

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: P686282

Luminaire Tested: SQ4R-F-050D-92765-1-UNV-STD-W-4_5000K

Issue Date: 5/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P686282
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_5000K
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

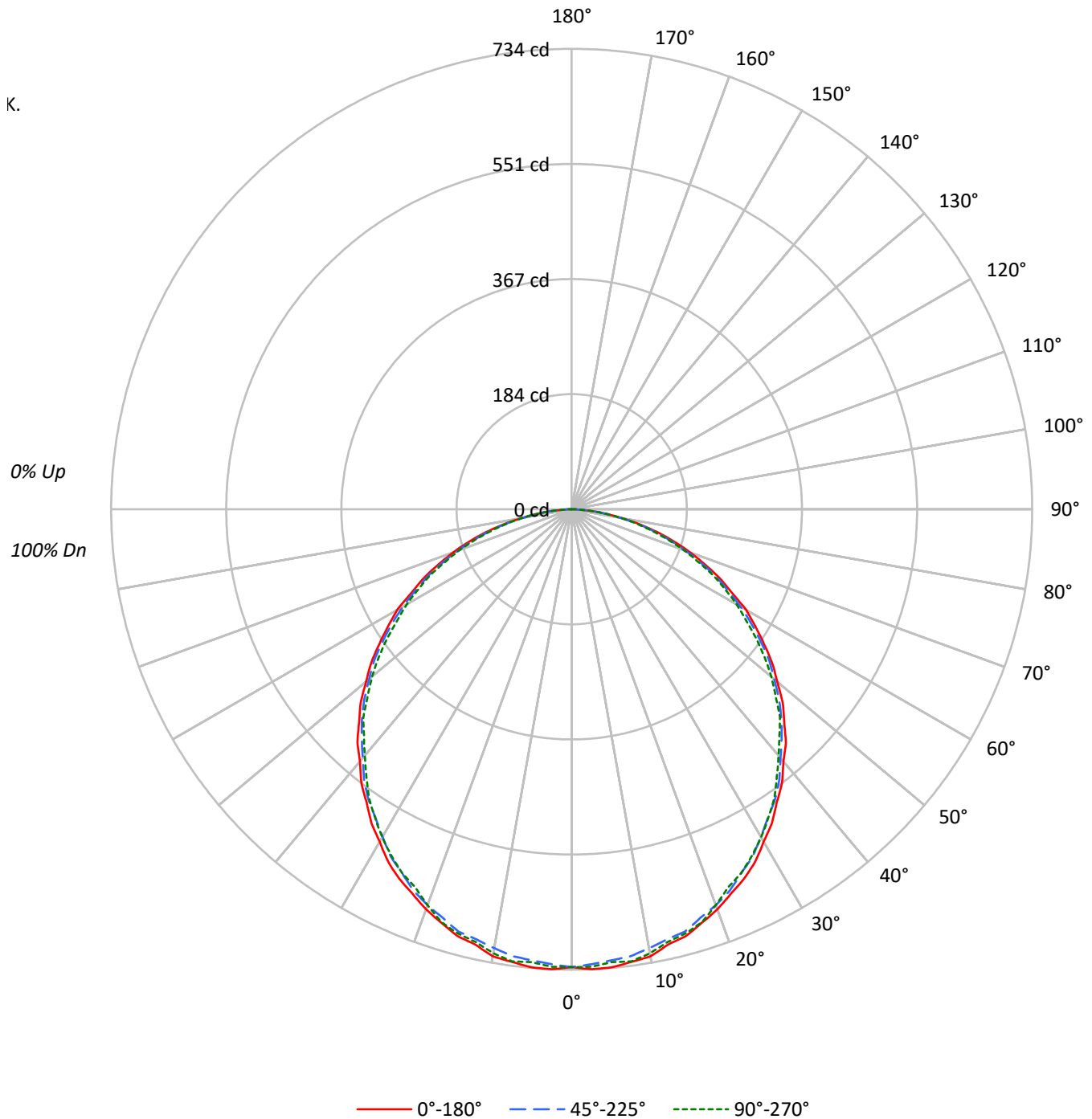
Lumens per Lamp: N/A
Luminaire Lumens: 2041.2 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.23 / 1.35
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

