

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: P293518

Luminaire Tested: **24GR-LD5-64-A-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33306)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-64-A-UNV-L82765-W2A1-U-5500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (336) 80 CRI LEDS TUNED TO 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6732.0 lumens
Efficiency: N/A
Efficacy: 142.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.26
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

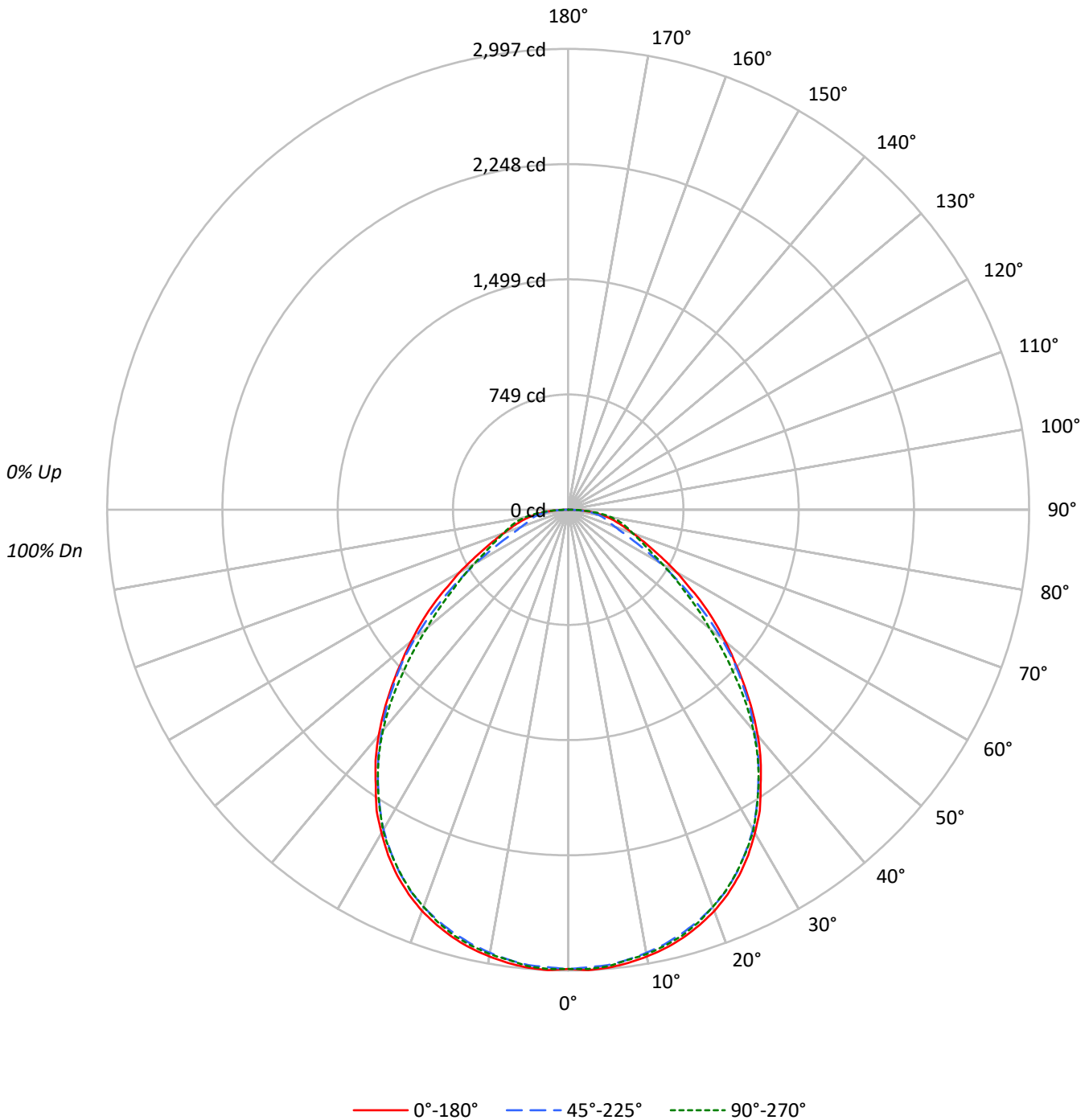
Input Watts (W): 47.244
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 89 | 88 | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 78 | 75 | 73 |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 73 | 69 | 65 | 63 |
| 4 | 86 | 74 | 66 | 60 | 83 | 73 | 65 | 60 | 71 | 64 | 59 | 68 | 63 | 58 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 |
| 6 | 73 | 61 | 53 | 46 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 38 | 33 | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 40 | 35 | 30 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4019 | 4019 | 4019 |
| 5° | 4038 | 4016 | 4026 |
| 10° | 4031 | 3998 | 4010 |
| 15° | 4016 | 3975 | 3993 |
| 20° | 3978 | 3937 | 3936 |
| 25° | 3900 | 3858 | 3855 |
| 30° | 3771 | 3732 | 3741 |
| 35° | 3582 | 3541 | 3546 |
| 40° | 3368 | 3310 | 3290 |
| 45° | 3087 | 3046 | 2925 |
| 50° | 2791 | 2715 | 2510 |
| 55° | 2506 | 2281 | 2164 |
| 60° | 2194 | 1836 | 1903 |
| 65° | 1914 | 1443 | 1752 |
| 70° | 1751 | 1260 | 1751 |
| 75° | 1752 | 1341 | 1930 |
| 80° | 1901 | 1579 | 2200 |
| 85° | 2087 | 1782 | 2360 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 282.8 | 4.2 |
| 10°-20° | 807.2 | 12.0 |
| 20°-30° | 1196.9 | 17.8 |
| 30°-40° | 1350.3 | 20.1 |
| 40°-50° | 1222.9 | 18.2 |
| 50°-60° | 882.3 | 13.1 |
| 60°-70° | 526.8 | 7.8 |
| 70°-80° | 325.6 | 4.8 |
| 80°-90° | 137.2 | 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° | 2287.0 | 34.0 |
| 0°-40° | 3637.2 | 54.0 |
| 0°-60° | 5742.4 | 85.3 |
| 0°-90° | 6732.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6732.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2987 | 2987 | 2987 | 2987 | 2987 | |
| 5° | 2990 | 2986 | 2973 | 2970 | 2981 | 284 |
| 15° | 2883 | 2865 | 2854 | 2855 | 2866 | 813 |
| 25° | 2627 | 2612 | 2599 | 2590 | 2597 | 1207 |
