

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: P276050

Luminaire Tested: **24CZ2-30HE-UNV-L82765-W2A1-U-6500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P276050
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-6500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (336) 80 CRI LEDS TUNED TO 6500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3035.7 lumens
Efficiency: N/A
Efficacy: 148.4 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

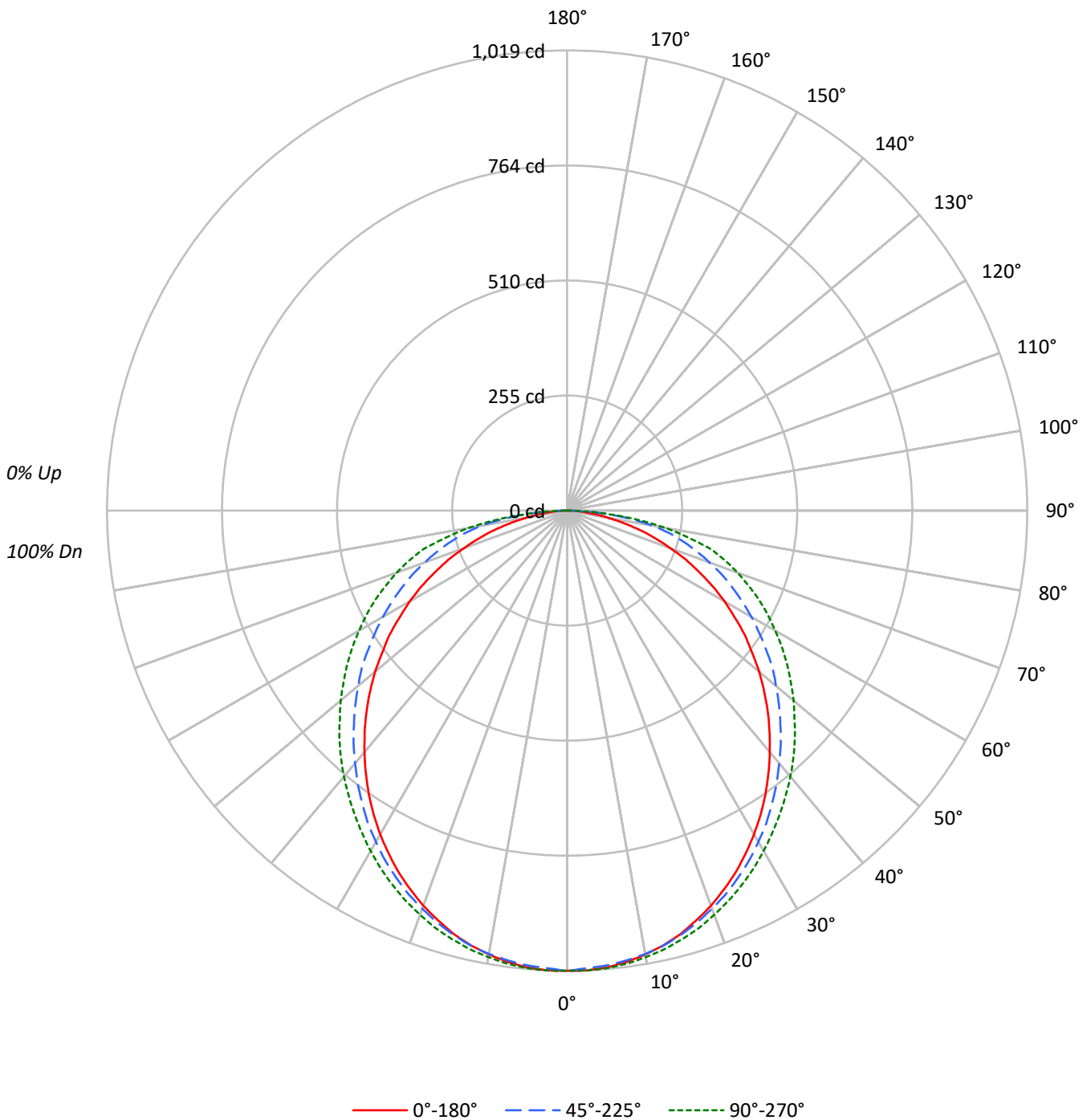
Input Watts (W): 20.46
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1371 | 1371 | 1371 |
| 5° | 1371 | 1366 | 1374 |
| 10° | 1364 | 1362 | 1372 |
| 15° | 1352 | 1355 | 1369 |
| 20° | 1333 | 1343 | 1364 |
| 25° | 1312 | 1331 | 1358 |
| 30° | 1286 | 1316 | 1352 |
| 35° | 1258 | 1300 | 1348 |
| 40° | 1226 | 1283 | 1351 |
| 45° | 1195 | 1271 | 1357 |
| 50° | 1162 | 1264 | 1370 |
| 55° | 1126 | 1262 | 1395 |
| 60° | 1082 | 1268 | 1431 |
| 65° | 1026 | 1287 | 1493 |
| 70° | 952 | 1319 | 1578 |
| 75° | 869 | 1385 | 1712 |
| 80° | 714 | 1492 | 1712 |
| 85° | 548 | 1377 | 1470 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 96.4 | 3.2 |
| 10°-20° | 275.2 | 9.1 |
| 20°-30° | 414.1 | 13.6 |
| 30°-40° | 496.3 | 16.3 |
| 40°-50° | 517.2 | 17.0 |
| 50°-60° | 481.2 | 15.9 |
| 60°-70° | 396.3 | 13.1 |
| 70°-80° | 269.9 | 8.9 |
| 80°-90° | 89.1 | 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° | 785.7 | 25.9 |
| 0°-40° | 1282.0 | 42.2 |
| 0°-60° | 2280.4 | 75.1 |
| 0°-90° | 3035.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3035.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1019 | 1019 | 1019 | 1019 | 1019 | |
| 5° | 1015 | 1015 | 1011 | 1016 | 1017 | 96 |
| 15° | 971 | 972 | 973 | 982 | 983 | 273 |
| 25° | 884 | 888 | 897 | 912 | 915 | 407 |
| 35° | 766 | 775 | 791 | 812 | 821 | 479 |
| 45° | 628 | 641 | 668 | 701 | 713 | 484 |
| 55° | 480 | 496 | 538 | 580 | 595 | 428 |
| 65° | 322 | 350 | 404 | 452 | 469 | 320 |
