

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: P277500

Luminaire Tested: **22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277500
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: 22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1867.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

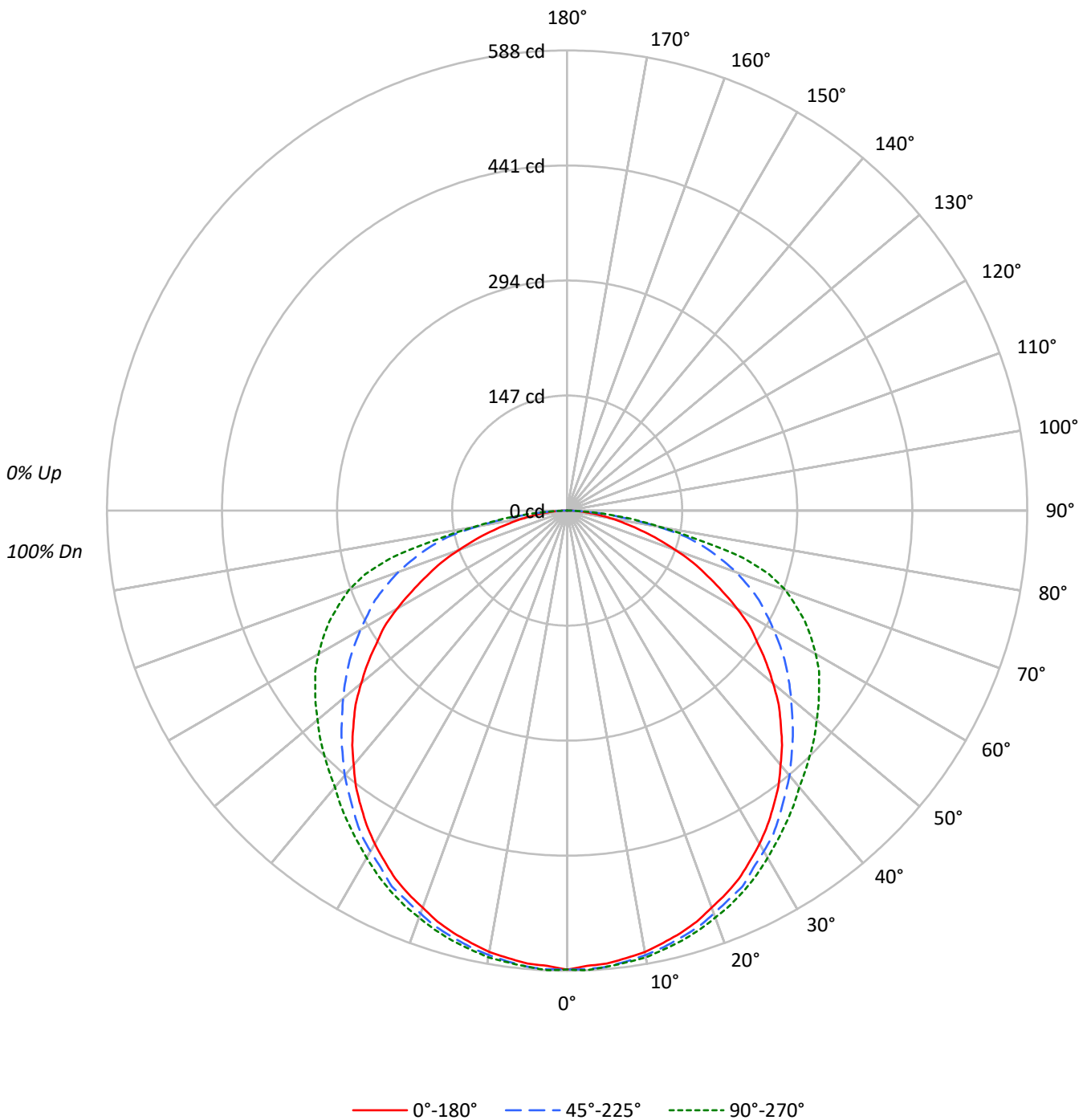
Input Watts (W): 21.297
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P277500

CATALOG NUMBER: 22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P277500

CATALOG NUMBER: 22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K

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 | 108 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 92 | 89 | 92 | 89 | 86 | 88 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 97 | 88 | 81 | 75 | 95 | 86 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 3 | 88 | 77 | 68 | 61 | 86 | 75 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 55 | | | | | 55 | | | |
| 4 | 80 | 68 | 59 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | 47 | | | |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 50 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 | | | | | 40 | | | |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 | | | | | 35 | | | |
| 7 | 63 | 49 | 40 | 33 | 61 | 48 | 39 | 33 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 31 | | | | | 31 | | | |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 35 | 30 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 | | | | | 27 | | | |
| 9 | 55 | 41 | 32 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 24 | | | | | 24 | | | |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 | | | | | 22 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1578 | 1578 | 1578 |
| 5° | 1569 | 1581 | 1581 |
| 10° | 1565 | 1576 | 1584 |
| 15° | 1557 | 1573 | 1584 |
| 20° | 1546 | 1569 | 1585 |
| 25° | 1542 | 1574 | 1590 |
| 30° | 1528 | 1562 | 1592 |
| 35° | 1511 | 1556 | 1602 |
| 40° | 1491 | 1553 | 1621 |
| 45° | 1469 | 1552 | 1673 |
| 50° | 1438 | 1564 | 1742 |
| 55° | 1398 | 1598 | 1843 |
| 60° | 1352 | 1641 | 1974 |
| 65° | 1259 | 1723 | 2134 |
| 70° | 1157 | 1805 | 2334 |
| 75° | 1014 | 1900 | 2413 |
| 80° | 872 | 1808 | 1894 |
| 85° | 763 | 1315 | 1442 |



