

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: P845654

Luminaire Tested: SQ2R-PW1-100D-940-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845654
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-PW1-100D-940-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
1000 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

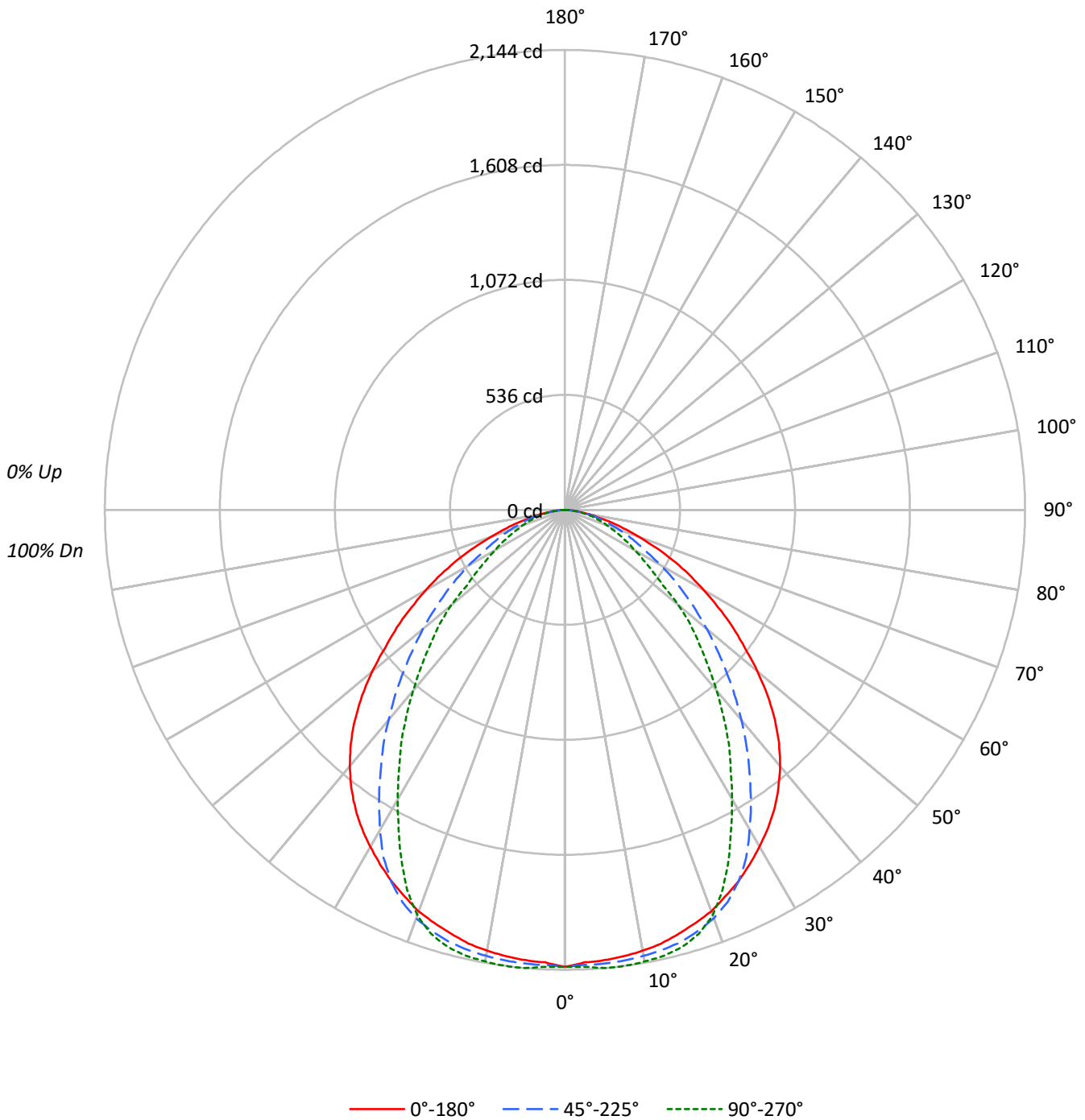
Lumens per Lamp: N/A
Luminaire Lumens: 4724.8 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9969
Total Harmonic Distortion (THDi): 0.066
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





