

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: P260285

Luminaire Tested: **22CZ-LD5-24-SQP-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P260285
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25713)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ-LD5-24-SQP-UNV-L82765-W2A1-U-2700K
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER
WITH SQP LENS
Light Source: (168) 80 CRI LEDS TUNED AT 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1400.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

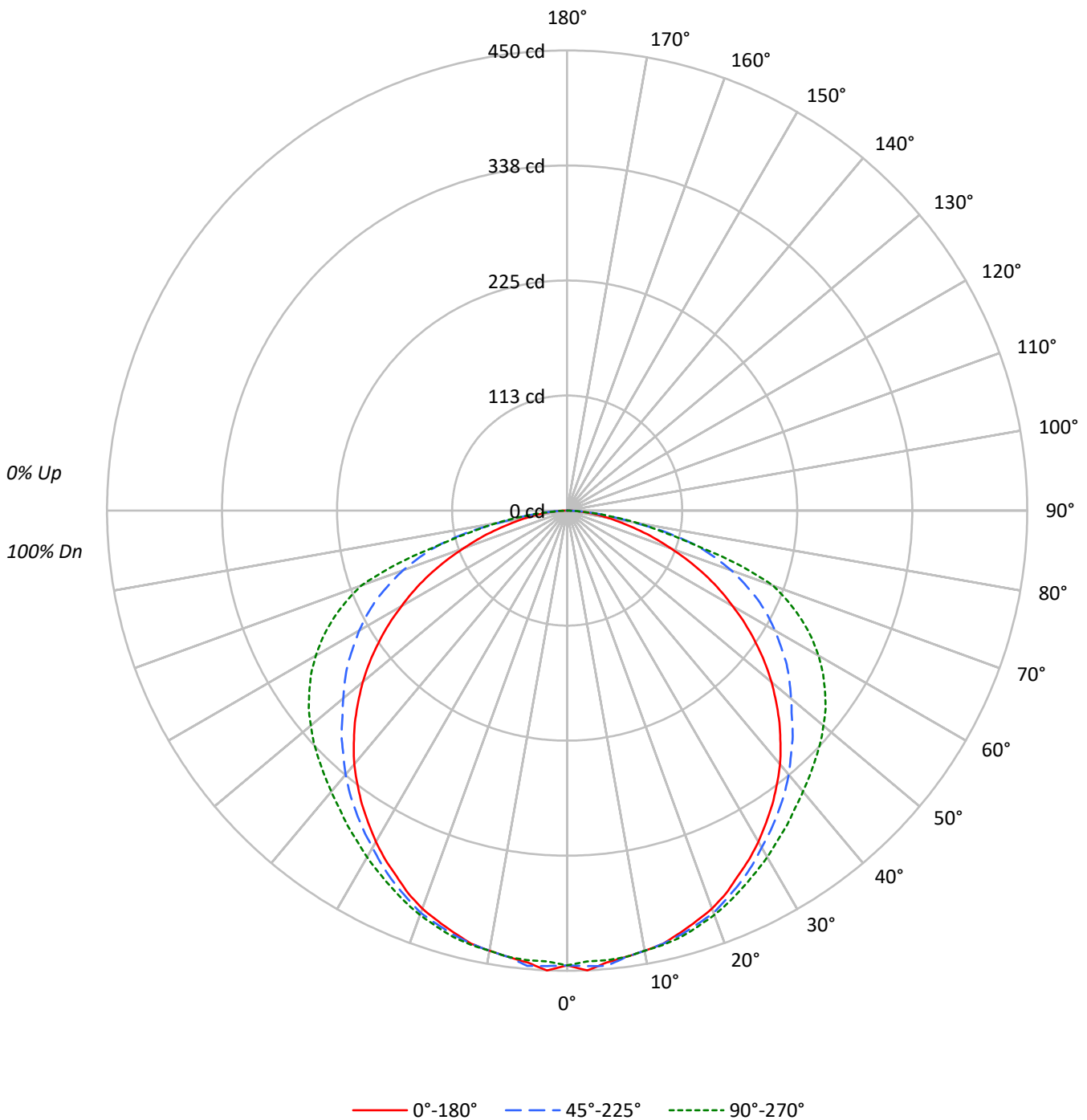
Input Watts (W): 17.577
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 99 | 95 | 105 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 87 | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 64 | 59 | 68 | 63 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 79 | 67 | 58 | 52 | 64 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 50 | 47 |
| 5 | 74 | 61 | 52 | 45 | 72 | 60 | 51 | 44 | 58 | 50 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 41 |
| 6 | 68 | 55 | 45 | 39 | 66 | 54 | 45 | 39 | 52 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 28 |
| 9 | 55 | 41 | 33 | 27 | 54 | 41 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 35 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1197 | 1197 | 1197 |
| 5° | 1198 | 1207 | 1192 |
| 10° | 1194 | 1194 | 1194 |
| 15° | 1190 | 1197 | 1202 |
| 20° | 1186 | 1199 | 1205 |
| 25° | 1172 | 1191 | 1207 |
| 30° | 1162 | 1182 | 1216 |
| 35° | 1150 | 1182 | 1232 |
| 40° | 1138 | 1184 | 1260 |
| 45° | 1117 | 1187 | 1308 |
| 50° | 1092 | 1197 | 1370 |
| 55° | 1056 | 1229 | 1444 |
| 60° | 1006 | 1264 | 1527 |
| 65° | 949 | 1309 | 1613 |
| 70° | 847 | 1343 | 1685 |
| 75° | 735 | 1345 | 1334 |
| 80° | 623 | 993 | 1079 |
| 85° | 537 | 670 | 605 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.2 | 3.0 |
| 10°-20° | 121.3 | 8.7 |
| 20°-30° | 184.8 | 13.2 |
| 30°-40° | 226.1 | 16.1 |
| 40°-50° | 243.3 | 17.4 |
| 50°-60° | 235.6 | 16.8 |
| 60°-70° | 199.6 | 14.3 |
| 70°-80° | 120.7 | 8.6 |
| 80°-90° | 26.5 | 1.9 |
| 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° | 348.2 | 24.9 |
| 0°-40° | 574.3 | 41.0 |
| 0°-60° | 1053.2 | 75.2 |
| 0°-90° | 1400.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1400.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 445 | 445 | 445 | 445 | 445 | |
| 5° | 444 | 444 | 447 | 445 | 441 | 42 |
| 15° | 427 | 428 | 430 | 430 | 432 | 121 |
| 25° | 395 | 397 | 401 | 404 | 407 | 182 |
| 35° | 350 | 352 | 360 | 370 | 375 | 219 |
| 45° | 294 | 299 | 312 | 332 | 344 | 226 |
| 55° | 225 | 235 | 262 | 292 | 308 | 201 |
| 65° | 149 | 165 | 206 | 238 | 253 | 147 |
| 75° | 71 | 96 | 129 | 132 | 128 | 76 |
| 85° | 17 | 21 | 22 | 21 | 20 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 444.7 | 444.7 | 444.7 | 444.7 | 444.7 |
| 2.5° | 450.1 | 449.0 | 445.8 | 443.6 | 441.4 |
| 5° | 443.6 | 443.6 | 446.9 | 444.7 | 441.4 |
| 7.5° | 440.3 | 440.3 | 440.3 | 445.8 | 440.3 |
| 10° | 437.1 | 438.2 | 437.1 | 441.4 | 437.1 |
| 12.5° | 433.8 | 433.8 | 433.8 | 434.9 | 434.9 |
| 15° | 427.3 | 428.4 | 429.5 | 430.5 | 431.6 |
| 17.5° | 420.8 | 421.8 | 424.0 | 425.1 | 426.2 |
| 20° | 414.2 | 415.3 | 418.6 | 418.6 | 420.8 |
| 22.5° | 405.5 | 405.5 | 409.9 | 411.0 | 414.2 |
| 25° | 394.7 | 396.8 | 401.2 | 404.5 | 406.6 |
| 27.5° | 384.9 | 387.1 | 391.4 | 395.8 | 399.0 |
| 30° | 374.0 | 376.2 | 380.5 | 387.1 | 391.4 |
| 32.5° | 362.0 | 364.2 | 370.7 | 378.4 | 382.7 |
| 35° | 350.1 | 352.3 | 359.9 | 369.7 | 375.1 |
| 37.5° | 337.0 | 340.3 | 349.0 | 359.9 | 366.4 |
| 40° | 324.0 | 327.3 | 337.0 | 349.0 | 358.8 |
| 42.5° | 308.8 | 313.1 | 324.0 | 340.3 | 351.2 |
| 45° | 293.6 | 299.0 | 312.0 | 331.6 | 343.6 |
| 47.5° | 277.2 | 282.7 | 297.9 | 322.9 | 336.0 |
| 50° | 260.9 | 267.5 | 285.9 | 313.1 | 327.3 |
| 52.5° | 243.5 | 250.1 | 274.0 | 303.3 | 318.6 |
| 55° | 225.1 | 234.8 | 262.0 | 292.5 | 307.7 |
| 57.5° | 206.6 | 217.4 | 247.9 | 280.5 | 296.8 |
| 60° | 187.0 | 200.1 | 234.8 | 267.5 | 283.8 |
| 62.5° | 168.5 | 182.7 | 220.7 | 253.3 | 269.6 |
| 65° | 149.0 | 165.3 | 205.5 | 238.1 | 253.3 |
| 67.5° | 128.3 | 149.0 | 188.1 | 219.6 | 234.8 |
| 70° | 107.6 | 131.6 | 170.7 | 200.1 | 214.2 |
| 72.5° | 89.2 | 114.2 | 151.1 | 176.1 | 176.1 |
| 75° | 70.7 | 95.7 | 129.4 | 131.6 | 128.3 |
| 77.5° | 54.4 | 78.3 | 101.1 | 92.4 | 94.6 |
| 80° | 40.2 | 59.8 | 64.1 | 67.4 | 69.6 |
| 82.5° | 27.2 | 40.2 | 41.3 | 43.5 | 43.5 |
| 85° | 17.4 | 20.7 | 21.7 | 20.7 | 19.6 |
| 87.5° | 7.6 | 8.7 | 6.5 | 4.3 | 3.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)