

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: P259076

Luminaire Tested: **14CZ-LD5-25-SQP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P259076
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35908)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-25-SQP-UNV-L93050-W2A1-U-3500K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1349.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

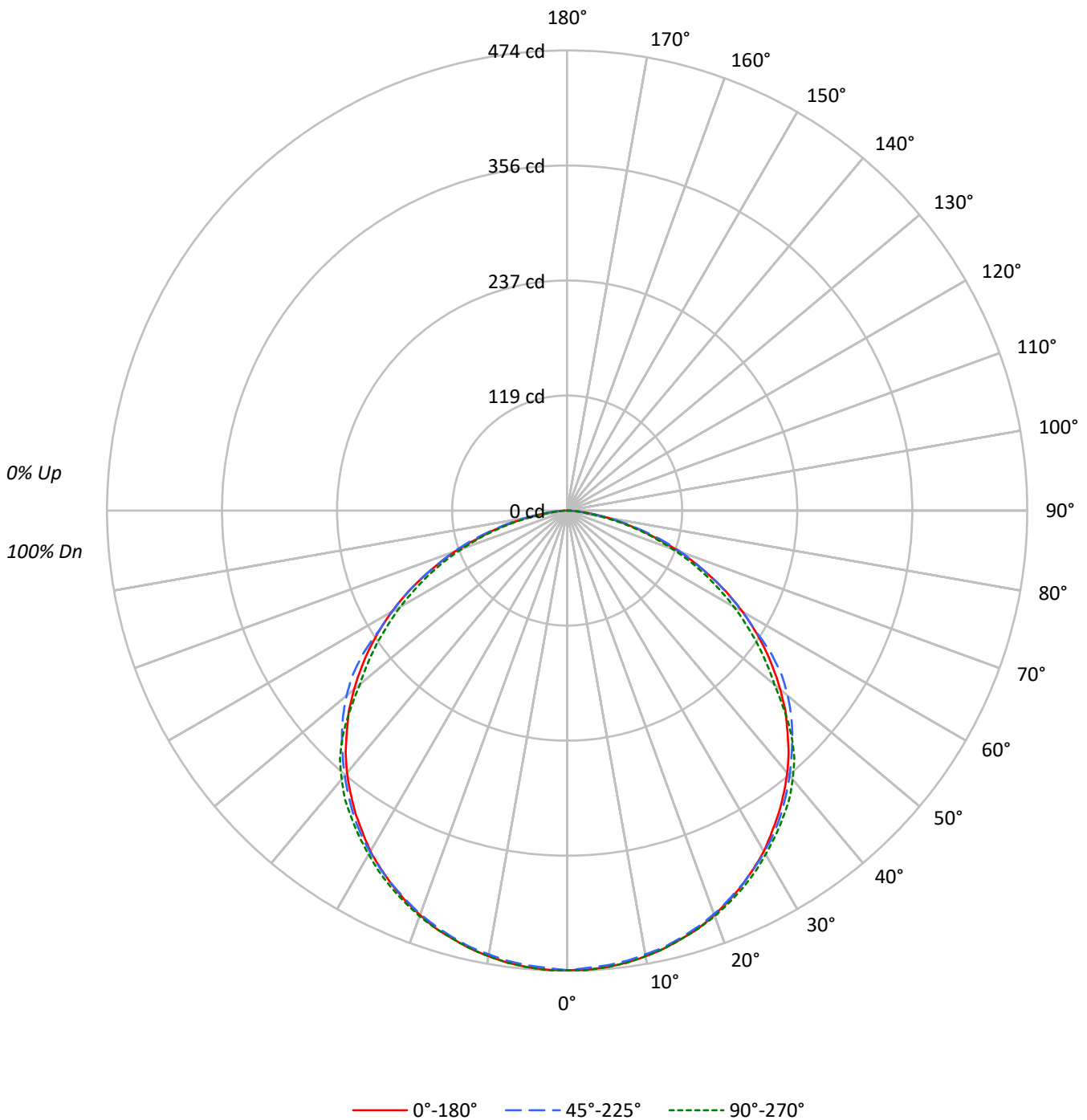
Input Watts (W): 18.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 62 | 59 |
| 4 | 83 | 71 | 62 | 55 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 41 | 54 | 47 | 41 | 52 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 42 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 55 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1274 | 1274 | 1274 |
| 5° | 1275 | 1270 | 1275 |
| 10° | 1274 | 1268 | 1274 |
| 15° | 1272 | 1268 | 1272 |
| 20° | 1269 | 1267 | 1273 |
| 25° | 1265 | 1263 | 1273 |
| 30° | 1259 | 1262 | 1271 |
| 35° | 1249 | 1259 | 1271 |
| 40° | 1239 | 1252 | 1270 |
| 45° | 1221 | 1249 | 1243 |
| 50° | 1199 | 1242 | 1167 |
| 55° | 1168 | 1202 | 1123 |
| 60° | 1124 | 1122 | 1070 |
| 65° | 1053 | 1059 | 1001 |
| 70° | 967 | 978 | 906 |
| 75° | 812 | 850 | 775 |
| 80° | 645 | 659 | 545 |
| 85° | 423 | 367 | 312 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 44.8 | 3.3 |
| 10°-20° | 128.9 | 9.6 |
| 20°-30° | 196.8 | 14.6 |
| 30°-40° | 240.0 | 17.8 |
| 40°-50° | 251.0 | 18.6 |
| 50°-60° | 222.2 | 16.5 |
| 60°-70° | 163.6 | 12.1 |
| 70°-80° | 84.7 | 6.3 |
| 80°-90° | 16.9 | 1.3 |
| 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° | 370.4 | 27.5 |
| 0°-40° | 610.5 | 45.3 |
| 0°-60° | 1083.7 | 80.3 |
| 0°-90° | 1349.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1349.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 473 | 473 | 473 | 473 | 473 | |
| 5° | 472 | 472 | 470 | 472 | 472 | 45 |
| 15° | 456 | 456 | 455 | 457 | 456 | 129 |
| 25° | 426 | 426 | 425 | 428 | 429 | 196 |
| 35° | 380 | 381 | 383 | 387 | 387 | 238 |
| 45° | 321 | 324 | 328 | 331 | 327 | 248 |
| 55° | 249 | 254 | 256 | 243 | 239 | 222 |
| 65° | 165 | 176 | 166 | 160 | 157 | 164 |
| 75° | 78 | 84 | 82 | 77 | 74 | 83 |
| 85° | 14 | 15 | 12 | 10 | 10 | 18 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P259076