TEST NUMBER: P845654

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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° | 34389 | 34389 | 34389 |
| 5° | 34159 | 34422 | 34751 |
| 10° | 34221 | 34621 | 35052 |
| 15° | 34213 | 34857 | 35263 |
| 20° | 34227 | 34819 | 34575 |
| 25° | 34041 | 34078 | 32126 |
| 30° | 33810 | 32108 | 29045 |
| 35° | 33545 | 29548 | 26229 |
| 40° | 32878 | 26936 | 23172 |
| 45° | 31588 | 24224 | 20242 |
| 50° | 29399 | 21655 | 17324 |
| 55° | 26894 | 19128 | 14047 |
| 60° | 24106 | 16637 | 12119 |
| 65° | 21081 | 14338 | 10774 |
| 70° | 17235 | 12737 | 9767 |
| 75° | 13412 | 11011 | 8983 |
| 80° | 9995 | 9428 | 7922 |
| 85° | 6762 | 7132 | 4502 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 31588 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 202.9 | 4.3 |
| 10°-20° | 588.2 | 12.4 |
| 20°-30° | 866.1 | 18.3 |
| 30°-40° | 946.3 | 20.0 |
| 40°-50° | 848.1 | 18.0 |
| 50°-60° | 631.6 | 13.4 |
| 60°-70° | 399.0 | 8.4 |
| 70°-80° | 197.5 | 4.2 |
| 80°-90° | 45.1 | 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° | 1657.2 | 35.1 |
| 0°-40° | 2603.5 | 55.1 |
| 0°-60° | 4083.3 | 86.4 |
| 0°-90° | 4724.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4724.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2130 | 2130 | 2130 | 2130 | 2130 | |
| 5° | 2108 | 2142 | 2124 | 2126 | 2144 | 201 |
| 15° | 2047 | 2087 | 2085 | 2100 | 2110 | 578 |
| 25° | 1911 | 1953 | 1913 | 1834 | 1803 | 880 |
| 35° | 1702 | 1684 | 1499 | 1369 | 1331 | 1062 |
| 45° | 1383 | 1270 | 1061 | 929 | 886 | 1062 |
| 55° | 955 | 862 | 680 | 534 | 499 | 853 |
| 65° | 552 | 505 | 375 | 302 | 282 | 547 |
| 75° | 215 | 231 | 176 | 148 | 144 | 235 |
| 85° | 36 | 47 | 38 | 26 | 24 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P845654

