

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: P853608

Luminaire Tested: SQ2-BBN-0U-050D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853608
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-130-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBN-0U-050D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

Summary

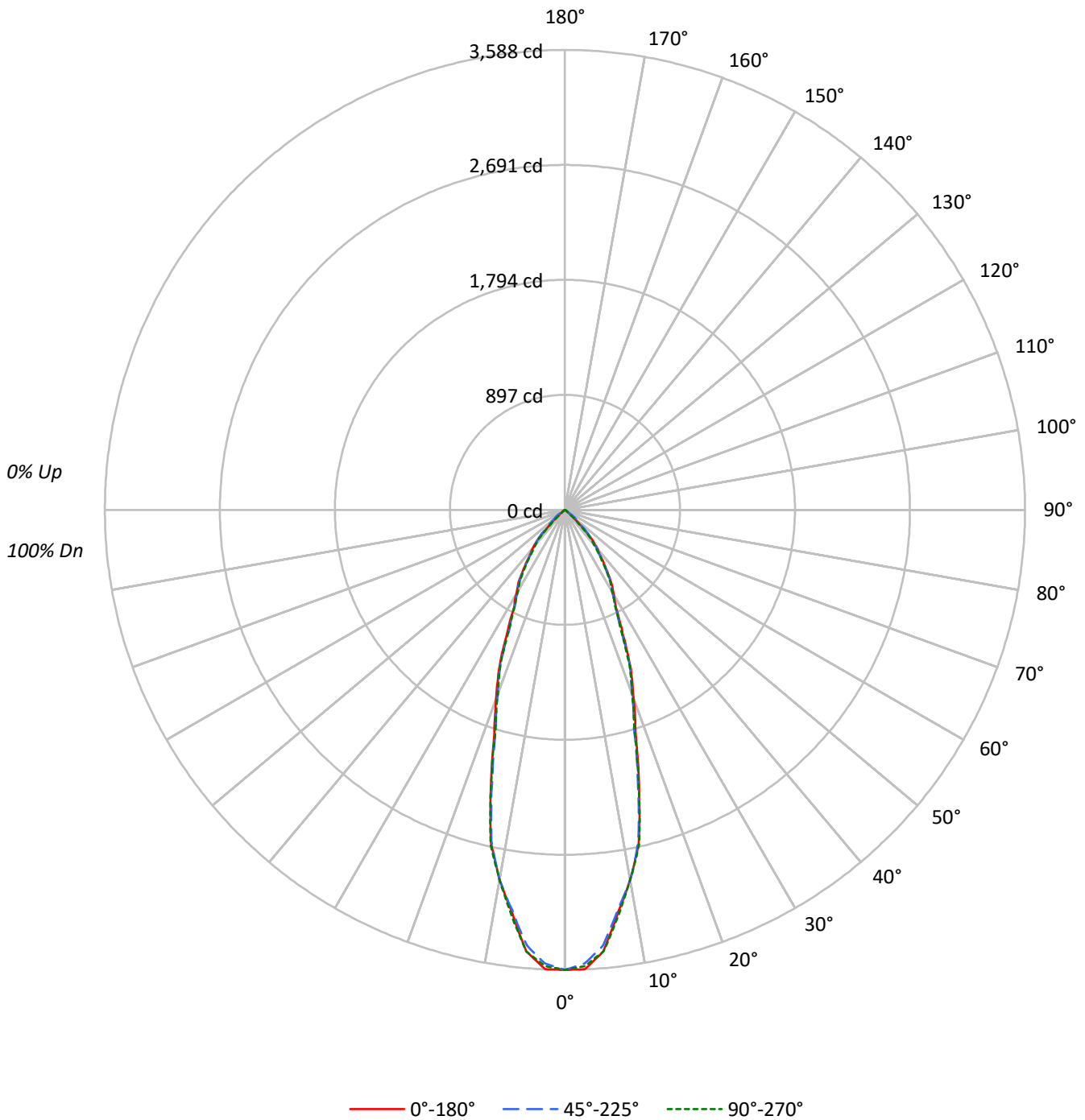
Lumens per Lamp: N/A
Luminaire Lumens: 1939.7 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 18.1
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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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 |
| 2 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 93 | 91 | 90 | 88 |
| 3 | 103 | 97 | 93 | 89 | 101 | 96 | 92 | 88 | 93 | 90 | 87 | 91 | 88 | 85 | 89 | 86 | 84 | 82 |
| 4 | 98 | 91 | 86 | 82 | 97 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 84 | 81 | 79 | 77 |
| 5 | 94 | 86 | 80 | 76 | 92 | 85 | 80 | 76 | 83 | 79 | 75 | 82 | 78 | 75 | 80 | 77 | 74 | 73 |
| 6 | 90 | 81 | 75 | 71 | 88 | 80 | 75 | 71 | 79 | 74 | 71 | 77 | 73 | 70 | 76 | 73 | 70 | 68 |
| 7 | 85 | 77 | 71 | 67 | 84 | 76 | 71 | 67 | 75 | 70 | 66 | 74 | 69 | 66 | 72 | 69 | 66 | 64 |
| 8 | 82 | 73 | 67 | 63 | 80 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 69 | 65 | 62 | 61 |
| 9 | 78 | 69 | 63 | 60 | 77 | 69 | 63 | 60 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 58 |
| 10 | 75 | 66 | 60 | 57 | 74 | 65 | 60 | 57 | 64 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 55 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 57939 | 57939 | 57939 |
| 5° | 56002 | 55310 | 56033 |
| 10° | 48062 | 48093 | 48062 |
| 15° | 37304 | 36710 | 37219 |
| 20° | 26923 | 26368 | 26345 |
| 25° | 19091 | 18330 | 18364 |
| 30° | 14203 | 13841 | 13709 |
| 35° | 11052 | 10772 | 10541 |
| 40° | 8178 | 7973 | 7470 |
| 45° | 4179 | 5124 | 3366 |
| 50° | 909 | 2826 | 666 |
| 55° | 256 | 1146 | 200 |
| 60° | 42 | 229 | 19 |
| 65° | 0 | 23 | 0 |
| 70° | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5124 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 310.3 | 16.0 |
