

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: P276853

Luminaire Tested: **24CZ2-75HE-RDP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276853
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-75HE-RDP-UNV-L93050-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4076.6 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

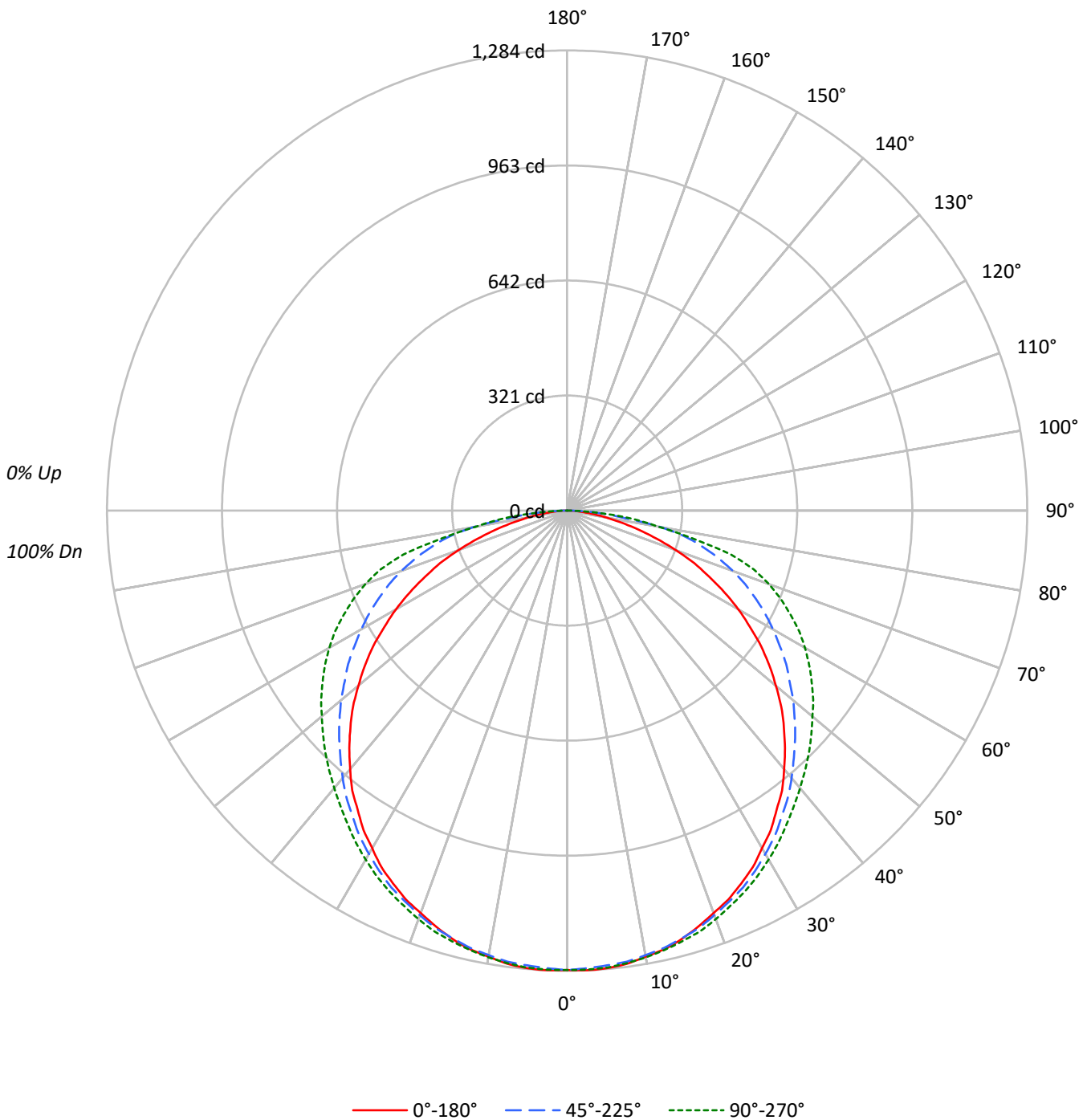
Input Watts (W): 59.513676
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 88 | 86 | 84 | 82 |
| 2 | 97 | 89 | 81 | 75 | 95 | 87 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 77 | 73 | 69 | 67 |
| 3 | 88 | 77 | 68 | 62 | 86 | 76 | 68 | 61 | 72 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 51 | 64 | 57 | 51 | 62 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 51 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 45 | 38 | 51 | 44 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 24 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1725 | 1725 | 1725 |
| 5° | 1732 | 1721 | 1729 |
| 10° | 1727 | 1721 | 1729 |
| 15° | 1724 | 1721 | 1732 |
| 20° | 1711 | 1720 | 1737 |
| 25° | 1705 | 1723 | 1741 |
| 30° | 1690 | 1718 | 1747 |
| 35° | 1674 | 1714 | 1754 |
| 40° | 1655 | 1712 | 1776 |
| 45° | 1627 | 1712 | 1816 |
| 50° | 1591 | 1723 | 1871 |
| 55° | 1551 | 1750 | 1954 |
| 60° | 1485 | 1785 | 2062 |
| 65° | 1391 | 1848 | 2189 |
| 70° | 1265 | 1933 | 2354 |
| 75° | 1072 | 2039 | 2460 |
| 80° | 846 | 2053 | 1990 |
| 85° | 624 | 1561 | 1748 |