| 75° | 167 | 205 | 266 | 314 | 329 | 176 |
| 85° | 36 | 69 | 89 | 95 | 95 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1019.2 | 1019.2 | 1019.2 | 1019.2 | 1019.2 |
| 2.5° | 1019.2 | 1019.2 | 1014.2 | 1019.2 | 1019.2 |
| 5° | 1015.2 | 1015.2 | 1011.1 | 1016.2 | 1017.2 |
| 7.5° | 1008.1 | 1009.1 | 1005.0 | 1011.1 | 1012.1 |
| 10° | 998.0 | 999.0 | 996.9 | 1003.0 | 1004.0 |
| 12.5° | 985.8 | 986.8 | 986.8 | 993.9 | 994.9 |
| 15° | 970.6 | 971.6 | 972.6 | 981.7 | 982.8 |
| 17.5° | 951.3 | 954.4 | 956.4 | 967.6 | 969.6 |
| 20° | 931.1 | 934.1 | 938.2 | 950.3 | 952.4 |
| 22.5° | 907.8 | 911.8 | 918.9 | 932.1 | 935.1 |
| 25° | 883.5 | 887.5 | 896.6 | 911.8 | 914.9 |
| 27.5° | 856.1 | 862.2 | 873.3 | 889.5 | 893.6 |
| 30° | 827.7 | 833.8 | 847.0 | 864.2 | 870.3 |
| 32.5° | 797.4 | 805.5 | 820.7 | 839.9 | 846.0 |
| 35° | 765.9 | 775.1 | 791.3 | 812.5 | 820.7 |
| 37.5° | 732.5 | 742.6 | 761.9 | 785.2 | 795.3 |
| 40° | 698.1 | 710.2 | 730.5 | 757.8 | 769.0 |
| 42.5° | 663.6 | 674.8 | 700.1 | 729.5 | 741.6 |
| 45° | 628.2 | 641.3 | 667.7 | 701.1 | 713.3 |
| 47.5° | 591.7 | 604.9 | 636.3 | 671.7 | 682.9 |
| 50° | 555.2 | 568.4 | 603.8 | 641.3 | 654.5 |
| 52.5° | 515.7 | 532.9 | 573.4 | 610.9 | 624.1 |
| 55° | 480.2 | 496.4 | 538.0 | 580.5 | 594.7 |
| 57.5° | 439.7 | 459.0 | 504.5 | 549.1 | 564.3 |
| 60° | 402.2 | 422.5 | 471.1 | 516.7 | 531.9 |
| 62.5° | 363.7 | 386.0 | 437.7 | 484.3 | 501.5 |
| 65° | 322.2 | 349.5 | 404.2 | 451.9 | 469.1 |
| 67.5° | 284.7 | 313.1 | 370.8 | 419.4 | 434.6 |
| 70° | 242.1 | 276.6 | 335.4 | 384.0 | 401.2 |
| 72.5° | 205.7 | 240.1 | 301.9 | 349.5 | 366.8 |
| 75° | 167.2 | 204.7 | 266.5 | 314.1 | 329.3 |
| 77.5° | 128.7 | 170.2 | 232.0 | 268.5 | 273.6 |
| 80° | 92.2 | 135.8 | 192.5 | 213.8 | 220.9 |
| 82.5° | 64.8 | 104.4 | 141.8 | 156.0 | 160.1 |
| 85° | 35.5 | 68.9 | 89.2 | 95.2 | 95.2 |
| 87.5° | 15.2 | 29.4 | 35.5 | 36.5 | 37.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)