

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: P845659

Luminaire Tested: SQ2R-PW1-125D-935-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845659
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-8)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-PW1-125D-935-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
1250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

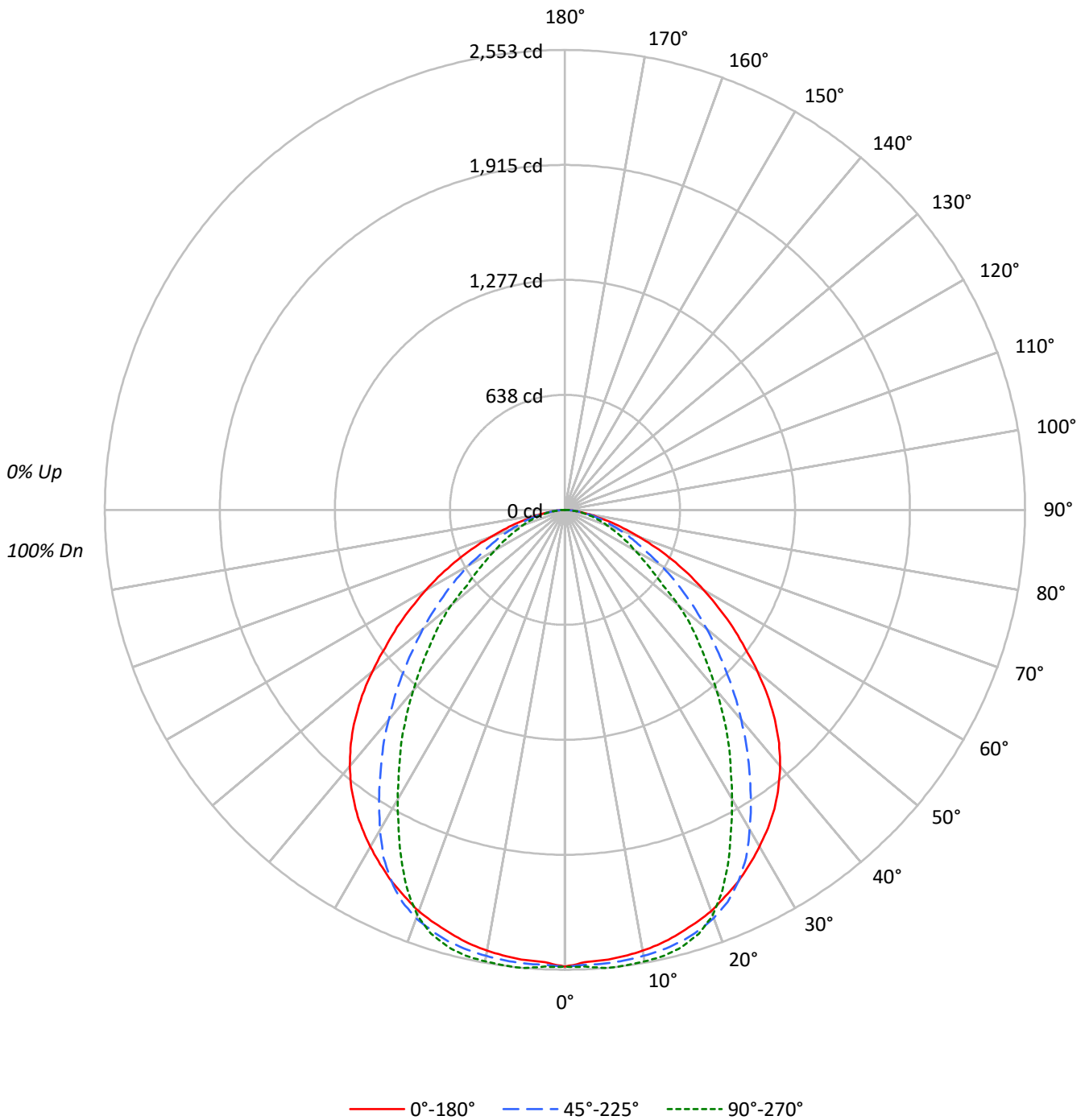
Lumens per Lamp: N/A
Luminaire Lumens: 5625.2 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 49.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9979
Total Harmonic Distortion (THDi): 0.0523
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
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 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | 87 | | | | 87 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 83 | 79 | 76 | 74 | | | | 74 |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 | | | | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 | | | | 56 |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 | | | | 49 |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 44 | | | | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 | | | | 39 |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 36 | | | | 36 |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | 32 |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 | | | | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 40943 | 40943 | 40943 |
| 5° | 40670 | 40982 | 41373 |
| 10° | 40743 | 41218 | 41733 |
| 15° | 40732 | 41499 | 41984 |
| 20° | 40749 | 41453 | 41163 |
| 25° | 40529 | 40572 | 38249 |
| 30° | 40253 | 38227 | 34580 |
| 35° | 39937 | 35177 | 31227 |
| 40° | 39144 | 32068 | 27590 |
| 45° | 37609 | 28841 | 24099 |
| 50° | 35003 | 25782 | 20625 |
| 55° | 32020 | 22773 | 16724 |
| 60° | 28698 | 19808 | 14428 |
| 65° | 25096 | 17070 | 12825 |
| 70° | 20521 | 15163 | 11627 |
| 75° | 15970 | 13107 | 10699 |
| 80° | 11901 | 11232 | 9428 |
| 85° | 8058 | 8503 | 5372 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 37609 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 241.5 | 4.3 |
| 10°-20° | 700.3 | 12.4 |
| 20°-30° | 1031.2 | 18.3 |
| 30°-40° | 1126.6 | 20.0 |
| 40°-50° | 1009.8 | 18.0 |
