

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: P275657

Luminaire Tested: **14CZ2-39-S-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P275657
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-39-S-UNV-L82765-W2A1-U-5000K
Description: CRUZE 2.0 1x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4002.0 lumens
Efficiency: N/A
Efficacy: 126.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

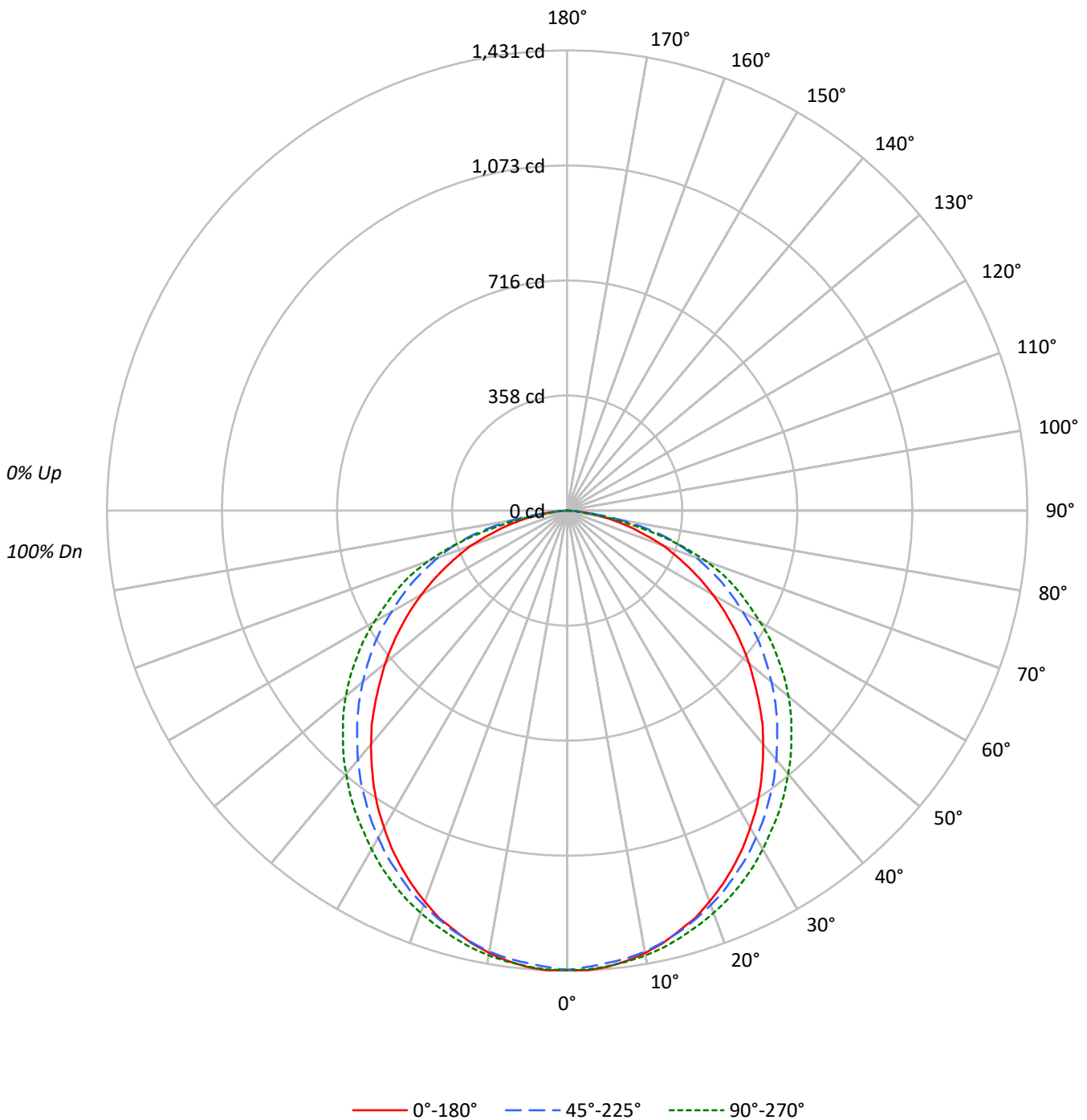
Input Watts (W): 31.713
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 | | | | | 84 | | | |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 | | | | | 70 | | | |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 | | | | | 58 | | | |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 | | | | | 50 | | | |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 56 | 50 | 45 | 43 | | | | | 43 | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 | | | | | 33 | | | |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 28 | 27 | | | | | 27 | | | |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 | | | | | 24 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3844 | 3844 | 3844 |
| 5° | 3848 | 3816 | 3843 |
| 10° | 3817 | 3806 | 3839 |
| 15° | 3765 | 3775 | 3825 |
| 20° | 3705 | 3739 | 3813 |
| 25° | 3629 | 3694 | 3800 |
| 30° | 3539 | 3650 | 3779 |
| 35° | 3442 | 3598 | 3768 |
| 40° | 3332 | 3555 | 3757 |
| 45° | 3209 | 3511 | 3753 |
| 50° | 3090 | 3472 | 3763 |
| 55° | 2960 | 3445 | 3751 |
| 60° | 2819 | 3396 | 3727 |
| 65° | 2653 | 3386 | 3727 |
| 70° | 2498 | 3356 | 3622 |
| 75° | 2166 | 3280 | 3094 |
| 80° | 1753 | 2644 | 2060 |
| 85° | 1164 | 920 | 611 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 134.9 | 3.4 |
| 10°-20° | 383.9 | 9.6 |
| 20°-30° | 575.8 | 14.4 |
| 30°-40° | 686.9 | 17.2 |
| 40°-50° | 710.1 | 17.7 |
| 50°-60° | 648.4 | 16.2 |
| 60°-70° | 510.2 | 12.7 |
| 70°-80° | 297.0 | 7.4 |
| 80°-90° | 54.7 | 1.4 |
| 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° | 1094.6 | 27.4 |
| 0°-40° | 1781.6 | 44.5 |
| 0°-60° | 3140.0 | 78.5 |
| 0°-90° | 4002.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4002.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1429 | 1429 | 1429 | 1429 | 1429 | |
| 5° | 1425 | 1421 | 1413 | 1425 | 1423 | 135 |
| 15° | 1351 | 1353 | 1355 | 1373 | 1373 | 381 |
| 25° | 1222 | 1228 | 1244 | 1274 | 1280 | 563 |
| 35° | 1048 | 1062 | 1095 | 1137 | 1147 | 655 |
| 45° | 843 | 871 | 923 | 974 | 986 | 651 |
| 55° | 631 | 665 | 734 | 788 | 800 | 564 |
| 65° | 417 | 460 | 532 | 573 | 585 | 414 |
| 75° | 208 | 258 | 316 | 310 | 298 | 221 |
| 85° | 38 | 54 | 30 | 24 | 20 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P275657