CATALOG NUMBER: SQ2R-PW1-100D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2129.9 | 2129.9 | 2129.9 | 2129.9 | 2129.9 |
| 2.5° | 2111.7 | 2146.2 | 2123.8 | 2125.9 | 2132.0 |
| 5° | 2107.6 | 2142.1 | 2123.8 | 2125.9 | 2144.1 |
| 7.5° | 2099.5 | 2134.0 | 2119.8 | 2125.9 | 2144.1 |
| 10° | 2087.3 | 2123.8 | 2111.7 | 2121.8 | 2138.0 |
| 12.5° | 2071.1 | 2109.6 | 2101.5 | 2113.7 | 2129.9 |
| 15° | 2046.8 | 2087.3 | 2085.3 | 2099.5 | 2109.6 |
| 17.5° | 2020.4 | 2061.0 | 2058.9 | 2067.0 | 2073.1 |
| 20° | 1992.0 | 2032.6 | 2026.5 | 2012.3 | 2012.3 |
| 22.5° | 1951.4 | 1996.0 | 1979.8 | 1935.2 | 1919.0 |
| 25° | 1910.8 | 1953.4 | 1912.9 | 1833.8 | 1803.3 |
| 27.5° | 1864.2 | 1900.7 | 1829.7 | 1720.2 | 1677.6 |
| 30° | 1813.5 | 1839.8 | 1722.2 | 1598.5 | 1557.9 |
| 32.5° | 1760.7 | 1766.8 | 1612.7 | 1482.8 | 1438.2 |
| 35° | 1701.9 | 1683.7 | 1499.1 | 1369.2 | 1330.7 |
| 37.5° | 1635.0 | 1586.3 | 1391.6 | 1255.6 | 1213.0 |
| 40° | 1559.9 | 1482.8 | 1278.0 | 1142.0 | 1099.4 |
| 42.5° | 1476.7 | 1375.3 | 1170.4 | 1034.5 | 989.9 |
| 45° | 1383.4 | 1269.8 | 1060.9 | 929.1 | 886.5 |
| 47.5° | 1282.0 | 1168.4 | 957.5 | 829.7 | 795.2 |
| 50° | 1170.4 | 1060.9 | 862.1 | 734.3 | 689.7 |
| 52.5° | 1056.8 | 961.5 | 768.8 | 636.9 | 572.0 |
| 55° | 955.4 | 862.1 | 679.5 | 533.5 | 499.0 |
| 57.5° | 847.9 | 764.7 | 598.4 | 460.5 | 432.1 |
| 60° | 746.5 | 675.5 | 515.2 | 403.7 | 375.3 |
| 62.5° | 649.1 | 588.3 | 434.1 | 350.9 | 328.6 |
| 65° | 551.8 | 505.1 | 375.3 | 302.2 | 282.0 |
| 67.5° | 456.4 | 426.0 | 322.5 | 255.6 | 241.4 |
| 70° | 365.1 | 357.0 | 269.8 | 217.0 | 206.9 |
| 72.5° | 286.0 | 292.1 | 219.1 | 180.5 | 174.5 |
| 75° | 215.0 | 231.2 | 176.5 | 148.1 | 144.0 |
| 77.5° | 156.2 | 180.5 | 137.9 | 115.6 | 111.6 |
| 80° | 107.5 | 131.9 | 101.4 | 85.2 | 85.2 |
| 82.5° | 66.9 | 85.2 | 64.9 | 58.8 | 58.8 |
| 85° | 36.5 | 46.7 | 38.5 | 26.4 | 24.3 |
| 87.5° | 12.2 | 18.3 | 8.1 | 6.1 | 6.1 |
| 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 | 23.25 | 24.76 | 23.62 | 25.07 | 25.38 | 19.76 | 21.26 | 20.12 | 21.57 | 21.89 |
| | 3H | 24.62 | 25.97 | 25.00 | 26.30 | 26.66 | 21.01 | 22.35 | 21.39 | 22.68 | 23.04 |
| | 4H | 25.03 | 26.29 | 25.43 | 26.64 | 27.02 | 21.48 | 22.74 | 21.88 | 23.09 | 23.47 |
| | 6H | 25.26 | 26.43 | 25.67 | 26.79 | 27.18 | 21.83 | 22.99 | 22.24 | 23.36 | 23.75 |
| | 8H | 25.31 | 26.42 | 25.74 | 26.81 | 27.21 | 21.92 | 23.03 | 22.35 | 23.42 | 23.82 |
| | 12H | 25.33 | 26.39 | 25.76 | 26.77 | 27.20 | 21.95 | 23.01 | 22.38 | 23.39 | 23.82 |
| 4H | 2H | 23.43 | 24.69 | 23.83 | 25.04 | 25.42 | 20.51 | 21.77 | 20.91 | 22.12 | 22.50 |
| | 3H | 25.04 | 26.08 | 25.45 | 26.48 | 26.88 | 21.96 | 23.00 | 22.37 | 23.40 | 23.80 |
| | 4H | 25.57 | 26.51 | 26.00 | 26.92 | 27.36 | 22.52 | 23.46 | 22.96 | 23.88 | 24.32 |
| | 6H | 25.94 | 26.75 | 26.39 | 27.19 | 27.65 | 22.96 | 23.77 | 23.42 | 24.22 | 24.68 |
| | 8H | 26.02 | 26.79 | 26.49 | 27.23 | 27.70 | 23.08 | 23.84 | 23.54 | 24.28 | 24.75 |
| | 12H | 26.07 | 26.75 | 26.55 | 27.23 | 27.70 | 23.13 | 23.81 | 23.61 | 24.29 | 24.76 |
| 8H | 4H | 25.65 | 26.41 | 26.12 | 26.86 | 27.32 | 22.89 | 23.66 | 23.36 | 24.10 | 24.57 |
| | 6H | 26.11 | 26.74 | 26.61 | 27.23 | 27.71 | 23.42 | 24.05 | 23.92 | 24.54 | 25.02 |
| | 8H | 26.26 | 26.82 | 26.77 | 27.33 | 27.82 | 23.59 | 24.15 | 24.10 | 24.66 | 25.15 |
| | 12H | 26.35 | 26.85 | 26.86 | 27.34 | 27.91 | 23.67 | 24.17 | 24.18 | 24.66 | 25.23 |
| 12H | 4H | 25.64 | 26.32 | 26.12 | 26.80 | 27.27 | 22.94 | 23.62 | 23.42 | 24.10 | 24.57 |
| | 6H | 26.10 | 26.67 | 26.62 | 27.18 | 27.67 | 23.49 | 24.05 | 24.00 | 24.56 | 25.05 |
| | 8H | 26.29 | 26.79 | 26.80 | 27.28 | 27.85 | 23.70 | 24.20 | 24.21 | 24.69 | 25.26 |