

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: P276119

Luminaire Tested: **24CZ2-70HE-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276119
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: 24CZ2-70HE-UNV-L82765-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (336) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6868.0 lumens
Efficiency: N/A
Efficacy: 125.0 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

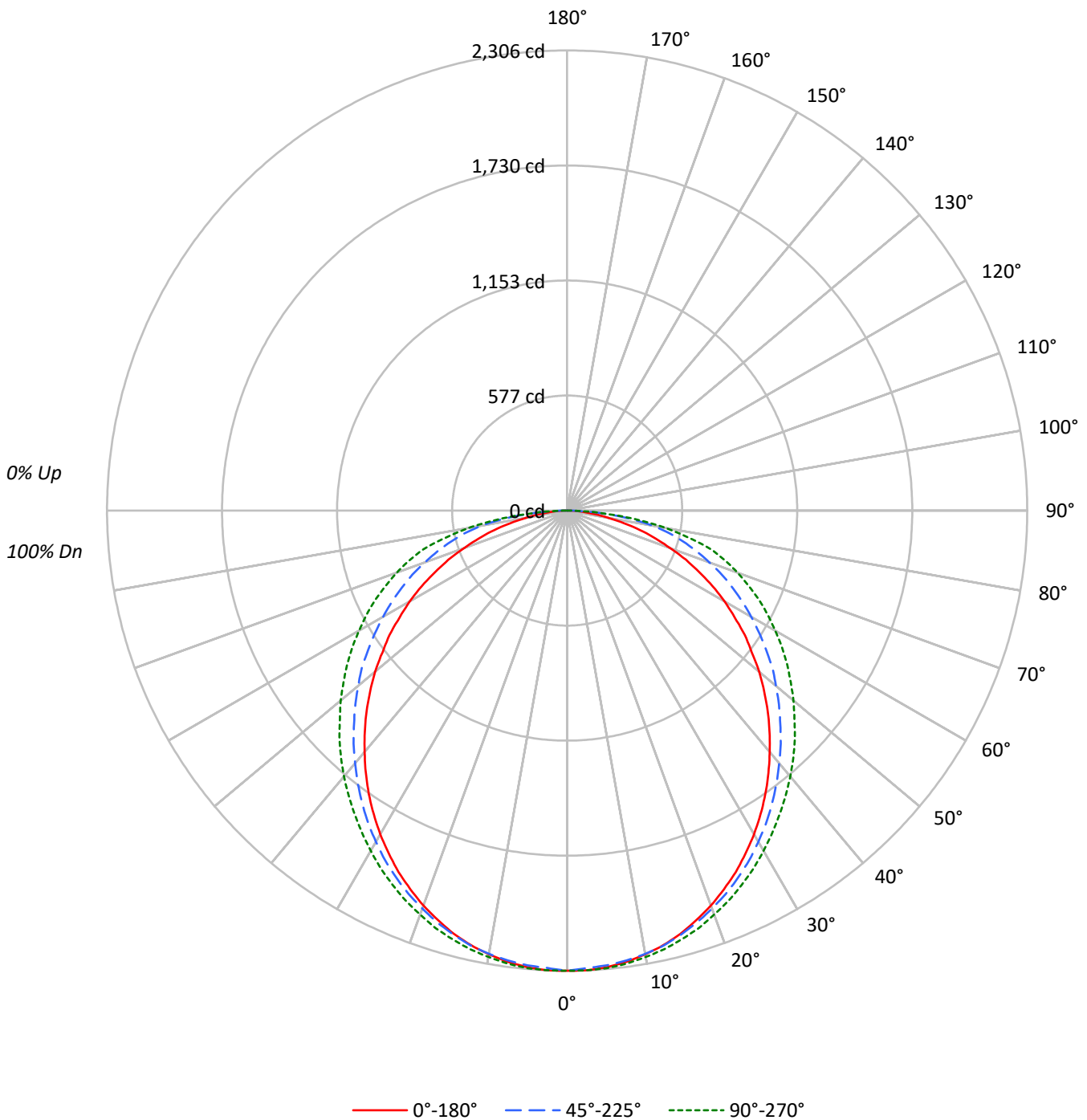
Input Watts (W): 54.963
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 3103 | 3103 | 3103 |
| 5° | 3102 | 3090 | 3108 |
| 10° | 3085 | 3082 | 3103 |
| 15° | 3059 | 3065 | 3097 |
| 20° | 3016 | 3039 | 3085 |
| 25° | 2967 | 3011 | 3073 |
| 30° | 2909 | 2977 | 3059 |
| 35° | 2846 | 2940 | 3050 |
| 40° | 2774 | 2903 | 3056 |
| 45° | 2704 | 2874 | 3071 |
| 50° | 2629 | 2860 | 3099 |
| 55° | 2549 | 2855 | 3156 |
| 60° | 2449 | 2868 | 3238 |
| 65° | 2321 | 2912 | 3379 |
| 70° | 2155 | 2985 | 3571 |
| 75° | 1966 | 3134 | 3872 |
| 80° | 1616 | 3374 | 3872 |
| 85° | 1238 | 3114 | 3327 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 218.1 | 3.2 |
| 10°-20° | 622.6 | 9.1 |
| 20°-30° | 936.9 | 13.6 |
| 30°-40° | 1122.8 | 16.3 |
| 40°-50° | 1170.1 | 17.0 |
| 50°-60° | 1088.6 | 15.9 |
| 60°-70° | 896.6 | 13.1 |
| 70°-80° | 610.6 | 8.9 |
| 80°-90° | 201.6 | 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° | 1777.6 | 25.9 |
| 0°-40° | 2900.4 | 42.2 |
| 0°-60° | 5159.1 | 75.1 |
| 0°-90° | 6868.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6868.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2306 | 2306 | 2306 | 2306 | 2306 | |
| 5° | 2297 | 2297 | 2288 | 2299 | 2301 | 218 |
| 15° | 2196 | 2198 | 2200 | 2221 | 2223 | 619 |
| 25° | 1999 | 2008 | 2028 | 2063 | 2070 | 920 |
| 35° | 1733 | 1754 | 1790 | 1838 | 1857 | 1083 |
| 45° | 1421 | 1451 | 1510 | 1586 | 1614 | 1096 |
| 55° | 1086 | 1123 | 1217 | 1313 | 1346 | 968 |
| 65° | 729 | 791 | 915 | 1022 | 1061 | 724 |
| 75° | 378 | 463 | 603 | 711 | 745 | 399 |
| 85° | 80 | 156 | 202 | 216 | 216 | 99 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276119

