

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:

Luminaire Tested: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12

Issue Date: 8/1/2024

**Test Information**

Test Method: LM-79-2019  
Report Number:  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-892-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/1/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

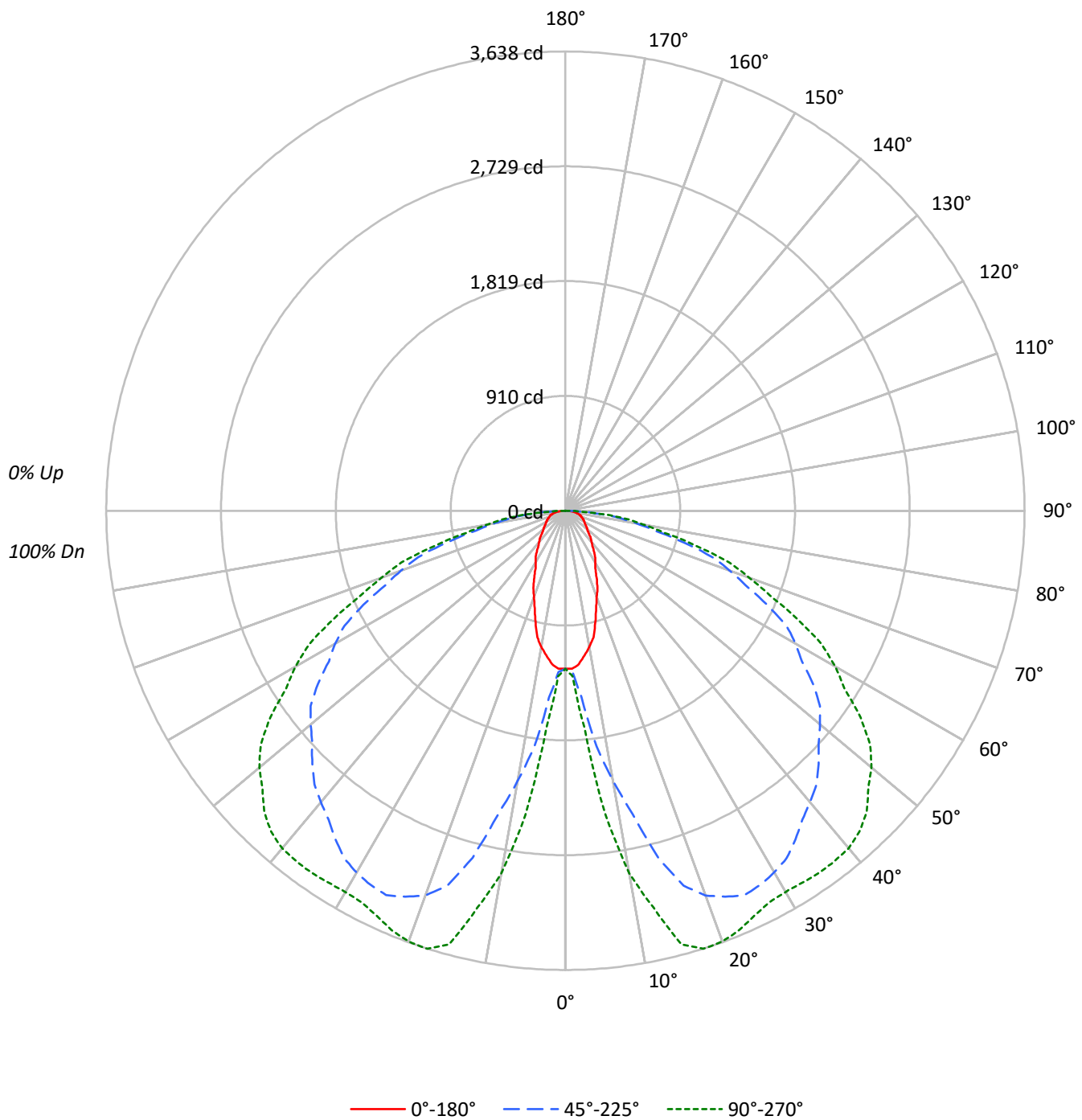
Lumens per Lamp: N/A  
Luminaire Lumens: 9691.2 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 0.7 / 2.7 / 2.32  
Luminous Opening: Rectangular (W 0.29' x L: 12' x H: 0')  
CIE Type: Direct

