

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: P845656

Luminaire Tested: SQ2R-PW1-125D-835-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845656
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-835-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
1250 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

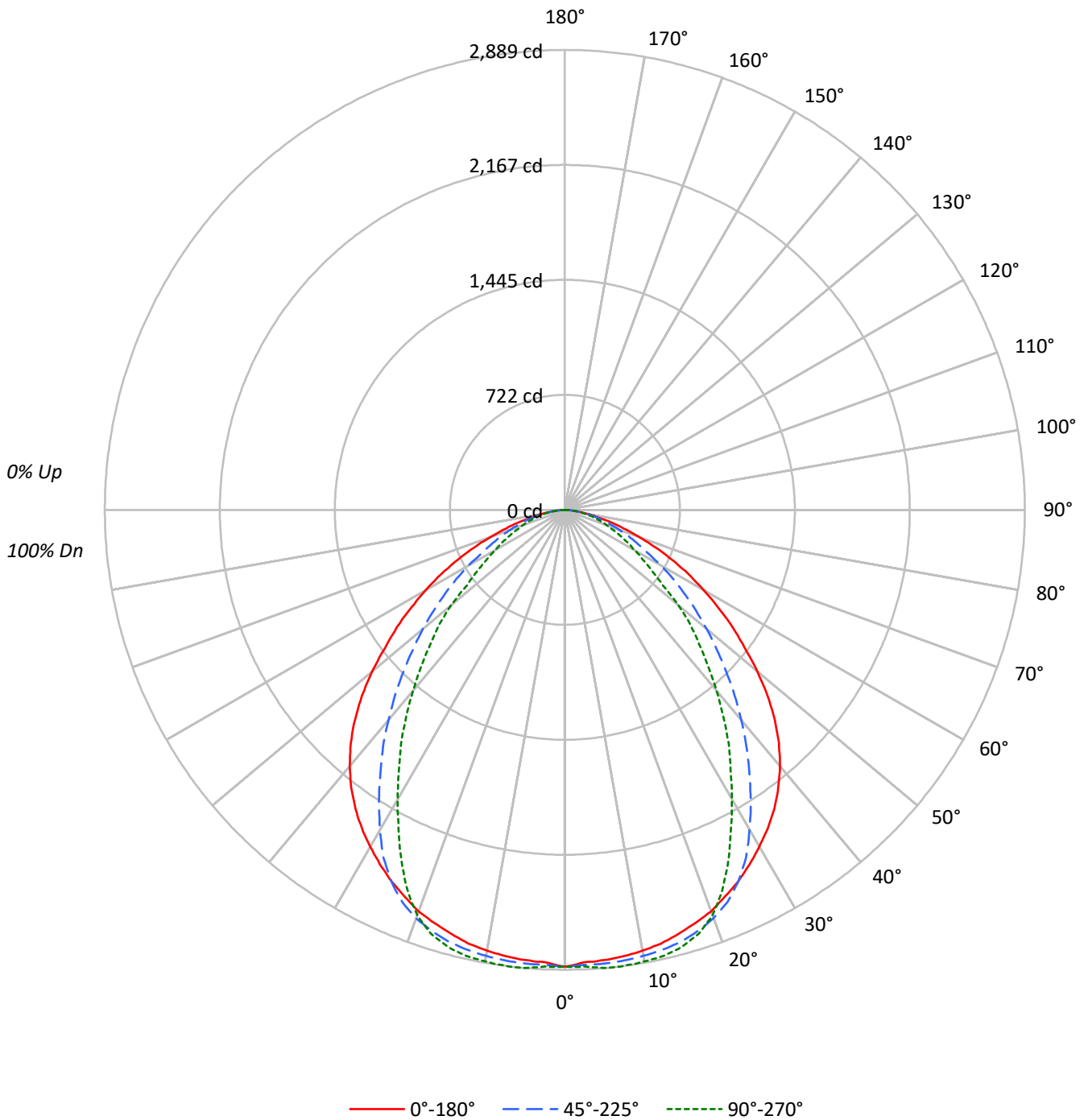
Lumens per Lamp: N/A
Luminaire Lumens: 6365.9 lumens
Efficiency: N/A
Efficacy: 129.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: SQ2R-PW1-125D-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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | 87 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 83 | 79 | 76 | 74 |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 35 |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 46334 | 46334 | 46334 |
| 5° | 46023 | 46378 | 46820 |
| 10° | 46107 | 46645 | 47227 |
| 15° | 46094 | 46964 | 47512 |
| 20° | 46113 | 46912 | 46584 |
| 25° | 45865 | 45915 | 43285 |
| 30° | 45552 | 43261 | 39133 |
| 35° | 45196 | 39809 | 35339 |
| 40° | 44297 | 36290 | 31221 |
| 45° | 42560 | 32638 | 27270 |
| 50° | 39612 | 29175 | 23340 |
| 55° | 36237 | 25774 | 18925 |
| 60° | 32479 | 22417 | 16327 |
| 65° | 28401 | 19316 | 14514 |
| 70° | 23221 | 17160 | 13161 |
| 75° | 18072 | 14835 | 12102 |
| 80° | 13473 | 12710 | 10674 |
| 85° | 9114 | 9615 | 6076 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 42560 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 273.3 | 4.3 |
| 10°-20° | 792.5 | 12.4 |
| 20°-30° | 1167.0 | 18.3 |
| 30°-40° | 1274.9 | 20.0 |
| 40°-50° | 1142.7 | 18.0 |
| 50°-60° | 851.0 | 13.4 |
| 60°-70° | 537.6 | 8.4 |
| 70°-80° | 266.1 | 4.2 |
| 80°-90° | 60.7 | 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° | 2232.8 | 35.1 |
| 0°-40° | 3507.8 | 55.1 |
| 0°-60° | 5501.5 | 86.4 |
| 0°-90° | 6365.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6365.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2870 | 2870 | 2870 | 2870 | 2870 | |
| 5° | 2840 | 2886 | 2862 | 2864 | 2889 | 270 |
