

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: P293515

Luminaire Tested: **24GR-LD5-64-A-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293515
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-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6462.0 lumens
Efficiency: N/A
Efficacy: 139.0 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

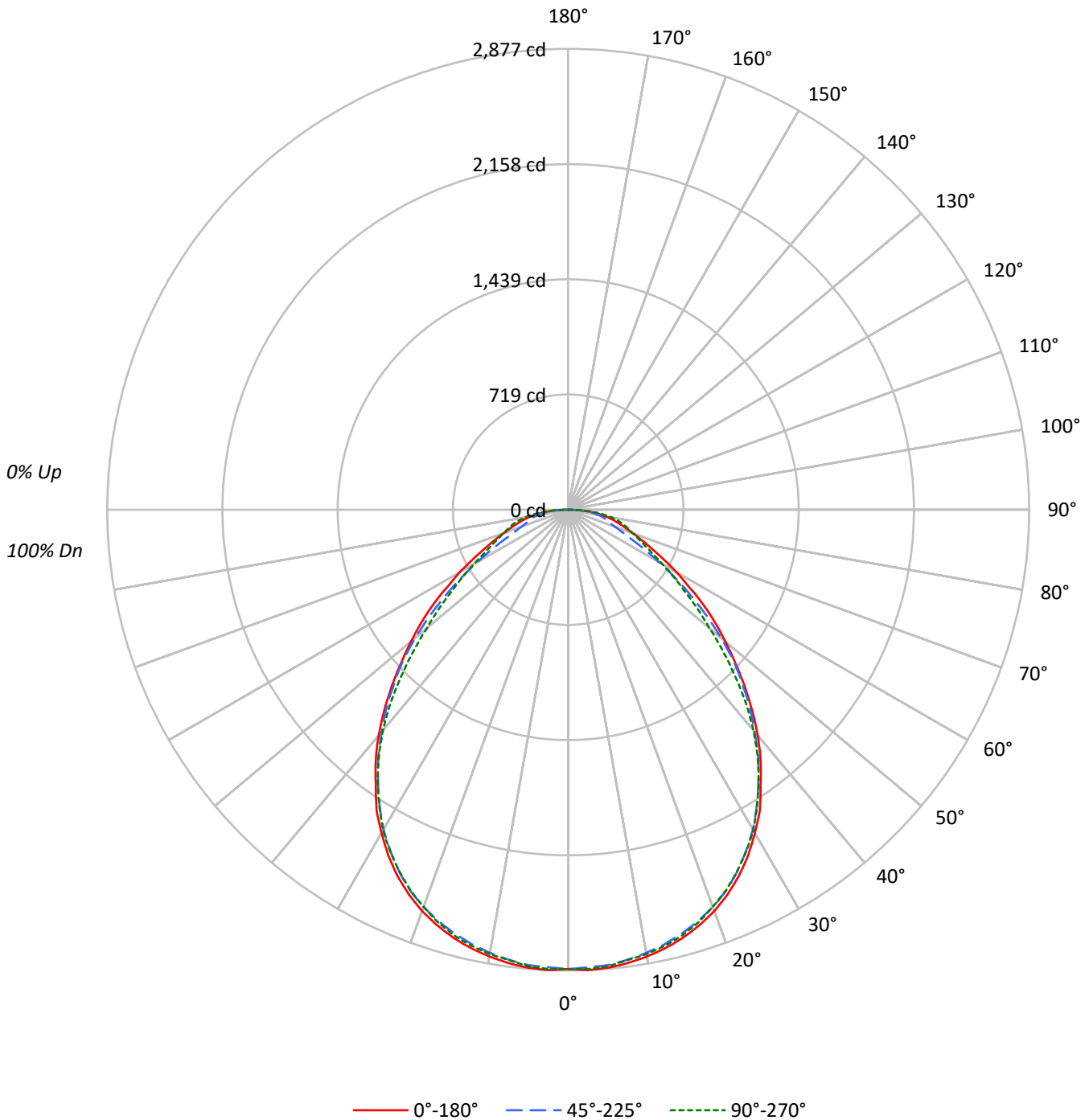
Input Watts (W): 46.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3858 | 3858 | 3858 |
| 5° | 3876 | 3855 | 3864 |
| 10° | 3869 | 3838 | 3849 |
| 15° | 3855 | 3816 | 3832 |
| 20° | 3818 | 3779 | 3778 |
| 25° | 3744 | 3704 | 3701 |
| 30° | 3620 | 3583 | 3591 |
| 35° | 3438 | 3399 | 3404 |
| 40° | 3233 | 3177 | 3158 |
| 45° | 2963 | 2923 | 2808 |
| 50° | 2679 | 2606 | 2409 |
| 55° | 2405 | 2190 | 2077 |
| 60° | 2106 | 1762 | 1827 |
| 65° | 1837 | 1386 | 1681 |
| 70° | 1681 | 1210 | 1681 |
| 75° | 1681 | 1287 | 1853 |
| 80° | 1826 | 1516 | 2111 |
| 85° | 2004 | 1711 | 2265 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 271.5 | 4.2 |
| 10°-20° | 774.8 | 12.0 |
| 20°-30° | 1148.9 | 17.8 |
| 30°-40° | 1296.1 | 20.1 |
| 40°-50° | 1173.9 | 18.2 |
| 50°-60° | 846.9 | 13.1 |
| 60°-70° | 505.7 | 7.8 |
| 70°-80° | 312.5 | 4.8 |
| 80°-90° | 131.7 | 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° | 2195.2 | 34.0 |
| 0°-40° | 3491.4 | 54.0 |
| 0°-60° | 5512.1 | 85.3 |
| 0°-90° | 6462.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6462.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2867 | 2867 | 2867 | 2867 | 2867 | |
| 5° | 2870 | 2866 | 2854 | 2851 | 2861 | 273 |
| 15° | 2767 | 2750 | 2739 | 2740 | 2751 | 780 |
| 25° | 2522 | 2508 | 2495 | 2486 | 2493 | 1158 |
| 35° | 2093 | 2090 | 2070 | 2070 | 2072 | 1310 |
| 45° | 1557 | 1547 | 1536 | 1498 | 1476 | 1200 |
| 55° | 1025 | 993 | 933 | 888 | 886 | 915 |
| 65° | 577 | 508 | 435 | 494 | 528 | 580 |
| 75° | 323 | 280 | 248 | 308 | 356 | 345 |
| 85° | 130 | 114 | 111 | 145 | 147 | 136 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293515

