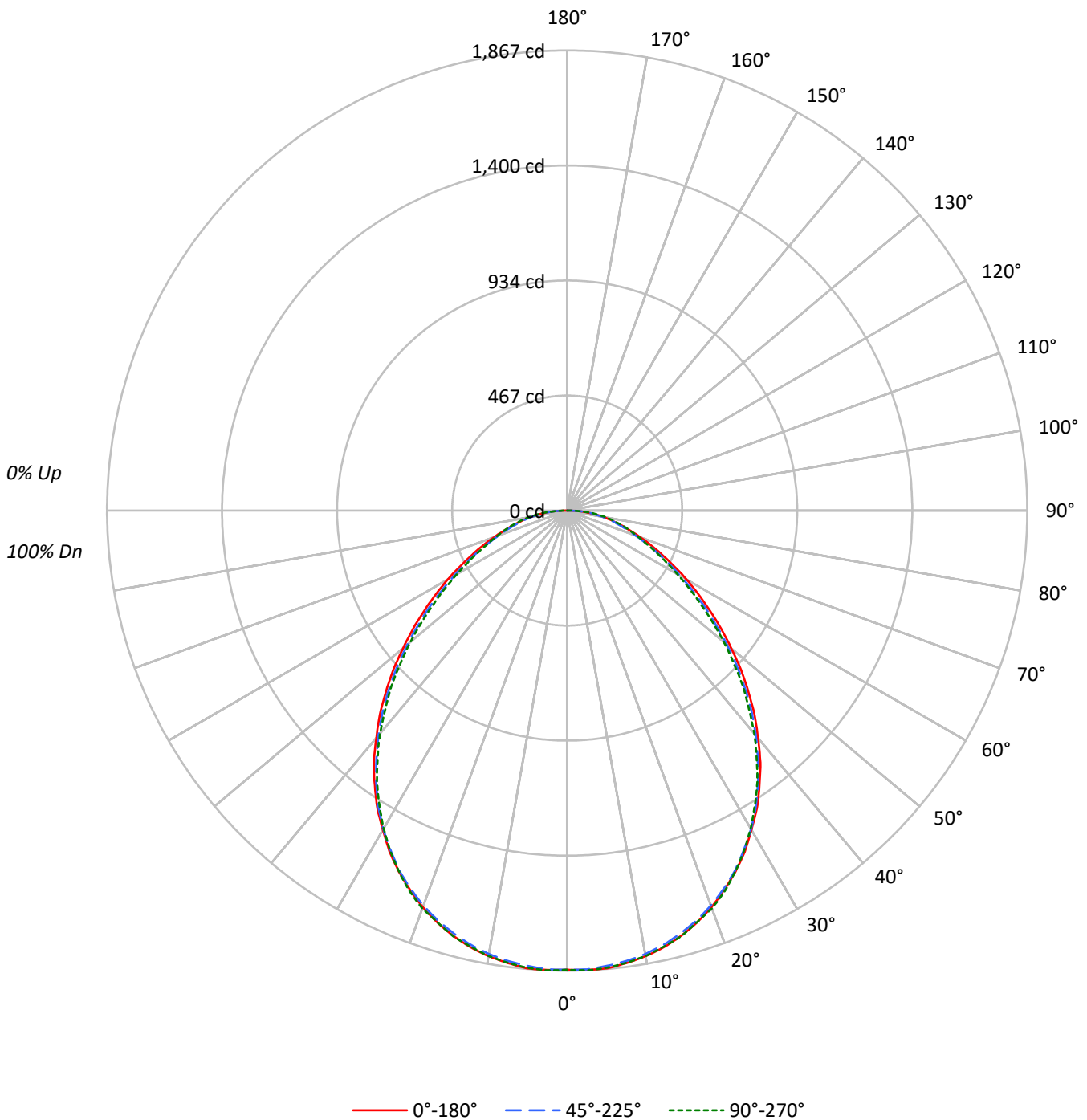
Input Watts (W): 39.863241
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 90 | 80 | 73 | 68 | 78 | 71 | 66 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 82 | 72 | 64 | 58 | 70 | 63 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 44 | 55 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 67 | 54 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 39 | 49 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 33 |
| 9 | 59 | 46 | 38 | 33 | 58 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 39 | 33 | 29 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2507 | 2507 | 2507 |
| 5° | 2518 | 2504 | 2515 |
| 10° | 2508 | 2496 | 2507 |
| 15° | 2489 | 2475 | 2490 |
| 20° | 2452 | 2442 | 2460 |
| 25° | 2399 | 2393 | 2398 |
| 30° | 2323 | 2319 | 2314 |
| 35° | 2235 | 2218 | 2209 |
| 40° | 2116 | 2092 | 2075 |
| 45° | 1979 | 1943 | 1919 |
| 50° | 1819 | 1770 | 1740 |
| 55° | 1659 | 1598 | 1551 |
| 60° | 1507 | 1425 | 1389 |
| 65° | 1357 | 1280 | 1259 |
| 70° | 1243 | 1162 | 1194 |
| 75° | 1161 | 1108 | 1190 |
| 80° | 1152 | 1131 | 1242 |
| 85° | 1175 | 1184 | 1354 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 176.3 | 4.0 |
| 10°-20° | 501.3 | 11.4 |
| 20°-30° | 740.6 | 16.9 |
| 30°-40° | 842.0 | 19.2 |
| 40°-50° | 786.3 | 17.9 |
| 50°-60° | 611.5 | 13.9 |
| 60°-70° | 405.7 | 9.3 |
| 70°-80° | 234.8 | 5.4 |
| 80°-90° | 85.4 | 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° | 1418.3 | 32.4 |
| 0°-40° | 2260.3 | 51.6 |
| 0°-60° | 3658.1 | 83.4 |
| 0°-90° | 4384.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4384.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1863 | 1863 | 1863 | 1863 | 1863 | |
| 5° | 1865 | 1855 | 1854 | 1858 | 1862 | 177 |
| 15° | 1786 | 1778 | 1777 | 1776 | 1788 | 503 |
| 25° | 1616 | 1609 | 1612 | 1608 | 1615 | 743 |
| 35° | 1361 | 1354 | 1351 | 1341 | 1345 | 850 |
| 45° | 1040 | 1032 | 1021 | 1008 | 1009 | 801 |
| 55° | 707 | 697 | 681 | 663 | 661 | 634 |
| 65° | 426 | 413 | 402 | 395 | 395 | 426 |
| 75° | 223 | 218 | 213 | 223 | 229 | 239 |