| 15° | 2758 | 2812 | 2810 | 2829 | 2842 | 779 |
| 25° | 2574 | 2632 | 2577 | 2471 | 2430 | 1186 |
| 35° | 2293 | 2268 | 2020 | 1845 | 1793 | 1431 |
| 45° | 1864 | 1711 | 1429 | 1252 | 1194 | 1431 |
| 55° | 1287 | 1162 | 916 | 719 | 672 | 1149 |
| 65° | 743 | 680 | 506 | 407 | 380 | 737 |
| 75° | 290 | 312 | 238 | 200 | 194 | 317 |
| 85° | 49 | 63 | 52 | 36 | 33 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P845656

CATALOG NUMBER: SQ2R-PW1-125D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2869.7 | 2869.7 | 2869.7 | 2869.7 | 2869.7 |
| 2.5° | 2845.1 | 2891.6 | 2861.5 | 2864.2 | 2872.4 |
| 5° | 2839.6 | 2886.1 | 2861.5 | 2864.2 | 2888.8 |
| 7.5° | 2828.7 | 2875.2 | 2856.0 | 2864.2 | 2888.8 |
| 10° | 2812.3 | 2861.5 | 2845.1 | 2858.8 | 2880.6 |
| 12.5° | 2790.4 | 2842.4 | 2831.4 | 2847.8 | 2869.7 |
| 15° | 2757.6 | 2812.3 | 2809.6 | 2828.7 | 2842.4 |
| 17.5° | 2722.1 | 2776.8 | 2774.0 | 2785.0 | 2793.2 |
| 20° | 2683.8 | 2738.5 | 2730.3 | 2711.2 | 2711.2 |
| 22.5° | 2629.2 | 2689.3 | 2667.4 | 2607.3 | 2585.5 |
| 25° | 2574.5 | 2631.9 | 2577.3 | 2470.7 | 2429.7 |
| 27.5° | 2511.7 | 2560.9 | 2465.2 | 2317.6 | 2260.2 |
| 30° | 2443.3 | 2478.9 | 2320.4 | 2153.6 | 2099.0 |
| 32.5° | 2372.3 | 2380.5 | 2172.8 | 1997.9 | 1937.7 |
| 35° | 2293.0 | 2268.4 | 2019.7 | 1844.8 | 1792.9 |
| 37.5° | 2202.8 | 2137.2 | 1874.9 | 1691.8 | 1634.4 |
| 40° | 2101.7 | 1997.9 | 1721.8 | 1538.7 | 1481.3 |
| 42.5° | 1989.7 | 1853.0 | 1577.0 | 1393.9 | 1333.7 |
| 45° | 1863.9 | 1710.9 | 1429.4 | 1251.7 | 1194.3 |
| 47.5° | 1727.3 | 1574.2 | 1290.0 | 1117.8 | 1071.4 |
| 50° | 1577.0 | 1429.4 | 1161.5 | 989.4 | 929.2 |
| 52.5° | 1423.9 | 1295.5 | 1035.8 | 858.2 | 770.7 |
| 55° | 1287.3 | 1161.5 | 915.6 | 718.8 | 672.3 |
| 57.5° | 1142.4 | 1030.4 | 806.2 | 620.4 | 582.1 |
| 60° | 1005.8 | 910.1 | 694.2 | 543.9 | 505.6 |
| 62.5° | 874.6 | 792.6 | 584.9 | 472.8 | 442.8 |
| 65° | 743.4 | 680.5 | 505.6 | 407.2 | 379.9 |
| 67.5° | 614.9 | 573.9 | 434.6 | 344.4 | 325.2 |
| 70° | 491.9 | 481.0 | 363.5 | 292.4 | 278.8 |
