

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: P261327

Luminaire Tested: **24CZ-LD5-65-S-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-65-S-UNV-L92765-W2A1-U-5700K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED AT 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6285.0 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

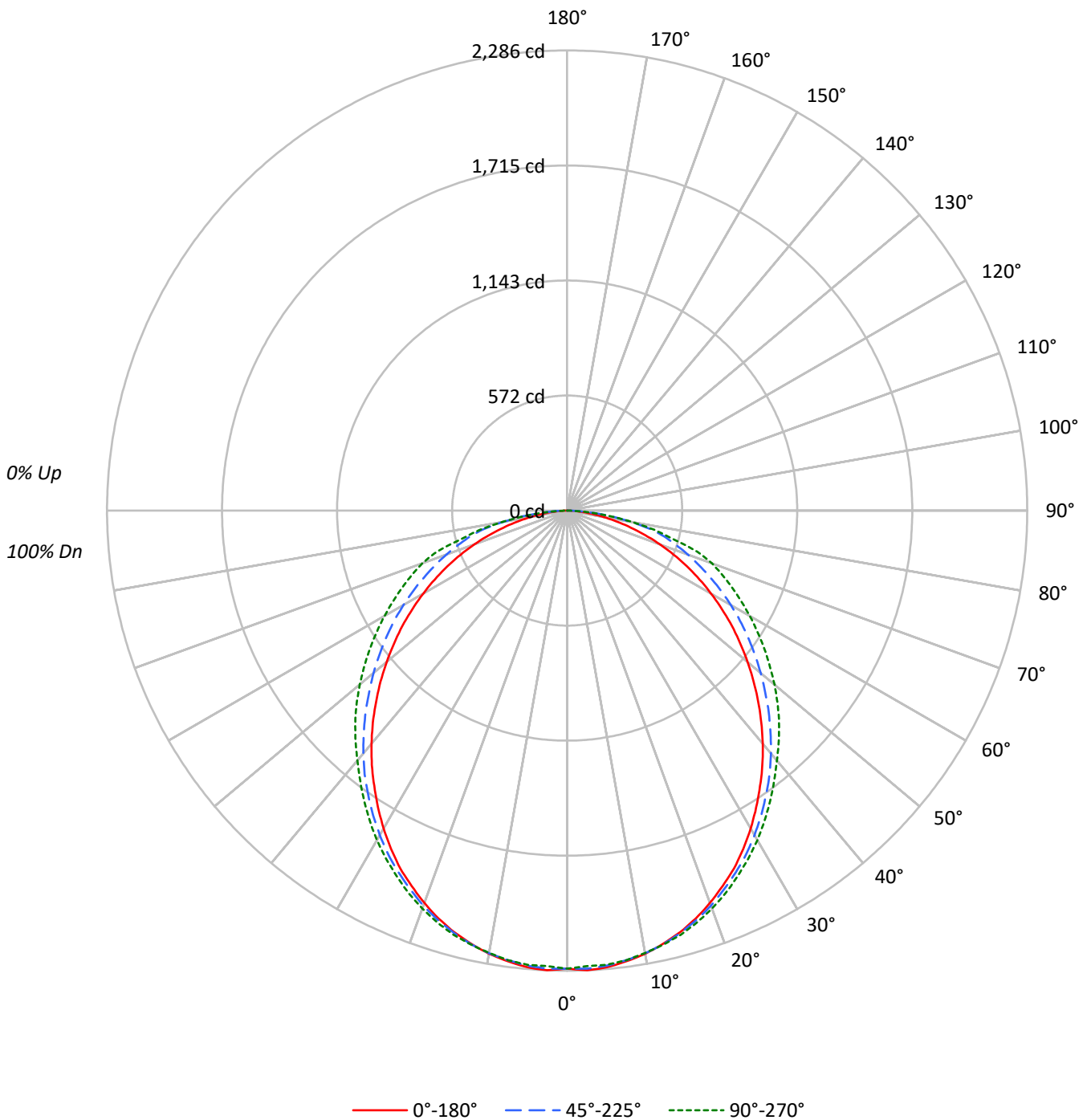
Input Watts (W): 50.406
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3061 | 3061 | 3061 |
| 5° | 3076 | 3065 | 3059 |
| 10° | 3054 | 3052 | 3049 |
| 15° | 3021 | 3027 | 3038 |
| 20° | 2970 | 2991 | 3012 |
| 25° | 2912 | 2943 | 2974 |
| 30° | 2833 | 2892 | 2937 |
| 35° | 2745 | 2830 | 2889 |
| 40° | 2656 | 2766 | 2847 |
| 45° | 2555 | 2694 | 2833 |
| 50° | 2451 | 2627 | 2815 |
| 55° | 2345 | 2571 | 2806 |
| 60° | 2223 | 2527 | 2819 |
| 65° | 2091 | 2497 | 2876 |
| 70° | 1925 | 2509 | 3011 |
| 75° | 1707 | 2598 | 2805 |
| 80° | 1426 | 2463 | 2528 |
| 85° | 1065 | 1970 | 1808 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 215.1 | 3.4 |
| 10°-20° | 611.8 | 9.7 |
| 20°-30° | 911.7 | 14.5 |
| 30°-40° | 1073.3 | 17.1 |
| 40°-50° | 1090.7 | 17.4 |
| 50°-60° | 980.6 | 15.6 |
| 60°-70° | 774.7 | 12.3 |
| 70°-80° | 491.5 | 7.8 |
| 80°-90° | 135.6 | 2.2 |
| 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° | 1738.7 | 27.7 |
| 0°-40° | 2811.9 | 44.7 |
| 0°-60° | 4883.2 | 77.7 |
| 0°-90° | 6285.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6285.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2275 | 2275 | 2275 | 2275 | 2275 | |
| 5° | 2277 | 2259 | 2269 | 2265 | 2265 | 216 |
| 15° | 2169 | 2158 | 2173 | 2179 | 2181 | 611 |
| 25° | 1962 | 1960 | 1982 | 1995 | 2003 | 902 |
| 35° | 1671 | 1681 | 1723 | 1742 | 1759 | 1045 |
| 45° | 1343 | 1361 | 1416 | 1458 | 1489 | 1036 |
| 55° | 1000 | 1025 | 1096 | 1167 | 1196 | 893 |
| 65° | 657 | 690 | 784 | 870 | 903 | 650 |
| 75° | 328 | 385 | 500 | 544 | 540 | 349 |