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° | 7028 | 7028 | 7028 |
| 5° | 7084 | 6976 | 7005 |
| 10° | 7076 | 6946 | 7026 |
| 15° | 7020 | 6948 | 6979 |
| 20° | 6953 | 6880 | 6880 |
| 25° | 6905 | 6795 | 6795 |
| 30° | 6805 | 6701 | 6713 |
| 35° | 6699 | 6639 | 6614 |
| 40° | 6597 | 6506 | 6442 |
| 45° | 6519 | 6435 | 6392 |
| 50° | 6403 | 6312 | 6219 |
| 55° | 6281 | 6178 | 6022 |
| 60° | 6179 | 5981 | 5844 |
| 65° | 5932 | 5768 | 5675 |
| 70° | 5655 | 5424 | 5340 |
| 75° | 5263 | 5074 | 4921 |
| 80° | 4491 | 4374 | 4374 |
| 85° | 3281 | 3402 | 3281 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 6533 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.1 | 3.4 |
| 10°-20° | 197.2 | 9.7 |
| 20°-30° | 296.3 | 14.5 |
| 30°-40° | 353.8 | 17.3 |
| 40°-50° | 365.0 | 17.9 |
| 50°-60° | 328.7 | 16.1 |
| 60°-70° | 250.1 | 12.3 |
| 70°-80° | 143.6 | 7.0 |
| 80°-90° | 37.4 | 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° | 562.7 | 27.6 |
| 0°-40° | 916.4 | 44.9 |
| 0°-60° | 1610.2 | 78.9 |
| 0°-90° | 2041.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2041.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 730 | 730 | 730 | 730 | 730 | |
| 5° | 733 | 730 | 722 | 730 | 725 | 70 |
| 15° | 704 | 701 | 697 | 699 | 700 | 198 |
| 25° | 650 | 645 | 640 | 642 | 640 | 299 |
| 35° | 570 | 569 | 565 | 563 | 563 | 357 |
| 45° | 479 | 480 | 473 | 468 | 470 | 370 |
| 55° | 374 | 375 | 368 | 365 | 359 | 335 |
| 65° | 260 | 257 | 253 | 248 | 249 | 257 |
| 75° | 142 | 137 | 136 | 133 | 132 | 149 |
| 85° | 30 | 31 | 31 | 31 | 30 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 730.0 | 730.0 | 730.0 | 730.0 | 730.0 |
| 2.5° | 734.1 | 734.1 | 725.9 | 731.0 | 730.0 |
| 5° | 733.0 | 730.0 | 721.8 | 730.0 | 724.8 |
| 7.5° | 727.9 | 722.8 | 718.7 | 723.8 | 726.9 |
| 10° | 723.8 | 722.8 | 710.5 | 716.6 | 718.7 |
| 12.5° | 710.5 | 715.6 | 702.3 | 706.4 | 706.4 |
| 15° | 704.3 | 701.2 | 697.1 | 699.2 | 700.2 |
| 17.5° | 691.0 | 688.9 | 682.8 | 687.9 | 690.0 |
| 20° | 678.7 | 675.6 | 671.5 | 672.5 | 671.5 |
| 22.5° | 663.3 | 661.3 | 658.2 | 658.2 | 652.0 |
| 25° | 650.0 | 644.9 | 639.7 | 641.8 | 639.7 |
| 27.5° | 633.6 | 629.5 | 624.4 | 625.4 | 622.3 |
| 30° | 612.1 | 613.1 | 602.8 | 602.8 | 603.9 |
| 32.5° | 593.6 | 589.5 | 582.3 | 582.3 | 583.3 |
| 35° | 570.0 | 569.0 | 564.9 | 562.8 | 562.8 |
| 37.5° | 550.5 | 550.5 | 543.4 | 540.3 | 537.2 |
| 40° | 524.9 | 525.9 | 517.7 | 516.7 | 512.6 |
| 42.5° | 505.4 | 503.4 | 495.2 | 494.2 | 490.1 |
| 45° | 478.8 | 479.8 | 472.6 | 468.5 | 469.5 |