Input Watts (W): 108.2  
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

TEST NUMBER:

CATALOG NUMBER: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12

### Luminous Intensity Polar Plot



TEST NUMBER:

CATALOG NUMBER: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  |  | 30  |     |     |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 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 |
| 1   | 108 | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 96  | 93  | 89  |  |  | 92  | 89  | 87  |  | 89  |
| 2   | 97  | 88  | 81  | 75  | 95  | 87  | 80  | 74  | 83  | 77  | 72  |  |  | 80  | 75  | 71  |  | 77  |
| 3   | 88  | 77  | 68  | 61  | 86  | 75  | 67  | 61  | 72  | 65  | 59  |  |  | 69  | 63  | 58  |  | 67  |
| 4   | 80  | 67  | 58  | 51  | 78  | 66  | 57  | 51  | 63  | 56  | 50  |  |  | 61  | 54  | 49  |  | 59  |
| 5   | 73  | 60  | 50  | 43  | 71  | 58  | 50  | 43  | 56  | 48  | 42  |  |  | 54  | 47  | 42  |  | 52  |
| 6   | 67  | 53  | 44  | 37  | 65  | 52  | 43  | 37  | 50  | 42  | 36  |  |  | 49  | 42  | 36  |  | 47  |
| 7   | 62  | 48  | 39  | 32  | 60  | 47  | 38  | 32  | 45  | 38  | 32  |  |  | 44  | 37  | 32  |  | 43  |
| 8   | 58  | 43  | 34  | 28  | 56  | 43  | 34  | 28  | 41  | 34  | 28  |  |  | 40  | 33  | 28  |  | 39  |
| 9   | 54  | 40  | 31  | 25  | 52  | 39  | 31  | 25  | 38  | 30  | 25  |  |  | 37  | 30  | 25  |  | 36  |
| 10  | 50  | 36  | 28  | 23  | 49  | 36  | 28  | 22  | 35  | 27  | 22  |  |  | 34  | 27  | 22  |  | 33  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 3851 | 3851  | 3851  |
| 5°  | 3766 | 4581  | 5333  |
| 10° | 3420 | 6778  | 9104  |
| 15° | 2910 | 9058  | 11320 |
| 20° | 2372 | 10615 | 11887 |
| 25° | 1981 | 11402 | 12010 |
| 30° | 1673 | 11754 | 12383 |
| 35° | 1481 | 11927 | 13152 |
| 40° | 1293 | 12100 | 14015 |
| 45° | 1173 | 12338 | 14676 |
| 50° | 1079 | 12599 | 15142 |
| 55° | 1036 | 12835 | 15307 |
| 60° | 1065 | 12953 | 15182 |
| 65° | 1113 | 12849 | 14739 |
| 70° | 1195 | 12455 | 13939 |
| 75° | 1339 | 11554 | 12775 |
| 80° | 1498 | 9984  | 11124 |
| 85° | 1422 | 8312  | 9520  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 52.5°

Luminance: 15370 cd/sqm

TEST NUMBER:

