

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P686279

Luminaire Tested: SQ4R-F-050D-92765-1-UNV-STD-W-4_3500K

Issue Date: 5/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P686279
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2203-586-27)
Test Lab: INNOVATION CENTER
Issue Date: 5/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4R-F-050D-92765-1-UNV-STD-W-4_3500K
Description: CORELITE SQ4R RECESSED LED LUMINAIRE WITH FROSTED LENS, WHITE TUNING 2700K-6500I
500 LUMENS PER FOOT
Light Source: 2700K AND 6500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

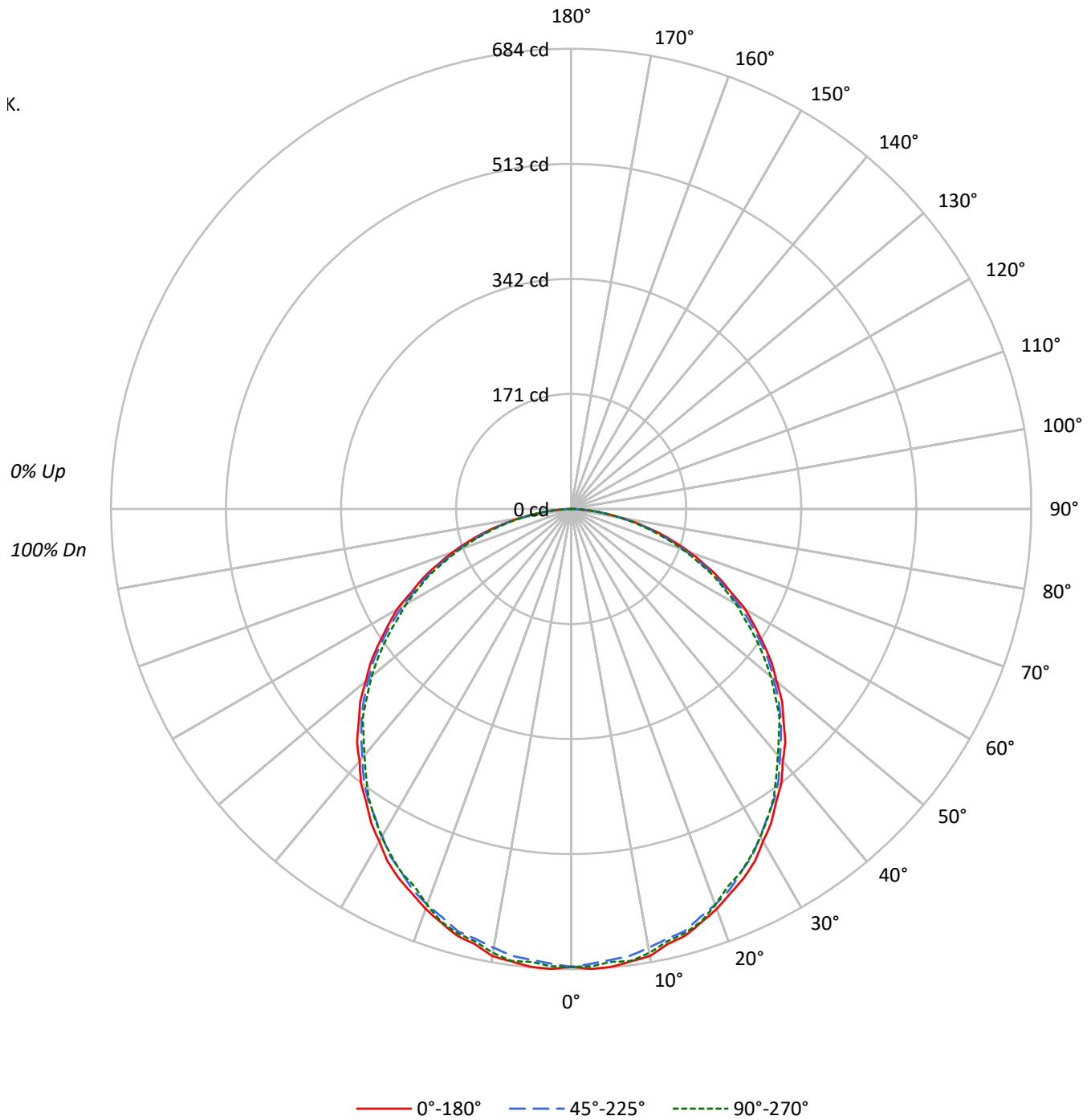
Lumens per Lamp: N/A
Luminaire Lumens: 1902.8 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.23 / 1.35
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 21.2
Input Voltage (V): 120
Input Current (A_{in}): 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: 24 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 | 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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 84 | | | | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 | | | | 70 |
| 3 | 90 | 79 | 71 | 65 | 88 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 59 | | | | 59 |
| 4 | 82 | 70 | 62 | 55 | 80 | 69 | 61 | 54 | 67 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 50 | | | | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 43 | | | | 43 |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 38 | | | | 38 |
| 7 | 65 | 51 | 43 | 36 | 63 | 51 | 42 | 36 | 49 | 41 | 36 | 48 | 41 | 36 | 46 | 40 | 35 | 33 | | | | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 44 | 37 | 32 | 42 | 36 | 32 | 30 | | | | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 | | | | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 | | | | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6550 | 6550 | 6550 |
| 5° | 6603 | 6502 | 6530 |
| 10° | 6596 | 6475 | 6549 |
| 15° | 6543 | 6478 | 6505 |
| 20° | 6481 | 6413 | 6413 |
| 25° | 6436 | 6334 | 6334 |
| 30° | 6342 | 6246 | 6258 |
| 35° | 6244 | 6189 | 6167 |
| 40° | 6149 | 6065 | 6005 |
| 45° | 6076 | 5999 | 5959 |
| 50° | 5969 | 5883 | 5796 |
| 55° | 5855 | 5759 | 5615 |
| 60° | 5759 | 5576 | 5447 |
| 65° | 5529 | 5376 | 5290 |
| 70° | 5272 | 5058 | 4977 |
