

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: P293064

Luminaire Tested: **24GR-LD5-56-F1-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293064
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-12)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-56-F1-UNV-L93050-W2A1-U-5000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5263.0 lumens
Efficiency: N/A
Efficacy: 129.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.25
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

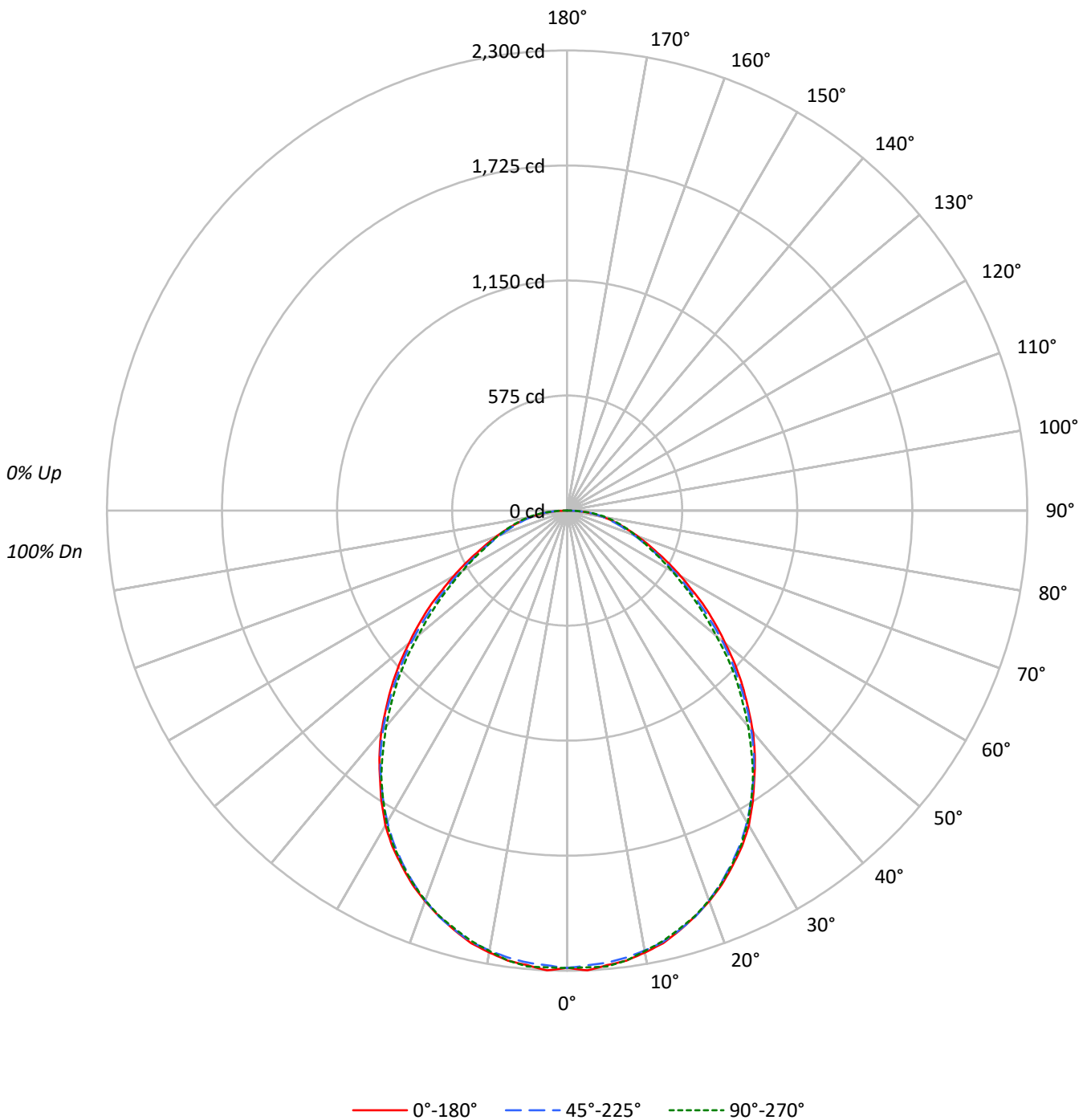
Input Watts (W): 40.603614
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P293064