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1428.6 | 1428.6 | 1428.6 | 1428.6 | 1428.6 |
| 2.5° | 1430.6 | 1426.7 | 1420.7 | 1430.6 | 1428.6 |
| 5° | 1424.7 | 1420.7 | 1412.8 | 1424.7 | 1422.7 |
| 7.5° | 1412.8 | 1408.8 | 1404.8 | 1416.7 | 1414.8 |
| 10° | 1396.9 | 1394.9 | 1392.9 | 1406.8 | 1404.8 |
| 12.5° | 1377.1 | 1377.1 | 1375.1 | 1390.9 | 1390.9 |
| 15° | 1351.3 | 1353.2 | 1355.2 | 1373.1 | 1373.1 |
| 17.5° | 1327.5 | 1325.5 | 1331.4 | 1351.3 | 1353.2 |
| 20° | 1293.7 | 1297.7 | 1305.6 | 1329.4 | 1331.4 |
| 22.5° | 1260.0 | 1264.0 | 1277.8 | 1301.7 | 1307.6 |
| 25° | 1222.3 | 1228.2 | 1244.1 | 1273.9 | 1279.8 |
| 27.5° | 1182.6 | 1190.5 | 1212.4 | 1244.1 | 1250.1 |
| 30° | 1138.9 | 1150.9 | 1174.7 | 1210.4 | 1216.3 |
| 32.5° | 1095.3 | 1107.2 | 1137.0 | 1172.7 | 1180.6 |
| 35° | 1047.7 | 1061.6 | 1095.3 | 1137.0 | 1146.9 |
| 37.5° | 998.1 | 1015.9 | 1055.6 | 1097.3 | 1109.2 |
| 40° | 948.5 | 968.3 | 1012.0 | 1055.6 | 1069.5 |
| 42.5° | 898.9 | 918.7 | 966.3 | 1015.9 | 1029.8 |
| 45° | 843.3 | 871.1 | 922.7 | 974.3 | 986.2 |
| 47.5° | 789.7 | 819.5 | 877.0 | 928.6 | 944.5 |
| 50° | 738.1 | 767.9 | 829.4 | 883.0 | 898.9 |
| 52.5° | 684.6 | 716.3 | 781.8 | 837.3 | 851.2 |
| 55° | 631.0 | 664.7 | 734.2 | 787.7 | 799.6 |
| 57.5° | 577.4 | 613.1 | 684.6 | 736.2 | 750.0 |
| 60° | 523.8 | 561.5 | 631.0 | 682.6 | 692.5 |
| 62.5° | 470.3 | 509.9 | 581.4 | 627.0 | 636.9 |
| 65° | 416.7 | 460.3 | 531.8 | 573.4 | 585.3 |
| 67.5° | 365.1 | 408.8 | 478.2 | 517.9 | 527.8 |
| 70° | 317.5 | 357.2 | 426.6 | 456.4 | 460.3 |
| 72.5° | 258.0 | 307.6 | 375.0 | 390.9 | 381.0 |
| 75° | 208.3 | 258.0 | 315.5 | 309.5 | 297.6 |
| 77.5° | 158.7 | 208.3 | 246.0 | 226.2 | 210.3 |
| 80° | 113.1 | 162.7 | 170.6 | 140.9 | 132.9 |
| 82.5° | 73.4 | 113.1 | 95.2 | 73.4 | 59.5 |
| 85° | 37.7 | 53.6 | 29.8 | 23.8 | 19.8 |
| 87.5° | 11.9 | 7.9 | 4.0 | 4.0 | 2.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)