| 10°-20° | 611.8 | 31.5 |
| 20°-30° | 493.5 | 25.4 |
| 30°-40° | 342.8 | 17.7 |
| 40°-50° | 158.4 | 8.2 |
| 50°-60° | 22.2 | 1.1 |
| 60°-70° | 0.8 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 1415.6 | 73.0 |
| 0°-40° | 1758.4 | 90.7 |
| 0°-60° | 1939.0 | 100.0 |
| 0°-90° | 1939.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1939.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3588 | 3588 | 3588 | 3588 | 3588 | |
| 5° | 3455 | 3437 | 3413 | 3455 | 3457 | 311 |
| 15° | 2232 | 2260 | 2196 | 2227 | 2227 | 614 |
| 25° | 1072 | 1048 | 1029 | 1044 | 1031 | 502 |
| 35° | 561 | 561 | 546 | 537 | 535 | 351 |
| 45° | 183 | 218 | 224 | 204 | 147 | 148 |
| 55° | 9 | 14 | 41 | 12 | 7 | 11 |
| 65° | 0 | 0 | 1 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3588.5 | 3588.5 | 3588.5 | 3588.5 | 3588.5 |
| 2.5° | 3586.4 | 3573.3 | 3541.9 | 3570.2 | 3561.6 |
| 5° | 3455.3 | 3436.9 | 3412.6 | 3454.7 | 3457.2 |
| 7.5° | 3165.8 | 3171.8 | 3149.1 | 3195.6 | 3190.6 |
| 10° | 2931.5 | 2935.9 | 2933.4 | 2948.5 | 2931.5 |
| 12.5° | 2659.8 | 2677.4 | 2644.2 | 2667.6 | 2674.8 |
| 15° | 2231.7 | 2260.2 | 2196.2 | 2227.2 | 2226.6 |
| 17.5° | 1830.3 | 1827.4 | 1794.3 | 1800.1 | 1798.2 |
| 20° | 1566.9 | 1562.5 | 1534.6 | 1530.1 | 1533.3 |
| 22.5° | 1341.4 | 1333.9 | 1324.0 | 1312.9 | 1317.1 |
| 25° | 1071.6 | 1047.5 | 1028.9 | 1044.1 | 1030.8 |
| 27.5° | 860.1 | 859.7 | 844.3 | 846.1 | 848.6 |
| 30° | 761.8 | 757.4 | 742.4 | 742.9 | 735.3 |
| 32.5° | 674.4 | 677.5 | 659.1 | 655.4 | 647.9 |
| 35° | 560.7 | 560.7 | 546.5 | 536.7 | 534.8 |
| 37.5° | 455.3 | 454.1 | 444.0 | 430.2 | 425.3 |
| 40° | 388.0 | 384.9 | 378.3 | 361.3 | 354.4 |
| 42.5° | 311.4 | 319.9 | 313.6 | 296.6 | 286.1 |
| 45° | 183.0 | 218.4 | 224.4 | 203.7 | 147.4 |
| 47.5° | 78.6 | 117.6 | 149.8 | 97.6 | 50.8 |
| 50° | 36.2 | 66.6 | 112.5 | 48.0 | 26.5 |
| 52.5° | 21.2 | 36.4 | 83.6 | 28.1 | 16.7 |
| 55° | 9.1 | 14.1 | 40.7 | 11.5 | 7.1 |
| 57.5° | 3.4 | 6.1 | 15.4 | 5.0 | 2.7 |
| 60° | 1.3 | 2.6 | 7.1 | 1.9 | 0.6 |
| 62.5° | 0.3 | 1.0 | 3.5 | 0.9 | 0.1 |
| 65° | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |