

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: P277494

Luminaire Tested: **22CZ2-24HE-RDP-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24HE-RDP-UNV-L83050-W2A1-U-3500K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 80 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1520.0 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

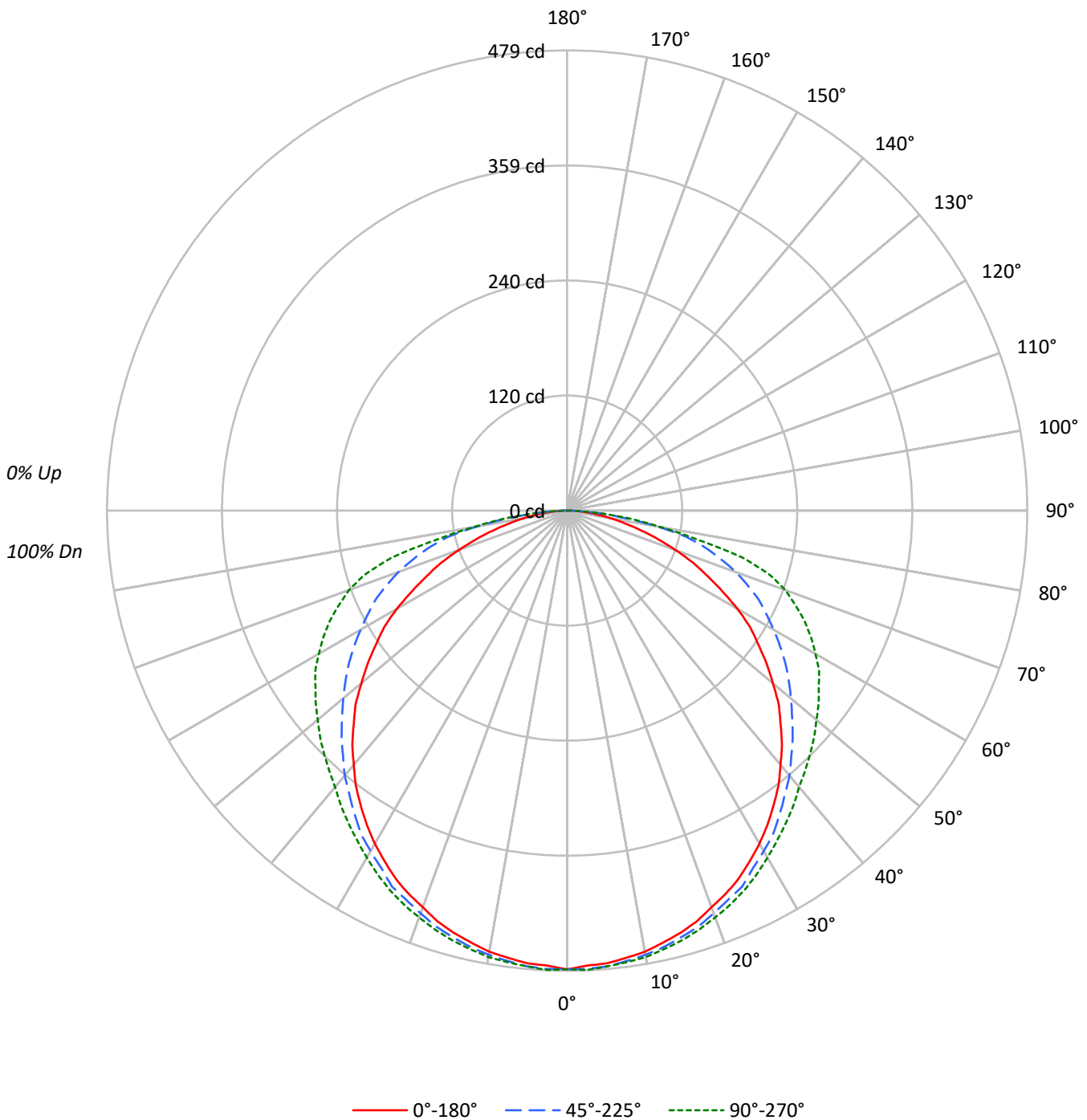
Input Watts (W): 17.577
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 92 | 89 | 92 | 89 | 86 | 88 | 86 | 84 | 82 |
| 2 | 97 | 88 | 81 | 75 | 95 | 86 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 76 | 72 | 69 | 67 |
| 3 | 88 | 77 | 68 | 61 | 86 | 75 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 55 |
| 4 | 80 | 68 | 59 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 50 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 33 | 61 | 48 | 39 | 33 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 35 | 30 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 32 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 24 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1285 | 1285 | 1285 |
| 5° | 1278 | 1287 | 1287 |
| 10° | 1274 | 1283 | 1289 |
| 15° | 1268 | 1280 | 1290 |
| 20° | 1258 | 1277 | 1290 |
| 25° | 1255 | 1281 | 1295 |
| 30° | 1244 | 1272 | 1296 |
| 35° | 1231 | 1267 | 1304 |
| 40° | 1214 | 1265 | 1320 |
| 45° | 1196 | 1264 | 1362 |
| 50° | 1170 | 1273 | 1418 |
| 55° | 1138 | 1301 | 1500 |
| 60° | 1101 | 1336 | 1607 |
| 65° | 1025 | 1403 | 1737 |
| 70° | 941 | 1469 | 1900 |
| 75° | 826 | 1546 | 1965 |
| 80° | 710 | 1472 | 1542 |
| 85° | 621 | 1071 | 1173 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.2 | 3.0 |
| 10°-20° | 129.7 | 8.5 |
| 20°-30° | 197.8 | 13.0 |
| 30°-40° | 241.6 | 15.9 |
| 40°-50° | 258.3 | 17.0 |
| 50°-60° | 249.3 | 16.4 |
| 60°-70° | 214.6 | 14.1 |
| 70°-80° | 145.2 | 9.6 |
| 80°-90° | 38.3 | 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° | 372.7 | 24.5 |
| 0°-40° | 614.3 | 40.4 |
| 0°-60° | 1121.9 | 73.8 |
| 0°-90° | 1520.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1520.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 478 | 478 | 478 | 478 | 478 | |
| 5° | 473 | 474 | 476 | 476 | 476 | 45 |
