

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: P276042

Luminaire Tested: **24CZ2-30HE-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276042
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: 24CZ2-30HE-UNV-L82765-W2A1-U-2700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (336) 80 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2664.9 lumens
Efficiency: N/A
Efficacy: 135.8 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

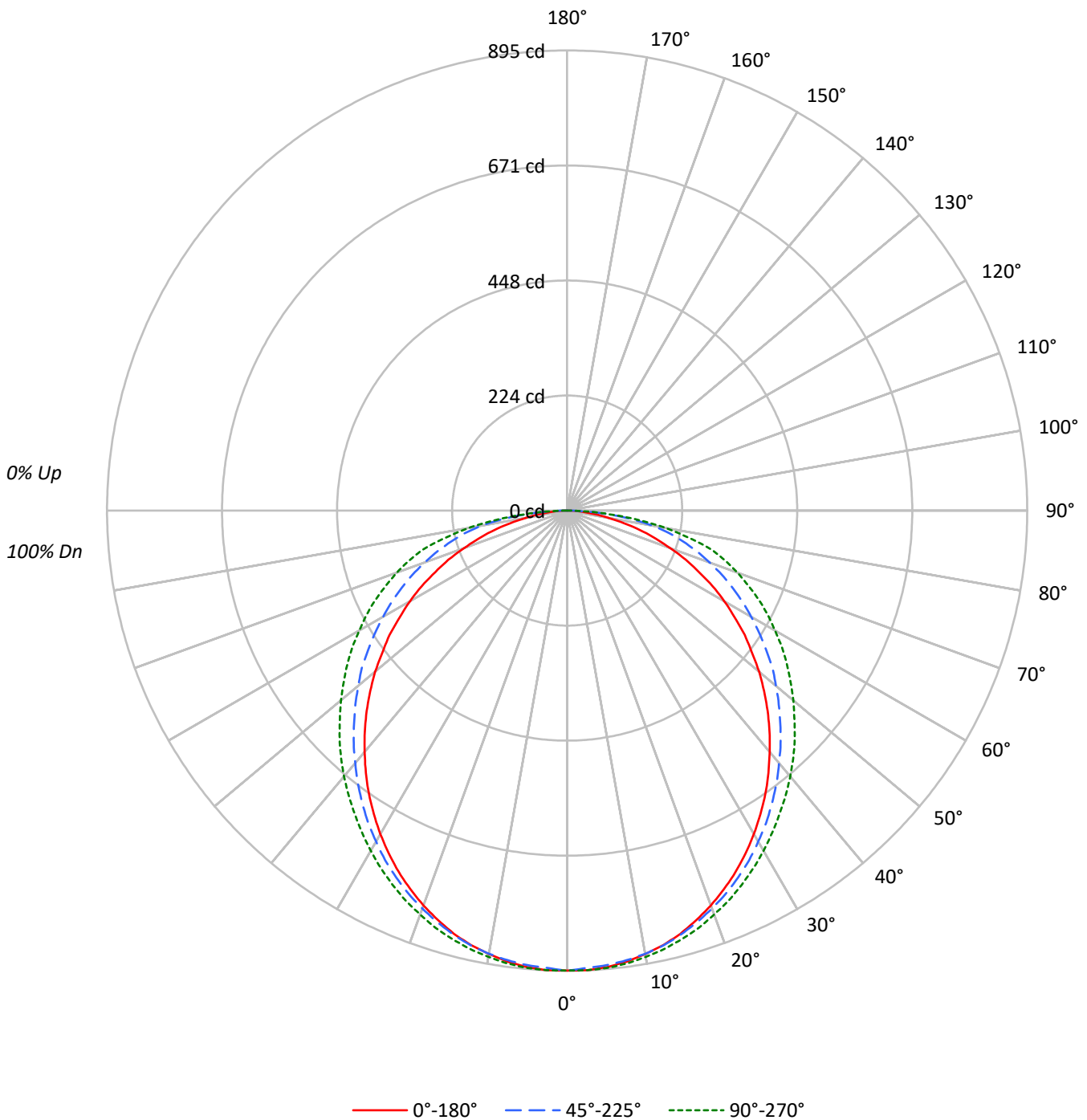
Input Watts (W): 19.623
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1204 | 1204 | 1204 |
| 5° | 1204 | 1199 | 1206 |
| 10° | 1197 | 1196 | 1204 |
| 15° | 1187 | 1189 | 1202 |
| 20° | 1170 | 1179 | 1197 |
| 25° | 1151 | 1169 | 1192 |
| 30° | 1129 | 1155 | 1187 |
| 35° | 1104 | 1141 | 1183 |
| 40° | 1076 | 1126 | 1186 |
| 45° | 1049 | 1115 | 1191 |
| 50° | 1020 | 1110 | 1203 |
| 55° | 989 | 1108 | 1225 |
| 60° | 950 | 1113 | 1256 |
| 65° | 900 | 1130 | 1311 |
| 70° | 836 | 1158 | 1386 |
| 75° | 763 | 1216 | 1503 |
| 80° | 627 | 1309 | 1502 |
| 85° | 480 | 1209 | 1291 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.6 | 3.2 |
| 10°-20° | 241.6 | 9.1 |
| 20°-30° | 363.5 | 13.6 |
| 30°-40° | 435.7 | 16.3 |
| 40°-50° | 454.0 | 17.0 |
| 50°-60° | 422.4 | 15.9 |
| 60°-70° | 347.9 | 13.1 |
| 70°-80° | 236.9 | 8.9 |
| 80°-90° | 78.2 | 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° | 689.7 | 25.9 |
| 0°-40° | 1125.4 | 42.2 |
| 0°-60° | 2001.8 | 75.1 |
| 0°-90° | 2664.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2664.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 895 | 895 | 895 | 895 | 895 | |
| 5° | 891 | 891 | 888 | 892 | 893 | 85 |
| 15° | 852 | 853 | 854 | 862 | 863 | 240 |
| 25° | 776 | 779 | 787 | 800 | 803 | 357 |
| 35° | 672 | 680 | 695 | 713 | 720 | 420 |
| 45° | 551 | 563 | 586 | 616 | 626 | 425 |
| 55° | 422 | 436 | 472 | 510 | 522 | 376 |
| 65° | 283 | 307 | 355 | 397 | 412 | 281 |