CATALOG NUMBER: 14CZ-LD5-25-SQP-UNV-L93050-W2A1-U-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 473.4 | 473.4 | 473.4 | 473.4 | 473.4 |
| 2.5° | 473.4 | 473.4 | 471.6 | 473.4 | 473.8 |
| 5° | 472.0 | 472.0 | 470.2 | 472.0 | 472.0 |
| 7.5° | 469.7 | 469.3 | 467.9 | 469.7 | 469.7 |
| 10° | 466.1 | 466.1 | 464.2 | 466.5 | 466.1 |
| 12.5° | 462.0 | 461.5 | 460.6 | 462.4 | 462.0 |
| 15° | 456.5 | 456.5 | 455.1 | 456.9 | 456.5 |
| 17.5° | 451.0 | 450.5 | 449.2 | 451.0 | 451.0 |
| 20° | 443.2 | 442.8 | 442.3 | 444.1 | 444.6 |
| 22.5° | 435.0 | 434.5 | 434.1 | 436.8 | 436.8 |
| 25° | 425.9 | 425.9 | 425.4 | 428.2 | 428.6 |
| 27.5° | 415.8 | 415.8 | 416.3 | 419.9 | 419.5 |
| 30° | 405.3 | 405.3 | 406.2 | 409.0 | 409.0 |
| 32.5° | 392.5 | 393.4 | 395.3 | 398.4 | 398.4 |
| 35° | 380.2 | 381.1 | 383.4 | 387.0 | 387.0 |
| 37.5° | 366.5 | 367.8 | 370.1 | 374.7 | 375.6 |
| 40° | 352.8 | 353.7 | 356.4 | 361.4 | 361.4 |
| 42.5° | 337.7 | 338.6 | 342.2 | 347.3 | 346.4 |
| 45° | 320.8 | 323.5 | 328.1 | 330.8 | 326.7 |
| 47.5° | 304.8 | 306.6 | 313.0 | 309.8 | 302.9 |
| 50° | 286.5 | 290.2 | 296.6 | 285.1 | 278.7 |
| 52.5° | 267.8 | 271.9 | 278.7 | 262.7 | 259.1 |
| 55° | 249.0 | 254.1 | 256.3 | 243.1 | 239.4 |
| 57.5° | 228.9 | 234.4 | 229.8 | 222.1 | 218.4 |
| 60° | 208.8 | 215.2 | 208.4 | 201.1 | 198.8 |
| 62.5° | 187.8 | 195.1 | 187.3 | 180.9 | 177.7 |
| 65° | 165.4 | 175.5 | 166.3 | 159.9 | 157.2 |
| 67.5° | 143.5 | 154.0 | 144.4 | 138.9 | 137.1 |
| 70° | 122.9 | 128.9 | 124.3 | 118.8 | 115.1 |
| 72.5° | 98.2 | 104.2 | 103.3 | 97.3 | 95.0 |
| 75° | 78.1 | 83.6 | 81.8 | 76.8 | 74.5 |
| 77.5° | 58.0 | 64.0 | 62.1 | 56.2 | 55.3 |
| 80° | 41.6 | 45.7 | 42.5 | 37.0 | 35.2 |
| 82.5° | 26.0 | 29.2 | 25.1 | 21.0 | 20.1 |
| 85° | 13.7 | 14.6 | 11.9 | 10.5 | 10.1 |
| 87.5° | 4.6 | 5.0 | 5.0 | 4.6 | 4.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)