CATALOG NUMBER: 24GR-LD5-64-A-UNV-L82765-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2867.1 | 2867.1 | 2867.1 | 2867.1 | 2867.1 |
| 2.5° | 2877.1 | 2869.1 | 2859.1 | 2865.1 | 2870.1 |
| 5° | 2870.1 | 2866.1 | 2854.1 | 2851.1 | 2861.1 |
| 7.5° | 2855.1 | 2845.2 | 2834.2 | 2839.2 | 2835.2 |
| 10° | 2832.2 | 2823.2 | 2809.2 | 2810.2 | 2817.2 |
| 12.5° | 2804.2 | 2793.2 | 2778.3 | 2782.3 | 2788.2 |
| 15° | 2767.3 | 2750.3 | 2739.3 | 2740.3 | 2751.3 |
| 17.5° | 2720.4 | 2707.4 | 2693.4 | 2696.4 | 2701.4 |
| 20° | 2666.5 | 2659.5 | 2639.5 | 2633.5 | 2638.5 |
| 22.5° | 2598.6 | 2585.6 | 2574.6 | 2571.6 | 2572.6 |
| 25° | 2521.7 | 2507.7 | 2494.7 | 2485.8 | 2492.8 |
| 27.5° | 2431.9 | 2419.9 | 2402.9 | 2399.9 | 2405.9 |
| 30° | 2330.0 | 2321.0 | 2306.1 | 2302.1 | 2311.1 |
| 32.5° | 2226.2 | 2211.2 | 2190.3 | 2190.3 | 2192.3 |
| 35° | 2093.4 | 2090.4 | 2069.5 | 2070.5 | 2072.5 |
| 37.5° | 1973.6 | 1959.7 | 1947.7 | 1935.7 | 1941.7 |
| 40° | 1840.9 | 1824.9 | 1808.9 | 1800.9 | 1797.9 |
| 42.5° | 1698.1 | 1686.1 | 1679.1 | 1650.2 | 1643.2 |
| 45° | 1557.3 | 1547.4 | 1536.4 | 1498.4 | 1475.5 |
| 47.5° | 1413.6 | 1411.6 | 1402.6 | 1335.7 | 1312.8 |
| 50° | 1279.8 | 1276.8 | 1244.9 | 1174.0 | 1151.0 |
| 52.5° | 1153.0 | 1133.1 | 1091.1 | 1021.3 | 1017.3 |
| 55° | 1025.3 | 993.3 | 933.4 | 887.5 | 885.5 |
| 57.5° | 890.5 | 852.5 | 791.7 | 766.7 | 779.7 |
| 60° | 782.7 | 724.8 | 654.9 | 657.9 | 678.8 |
| 62.5° | 670.9 | 606.0 | 537.1 | 567.0 | 592.0 |
| 65° | 577.0 | 508.1 | 435.3 | 494.2 | 528.1 |
| 67.5° | 495.2 | 431.3 | 361.4 | 440.2 | 473.2 |
| 70° | 427.3 | 375.4 | 307.5 | 390.3 | 427.3 |
| 72.5° | 373.4 | 325.4 | 272.5 | 350.4 | 393.3 |
| 75° | 323.4 | 280.5 | 247.6 | 308.5 | 356.4 |
| 77.5° | 280.5 | 238.6 | 223.6 | 272.5 | 319.5 |
| 80° | 235.6 | 197.7 | 195.7 | 237.6 | 272.5 |
| 82.5° | 183.7 | 157.7 | 157.7 | 198.7 | 219.6 |
| 85° | 129.8 | 113.8 | 110.8 | 144.8 | 146.7 |
| 87.5° | 66.9 | 63.9 | 57.9 | 75.9 | 75.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)