| 50°-60° | 752.0 | 13.4 |
| 60°-70° | 475.0 | 8.4 |
| 70°-80° | 235.1 | 4.2 |
| 80°-90° | 53.6 | 1.0 |
| 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° | 1973.0 | 35.1 |
| 0°-40° | 3099.6 | 55.1 |
| 0°-60° | 4861.4 | 86.4 |
| 0°-90° | 5625.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5625.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2536 | 2536 | 2536 | 2536 | 2536 | |
| 5° | 2509 | 2550 | 2529 | 2531 | 2553 | 239 |
| 15° | 2437 | 2485 | 2483 | 2500 | 2512 | 688 |
| 25° | 2275 | 2326 | 2277 | 2183 | 2147 | 1048 |
| 35° | 2026 | 2004 | 1785 | 1630 | 1584 | 1265 |
| 45° | 1647 | 1512 | 1263 | 1106 | 1055 | 1265 |
| 55° | 1138 | 1026 | 809 | 635 | 594 | 1015 |
| 65° | 657 | 601 | 447 | 360 | 336 | 651 |
| 75° | 256 | 275 | 210 | 176 | 172 | 280 |
| 85° | 44 | 56 | 46 | 31 | 29 | 55 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P845659

CATALOG NUMBER: SQ2R-PW1-125D-935-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2535.8 | 2535.8 | 2535.8 | 2535.8 | 2535.8 |
| 2.5° | 2514.1 | 2555.1 | 2528.6 | 2531.0 | 2538.2 |
| 5° | 2509.3 | 2550.3 | 2528.6 | 2531.0 | 2552.7 |
| 7.5° | 2499.6 | 2540.6 | 2523.7 | 2531.0 | 2552.7 |
| 10° | 2485.1 | 2528.6 | 2514.1 | 2526.2 | 2545.5 |
| 12.5° | 2465.8 | 2511.7 | 2502.0 | 2516.5 | 2535.8 |
| 15° | 2436.8 | 2485.1 | 2482.7 | 2499.6 | 2511.7 |
| 17.5° | 2405.4 | 2453.7 | 2451.3 | 2460.9 | 2468.2 |
| 20° | 2371.6 | 2419.9 | 2412.6 | 2395.7 | 2395.7 |
| 22.5° | 2323.3 | 2376.4 | 2357.1 | 2304.0 | 2284.7 |
| 25° | 2275.0 | 2325.7 | 2277.4 | 2183.2 | 2147.0 |
| 27.5° | 2219.4 | 2262.9 | 2178.4 | 2048.0 | 1997.3 |
| 30° | 2159.1 | 2190.5 | 2050.4 | 1903.1 | 1854.8 |
| 32.5° | 2096.3 | 2103.5 | 1920.0 | 1765.4 | 1712.3 |
| 35° | 2026.2 | 2004.5 | 1784.7 | 1630.2 | 1584.3 |
| 37.5° | 1946.5 | 1888.6 | 1656.7 | 1494.9 | 1444.2 |
| 40° | 1857.2 | 1765.4 | 1521.5 | 1359.7 | 1309.0 |
| 42.5° | 1758.2 | 1637.4 | 1393.5 | 1231.7 | 1178.6 |
| 45° | 1647.1 | 1511.8 | 1263.1 | 1106.1 | 1055.4 |
| 47.5° | 1526.3 | 1391.1 | 1139.9 | 987.8 | 946.7 |
| 50° | 1393.5 | 1263.1 | 1026.4 | 874.3 | 821.1 |
| 52.5° | 1258.2 | 1144.7 | 915.3 | 758.3 | 681.0 |
| 55° | 1137.5 | 1026.4 | 809.0 | 635.2 | 594.1 |
| 57.5° | 1009.5 | 910.5 | 712.4 | 548.2 | 514.4 |
| 60° | 888.7 | 804.2 | 613.4 | 480.6 | 446.8 |