| 47.5° | 456.2 | 453.1 | 448.0 | 443.9 | 440.8 |
| 50° | 427.5 | 426.5 | 421.4 | 418.3 | 415.2 |
| 52.5° | 402.9 | 399.8 | 396.8 | 389.6 | 387.5 |
| 55° | 374.2 | 375.2 | 368.1 | 365.0 | 358.8 |
| 57.5° | 346.5 | 345.5 | 339.3 | 334.2 | 329.1 |
| 60° | 320.9 | 317.8 | 310.6 | 305.5 | 303.5 |
| 62.5° | 287.1 | 286.0 | 280.9 | 276.8 | 274.8 |
| 65° | 260.4 | 257.3 | 253.2 | 248.1 | 249.1 |
| 67.5° | 229.6 | 227.6 | 223.5 | 219.4 | 217.3 |
| 70° | 200.9 | 197.9 | 192.7 | 190.7 | 189.7 |
| 72.5° | 171.2 | 168.1 | 164.0 | 159.9 | 161.0 |
| 75° | 141.5 | 137.4 | 136.4 | 133.3 | 132.3 |
| 77.5° | 110.7 | 108.7 | 106.6 | 105.6 | 104.6 |
| 80° | 81.0 | 82.0 | 78.9 | 77.9 | 78.9 |
| 82.5° | 55.4 | 55.4 | 54.3 | 53.3 | 54.3 |
| 85° | 29.7 | 30.8 | 30.8 | 30.8 | 29.7 |
| 87.5° | 10.3 | 12.3 | 13.3 | 13.3 | 12.3 |
| 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 | 18.60 | 20.24 | 18.97 | 20.56 | 20.87 | 18.36 | 20.00 | 18.72 | 20.31 | 20.63 |
| | 3H | 20.44 | 21.92 | 20.81 | 22.25 | 22.61 | 20.16 | 21.65 | 20.54 | 21.97 | 22.33 |
| | 4H | 21.12 | 22.52 | 21.52 | 22.87 | 23.24 | 20.83 | 22.23 | 21.23 | 22.58 | 22.95 |
| | 6H | 21.61 | 22.91 | 22.02 | 23.27 | 23.66 | 21.32 | 22.62 | 21.73 | 22.98 | 23.37 |
| | 8H | 21.75 | 22.99 | 22.18 | 23.38 | 23.78 | 21.47 | 22.71 | 21.89 | 23.10 | 23.49 |
| | 12H | 21.83 | 23.02 | 22.26 | 23.40 | 23.83 | 21.55 | 22.74 | 21.98 | 23.12 | 23.55 |
| 4H | 2H | 19.21 | 20.61 | 19.61 | 20.96 | 21.33 | 19.02 | 20.42 | 19.42 | 20.77 | 21.14 |
| | 3H | 21.27 | 22.44 | 21.68 | 22.84 | 23.24 | 21.04 | 22.22 | 21.45 | 22.61 | 23.01 |
| | 4H | 22.08 | 23.14 | 22.51 | 23.56 | 23.99 | 21.84 | 22.90 | 22.27 | 23.31 | 23.75 |
| | 6H | 22.70 | 23.62 | 23.15 | 24.06 | 24.52 | 22.44 | 23.37 | 22.90 | 23.81 | 24.27 |
| | 8H | 22.89 | 23.75 | 23.35 | 24.20 | 24.66 | 22.64 | 23.51 | 23.10 | 23.95 | 24.41 |
| | 12H | 23.00 | 23.78 | 23.48 | 24.26 | 24.73 | 22.76 | 23.54 | 23.24 | 24.02 | 24.49 |
| 8H | 4H | 22.38 | 23.25 | 22.84 | 23.69 | 24.15 | 22.16 | 23.03 | 22.62 | 23.47 | 23.94 |
| | 6H | 23.11 | 23.83 | 23.60 | 24.32 | 24.79 | 22.88 | 23.61 | 23.38 | 24.09 | 24.57 |
| | 8H | 23.37 | 24.02 | 23.88 | 24.52 | 25.01 | 23.14 | 23.79 | 23.65 | 24.30 | 24.78 |
| | 12H | 23.55 | 24.12 | 24.05 | 24.61 | 25.17 | 23.33 | 23.90 | 23.84 | 24.39 | 24.96 |
| 12H | 4H | 22.41 | 23.19 | 22.89 | 23.66 | 24.13 | 22.20 | 22.98 | 22.68 | 23.46 | 23.92 |
| | 6H | 23.16 | 23.81 | 23.66 | 24.31 | 24.80 | 22.94 | 23.59 | 23.45 | 24.09 | 24.58 |
| | 8H | 23.47 | 24.04 | 23.98 | 24.53 | 25.09 | 23.26 | 23.83 | 23.76 | 24.32 | 24.88 |