| 75° | 4906 | 4728 | 4586 |
| 80° | 4186 | 4081 | 4081 |
| 85° | 3060 | 3170 | 3060 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 6090 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 64.4 | 3.4 |
| 10°-20° | 183.8 | 9.7 |
| 20°-30° | 276.2 | 14.5 |
| 30°-40° | 329.8 | 17.3 |
| 40°-50° | 340.2 | 17.9 |
| 50°-60° | 306.4 | 16.1 |
| 60°-70° | 233.1 | 12.3 |
| 70°-80° | 133.8 | 7.0 |
| 80°-90° | 34.8 | 1.8 |
| 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° | 524.5 | 27.6 |
| 0°-40° | 854.3 | 44.9 |
| 0°-60° | 1501.0 | 78.9 |
| 0°-90° | 1902.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1902.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 680 | 680 | 680 | 680 | 680 | |
| 5° | 683 | 680 | 673 | 680 | 676 | 65 |
| 15° | 656 | 654 | 650 | 652 | 653 | 185 |
| 25° | 606 | 601 | 596 | 598 | 596 | 279 |
| 35° | 531 | 530 | 527 | 525 | 525 | 333 |
| 45° | 446 | 447 | 441 | 437 | 438 | 345 |
| 55° | 349 | 350 | 343 | 340 | 334 | 312 |
| 65° | 243 | 240 | 236 | 231 | 232 | 239 |
| 75° | 132 | 128 | 127 | 124 | 123 | 139 |
| 85° | 28 | 29 | 29 | 29 | 28 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 680.4 | 680.4 | 680.4 | 680.4 | 680.4 |
| 2.5° | 684.3 | 684.3 | 676.6 | 681.4 | 680.4 |
| 5° | 683.3 | 680.4 | 672.8 | 680.4 | 675.7 |
| 7.5° | 678.5 | 673.7 | 669.9 | 674.7 | 677.6 |
| 10° | 674.7 | 673.7 | 662.3 | 668.0 | 669.9 |
| 12.5° | 662.3 | 667.1 | 654.6 | 658.5 | 658.5 |
| 15° | 656.5 | 653.7 | 649.9 | 651.8 | 652.7 |
| 17.5° | 644.1 | 642.2 | 636.5 | 641.3 | 643.2 |
| 20° | 632.6 | 629.8 | 626.0 | 626.9 | 626.0 |
| 22.5° | 618.3 | 616.4 | 613.5 | 613.5 | 607.8 |
| 25° | 605.9 | 601.1 | 596.3 | 598.2 | 596.3 |
| 27.5° | 590.6 | 586.8 | 582.0 | 583.0 | 580.1 |
| 30° | 570.5 | 571.5 | 561.9 | 561.9 | 562.9 |
| 32.5° | 553.3 | 549.5 | 542.8 | 542.8 | 543.8 |
| 35° | 531.3 | 530.4 | 526.6 | 524.7 | 524.7 |
| 37.5° | 513.2 | 513.2 | 506.5 | 503.6 | 500.8 |
| 40° | 489.3 | 490.3 | 482.6 | 481.7 | 477.8 |
| 42.5° | 471.1 | 469.2 | 461.6 | 460.6 | 456.8 |
| 45° | 446.3 | 447.3 | 440.6 | 436.7 | 437.7 |
| 47.5° | 425.3 | 422.4 | 417.6 | 413.8 | 410.9 |
| 50° | 398.5 | 397.6 | 392.8 | 389.9 | 387.0 |
| 52.5° | 375.6 | 372.7 | 369.8 | 363.2 | 361.2 |
| 55° | 348.8 | 349.8 | 343.1 | 340.2 | 334.5 |
| 57.5° | 323.0 | 322.1 | 316.3 | 311.5 | 306.8 |