| 35° | 2181 | 2178 | 2156 | 2157 | 2159 | 1365 |
| 45° | 1622 | 1612 | 1601 | 1561 | 1537 | 1250 |
| 55° | 1068 | 1035 | 972 | 925 | 922 | 953 |
| 65° | 601 | 529 | 453 | 515 | 550 | 605 |
| 75° | 337 | 292 | 258 | 321 | 371 | 360 |
| 85° | 135 | 119 | 115 | 151 | 153 | 141 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24GR-LD5-64-A-UNV-L82765-W2A1-U-5500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2986.9 | 2986.9 | 2986.9 | 2986.9 | 2986.9 |
| 2.5° | 2997.3 | 2989.0 | 2978.6 | 2984.8 | 2990.0 |
| 5° | 2990.0 | 2985.9 | 2973.4 | 2970.3 | 2980.7 |
| 7.5° | 2974.4 | 2964.0 | 2952.6 | 2957.8 | 2953.6 |
| 10° | 2950.5 | 2941.1 | 2926.6 | 2927.6 | 2934.9 |
| 12.5° | 2921.4 | 2909.9 | 2894.3 | 2898.5 | 2904.7 |
| 15° | 2882.9 | 2865.2 | 2853.8 | 2854.8 | 2866.3 |
| 17.5° | 2834.0 | 2820.5 | 2805.9 | 2809.1 | 2814.3 |
| 20° | 2777.9 | 2770.6 | 2749.8 | 2743.5 | 2748.7 |
| 22.5° | 2707.1 | 2693.6 | 2682.2 | 2679.1 | 2680.1 |
| 25° | 2627.1 | 2612.5 | 2599.0 | 2589.6 | 2596.9 |
| 27.5° | 2533.5 | 2521.0 | 2503.3 | 2500.2 | 2506.4 |
| 30° | 2427.4 | 2418.0 | 2402.4 | 2398.3 | 2407.6 |
| 32.5° | 2319.2 | 2303.6 | 2281.8 | 2281.8 | 2283.9 |
| 35° | 2180.9 | 2177.8 | 2155.9 | 2157.0 | 2159.1 |
| 37.5° | 2056.1 | 2041.5 | 2029.1 | 2016.6 | 2022.8 |
| 40° | 1917.8 | 1901.1 | 1884.5 | 1876.2 | 1873.1 |
| 42.5° | 1769.1 | 1756.6 | 1749.3 | 1719.1 | 1711.9 |
| 45° | 1622.4 | 1612.0 | 1600.6 | 1561.1 | 1537.1 |
| 47.5° | 1472.7 | 1470.6 | 1461.2 | 1391.5 | 1367.6 |
| 50° | 1333.3 | 1330.2 | 1296.9 | 1223.1 | 1199.1 |
| 52.5° | 1201.2 | 1180.4 | 1136.7 | 1063.9 | 1059.8 |
| 55° | 1068.1 | 1034.8 | 972.4 | 924.6 | 922.5 |
| 57.5° | 927.7 | 888.2 | 824.7 | 798.7 | 812.2 |
| 60° | 815.4 | 755.0 | 682.2 | 685.4 | 707.2 |
| 62.5° | 698.9 | 631.3 | 559.5 | 590.7 | 616.7 |
| 65° | 601.1 | 529.4 | 453.4 | 514.8 | 550.2 |
| 67.5° | 515.8 | 449.3 | 376.5 | 458.6 | 493.0 |
| 70° | 445.1 | 391.0 | 320.3 | 406.6 | 445.1 |
| 72.5° | 389.0 | 339.0 | 283.9 | 365.0 | 409.8 |
| 75° | 337.0 | 292.2 | 257.9 | 321.4 | 371.3 |
| 77.5° | 292.2 | 248.6 | 233.0 | 283.9 | 332.8 |
| 80° | 245.4 | 205.9 | 203.8 | 247.5 | 283.9 |
| 82.5° | 191.4 | 164.3 | 164.3 | 207.0 | 228.8 |
| 85° | 135.2 | 118.6 | 115.4 | 150.8 | 152.9 |
| 87.5° | 69.7 | 66.6 | 60.3 | 79.0 | 79.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)