

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: CORELITE

Report Number: P30661

Luminaire Tested: **Z3-WD-2T8-1C-UNV-22**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P30661
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: CORELITE
Catalog Number: Z3-WD-2T8-1C-UNV-22
Description: CORELITE 2x2 SHALLOW RECESSED FIXTURE WITH A WHITE UPPER REFLECTOR AND A CLEAR FLAT LENS WITH A ROUND PERF INLAY OVER LAMP MOUNTING & TWO MICRO ACRYLIC LENS OVER CURVED REFLECTORS
Light Source: (2) PHILIPS DOUBLE ENDED BI-PIN T8 FLUORESCENT LAMPS 4100K PHILIPS F17T8/TL841 17 W
Ballast/Driver: GE ELECTRONIC BALLAST GE232-MVPS-N

Summary

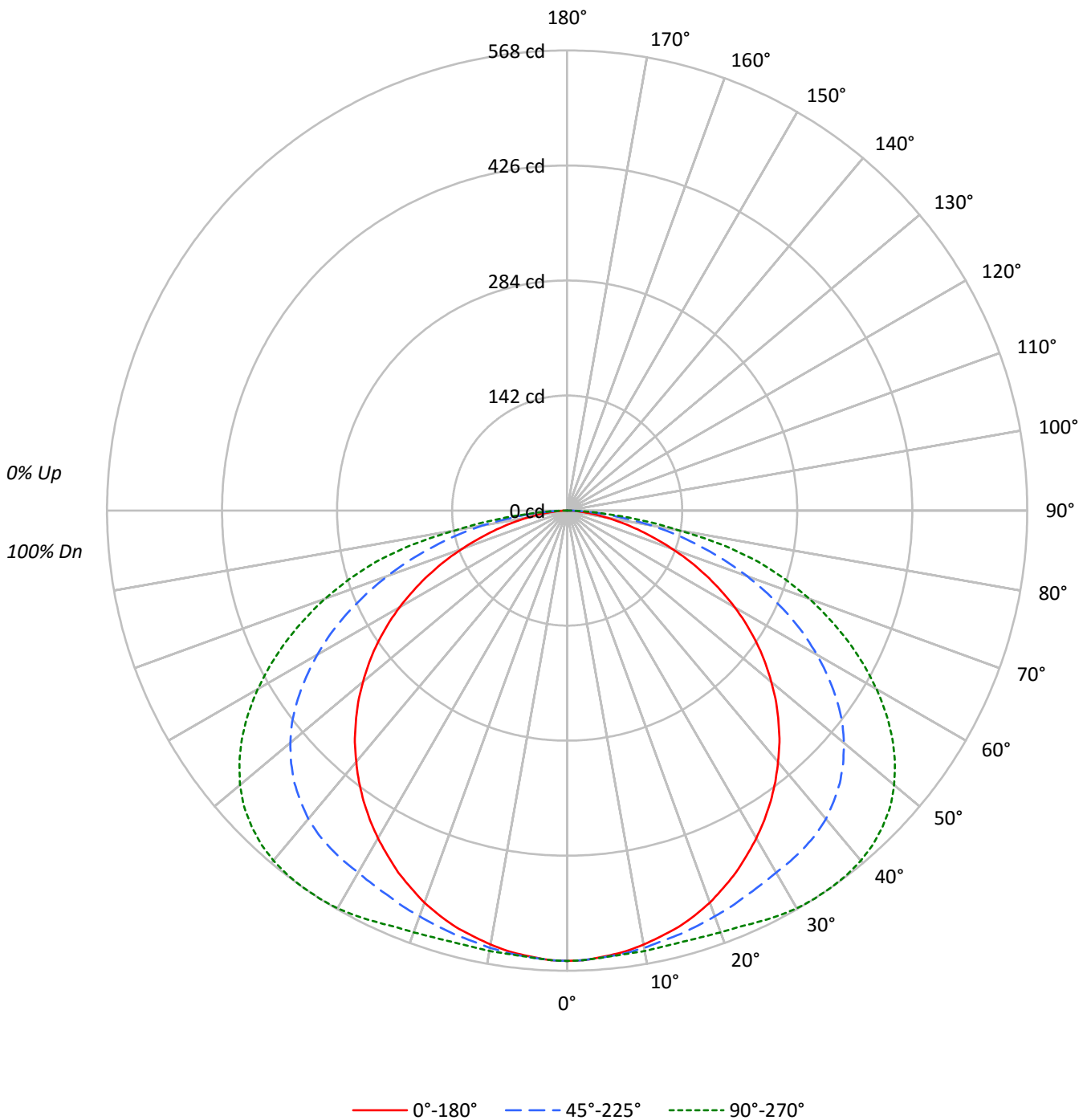
Lumens per Lamp: 1300 (2 lamps)
Luminaire Lumens: 1995.3 lumens
Efficiency: 76.7%
Efficacy: 71.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.56 / 1.57
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 27.9
Input Voltage (V): 120.06
Input Current (Ain): 0.2332
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 | | | | | | | | | | |
| 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 | 91 | 91 | 91 | 91 | 89 | 89 | 89 | 89 | 85 | 85 | 85 | 82 | 82 | 82 | 78 | 78 | 78 | 77 | | | | | | 77 | | | | | | | | | | | | | | |
| 1 | 83 | 79 | 75 | 72 | 81 | 77 | 74 | 71 | 74 | 71 | 69 | 71 | 68 | 66 | 68 | 66 | 64 | 63 | | | | | | 63 | | | | | | | | | | | | | | |
| 2 | 75 | 68 | 62 | 57 | 73 | 66 | 61 | 57 | 64 | 59 | 55 | 61 | 57 | 54 | 59 | 56 | 53 | 51 | | | | | | 51 | | | | | | | | | | | | | | |
| 3 | 68 | 59 | 52 | 47 | 66 | 58 | 51 | 46 | 55 | 50 | 46 | 53 | 49 | 45 | 51 | 47 | 44 | 42 | | | | | | 42 | | | | | | | | | | | | | | |
| 4 | 61 | 52 | 44 | 39 | 60 | 51 | 44 | 39 | 49 | 43 | 38 | 47 | 42 | 38 | 45 | 41 | 37 | 35 | | | | | | 35 | | | | | | | | | | | | | | |
| 5 | 56 | 46 | 39 | 33 | 55 | 45 | 38 | 33 | 43 | 37 | 33 | 42 | 36 | 32 | 40 | 36 | 32 | 30 | | | | | | 30 | | | | | | | | | | | | | | |
| 6 | 52 | 41 | 34 | 29 | 50 | 40 | 33 | 28 | 39 | 33 | 28 | 37 | 32 | 28 | 36 | 31 | 28 | 26 | | | | | | 26 | | | | | | | | | | | | | | |
| 7 | 48 | 37 | 30 | 25 | 46 | 36 | 30 | 25 | 35 | 29 | 25 | 34 | 28 | 24 | 33 | 28 | 24 | 23 | | | | | | 23 | | | | | | | | | | | | | | |