| 72.5° | 385.4 | 393.6 | 295.2 | 243.2 | 235.0 |
| 75° | 289.7 | 311.6 | 237.8 | 199.5 | 194.0 |
| 77.5° | 210.4 | 243.2 | 185.8 | 155.8 | 150.3 |
| 80° | 144.9 | 177.6 | 136.7 | 114.8 | 114.8 |
| 82.5° | 90.2 | 114.8 | 87.5 | 79.3 | 79.3 |
| 85° | 49.2 | 62.9 | 51.9 | 35.5 | 32.8 |
| 87.5° | 16.4 | 24.6 | 10.9 | 8.2 | 8.2 |
| 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 | 24.29 | 25.79 | 24.65 | 26.10 | 26.42 | 20.79 | 22.30 | 21.16 | 22.61 | 22.92 |
| | 3H | 25.66 | 27.00 | 26.04 | 27.33 | 27.69 | 22.04 | 23.39 | 22.42 | 23.72 | 24.08 |
| | 4H | 26.06 | 27.32 | 26.46 | 27.67 | 28.05 | 22.52 | 23.78 | 22.92 | 24.13 | 24.51 |
| | 6H | 26.30 | 27.46 | 26.71 | 27.83 | 28.22 | 22.86 | 24.03 | 23.28 | 24.40 | 24.79 |
| | 8H | 26.35 | 27.46 | 26.78 | 27.85 | 28.25 | 22.96 | 24.06 | 23.38 | 24.45 | 24.86 |
| | 12H | 26.36 | 27.42 | 26.80 | 27.81 | 28.24 | 22.99 | 24.05 | 23.42 | 24.43 | 24.86 |
| 4H | 2H | 24.47 | 25.73 | 24.87 | 26.08 | 26.46 | 21.55 | 22.81 | 21.95 | 23.16 | 23.54 |
| | 3H | 26.07 | 27.11 | 26.48 | 27.51 | 27.92 | 22.99 | 24.03 | 23.40 | 24.43 | 24.84 |
| | 4H | 26.60 | 27.54 | 27.04 | 27.96 | 28.40 | 23.56 | 24.50 | 23.99 | 24.91 | 25.35 |
| | 6H | 26.97 | 27.78 | 27.43 | 28.23 | 28.69 | 24.00 | 24.81 | 24.45 | 25.25 | 25.71 |
| | 8H | 27.06 | 27.82 | 27.53 | 28.27 | 28.73 | 24.11 | 24.87 | 24.58 | 25.32 | 25.79 |
| | 12H | 27.11 | 27.78 | 27.59 | 28.26 | 28.73 | 24.16 | 24.84 | 24.65 | 25.32 | 25.79 |
| 8H | 4H | 26.69 | 27.45 | 27.15 | 27.89 | 28.36 | 23.93 | 24.69 | 24.39 | 25.14 | 25.60 |
| | 6H | 27.15 | 27.78 | 27.65 | 28.27 | 28.75 | 24.46 | 25.08 | 24.95 | 25.58 | 26.05 |
| | 8H | 27.30 | 27.86 | 27.81 | 28.37 | 28.86 | 24.62 | 25.19 | 25.14 | 25.70 | 26.18 |
| | 12H | 27.39 | 27.89 | 27.90 | 28.38 | 28.95 | 24.71 | 25.21 | 25.22 | 25.70 | 26.27 |
| 12H | 4H | 26.67 | 27.35 | 27.16 | 27.83 | 28.30 | 23.97 | 24.65 | 24.46 | 25.13 | 25.60 |
| | 6H | 27.14 | 27.70 | 27.65 | 28.21 | 28.70 | 24.52 | 25.09 | 25.04 | 25.60 | 26.09 |
| | 8H | 27.33 | 27.83 | 27.84 | 28.32 | 28.89 | 24.74 | 25.23 | 25.25 | 25.73 | 26.29 |