| 62.5° | 772.8 | 700.4 | 516.8 | 417.8 | 391.2 |
| 65° | 656.9 | 601.4 | 446.8 | 359.8 | 335.7 |
| 67.5° | 543.4 | 507.2 | 384.0 | 304.3 | 287.4 |
| 70° | 434.7 | 425.1 | 321.2 | 258.4 | 246.3 |
| 72.5° | 340.5 | 347.8 | 260.8 | 214.9 | 207.7 |
| 75° | 256.0 | 275.3 | 210.1 | 176.3 | 171.5 |
| 77.5° | 186.0 | 214.9 | 164.2 | 137.7 | 132.8 |
| 80° | 128.0 | 157.0 | 120.8 | 101.4 | 101.4 |
| 82.5° | 79.7 | 101.4 | 77.3 | 70.0 | 70.0 |
| 85° | 43.5 | 55.5 | 45.9 | 31.4 | 29.0 |
| 87.5° | 14.5 | 21.7 | 9.7 | 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 | 23.86 | 25.36 | 24.22 | 25.67 | 25.99 | 20.36 | 21.87 | 20.73 | 22.18 | 22.49 |
| | 3H | 25.23 | 26.58 | 25.61 | 26.90 | 27.27 | 21.61 | 22.96 | 21.99 | 23.29 | 23.65 |
| | 4H | 25.63 | 26.89 | 26.03 | 27.24 | 27.62 | 22.09 | 23.35 | 22.49 | 23.70 | 24.08 |
| | 6H | 25.87 | 27.03 | 26.28 | 27.40 | 27.79 | 22.44 | 23.60 | 22.85 | 23.97 | 24.36 |
| | 8H | 25.92 | 27.03 | 26.35 | 27.42 | 27.82 | 22.53 | 23.63 | 22.95 | 24.02 | 24.43 |
| | 12H | 25.93 | 26.99 | 26.37 | 27.38 | 27.81 | 22.56 | 23.62 | 22.99 | 24.00 | 24.43 |
| 4H | 2H | 24.04 | 25.30 | 24.44 | 25.65 | 26.03 | 21.12 | 22.38 | 21.52 | 22.73 | 23.11 |
| | 3H | 25.64 | 26.68 | 26.05 | 27.08 | 27.49 | 22.56 | 23.60 | 22.97 | 24.00 | 24.41 |
| | 4H | 26.17 | 27.11 | 26.61 | 27.53 | 27.97 | 23.13 | 24.07 | 23.56 | 24.48 | 24.92 |
| | 6H | 26.54 | 27.36 | 27.00 | 27.80 | 28.26 | 23.57 | 24.38 | 24.02 | 24.82 | 25.28 |
| | 8H | 26.63 | 27.39 | 27.10 | 27.84 | 28.30 | 23.68 | 24.44 | 24.15 | 24.89 | 25.36 |
| | 12H | 26.68 | 27.35 | 27.16 | 27.83 | 28.30 | 23.73 | 24.41 | 24.22 | 24.89 | 25.36 |
| 8H | 4H | 26.26 | 27.02 | 26.72 | 27.46 | 27.93 | 23.50 | 24.26 | 23.97 | 24.71 | 25.17 |
| | 6H | 26.72 | 27.35 | 27.22 | 27.84 | 28.32 | 24.03 | 24.65 | 24.52 | 25.15 | 25.62 |
| | 8H | 26.87 | 27.43 | 27.38 | 27.94 | 28.43 | 24.19 | 24.76 | 24.71 | 25.27 | 25.75 |
| | 12H | 26.96 | 27.46 | 27.47 | 27.95 | 28.52 | 24.28 | 24.78 | 24.79 | 25.27 | 25.84 |
| 12H | 4H | 26.25 | 26.92 | 26.73 | 27.40 | 27.87 | 23.55 | 24.22 | 24.03 | 24.70 | 25.17 |
| | 6H | 26.71 | 27.27 | 27.22 | 27.78 | 28.27 | 24.09 | 24.66 | 24.61 | 25.17 | 25.66 |
| | 8H | 26.90 | 27.40 | 27.41 | 27.89 | 28.46 | 24.31 | 24.80 | 24.82 | 25.30 | 25.86 |