

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: P276127

Luminaire Tested: **24CZ2-75HE-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276127
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-75HE-UNV-L82765-W2A1-U-4500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7243.5 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

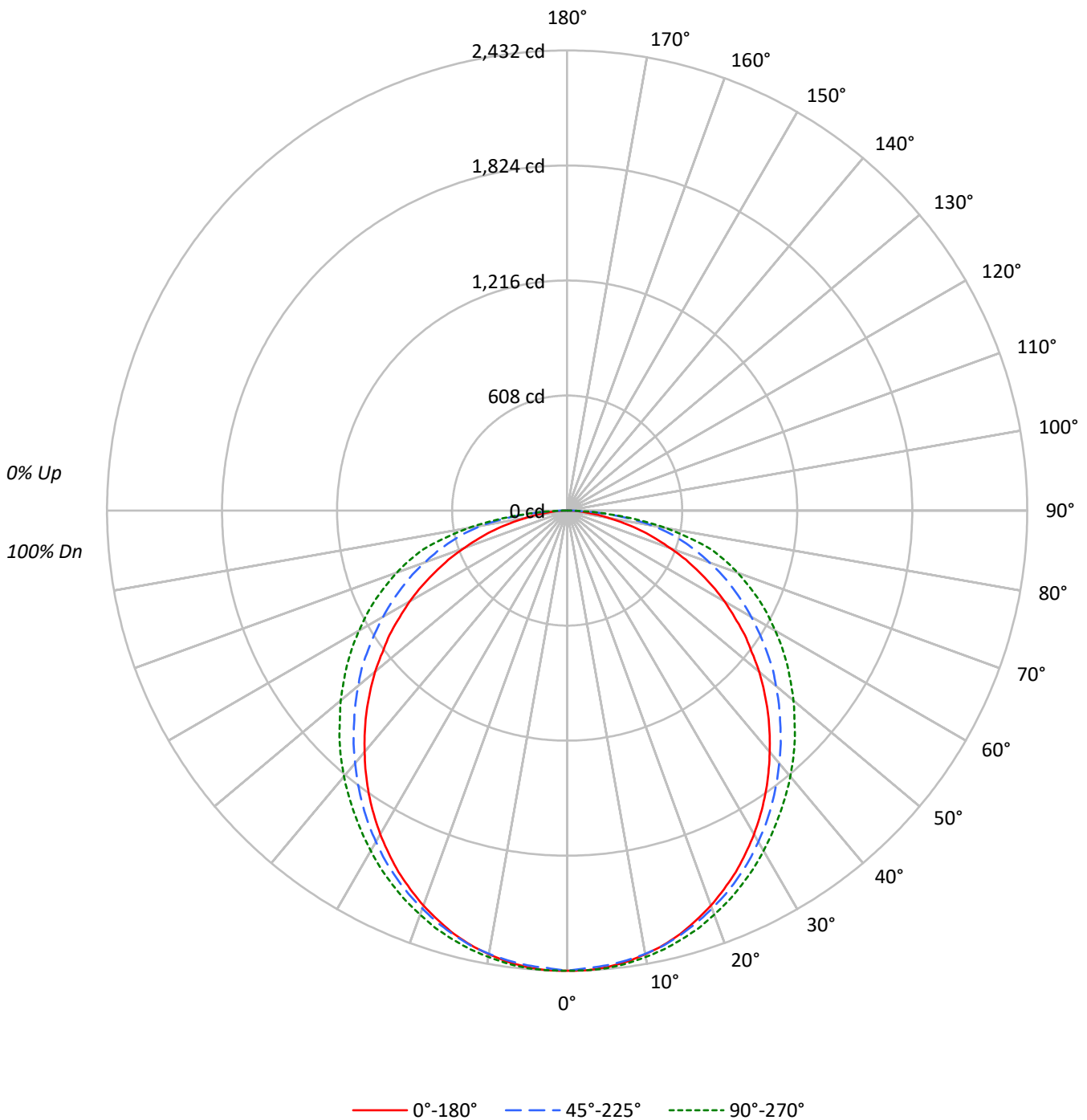
Input Watts (W): 59.52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 89 | 86 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 58 | 56 |
| 4 | 81 | 69 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 38 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 40 | 34 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3272 | 3272 | 3272 |
| 5° | 3272 | 3259 | 3278 |
| 10° | 3253 | 3250 | 3273 |
| 15° | 3226 | 3233 | 3266 |
| 20° | 3181 | 3205 | 3254 |
| 25° | 3130 | 3176 | 3241 |
| 30° | 3069 | 3140 | 3226 |
| 35° | 3002 | 3101 | 3216 |
| 40° | 2925 | 3061 | 3223 |
| 45° | 2852 | 3031 | 3238 |
| 50° | 2773 | 3016 | 3269 |
| 55° | 2688 | 3011 | 3329 |
| 60° | 2583 | 3025 | 3415 |
| 65° | 2448 | 3071 | 3564 |
| 70° | 2273 | 3148 | 3766 |
| 75° | 2074 | 3305 | 4085 |
| 80° | 1705 | 3559 | 4083 |
| 85° | 1306 | 3284 | 3507 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 230.0 | 3.2 |
| 10°-20° | 656.7 | 9.1 |
| 20°-30° | 988.2 | 13.6 |
| 30°-40° | 1184.2 | 16.3 |
| 40°-50° | 1234.1 | 17.0 |
| 50°-60° | 1148.2 | 15.9 |
| 60°-70° | 945.6 | 13.1 |
| 70°-80° | 644.0 | 8.9 |
| 80°-90° | 212.6 | 2.9 |
| 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° | 1874.8 | 25.9 |
| 0°-40° | 3059.0 | 42.2 |
| 0°-60° | 5441.2 | 75.1 |
| 0°-90° | 7243.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 7243.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2432 | 2432 | 2432 | 2432 | 2432 | |
| 5° | 2422 | 2422 | 2413 | 2425 | 2427 | 230 |
| 15° | 2316 | 2318 | 2321 | 2342 | 2345 | 652 |
| 25° | 2108 | 2118 | 2140 | 2176 | 2183 | 970 |
| 35° | 1828 | 1849 | 1888 | 1939 | 1958 | 1142 |
| 45° | 1499 | 1530 | 1593 | 1673 | 1702 | 1156 |
| 55° | 1146 | 1185 | 1284 | 1385 | 1419 | 1021 |
| 65° | 769 | 834 | 965 | 1078 | 1119 | 763 |
| 75° | 399 | 488 | 636 | 749 | 786 | 421 |
| 85° | 85 | 164 | 213 | 227 | 227 | 105 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276127

