

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: P276563

Luminaire Tested: **24CZ2-35-S-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276563
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35-S-UNV-L82765-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3453.1 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

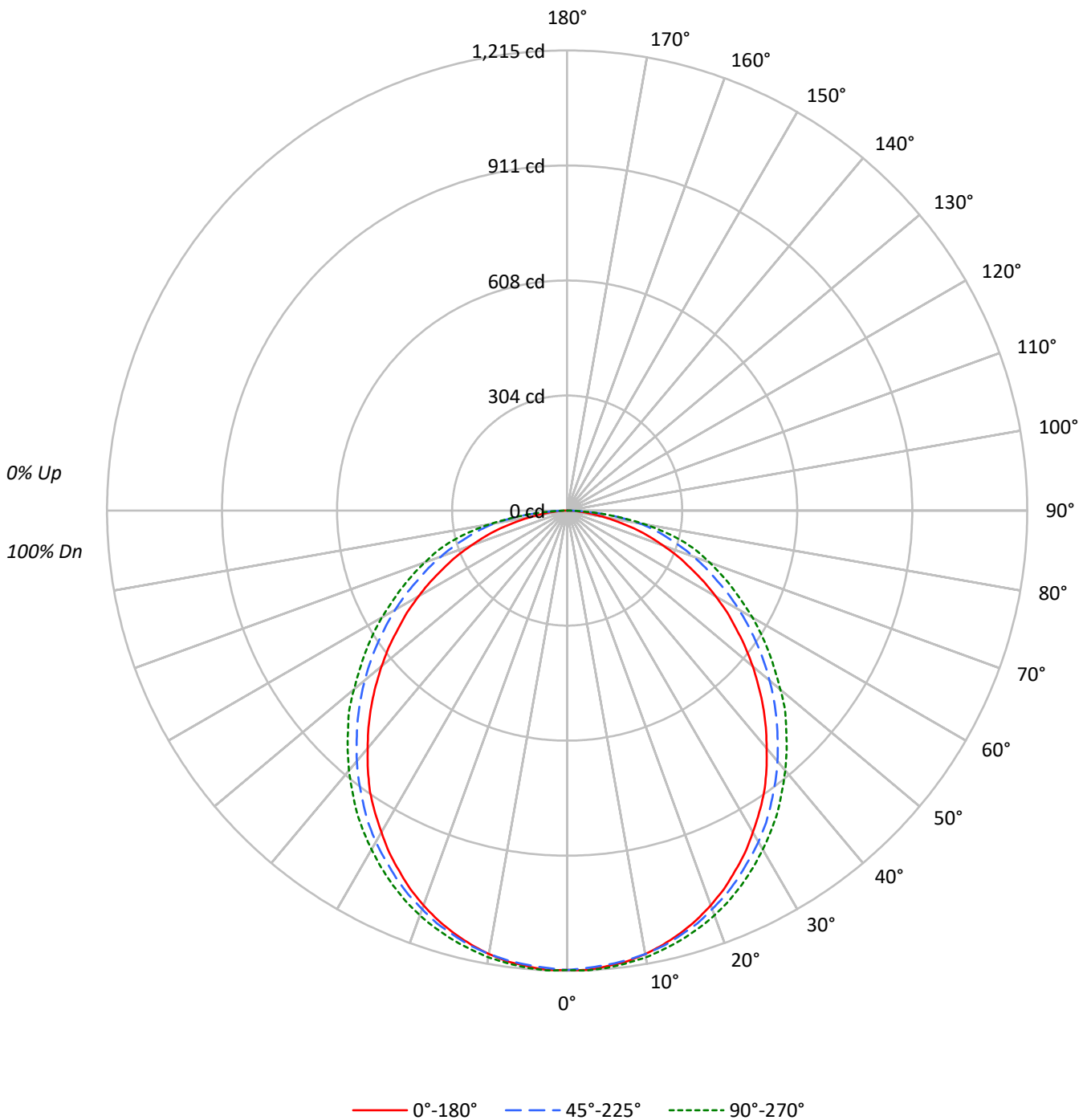
Input Watts (W): 26.133
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P276563

CATALOG NUMBER: 24CZ2-35-S-UNV-L82765-W2A1-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P276563

CATALOG NUMBER: 24CZ2-35-S-UNV-L82765-W2A1-U-3500K

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 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 |
| 3 | 89 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 |
| 6 | 70 | 56 | 47 | 40 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1632 | 1632 | 1632 |
| 5° | 1631 | 1627 | 1637 |
| 10° | 1624 | 1624 | 1636 |
| 15° | 1609 | 1617 | 1633 |
| 20° | 1588 | 1604 | 1629 |
| 25° | 1558 | 1588 | 1619 |
| 30° | 1523 | 1569 | 1605 |
| 35° | 1490 | 1544 | 1593 |
| 40° | 1439 | 1518 | 1574 |
| 45° | 1392 | 1488 | 1557 |
| 50° | 1339 | 1460 | 1538 |
| 55° | 1279 | 1433 | 1523 |
| 60° | 1219 | 1411 | 1520 |
| 65° | 1142 | 1386 | 1529 |
| 70° | 1057 | 1394 | 1571 |
| 75° | 947 | 1420 | 1659 |
| 80° | 765 | 1504 | 1623 |
| 85° | 576 | 1321 | 1288 |



