

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: P853693

Luminaire Tested: SQ2-F-0U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853693
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-0U-050D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

Summary

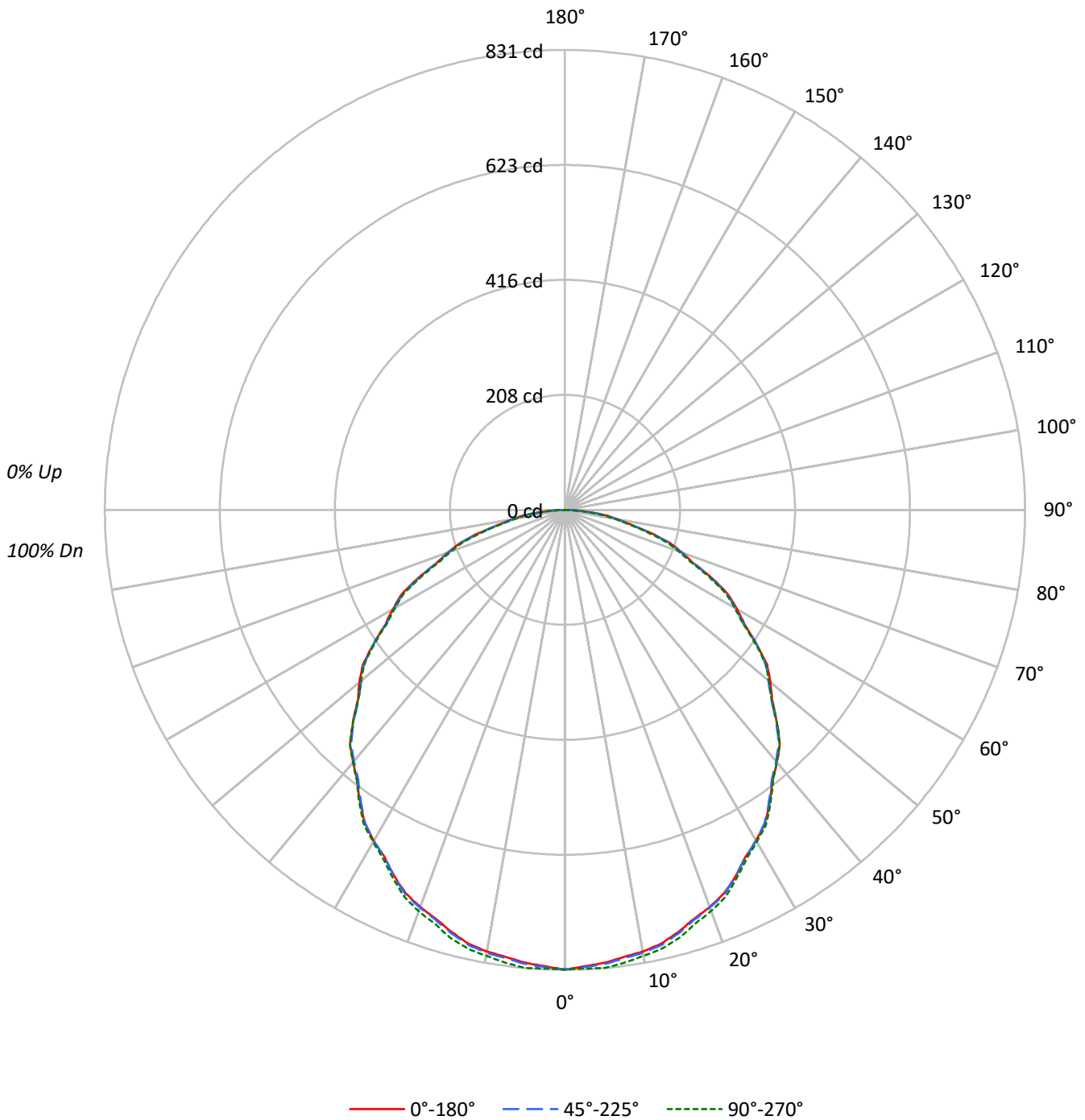
Lumens per Lamp: N/A
Luminaire Lumens: 2331.8 lumens
Efficiency: N/A
Efficacy: 131.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
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: 24 FT

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CATALOG NUMBER: SQ2-F-0U-050D-835-UNV-STD-W-4