| 8 | 44 | 34 | 27 | 22 | 43 | 33 | 26 | 22 | 32 | 26 | 22 | 31 | 26 | 22 | 30 | 25 | 21 | 20 | | | | | | 20 | | | | | | | | | | | | | | |
| 9 | 41 | 31 | 24 | 20 | 40 | 30 | 24 | 20 | 29 | 24 | 19 | 28 | 23 | 19 | 28 | 23 | 19 | 18 | | | | | | 18 | | | | | | | | | | | | | | |
| 10 | 39 | 28 | 22 | 18 | 38 | 28 | 22 | 18 | 27 | 21 | 18 | 26 | 21 | 17 | 26 | 21 | 17 | 16 | | | | | | 16 | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1496 | 1496 | 1496 |
| 5° | 1491 | 1494 | 1494 |
| 10° | 1486 | 1497 | 1508 |
| 15° | 1482 | 1507 | 1535 |
| 20° | 1475 | 1526 | 1586 |
| 25° | 1464 | 1556 | 1663 |
| 30° | 1451 | 1603 | 1762 |
| 35° | 1439 | 1672 | 1866 |
| 40° | 1423 | 1746 | 1981 |
| 45° | 1404 | 1811 | 2097 |
| 50° | 1377 | 1867 | 2206 |
| 55° | 1342 | 1905 | 2299 |
| 60° | 1286 | 1916 | 2373 |
| 65° | 1203 | 1904 | 2439 |
| 70° | 1086 | 1857 | 2502 |
| 75° | 936 | 1768 | 2537 |
| 80° | 759 | 1627 | 2170 |
| 85° | 556 | 1266 | 1544 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 52.6 | 2.6 | 2.0 |
| 10°-20° | 153.1 | 7.7 | 5.9 |
| 20°-30° | 242.9 | 12.2 | 9.3 |
| 30°-40° | 316.8 | 15.9 | 12.2 |
| 40°-50° | 360.6 | 18.1 | 13.9 |
| 50°-60° | 355.0 | 17.8 | 13.7 |
| 60°-70° | 289.6 | 14.5 | 11.1 |
| 70°-80° | 177.9 | 8.9 | 6.8 |
| 80°-90° | 46.6 | 2.3 | 1.8 |
| 90°-100° | 0.1 | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-30° | 448.7 | 22.5 | 17.3 |
| 0°-40° | 765.5 | 38.4 | 29.4 |
| 0°-60° | 1481.1 | 74.2 | 57.0 |
| 0°-90° | 1995.2 | 100.0 | 76.7 |
| 90°-120° | 0.1 | 0.0 | 0.0 |
| 90°-150° | 0.1 | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 | 0.0 |
| 0°-180° | 1995.3 | 100.0 | 76.7 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 556 | 556 | 556 | 556 | 556 | |
| 5° | 552 | 553 | 553 | 554 | 553 | 52 |
| 15° | 532 | 534 | 541 | 548 | 551 | 150 |
| 25° | 493 | 501 | 524 | 550 | 560 | 227 |
| 35° | 438 | 457 | 509 | 553 | 568 | 274 |
| 45° | 369 | 403 | 476 | 532 | 551 | 285 |
| 55° | 286 | 331 | 406 | 468 | 490 | 255 |
| 65° | 189 | 229 | 299 | 360 | 383 | 187 |
| 75° | 90 | 119 | 170 | 223 | 244 | 96 |
| 85° | 18 | 27 | 41 | 51 | 50 | 21 |
| 90° | 1 | 1 | 1 | 1 | 1 | 1 |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P30661