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2305.9 | 2305.9 | 2305.9 | 2305.9 | 2305.9 |
| 2.5° | 2305.9 | 2305.9 | 2294.4 | 2305.9 | 2305.9 |
| 5° | 2296.7 | 2296.7 | 2287.6 | 2299.0 | 2301.3 |
| 7.5° | 2280.7 | 2283.0 | 2273.8 | 2287.6 | 2289.8 |
| 10° | 2257.8 | 2260.1 | 2255.5 | 2269.2 | 2271.5 |
| 12.5° | 2230.3 | 2232.5 | 2232.5 | 2248.6 | 2250.9 |
| 15° | 2195.9 | 2198.2 | 2200.5 | 2221.1 | 2223.4 |
| 17.5° | 2152.3 | 2159.2 | 2163.8 | 2189.0 | 2193.6 |
| 20° | 2106.5 | 2113.4 | 2122.5 | 2150.0 | 2154.6 |
| 22.5° | 2053.8 | 2062.9 | 2079.0 | 2108.8 | 2115.6 |
| 25° | 1998.7 | 2007.9 | 2028.5 | 2062.9 | 2069.8 |
| 27.5° | 1936.9 | 1950.6 | 1975.8 | 2012.5 | 2021.7 |
| 30° | 1872.7 | 1886.4 | 1916.2 | 1955.2 | 1968.9 |
| 32.5° | 1803.9 | 1822.3 | 1856.6 | 1900.2 | 1913.9 |
| 35° | 1732.9 | 1753.5 | 1790.2 | 1838.3 | 1856.6 |
| 37.5° | 1657.2 | 1680.1 | 1723.7 | 1776.4 | 1799.3 |
| 40° | 1579.3 | 1606.8 | 1652.6 | 1714.5 | 1739.7 |
| 42.5° | 1501.4 | 1526.6 | 1583.9 | 1650.3 | 1677.8 |
| 45° | 1421.1 | 1450.9 | 1510.5 | 1586.2 | 1613.7 |
| 47.5° | 1338.6 | 1368.4 | 1439.5 | 1519.7 | 1544.9 |
| 50° | 1256.1 | 1285.9 | 1366.1 | 1450.9 | 1480.7 |
| 52.5° | 1166.7 | 1205.7 | 1297.4 | 1382.2 | 1412.0 |
| 55° | 1086.5 | 1123.1 | 1217.1 | 1313.4 | 1345.5 |
| 57.5° | 994.8 | 1038.3 | 1141.5 | 1242.3 | 1276.7 |
| 60° | 910.0 | 955.8 | 1065.8 | 1169.0 | 1203.4 |
| 62.5° | 822.9 | 873.3 | 990.2 | 1095.6 | 1134.6 |
| 65° | 728.9 | 790.8 | 914.6 | 1022.3 | 1061.3 |
| 67.5° | 644.1 | 708.3 | 838.9 | 948.9 | 983.3 |
| 70° | 547.8 | 625.8 | 758.7 | 868.7 | 907.7 |
| 72.5° | 465.3 | 543.2 | 683.1 | 790.8 | 829.8 |
| 75° | 378.2 | 463.0 | 602.8 | 710.6 | 744.9 |
| 77.5° | 291.1 | 385.1 | 524.9 | 607.4 | 618.9 |
| 80° | 208.6 | 307.1 | 435.5 | 483.6 | 499.7 |
| 82.5° | 146.7 | 236.1 | 320.9 | 353.0 | 362.2 |
| 85° | 80.2 | 155.9 | 201.7 | 215.5 | 215.5 |
| 87.5° | 34.4 | 66.5 | 80.2 | 82.5 | 84.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)