| 75° | 147 | 180 | 234 | 276 | 289 | 155 |
| 85° | 31 | 60 | 78 | 84 | 84 | 39 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 894.7 | 894.7 | 894.7 | 894.7 | 894.7 |
| 2.5° | 894.7 | 894.7 | 890.3 | 894.7 | 894.7 |
| 5° | 891.2 | 891.2 | 887.6 | 892.1 | 892.9 |
| 7.5° | 884.9 | 885.8 | 882.3 | 887.6 | 888.5 |
| 10° | 876.0 | 876.9 | 875.2 | 880.5 | 881.4 |
| 12.5° | 865.4 | 866.3 | 866.3 | 872.5 | 873.4 |
| 15° | 852.0 | 852.9 | 853.8 | 861.8 | 862.7 |
| 17.5° | 835.1 | 837.8 | 839.6 | 849.4 | 851.1 |
| 20° | 817.3 | 820.0 | 823.6 | 834.2 | 836.0 |
| 22.5° | 796.9 | 800.4 | 806.7 | 818.2 | 820.9 |
| 25° | 775.5 | 779.1 | 787.1 | 800.4 | 803.1 |
| 27.5° | 751.5 | 756.9 | 766.7 | 780.9 | 784.4 |
| 30° | 726.6 | 732.0 | 743.5 | 758.6 | 764.0 |
| 32.5° | 699.9 | 707.1 | 720.4 | 737.3 | 742.6 |
| 35° | 672.4 | 680.4 | 694.6 | 713.3 | 720.4 |
| 37.5° | 643.0 | 651.9 | 668.8 | 689.3 | 698.2 |
| 40° | 612.8 | 623.5 | 641.2 | 665.3 | 675.0 |
| 42.5° | 582.5 | 592.3 | 614.6 | 640.4 | 651.0 |
| 45° | 551.4 | 563.0 | 586.1 | 615.5 | 626.1 |
| 47.5° | 519.4 | 531.0 | 558.5 | 589.7 | 599.4 |
| 50° | 487.4 | 498.9 | 530.1 | 563.0 | 574.5 |
| 52.5° | 452.7 | 467.8 | 503.4 | 536.3 | 547.9 |
| 55° | 421.6 | 435.8 | 472.3 | 509.6 | 522.1 |
| 57.5° | 386.0 | 402.9 | 442.9 | 482.0 | 495.4 |
| 60° | 353.1 | 370.9 | 413.6 | 453.6 | 466.9 |
| 62.5° | 319.3 | 338.9 | 384.2 | 425.1 | 440.2 |
| 65° | 282.8 | 306.8 | 354.9 | 396.7 | 411.8 |
| 67.5° | 249.9 | 274.8 | 325.5 | 368.2 | 381.5 |
| 70° | 212.6 | 242.8 | 294.4 | 337.1 | 352.2 |
| 72.5° | 180.5 | 210.8 | 265.0 | 306.8 | 322.0 |
| 75° | 146.7 | 179.7 | 233.9 | 275.7 | 289.1 |
| 77.5° | 113.0 | 149.4 | 203.7 | 235.7 | 240.1 |
| 80° | 80.9 | 119.2 | 169.0 | 187.7 | 193.9 |
| 82.5° | 56.9 | 91.6 | 124.5 | 137.0 | 140.5 |
| 85° | 31.1 | 60.5 | 78.3 | 83.6 | 83.6 |
| 87.5° | 13.3 | 25.8 | 31.1 | 32.0 | 32.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)