CATALOG NUMBER: Z3-WD-2T8-1C-UNV-22

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 0° | 556 | 556 | 556 | 556 | 556 |
| 2.5° | 555 | 555 | 555 | 555 | 555 |
| 5° | 552 | 553 | 553 | 554 | 553 |
| 7.5° | 549 | 549 | 551 | 552 | 552 |
| 10° | 544 | 545 | 548 | 551 | 552 |
| 12.5° | 538 | 540 | 544 | 549 | 551 |
| 15° | 532 | 534 | 541 | 548 | 551 |
| 17.5° | 524 | 527 | 537 | 548 | 552 |
| 20° | 515 | 519 | 533 | 548 | 554 |
| 22.5° | 504 | 511 | 529 | 548 | 556 |
| 25° | 493 | 501 | 524 | 550 | 560 |
| 27.5° | 480 | 491 | 520 | 552 | 564 |
| 30° | 467 | 480 | 516 | 554 | 567 |
| 32.5° | 453 | 469 | 513 | 554 | 568 |
| 35° | 438 | 457 | 509 | 553 | 568 |
| 37.5° | 422 | 445 | 504 | 551 | 567 |
| 40° | 405 | 432 | 497 | 547 | 564 |
| 42.5° | 388 | 418 | 487 | 541 | 559 |
| 45° | 369 | 403 | 476 | 532 | 551 |
| 47.5° | 350 | 387 | 462 | 521 | 541 |
| 50° | 329 | 370 | 446 | 506 | 527 |
| 52.5° | 308 | 352 | 428 | 489 | 510 |
| 55° | 286 | 331 | 406 | 468 | 490 |
| 57.5° | 263 | 308 | 382 | 445 | 467 |
| 60° | 239 | 283 | 356 | 419 | 441 |
| 62.5° | 214 | 256 | 329 | 390 | 413 |
| 65° | 189 | 229 | 299 | 360 | 383 |
| 67.5° | 164 | 201 | 268 | 327 | 351 |
| 70° | 138 | 173 | 236 | 294 | 318 |
| 72.5° | 113 | 145 | 203 | 260 | 282 |
| 75° | 90 | 119 | 170 | 223 | 244 |
| 77.5° | 68 | 93 | 138 | 183 | 197 |
| 80° | 49 | 69 | 105 | 134 | 140 |
| 82.5° | 32 | 46 | 70 | 91 | 94 |
| 85° | 18 | 27 | 41 | 51 | 50 |
| 87.5° | 8 | 11 | 16 | 19 | 18 |
| 90° | 1 | 1 | 1 | 1 | 1 |
| 92.5° | 0 | 0 | 0 | 0 | 0 |
| 95° | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|----|-------|-----|-------|-----|
| 112.5° | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)