| 15° | 455 | 456 | 460 | 462 | 463 | 128 |
| 25° | 423 | 425 | 432 | 434 | 436 | 195 |
| 35° | 375 | 378 | 386 | 394 | 397 | 234 |
| 45° | 314 | 320 | 332 | 349 | 358 | 243 |
| 55° | 243 | 250 | 277 | 305 | 320 | 217 |
| 65° | 161 | 177 | 220 | 255 | 273 | 160 |
| 75° | 79 | 105 | 149 | 179 | 189 | 85 |
| 85° | 20 | 28 | 35 | 36 | 38 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 22CZ2-24HE-RDP-UNV-L83050-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 |
| 2.5° | 474.1 | 475.2 | 477.5 | 477.5 | 478.6 |
| 5° | 473.0 | 474.1 | 476.3 | 476.3 | 476.3 |
| 7.5° | 469.6 | 470.7 | 473.0 | 474.1 | 474.1 |
| 10° | 466.3 | 467.4 | 469.6 | 470.7 | 471.9 |
| 12.5° | 460.7 | 461.8 | 465.2 | 467.4 | 467.4 |
| 15° | 455.1 | 456.2 | 459.6 | 461.8 | 462.9 |
| 17.5° | 448.4 | 450.6 | 454.0 | 456.2 | 457.3 |
| 20° | 439.4 | 441.7 | 446.1 | 449.5 | 450.6 |
| 22.5° | 431.6 | 433.8 | 438.3 | 441.7 | 443.9 |
| 25° | 422.7 | 424.9 | 431.6 | 433.8 | 436.1 |
| 27.5° | 411.5 | 413.7 | 419.3 | 423.8 | 427.1 |
| 30° | 400.3 | 402.5 | 409.3 | 414.8 | 417.1 |
| 32.5° | 388.0 | 391.4 | 399.2 | 403.7 | 407.0 |
| 35° | 374.6 | 377.9 | 385.8 | 393.6 | 397.0 |
| 37.5° | 361.2 | 364.5 | 372.4 | 382.4 | 386.9 |
| 40° | 345.5 | 350.0 | 360.1 | 373.5 | 375.7 |
| 42.5° | 331.0 | 336.6 | 345.5 | 361.2 | 366.8 |
| 45° | 314.2 | 319.8 | 332.1 | 348.9 | 357.8 |
| 47.5° | 298.6 | 304.1 | 317.6 | 337.7 | 348.9 |
| 50° | 279.5 | 287.4 | 304.1 | 327.6 | 338.8 |
| 52.5° | 261.7 | 268.4 | 290.7 | 316.4 | 329.9 |
| 55° | 242.6 | 250.5 | 277.3 | 305.3 | 319.8 |
| 57.5° | 225.9 | 232.6 | 262.8 | 294.1 | 310.9 |
| 60° | 204.6 | 213.6 | 248.2 | 281.8 | 298.6 |
| 62.5° | 182.3 | 195.7 | 233.7 | 268.4 | 286.3 |
| 65° | 161.0 | 176.7 | 220.3 | 254.9 | 272.8 |
| 67.5° | 142.0 | 158.8 | 203.5 | 240.4 | 257.2 |
| 70° | 119.6 | 140.9 | 186.7 | 222.5 | 241.5 |
| 72.5° | 99.5 | 123.0 | 167.7 | 203.5 | 220.3 |
| 75° | 79.4 | 105.1 | 148.7 | 178.9 | 189.0 |
| 77.5° | 61.5 | 86.1 | 127.5 | 136.4 | 137.5 |
| 80° | 45.8 | 68.2 | 95.0 | 96.2 | 99.5 |
| 82.5° | 31.3 | 48.1 | 61.5 | 67.1 | 68.2 |
| 85° | 20.1 | 28.0 | 34.7 | 35.8 | 38.0 |
| 87.5° | 8.9 | 10.1 | 12.3 | 11.2 | 11.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)