TEST NUMBER: P276563

CATALOG NUMBER: 24CZ2-35-S-UNV-L82765-W2A1-U-3500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 114.8 | 3.3 |
| 10°-20° | 328.2 | 9.5 |
| 20°-30° | 493.3 | 14.3 |
| 30°-40° | 587.6 | 17.0 |
| 40°-50° | 601.4 | 17.4 |
| 50°-60° | 541.4 | 15.7 |
| 60°-70° | 425.2 | 12.3 |
| 70°-80° | 275.9 | 8.0 |
| 80°-90° | 85.4 | 2.5 |
| 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° | 936.3 | 27.1 |
| 0°-40° | 1523.9 | 44.1 |
| 0°-60° | 2666.7 | 77.2 |
| 0°-90° | 3453.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3453.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1213 | 1213 | 1213 | 1213 | 1213 | |
| 5° | 1208 | 1210 | 1204 | 1211 | 1212 | 115 |
| 15° | 1155 | 1158 | 1160 | 1170 | 1172 | 326 |
| 25° | 1050 | 1058 | 1069 | 1087 | 1090 | 484 |
| 35° | 907 | 918 | 940 | 963 | 970 | 566 |
| 45° | 732 | 749 | 782 | 812 | 818 | 564 |
| 55° | 545 | 569 | 611 | 643 | 649 | 489 |
| 65° | 359 | 386 | 435 | 472 | 480 | 357 |
| 75° | 182 | 217 | 273 | 310 | 319 | 193 |
| 85° | 37 | 69 | 86 | 83 | 83 | 45 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P276563

CATALOG NUMBER: 24CZ2-35-S-UNV-L82765-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1213.1 | 1213.1 | 1213.1 | 1213.1 | 1213.1 |
| 2.5° | 1214.2 | 1214.2 | 1208.7 | 1214.2 | 1215.3 |
| 5° | 1207.6 | 1209.8 | 1204.3 | 1210.9 | 1212.0 |
| 7.5° | 1201.0 | 1201.0 | 1197.8 | 1204.3 | 1205.4 |
| 10° | 1189.0 | 1190.1 | 1189.0 | 1196.7 | 1197.8 |
| 12.5° | 1173.6 | 1175.8 | 1176.9 | 1184.6 | 1185.7 |
| 15° | 1155.0 | 1158.3 | 1160.5 | 1170.3 | 1172.5 |
| 17.5° | 1134.1 | 1137.4 | 1142.9 | 1153.9 | 1156.1 |
| 20° | 1108.9 | 1113.3 | 1119.9 | 1134.1 | 1137.4 |
| 22.5° | 1081.5 | 1085.9 | 1096.8 | 1110.0 | 1115.5 |
| 25° | 1049.7 | 1058.5 | 1069.4 | 1087.0 | 1090.3 |
| 27.5° | 1017.9 | 1025.5 | 1039.8 | 1058.5 | 1062.8 |
| 30° | 980.6 | 992.6 | 1010.2 | 1028.8 | 1033.2 |
| 32.5° | 944.4 | 956.4 | 977.3 | 997.0 | 1002.5 |
| 35° | 907.1 | 918.1 | 940.0 | 963.0 | 969.6 |
| 37.5° | 864.3 | 878.6 | 902.7 | 925.7 | 932.3 |
| 40° | 819.3 | 836.9 | 864.3 | 888.4 | 896.1 |
| 42.5° | 776.6 | 795.2 | 822.6 | 849.0 | 857.7 |
| 45° | 731.6 | 749.1 | 782.0 | 811.7 | 818.2 |
| 47.5° | 685.5 | 705.3 | 740.4 | 770.0 | 781.0 |
| 50° | 639.5 | 660.3 | 697.6 | 728.3 | 734.9 |
| 52.5° | 593.4 | 615.3 | 654.8 | 687.7 | 691.0 |
| 55° | 545.1 | 569.3 | 610.9 | 642.8 | 649.3 |
| 57.5° | 501.3 | 522.1 | 567.1 | 600.0 | 607.7 |
| 60° | 453.0 | 476.0 | 524.3 | 555.0 | 564.9 |
| 62.5° | 406.9 | 431.1 | 481.5 | 512.2 | 521.0 |
| 65° | 358.7 | 386.1 | 435.4 | 471.6 | 480.4 |
| 67.5° | 317.0 | 343.3 | 396.0 | 431.1 | 439.8 |
| 70° | 268.7 | 298.3 | 354.3 | 390.5 | 399.3 |
| 72.5° | 227.0 | 257.8 | 313.7 | 348.8 | 362.0 |
| 75° | 182.1 | 217.2 | 273.1 | 310.4 | 319.2 |
| 77.5° | 138.2 | 178.8 | 235.8 | 264.3 | 264.3 |
| 80° | 98.7 | 141.5 | 194.1 | 207.3 | 209.5 |
| 82.5° | 64.7 | 106.4 | 143.7 | 142.6 | 142.6 |
| 85° | 37.3 | 69.1 | 85.6 | 83.4 | 83.4 |
| 87.5° | 14.3 | 28.5 | 30.7 | 30.7 | 29.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)