| 60° | 299.1 | 296.3 | 289.6 | 284.8 | 282.9 |
| 62.5° | 267.6 | 266.6 | 261.9 | 258.0 | 256.1 |
| 65° | 242.7 | 239.9 | 236.0 | 231.3 | 232.2 |
| 67.5° | 214.1 | 212.2 | 208.3 | 204.5 | 202.6 |
| 70° | 187.3 | 184.4 | 179.7 | 177.8 | 176.8 |
| 72.5° | 159.6 | 156.7 | 152.9 | 149.1 | 150.0 |
| 75° | 131.9 | 128.1 | 127.1 | 124.2 | 123.3 |
| 77.5° | 103.2 | 101.3 | 99.4 | 98.4 | 97.5 |
| 80° | 75.5 | 76.5 | 73.6 | 72.6 | 73.6 |
| 82.5° | 51.6 | 51.6 | 50.7 | 49.7 | 50.7 |
| 85° | 27.7 | 28.7 | 28.7 | 28.7 | 27.7 |
| 87.5° | 9.6 | 11.5 | 12.4 | 12.4 | 11.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 18.36 | 20.00 | 18.72 | 20.31 | 20.63 | 18.11 | 19.75 | 18.48 | 20.07 | 20.38 |
| | 3H | 20.19 | 21.68 | 20.57 | 22.00 | 22.36 | 19.92 | 21.40 | 20.30 | 21.73 | 22.09 |
| | 4H | 20.88 | 22.28 | 21.28 | 22.63 | 23.00 | 20.59 | 21.99 | 20.99 | 22.33 | 22.71 |
| | 6H | 21.37 | 22.66 | 21.78 | 23.03 | 23.42 | 21.07 | 22.37 | 21.49 | 22.73 | 23.13 |
| | 8H | 21.51 | 22.75 | 21.93 | 23.14 | 23.54 | 21.22 | 22.46 | 21.65 | 22.85 | 23.25 |
| | 12H | 21.59 | 22.78 | 22.02 | 23.16 | 23.59 | 21.31 | 22.50 | 21.74 | 22.88 | 23.31 |
| 4H | 2H | 18.97 | 20.37 | 19.37 | 20.72 | 21.09 | 18.78 | 20.18 | 19.18 | 20.52 | 20.90 |
| | 3H | 21.02 | 22.20 | 21.43 | 22.59 | 22.99 | 20.80 | 21.97 | 21.21 | 22.37 | 22.77 |
| | 4H | 21.84 | 22.90 | 22.27 | 23.31 | 23.75 | 21.59 | 22.65 | 22.02 | 23.07 | 23.50 |
| | 6H | 22.45 | 23.38 | 22.91 | 23.82 | 24.27 | 22.20 | 23.13 | 22.65 | 23.57 | 24.02 |
| | 8H | 22.64 | 23.51 | 23.10 | 23.95 | 24.42 | 22.39 | 23.26 | 22.85 | 23.70 | 24.17 |
| | 12H | 22.76 | 23.54 | 23.24 | 24.02 | 24.48 | 22.52 | 23.30 | 23.00 | 23.77 | 24.24 |
| 8H | 4H | 22.14 | 23.00 | 22.60 | 23.45 | 23.91 | 21.92 | 22.79 | 22.38 | 23.23 | 23.70 |
| | 6H | 22.87 | 23.59 | 23.36 | 24.07 | 24.55 | 22.64 | 23.36 | 23.13 | 23.85 | 24.32 |
| | 8H | 23.12 | 23.77 | 23.63 | 24.28 | 24.76 | 22.90 | 23.55 | 23.41 | 24.05 | 24.54 |
| | 12H | 23.30 | 23.88 | 23.81 | 24.37 | 24.93 | 23.09 | 23.66 | 23.59 | 24.15 | 24.71 |
| 12H | 4H | 22.16 | 22.95 | 22.64 | 23.42 | 23.89 | 21.96 | 22.74 | 22.44 | 23.21 | 23.68 |
| | 6H | 22.91 | 23.56 | 23.42 | 24.07 | 24.55 | 22.69 | 23.34 | 23.20 | 23.85 | 24.34 |
| | 8H | 23.23 | 23.80 | 23.73 | 24.29 | 24.85 | 23.01 | 23.58 | 23.52 | 24.07 | 24.63 |