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CATALOG NUMBER: 24CZ2-75HE-RDP-UNV-L93050-W2A1-U-3500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.6 | 3.0 |
| 10°-20° | 350.0 | 8.6 |
| 20°-30° | 535.2 | 13.1 |
| 30°-40° | 654.3 | 16.0 |
| 40°-50° | 697.3 | 17.1 |
| 50°-60° | 666.7 | 16.4 |
| 60°-70° | 564.8 | 13.9 |
| 70°-80° | 379.6 | 9.3 |
| 80°-90° | 107.1 | 2.6 |
| 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° | 1006.8 | 24.7 |
| 0°-40° | 1661.1 | 40.7 |
| 0°-60° | 3025.1 | 74.2 |
| 0°-90° | 4076.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4076.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1282 | 1282 | 1282 | 1282 | 1282 | |
| 5° | 1282 | 1280 | 1274 | 1280 | 1280 | 122 |
| 15° | 1238 | 1238 | 1236 | 1246 | 1244 | 349 |
| 25° | 1148 | 1153 | 1161 | 1171 | 1173 | 529 |
| 35° | 1019 | 1027 | 1043 | 1064 | 1068 | 638 |
| 45° | 855 | 870 | 900 | 938 | 954 | 660 |
| 55° | 661 | 686 | 746 | 805 | 833 | 589 |
| 65° | 437 | 481 | 580 | 657 | 688 | 434 |
| 75° | 206 | 281 | 392 | 459 | 473 | 221 |
| 85° | 40 | 83 | 101 | 109 | 113 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276853

CATALOG NUMBER: 24CZ2-75HE-RDP-UNV-L93050-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1282.0 | 1282.0 | 1282.0 | 1282.0 | 1282.0 |
| 2.5° | 1284.0 | 1284.0 | 1277.9 | 1282.0 | 1282.0 |
| 5° | 1282.0 | 1280.0 | 1273.9 | 1280.0 | 1280.0 |
| 7.5° | 1275.9 | 1273.9 | 1269.8 | 1275.9 | 1273.9 |
| 10° | 1263.8 | 1263.8 | 1259.7 | 1265.8 | 1265.8 |
| 12.5° | 1253.7 | 1251.6 | 1249.6 | 1257.7 | 1255.7 |
| 15° | 1237.5 | 1237.5 | 1235.5 | 1245.6 | 1243.6 |
| 17.5° | 1217.3 | 1219.3 | 1221.3 | 1229.4 | 1231.4 |
| 20° | 1195.0 | 1199.1 | 1201.1 | 1213.2 | 1213.2 |
| 22.5° | 1174.8 | 1176.8 | 1180.9 | 1193.0 | 1193.0 |
| 25° | 1148.5 | 1152.6 | 1160.7 | 1170.8 | 1172.8 |
| 27.5° | 1122.2 | 1124.3 | 1134.4 | 1148.5 | 1150.5 |
| 30° | 1087.9 | 1093.9 | 1106.1 | 1122.2 | 1124.3 |
| 32.5° | 1057.5 | 1063.6 | 1077.8 | 1093.9 | 1098.0 |
| 35° | 1019.1 | 1027.2 | 1043.4 | 1063.6 | 1067.6 |
| 37.5° | 984.7 | 990.8 | 1011.0 | 1033.3 | 1039.3 |
| 40° | 942.3 | 954.4 | 974.6 | 1000.9 | 1011.0 |
| 42.5° | 899.8 | 911.9 | 936.2 | 970.6 | 982.7 |
| 45° | 855.3 | 869.5 | 899.8 | 938.2 | 954.4 |
| 47.5° | 810.8 | 827.0 | 861.4 | 905.9 | 924.1 |
| 50° | 760.3 | 780.5 | 823.0 | 873.5 | 893.7 |
| 52.5° | 711.8 | 736.0 | 782.5 | 839.1 | 865.4 |
| 55° | 661.2 | 685.5 | 746.1 | 804.8 | 833.1 |
| 57.5° | 604.6 | 636.9 | 703.7 | 770.4 | 800.7 |
| 60° | 552.0 | 582.3 | 663.2 | 736.0 | 766.4 |
| 62.5° | 495.4 | 535.8 | 622.8 | 699.6 | 730.0 |
| 65° | 436.8 | 481.2 | 580.3 | 657.2 | 687.5 |
| 67.5° | 384.2 | 432.7 | 537.9 | 614.7 | 645.0 |
| 70° | 321.5 | 382.2 | 491.4 | 568.2 | 598.5 |
| 72.5° | 262.9 | 329.6 | 442.8 | 517.6 | 546.0 |
| 75° | 206.2 | 281.1 | 392.3 | 459.0 | 473.2 |
| 77.5° | 153.7 | 232.5 | 339.7 | 368.0 | 357.9 |
| 80° | 109.2 | 186.0 | 264.9 | 250.7 | 256.8 |
| 82.5° | 70.8 | 141.5 | 163.8 | 186.0 | 192.1 |
| 85° | 40.4 | 82.9 | 101.1 | 109.2 | 113.2 |
| 87.5° | 18.2 | 30.3 | 40.4 | 40.4 | 38.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)