

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: P293187

Luminaire Tested: **24GR-LD5-56-F125-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293187
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-L83050-W2A1-U-3500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F125 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5635.0 lumens
Efficiency: N/A
Efficacy: 144.6 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

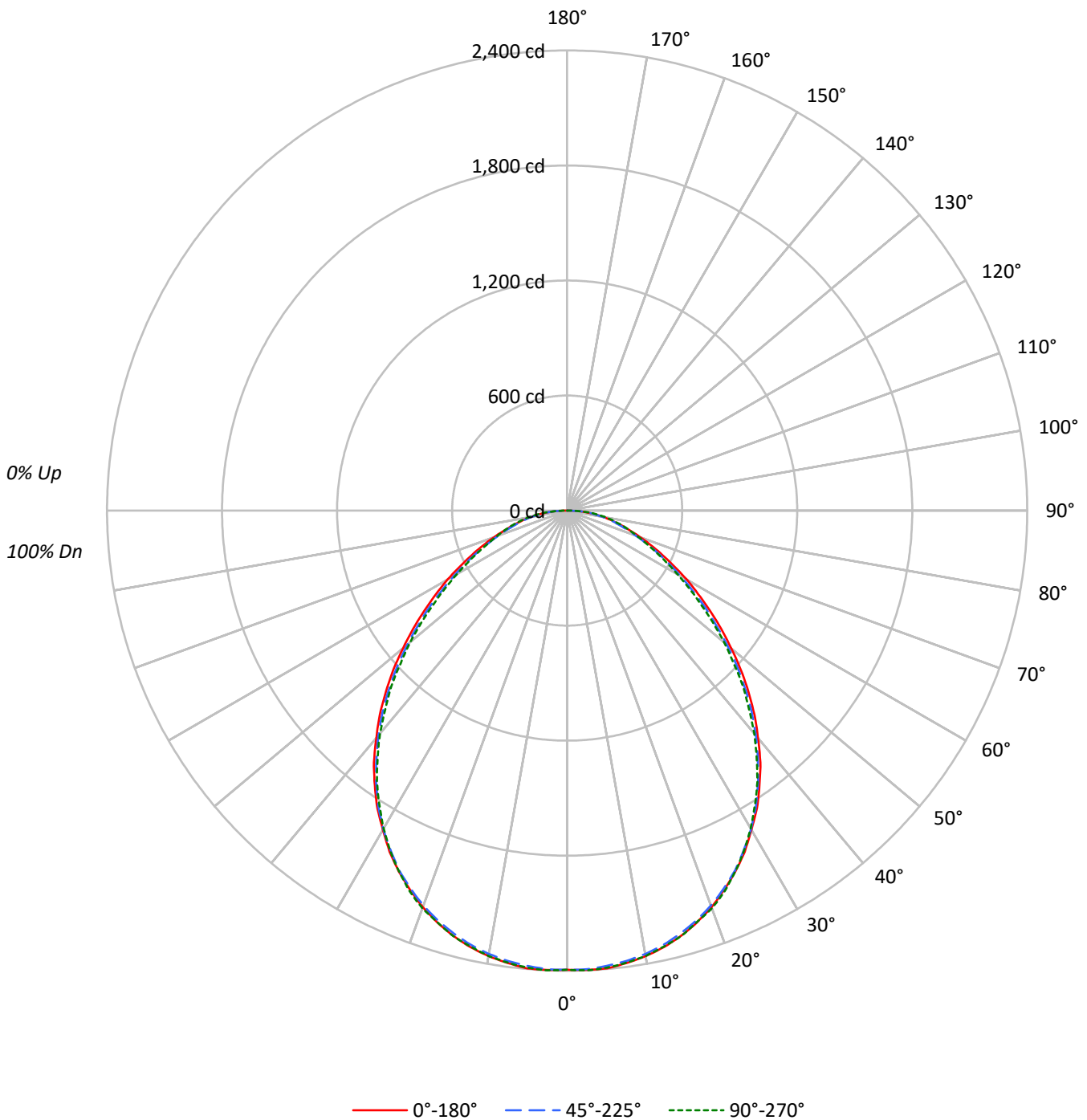
Input Watts (W): 38.967
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3222 | 3222 | 3222 |
| 5° | 3237 | 3219 | 3232 |
| 10° | 3224 | 3208 | 3223 |
| 15° | 3198 | 3181 | 3201 |
| 20° | 3152 | 3139 | 3162 |
| 25° | 3083 | 3075 | 3082 |
| 30° | 2986 | 2980 | 2974 |
| 35° | 2873 | 2851 | 2840 |
| 40° | 2720 | 2689 | 2667 |
| 45° | 2544 | 2497 | 2467 |
| 50° | 2338 | 2275 | 2236 |
| 55° | 2132 | 2054 | 1994 |
| 60° | 1936 | 1832 | 1785 |
| 65° | 1744 | 1646 | 1618 |
| 70° | 1597 | 1493 | 1535 |
| 75° | 1493 | 1424 | 1529 |
| 80° | 1481 | 1454 | 1597 |
| 85° | 1510 | 1522 | 1740 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 226.7 | 4.0 |
| 10°-20° | 644.4 | 11.4 |
| 20°-30° | 951.9 | 16.9 |
| 30°-40° | 1082.3 | 19.2 |
| 40°-50° | 1010.7 | 17.9 |
| 50°-60° | 786.0 | 13.9 |
| 60°-70° | 521.5 | 9.3 |
| 70°-80° | 301.8 | 5.4 |
| 80°-90° | 109.7 | 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° | 1823.0 | 32.4 |
| 0°-40° | 2905.3 | 51.6 |
| 0°-60° | 4701.9 | 83.4 |
| 0°-90° | 5635.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5635.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2395 | 2395 | 2395 | 2395 | 2395 | |
| 5° | 2397 | 2384 | 2383 | 2388 | 2393 | 227 |
| 15° | 2296 | 2285 | 2284 | 2283 | 2298 | 647 |
| 25° | 2077 | 2068 | 2072 | 2067 | 2076 | 955 |
| 35° | 1749 | 1740 | 1736 | 1724 | 1729 | 1092 |
| 45° | 1337 | 1326 | 1312 | 1296 | 1296 | 1030 |
| 55° | 909 | 896 | 876 | 853 | 850 | 815 |
| 65° | 548 | 531 | 517 | 507 | 508 | 548 |
| 75° | 287 | 280 | 274 | 286 | 294 | 307 |
| 85° | 98 | 96 | 99 | 112 | 113 | 106 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293187