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 | | | | |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 84 | | | | |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 | | | | |
| 3 | 90 | 79 | 71 | 65 | 88 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 59 | | | | |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 50 | | | | |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 43 | | | | |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 45 | 40 | 50 | 44 | 40 | 38 | | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 35 | 33 | | | | |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 | | | | |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13411 | 13411 | 13411 |
| 5° | 13316 | 13353 | 13462 |
| 10° | 13285 | 13321 | 13414 |
| 15° | 13203 | 13242 | 13374 |
| 20° | 13125 | 13144 | 13261 |
| 25° | 13003 | 13003 | 13083 |
| 30° | 12870 | 12870 | 12913 |
| 35° | 12713 | 12670 | 12759 |
| 40° | 12547 | 12499 | 12547 |
| 45° | 12351 | 12300 | 12351 |
| 50° | 12167 | 12052 | 12082 |
| 55° | 11882 | 11851 | 11786 |
| 60° | 11583 | 11512 | 11438 |
| 65° | 11240 | 11110 | 10980 |
| 70° | 10579 | 10523 | 10310 |
| 75° | 9956 | 9744 | 9457 |
| 80° | 8842 | 8629 | 8312 |
| 85° | 7132 | 6502 | 6076 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12426 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.5 | 3.4 |
| 10°-20° | 224.4 | 9.6 |
| 20°-30° | 337.5 | 14.5 |
| 30°-40° | 403.9 | 17.3 |
| 40°-50° | 416.7 | 17.9 |
| 50°-60° | 375.9 | 16.1 |
| 60°-70° | 286.9 | 12.3 |
| 70°-80° | 164.9 | 7.1 |
| 80°-90° | 43.0 | 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° | 640.4 | 27.5 |
| 0°-40° | 1044.3 | 44.8 |
| 0°-60° | 1836.9 | 78.8 |
| 0°-90° | 2331.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2331.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 831 | 831 | 831 | 831 | 831 | |
| 5° | 822 | 833 | 824 | 825 | 831 | 78 |
| 15° | 790 | 800 | 792 | 796 | 800 | 223 |
| 25° | 730 | 738 | 730 | 731 | 734 | 336 |
| 35° | 645 | 650 | 643 | 645 | 647 | 403 |
| 45° | 541 | 544 | 539 | 540 | 541 | 417 |
| 55° | 422 | 424 | 421 | 419 | 419 | 377 |
| 65° | 294 | 293 | 291 | 289 | 287 | 289 |
| 75° | 160 | 158 | 156 | 153 | 152 | 168 |
| 85° | 38 | 36 | 35 | 32 | 33 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 830.6 | 830.6 | 830.6 | 830.6 | 830.6 |
| 2.5° | 825.2 | 834.9 | 827.0 | 828.8 | 829.7 |
| 5° | 821.6 | 832.7 | 823.9 | 825.1 | 830.6 |
| 7.5° | 814.8 | 826.8 | 817.1 | 819.2 | 825.4 |
| 10° | 810.3 | 821.4 | 812.5 | 813.8 | 818.2 |
| 12.5° | 803.0 | 814.1 | 805.3 | 807.4 | 811.9 |
| 15° | 789.9 | 799.9 | 792.2 | 795.7 | 800.1 |
| 17.5° | 774.7 | 785.4 | 776.8 | 779.8 | 783.6 |
| 20° | 763.9 | 772.7 | 765.0 | 766.2 | 771.8 |
| 22.5° | 750.3 | 759.1 | 752.3 | 752.7 | 757.3 |
| 25° | 729.9 | 737.6 | 729.9 | 731.2 | 734.4 |
| 27.5° | 706.6 | 713.3 | 706.6 | 707.9 | 710.7 |