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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 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 | | | | | 62 | | | |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | 47 | | | |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | 42 | | | |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 | | | | | 34 | | | |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3076 | 3076 | 3076 |
| 5° | 3080 | 3063 | 3089 |
| 10° | 3064 | 3051 | 3054 |
| 15° | 3026 | 3023 | 3015 |
| 20° | 2975 | 2969 | 2969 |
| 25° | 2906 | 2890 | 2896 |
| 30° | 2822 | 2793 | 2801 |
| 35° | 2680 | 2667 | 2660 |
| 40° | 2538 | 2515 | 2471 |
| 45° | 2359 | 2318 | 2272 |
| 50° | 2161 | 2113 | 2034 |
| 55° | 1974 | 1884 | 1821 |
| 60° | 1759 | 1674 | 1630 |
| 65° | 1583 | 1500 | 1479 |
| 70° | 1469 | 1379 | 1435 |
| 75° | 1405 | 1343 | 1456 |
| 80° | 1405 | 1405 | 1556 |
| 85° | 1457 | 1474 | 1643 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 215.9 | 4.1 |
| 10°-20° | 611.0 | 11.6 |
| 20°-30° | 896.7 | 17.0 |
| 30°-40° | 1013.8 | 19.3 |
| 40°-50° | 937.0 | 17.8 |
| 50°-60° | 721.9 | 13.7 |
| 60°-70° | 478.0 | 9.1 |
| 70°-80° | 284.6 | 5.4 |
| 80°-90° | 104.2 | 2.0 |
| 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° | 1723.6 | 32.7 |
| 0°-40° | 2737.4 | 52.0 |
| 0°-60° | 4396.2 | 83.5 |
| 0°-90° | 5263.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5263.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2286 | 2286 | 2286 | 2286 | 2286 | |
| 5° | 2281 | 2281 | 2268 | 2269 | 2287 | 217 |
| 15° | 2172 | 2168 | 2170 | 2169 | 2164 | 612 |
| 25° | 1957 | 1952 | 1946 | 1944 | 1951 | 901 |
| 35° | 1632 | 1629 | 1624 | 1616 | 1620 | 1021 |
| 45° | 1240 | 1231 | 1218 | 1196 | 1194 | 955 |
| 55° | 841 | 824 | 803 | 782 | 776 | 750 |
| 65° | 497 | 490 | 471 | 467 | 465 | 498 |
| 75° | 270 | 264 | 258 | 270 | 280 | 288 |
| 85° | 94 | 89 | 96 | 105 | 106 | 100 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293064

CATALOG NUMBER: 24GR-LD5-56-F1-UNV-L93050-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2286.1 | 2286.1 | 2286.1 | 2286.1 | 2286.1 |
| 2.5° | 2300.2 | 2288.3 | 2275.3 | 2275.3 | 2285.0 |
| 5° | 2280.7 | 2280.7 | 2267.7 | 2268.8 | 2287.2 |
| 7.5° | 2268.8 | 2262.2 | 2253.6 | 2253.6 | 2267.7 |
| 10° | 2242.7 | 2237.3 | 2232.9 | 2230.8 | 2235.1 |
| 12.5° | 2214.5 | 2205.8 | 2209.0 | 2205.8 | 2204.7 |
| 15° | 2172.1 | 2167.8 | 2170.0 | 2168.9 | 2164.5 |
| 17.5° | 2126.5 | 2124.4 | 2128.7 | 2121.1 | 2124.4 |
| 20° | 2077.7 | 2071.2 | 2073.4 | 2069.0 | 2073.4 |
| 22.5° | 2022.3 | 2018.0 | 2012.6 | 2007.1 | 2015.8 |
| 25° | 1957.2 | 1951.8 | 1946.4 | 1944.2 | 1950.7 |
| 27.5° | 1892.1 | 1883.4 | 1875.8 | 1873.6 | 1883.4 |
| 30° | 1816.1 | 1806.3 | 1797.6 | 1795.5 | 1803.1 |
| 32.5° | 1726.0 | 1723.8 | 1713.0 | 1708.6 | 1711.9 |
| 35° | 1631.5 | 1629.4 | 1624.0 | 1616.4 | 1619.6 |
| 37.5° | 1541.5 | 1540.4 | 1532.8 | 1519.7 | 1511.1 |
| 40° | 1444.8 | 1437.2 | 1431.8 | 1413.4 | 1406.8 |
| 42.5° | 1338.5 | 1336.3 | 1326.5 | 1305.9 | 1298.3 |
| 45° | 1239.7 | 1231.0 | 1218.0 | 1196.3 | 1194.1 |
| 47.5° | 1137.6 | 1125.7 | 1113.8 | 1086.6 | 1085.5 |
| 50° | 1032.3 | 1023.7 | 1009.5 | 982.4 | 971.5 |
| 52.5° | 934.6 | 922.7 | 903.2 | 877.1 | 871.7 |
| 55° | 841.3 | 823.9 | 803.3 | 781.6 | 776.2 |
| 57.5° | 741.4 | 733.8 | 708.8 | 691.5 | 685.0 |
| 60° | 653.5 | 647.0 | 622.0 | 605.7 | 605.7 |
| 62.5° | 574.2 | 564.5 | 542.8 | 531.9 | 531.9 |
| 65° | 497.2 | 489.6 | 471.1 | 466.8 | 464.6 |
| 67.5° | 431.0 | 421.2 | 408.2 | 407.1 | 412.5 |
| 70° | 373.4 | 361.5 | 350.6 | 361.5 | 364.7 |
| 72.5° | 319.1 | 311.5 | 301.8 | 315.9 | 322.4 |
| 75° | 270.3 | 263.8 | 258.4 | 270.3 | 280.1 |
| 77.5° | 225.8 | 219.3 | 219.3 | 232.3 | 241.0 |
| 80° | 181.3 | 176.9 | 181.3 | 192.1 | 200.8 |
| 82.5° | 138.9 | 135.7 | 141.1 | 152.0 | 157.4 |
| 85° | 94.4 | 89.0 | 95.5 | 105.3 | 106.4 |
| 87.5° | 44.5 | 43.4 | 47.8 | 54.3 | 53.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)