TEST NUMBER: P277500

CATALOG NUMBER: 22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 55.5 | 3.0 |
| 10°-20° | 159.3 | 8.5 |
| 20°-30° | 243.0 | 13.0 |
| 30°-40° | 296.7 | 15.9 |
| 40°-50° | 317.3 | 17.0 |
| 50°-60° | 306.2 | 16.4 |
| 60°-70° | 263.6 | 14.1 |
| 70°-80° | 178.4 | 9.6 |
| 80°-90° | 47.1 | 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° | 457.8 | 24.5 |
| 0°-40° | 754.5 | 40.4 |
| 0°-60° | 1378.0 | 73.8 |
| 0°-90° | 1867.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1867.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 586 | 586 | 586 | 586 | 586 | |
| 5° | 581 | 582 | 585 | 585 | 585 | 55 |
| 15° | 559 | 560 | 564 | 567 | 569 | 158 |
| 25° | 519 | 522 | 530 | 533 | 536 | 239 |
| 35° | 460 | 464 | 474 | 483 | 488 | 288 |
| 45° | 386 | 393 | 408 | 428 | 440 | 298 |
| 55° | 298 | 308 | 341 | 375 | 393 | 267 |
| 65° | 198 | 217 | 271 | 313 | 335 | 197 |
| 75° | 98 | 129 | 183 | 220 | 232 | 105 |
| 85° | 25 | 34 | 43 | 44 | 47 | 28 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P277500

CATALOG NUMBER: 22CZ2-29HE-RDP-UNV-L83050-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 586.5 | 586.5 | 586.5 | 586.5 | 586.5 |
| 2.5° | 582.3 | 583.7 | 586.5 | 586.5 | 587.8 |
| 5° | 581.0 | 582.3 | 585.1 | 585.1 | 585.1 |
| 7.5° | 576.8 | 578.2 | 581.0 | 582.3 | 582.3 |
| 10° | 572.7 | 574.1 | 576.8 | 578.2 | 579.6 |
| 12.5° | 565.9 | 567.2 | 571.3 | 574.1 | 574.1 |
| 15° | 559.0 | 560.4 | 564.5 | 567.2 | 568.6 |
| 17.5° | 550.7 | 553.5 | 557.6 | 560.4 | 561.7 |
| 20° | 539.8 | 542.5 | 548.0 | 552.1 | 553.5 |
| 22.5° | 530.1 | 532.9 | 538.4 | 542.5 | 545.3 |
| 25° | 519.2 | 521.9 | 530.1 | 532.9 | 535.6 |
| 27.5° | 505.4 | 508.2 | 515.0 | 520.5 | 524.7 |
| 30° | 491.7 | 494.4 | 502.7 | 509.5 | 512.3 |
| 32.5° | 476.6 | 480.7 | 490.3 | 495.8 | 499.9 |
| 35° | 460.1 | 464.2 | 473.8 | 483.4 | 487.6 |
| 37.5° | 443.6 | 447.7 | 457.4 | 469.7 | 475.2 |
| 40° | 424.4 | 429.9 | 442.2 | 458.7 | 461.5 |
| 42.5° | 406.5 | 413.4 | 424.4 | 443.6 | 450.5 |
| 45° | 385.9 | 392.8 | 407.9 | 428.5 | 439.5 |
| 47.5° | 366.7 | 373.6 | 390.1 | 414.8 | 428.5 |
| 50° | 343.4 | 353.0 | 373.6 | 402.4 | 416.2 |
| 52.5° | 321.4 | 329.6 | 357.1 | 388.7 | 405.2 |
| 55° | 298.0 | 307.6 | 340.6 | 374.9 | 392.8 |
| 57.5° | 277.4 | 285.7 | 322.8 | 361.2 | 381.8 |
| 60° | 251.3 | 262.3 | 304.9 | 346.1 | 366.7 |
| 62.5° | 223.9 | 240.4 | 287.0 | 329.6 | 351.6 |
| 65° | 197.8 | 217.0 | 270.6 | 313.1 | 335.1 |
| 67.5° | 174.4 | 195.0 | 250.0 | 295.3 | 315.9 |
| 70° | 147.0 | 173.1 | 229.4 | 273.3 | 296.7 |
| 72.5° | 122.2 | 151.1 | 206.0 | 250.0 | 270.6 |
| 75° | 97.5 | 129.1 | 182.7 | 219.7 | 232.1 |
| 77.5° | 75.5 | 105.8 | 156.6 | 167.6 | 168.9 |
| 80° | 56.3 | 83.8 | 116.7 | 118.1 | 122.2 |
| 82.5° | 38.5 | 59.1 | 75.5 | 82.4 | 83.8 |
| 85° | 24.7 | 34.3 | 42.6 | 43.9 | 46.7 |
| 87.5° | 11.0 | 12.4 | 15.1 | 13.7 | 13.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)