CATALOG NUMBER: 24GR-LD5-56-F125-UNV-L83050-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2394.9 | 2394.9 | 2394.9 | 2394.9 | 2394.9 |
| 2.5° | 2398.4 | 2391.4 | 2394.9 | 2392.2 | 2400.2 |
| 5° | 2396.6 | 2384.3 | 2383.4 | 2387.8 | 2393.1 |
| 7.5° | 2379.9 | 2366.7 | 2369.3 | 2369.3 | 2378.1 |
| 10° | 2359.6 | 2346.4 | 2348.2 | 2349.1 | 2358.8 |
| 12.5° | 2332.3 | 2319.1 | 2320.0 | 2319.1 | 2328.8 |
| 15° | 2296.2 | 2284.8 | 2283.9 | 2283.0 | 2298.0 |
| 17.5° | 2252.2 | 2236.3 | 2241.6 | 2242.5 | 2250.4 |
| 20° | 2201.1 | 2188.8 | 2192.3 | 2191.4 | 2208.1 |
| 22.5° | 2140.3 | 2131.5 | 2134.2 | 2132.4 | 2148.3 |
| 25° | 2076.9 | 2068.1 | 2071.6 | 2067.2 | 2076.0 |
| 27.5° | 2005.6 | 1999.4 | 1995.9 | 1993.2 | 1999.4 |
| 30° | 1921.9 | 1918.4 | 1918.4 | 1906.9 | 1914.0 |
| 32.5° | 1842.6 | 1831.2 | 1831.2 | 1826.8 | 1822.4 |
| 35° | 1749.3 | 1740.4 | 1736.0 | 1723.7 | 1729.0 |
| 37.5° | 1655.9 | 1635.6 | 1633.9 | 1624.2 | 1624.2 |
| 40° | 1548.4 | 1537.0 | 1530.8 | 1520.2 | 1518.5 |
| 42.5° | 1446.3 | 1434.8 | 1424.2 | 1406.6 | 1403.1 |
| 45° | 1337.0 | 1326.5 | 1312.4 | 1295.6 | 1296.5 |
| 47.5° | 1228.7 | 1213.7 | 1200.5 | 1180.3 | 1177.6 |
| 50° | 1116.8 | 1106.3 | 1086.9 | 1069.3 | 1068.4 |
| 52.5° | 1012.0 | 995.3 | 977.7 | 956.5 | 956.5 |
| 55° | 909.0 | 895.8 | 875.5 | 852.6 | 850.0 |
| 57.5° | 810.3 | 798.0 | 775.1 | 758.4 | 754.0 |
| 60° | 719.6 | 702.0 | 680.9 | 666.8 | 663.2 |
| 62.5° | 628.9 | 613.0 | 597.2 | 583.1 | 582.2 |
| 65° | 547.9 | 531.1 | 517.0 | 507.3 | 508.2 |
| 67.5° | 474.7 | 460.7 | 444.8 | 442.2 | 443.0 |
| 70° | 406.0 | 391.1 | 379.6 | 385.8 | 390.2 |
| 72.5° | 340.9 | 332.9 | 325.0 | 333.8 | 340.0 |
| 75° | 287.1 | 280.1 | 273.9 | 286.3 | 294.2 |
| 77.5° | 237.8 | 232.5 | 231.6 | 242.2 | 249.3 |
| 80° | 191.1 | 185.0 | 187.6 | 199.9 | 206.1 |
| 82.5° | 145.3 | 140.9 | 141.8 | 156.8 | 161.2 |
| 85° | 97.8 | 96.0 | 98.6 | 111.9 | 112.7 |
| 87.5° | 52.0 | 52.0 | 53.7 | 61.7 | 59.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)