| 85° | 76 | 75 | 77 | 87 | 88 | 83 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293312

CATALOG NUMBER: 24GR-LD5-56-F125-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1863.2 | 1863.2 | 1863.2 | 1863.2 | 1863.2 |
| 2.5° | 1865.9 | 1860.5 | 1863.2 | 1861.1 | 1867.3 |
| 5° | 1864.6 | 1855.0 | 1854.3 | 1857.7 | 1861.8 |
| 7.5° | 1851.6 | 1841.3 | 1843.3 | 1843.3 | 1850.2 |
| 10° | 1835.8 | 1825.5 | 1826.9 | 1827.6 | 1835.1 |
| 12.5° | 1814.5 | 1804.3 | 1805.0 | 1804.3 | 1811.8 |
| 15° | 1786.5 | 1777.5 | 1776.9 | 1776.2 | 1787.8 |
| 17.5° | 1752.2 | 1739.9 | 1744.0 | 1744.7 | 1750.8 |
| 20° | 1712.4 | 1702.9 | 1705.6 | 1704.9 | 1717.9 |
| 22.5° | 1665.2 | 1658.3 | 1660.4 | 1659.0 | 1671.3 |
| 25° | 1615.8 | 1609.0 | 1611.7 | 1608.3 | 1615.1 |
| 27.5° | 1560.3 | 1555.5 | 1552.8 | 1550.7 | 1555.5 |
| 30° | 1495.2 | 1492.5 | 1492.5 | 1483.6 | 1489.1 |
| 32.5° | 1433.5 | 1424.6 | 1424.6 | 1421.2 | 1417.8 |
| 35° | 1360.9 | 1354.1 | 1350.6 | 1341.0 | 1345.1 |
| 37.5° | 1288.3 | 1272.5 | 1271.1 | 1263.6 | 1263.6 |
| 40° | 1204.7 | 1195.8 | 1191.0 | 1182.7 | 1181.4 |
| 42.5° | 1125.2 | 1116.3 | 1108.1 | 1094.3 | 1091.6 |
| 45° | 1040.2 | 1032.0 | 1021.0 | 1008.0 | 1008.7 |
| 47.5° | 955.9 | 944.3 | 934.0 | 918.2 | 916.2 |
| 50° | 868.9 | 860.7 | 845.6 | 831.9 | 831.2 |
| 52.5° | 787.4 | 774.3 | 760.6 | 744.2 | 744.2 |
| 55° | 707.2 | 696.9 | 681.1 | 663.3 | 661.3 |
| 57.5° | 630.4 | 620.8 | 603.0 | 590.0 | 586.6 |
| 60° | 559.9 | 546.1 | 529.7 | 518.7 | 516.0 |
| 62.5° | 489.3 | 476.9 | 464.6 | 453.6 | 453.0 |
| 65° | 426.2 | 413.2 | 402.2 | 394.7 | 395.4 |
| 67.5° | 369.4 | 358.4 | 346.1 | 344.0 | 344.7 |
| 70° | 315.9 | 304.3 | 295.3 | 300.1 | 303.6 |
| 72.5° | 265.2 | 259.0 | 252.9 | 259.7 | 264.5 |
| 75° | 223.4 | 217.9 | 213.1 | 222.7 | 228.9 |
| 77.5° | 185.0 | 180.9 | 180.2 | 188.4 | 193.9 |
| 80° | 148.7 | 143.9 | 146.0 | 155.6 | 160.3 |
| 82.5° | 113.1 | 109.6 | 110.3 | 122.0 | 125.4 |
| 85° | 76.1 | 74.7 | 76.7 | 87.0 | 87.7 |
| 87.5° | 40.4 | 40.4 | 41.8 | 48.0 | 45.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)