| 30° | 690.3 | 697.0 | 690.3 | 691.4 | 692.6 |
| 32.5° | 672.2 | 678.0 | 671.3 | 672.5 | 675.4 |
| 35° | 645.0 | 649.5 | 642.8 | 645.0 | 647.3 |
| 37.5° | 616.1 | 619.4 | 613.8 | 614.9 | 617.0 |
| 40° | 595.3 | 598.5 | 593.0 | 594.1 | 595.3 |
| 42.5° | 574.4 | 576.9 | 571.3 | 572.4 | 574.4 |
| 45° | 540.9 | 544.2 | 538.7 | 539.8 | 540.9 |
| 47.5° | 507.0 | 509.0 | 504.3 | 503.4 | 505.4 |
| 50° | 484.4 | 485.5 | 479.8 | 479.8 | 481.0 |
| 52.5° | 459.9 | 461.0 | 457.2 | 455.4 | 456.5 |
| 55° | 422.1 | 424.4 | 421.0 | 418.7 | 418.7 |
| 57.5° | 384.1 | 386.1 | 381.8 | 380.7 | 380.5 |
| 60° | 358.7 | 359.9 | 356.5 | 355.3 | 354.2 |
| 62.5° | 333.4 | 333.6 | 330.2 | 329.1 | 328.0 |
| 65° | 294.2 | 293.1 | 290.8 | 288.6 | 287.4 |
| 67.5° | 250.3 | 251.5 | 249.2 | 245.6 | 245.6 |
| 70° | 224.1 | 225.2 | 222.9 | 218.4 | 218.4 |
| 72.5° | 198.7 | 198.0 | 196.7 | 193.1 | 191.3 |
| 75° | 159.6 | 158.4 | 156.2 | 152.8 | 151.6 |
| 77.5° | 120.4 | 119.3 | 118.1 | 113.8 | 114.8 |
| 80° | 95.1 | 93.9 | 92.8 | 89.4 | 89.4 |
| 82.5° | 72.4 | 70.4 | 69.3 | 65.9 | 65.9 |
| 85° | 38.5 | 36.2 | 35.1 | 31.7 | 32.8 |
| 87.5° | 10.9 | 10.0 | 9.1 | 7.2 | 7.2 |
| 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 | 20.79 | 22.43 | 21.15 | 22.74 | 23.06 | 20.71 | 22.35 | 21.07 | 22.66 | 22.98 |
| | 3H | 22.62 | 24.10 | 22.99 | 24.43 | 24.79 | 22.50 | 23.98 | 22.87 | 24.31 | 24.67 |
| | 4H | 23.31 | 24.71 | 23.71 | 25.06 | 25.43 | 23.16 | 24.56 | 23.55 | 24.90 | 25.28 |
| | 6H | 23.82 | 25.11 | 24.23 | 25.48 | 25.87 | 23.63 | 24.93 | 24.04 | 25.29 | 25.68 |
| | 8H | 23.98 | 25.22 | 24.40 | 25.61 | 26.00 | 23.77 | 25.01 | 24.20 | 25.40 | 25.80 |
| | 12H | 24.08 | 25.26 | 24.51 | 25.65 | 26.07 | 23.85 | 25.04 | 24.28 | 25.42 | 25.85 |
| 4H | 2H | 21.42 | 22.82 | 21.82 | 23.17 | 23.54 | 21.36 | 22.76 | 21.76 | 23.11 | 23.48 |
| | 3H | 23.48 | 24.65 | 23.88 | 25.05 | 25.45 | 23.37 | 24.54 | 23.78 | 24.94 | 25.34 |
| | 4H | 24.30 | 25.36 | 24.73 | 25.77 | 26.21 | 24.15 | 25.22 | 24.58 | 25.63 | 26.06 |
| | 6H | 24.93 | 25.86 | 25.38 | 26.30 | 26.75 | 24.75 | 25.68 | 25.20 | 26.12 | 26.57 |
| | 8H | 25.14 | 26.00 | 25.59 | 26.45 | 26.91 | 24.93 | 25.80 | 25.39 | 26.24 | 26.71 |
| | 12H | 25.27 | 26.06 | 25.75 | 26.53 | 27.00 | 25.05 | 25.83 | 25.53 | 26.30 | 26.77 |
| 8H | 4H | 24.61 | 25.47 | 25.06 | 25.92 | 26.38 | 24.48 | 25.35 | 24.94 | 25.79 | 26.25 |
| | 6H | 25.36 | 26.08 | 25.85 | 26.57 | 27.04 | 25.19 | 25.91 | 25.68 | 26.40 | 26.87 |
| | 8H | 25.63 | 26.28 | 26.14 | 26.79 | 27.27 | 25.44 | 26.09 | 25.95 | 26.59 | 27.08 |
| | 12H | 25.84 | 26.41 | 26.34 | 26.90 | 27.46 | 25.61 | 26.18 | 26.11 | 26.67 | 27.23 |
| 12H | 4H | 24.64 | 25.42 | 25.12 | 25.89 | 26.36 | 24.51 | 25.30 | 24.99 | 25.77 | 26.24 |
| | 6H | 25.41 | 26.06 | 25.91 | 26.56 | 27.05 | 25.25 | 25.90 | 25.76 | 26.40 | 26.89 |
| | 8H | 25.74 | 26.31 | 26.24 | 26.80 | 27.36 | 25.55 | 26.12 | 26.06 | 26.61 | 27.17 |