| 85° | 69 | 119 | 128 | 117 | 117 | 85 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2275.3 | 2275.3 | 2275.3 | 2275.3 | 2275.3 |
| 2.5° | 2285.7 | 2269.0 | 2277.4 | 2273.2 | 2264.8 |
| 5° | 2277.4 | 2258.6 | 2269.0 | 2264.8 | 2264.8 |
| 7.5° | 2258.6 | 2243.9 | 2252.3 | 2250.2 | 2252.3 |
| 10° | 2235.6 | 2220.9 | 2233.5 | 2233.5 | 2231.4 |
| 12.5° | 2204.2 | 2191.6 | 2206.3 | 2206.3 | 2208.4 |
| 15° | 2168.6 | 2158.2 | 2172.8 | 2179.1 | 2181.2 |
| 17.5° | 2124.7 | 2114.3 | 2133.1 | 2139.4 | 2145.6 |
| 20° | 2074.5 | 2070.3 | 2089.2 | 2095.4 | 2103.8 |
| 22.5° | 2018.1 | 2018.1 | 2036.9 | 2045.2 | 2057.8 |
| 25° | 1961.6 | 1959.5 | 1982.5 | 1995.1 | 2003.4 |
| 27.5° | 1894.7 | 1896.8 | 1926.0 | 1938.6 | 1949.0 |
| 30° | 1823.6 | 1827.8 | 1861.2 | 1875.9 | 1890.5 |
| 32.5° | 1748.3 | 1756.7 | 1794.3 | 1811.0 | 1825.7 |
| 35° | 1670.9 | 1681.4 | 1723.2 | 1742.0 | 1758.7 |
| 37.5° | 1593.5 | 1608.2 | 1652.1 | 1670.9 | 1689.7 |
| 40° | 1512.0 | 1524.5 | 1574.7 | 1597.7 | 1620.7 |
| 42.5° | 1428.3 | 1445.1 | 1495.2 | 1528.7 | 1555.9 |
| 45° | 1342.6 | 1361.4 | 1415.8 | 1457.6 | 1489.0 |
| 47.5° | 1256.8 | 1281.9 | 1334.2 | 1390.7 | 1417.9 |
| 50° | 1171.1 | 1196.2 | 1254.8 | 1317.5 | 1344.7 |
| 52.5° | 1083.3 | 1108.4 | 1175.3 | 1240.1 | 1269.4 |
| 55° | 999.6 | 1024.7 | 1095.8 | 1166.9 | 1196.2 |
| 57.5° | 911.8 | 939.0 | 1018.4 | 1091.6 | 1120.9 |
| 60° | 826.0 | 853.2 | 939.0 | 1016.4 | 1047.7 |
| 62.5° | 742.4 | 771.7 | 861.6 | 943.2 | 974.5 |
| 65° | 656.7 | 690.1 | 784.2 | 870.0 | 903.4 |
| 67.5° | 573.0 | 610.6 | 708.9 | 798.9 | 834.4 |
| 70° | 489.4 | 533.3 | 637.8 | 729.8 | 765.4 |
| 72.5° | 407.8 | 455.9 | 566.7 | 658.7 | 677.6 |
| 75° | 328.3 | 384.8 | 499.8 | 543.7 | 539.5 |
| 77.5° | 253.0 | 315.8 | 424.5 | 432.9 | 445.4 |
| 80° | 184.0 | 253.0 | 317.9 | 334.6 | 326.2 |
| 82.5° | 121.3 | 190.3 | 227.9 | 219.6 | 217.5 |
| 85° | 69.0 | 119.2 | 127.6 | 117.1 | 117.1 |
| 87.5° | 29.3 | 48.1 | 41.8 | 31.4 | 29.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)