CATALOG NUMBER: 24CZ2-75HE-UNV-L82765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2432.0 | 2432.0 | 2432.0 | 2432.0 | 2432.0 |
| 2.5° | 2432.0 | 2432.0 | 2419.9 | 2432.0 | 2432.0 |
| 5° | 2422.3 | 2422.3 | 2412.6 | 2424.7 | 2427.2 |
| 7.5° | 2405.4 | 2407.8 | 2398.1 | 2412.6 | 2415.1 |
| 10° | 2381.2 | 2383.6 | 2378.8 | 2393.3 | 2395.7 |
| 12.5° | 2352.2 | 2354.6 | 2354.6 | 2371.6 | 2374.0 |
| 15° | 2315.9 | 2318.4 | 2320.8 | 2342.5 | 2345.0 |
| 17.5° | 2270.0 | 2277.3 | 2282.1 | 2308.7 | 2313.5 |
| 20° | 2221.7 | 2228.9 | 2238.6 | 2267.6 | 2272.4 |
| 22.5° | 2166.1 | 2175.7 | 2192.7 | 2224.1 | 2231.3 |
| 25° | 2108.0 | 2117.7 | 2139.5 | 2175.7 | 2183.0 |
| 27.5° | 2042.8 | 2057.3 | 2083.9 | 2122.5 | 2132.2 |
| 30° | 1975.1 | 1989.6 | 2021.0 | 2062.1 | 2076.6 |
| 32.5° | 1902.6 | 1921.9 | 1958.2 | 2004.1 | 2018.6 |
| 35° | 1827.6 | 1849.4 | 1888.1 | 1938.8 | 1958.2 |
| 37.5° | 1747.8 | 1772.0 | 1817.9 | 1873.5 | 1897.7 |
| 40° | 1665.6 | 1694.7 | 1743.0 | 1808.3 | 1834.9 |
| 42.5° | 1583.5 | 1610.0 | 1670.5 | 1740.6 | 1769.6 |
| 45° | 1498.8 | 1530.3 | 1593.1 | 1672.9 | 1701.9 |
| 47.5° | 1411.8 | 1443.2 | 1518.2 | 1602.8 | 1629.4 |
| 50° | 1324.8 | 1356.2 | 1440.8 | 1530.3 | 1561.7 |
| 52.5° | 1230.5 | 1271.6 | 1368.3 | 1457.7 | 1489.2 |
| 55° | 1145.9 | 1184.6 | 1283.7 | 1385.2 | 1419.1 |
| 57.5° | 1049.2 | 1095.1 | 1203.9 | 1310.3 | 1346.5 |
| 60° | 959.7 | 1008.1 | 1124.1 | 1232.9 | 1269.2 |
| 62.5° | 867.9 | 921.1 | 1044.4 | 1155.6 | 1196.7 |
| 65° | 768.8 | 834.0 | 964.6 | 1078.2 | 1119.3 |
| 67.5° | 679.3 | 747.0 | 884.8 | 1000.8 | 1037.1 |
| 70° | 577.8 | 660.0 | 800.2 | 916.2 | 957.3 |
| 72.5° | 490.7 | 572.9 | 720.4 | 834.0 | 875.1 |
| 75° | 398.9 | 488.3 | 635.8 | 749.4 | 785.7 |
| 77.5° | 307.0 | 406.1 | 553.6 | 640.6 | 652.7 |
| 80° | 220.0 | 323.9 | 459.3 | 510.1 | 527.0 |
| 82.5° | 154.7 | 249.0 | 338.4 | 372.3 | 382.0 |
| 85° | 84.6 | 164.4 | 212.7 | 227.2 | 227.2 |
| 87.5° | 36.3 | 70.1 | 84.6 | 87.0 | 89.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)