CATALOG NUMBER: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 164.3  | 1.7       |
| 10°-20°   | 715.4  | 7.4       |
| 20°-30°   | 1253.7 | 12.9      |
| 30°-40°   | 1614.3 | 16.7      |
| 40°-50°   | 1802.3 | 18.6      |
| 50°-60°   | 1728.3 | 17.8      |
| 60°-70°   | 1375.5 | 14.2      |
| 70°-80°   | 810.3  | 8.4       |
| 80°-90°   | 227.1  | 2.3       |
| 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°    | 2133.3 | 22.0      |
| 0°-40°    | 3747.6 | 38.7      |
| 0°-60°    | 7278.2 | 75.1      |
| 0°-90°    | 9691.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 9691.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1252 | 1252  | 1252 | 1252  | 1252 |      |
| 5°  | 1220 | 1308  | 1484 | 1674  | 1727 | 112  |
| 15° | 914  | 1679  | 2845 | 3440  | 3556 | 254  |
| 25° | 584  | 1905  | 3360 | 3533  | 3539 | 269  |
| 35° | 395  | 1787  | 3177 | 3370  | 3503 | 246  |
| 45° | 270  | 1402  | 2837 | 3223  | 3374 | 209  |
| 55° | 193  | 936   | 2394 | 2768  | 2855 | 176  |
| 65° | 153  | 612   | 1766 | 1993  | 2025 | 152  |
| 75° | 113  | 386   | 972  | 1060  | 1075 | 118  |
| 85° | 40   | 105   | 236  | 265   | 270  | 45   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER:

CATALOG NUMBER: SQ4-FB-0U-100D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 10°    | 20°    | 30°    | 40°    | 50°    | 60°    | 70°    | 80°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 | 1252.3 |
| 2.5°  | 1252.3 | 1252.3 | 1258.7 | 1268.4 | 1271.6 | 1284.5 | 1303.8 | 1313.5 | 1319.9 | 1313.5 |
| 5°    | 1220.0 | 1236.2 | 1288.5 | 1365.0 | 1441.5 | 1526.1 | 1634.8 | 1687.1 | 1719.3 | 1727.4 |
| 7.5°  | 1156.4 | 1200.7 | 1349.7 | 1549.4 | 1771.7 | 1992.3 | 2183.2 | 2337.8 | 2428.0 | 2432.0 |
| 10°   | 1095.2 | 1171.7 | 1401.2 | 1707.3 | 2013.3 | 2327.4 | 2589.1 | 2750.1 | 2879.0 | 2915.2 |
| 12.5° | 1027.6 | 1142.7 | 1456.0 | 1865.1 | 2283.9 | 2636.6 | 2927.3 | 3104.5 | 3207.6 | 3221.3 |
| 15°   | 914.0  | 1083.1 | 1534.1 | 2113.9 | 2633.4 | 3056.2 | 3334.0 | 3474.9 | 3539.3 | 3555.5 |
| 17.5° | 808.5  | 1030.0 | 1602.6 | 2308.8 | 2924.1 | 3305.0 | 3516.0 | 3604.6 | 3636.8 | 3638.4 |
| 20°   | 724.8  | 978.5  | 1634.8 | 2444.1 | 3072.3 | 3414.5 | 3567.5 | 3623.9 | 3640.0 | 3632.0 |
| 22.5° | 663.6  | 923.7  | 1654.1 | 2534.3 | 3162.5 | 3456.4 | 3570.8 | 3598.1 | 3604.6 | 3596.5 |
| 25°   | 583.9  | 833.5  | 1654.9 | 2653.5 | 3253.5 | 3466.9 | 3527.3 | 3535.3 | 3543.4 | 3539.3 |
| 27.5° | 513.0  | 732.8  | 1630.8 | 2732.4 | 3266.3 | 3417.7 | 3445.9 | 3466.1 | 3491.0 | 3496.7 |
| 30°   | 471.1  | 668.4  | 1598.5 | 2758.2 | 3253.5 | 3366.2 | 3394.4 | 3430.6 | 3474.9 | 3487.0 |
| 32.5° | 438.9  | 607.2  | 1550.2 | 2761.4 | 3221.3 | 3305.0 | 3342.9 | 3411.3 | 3474.9 | 3493.4 |
| 35°   | 394.6  | 515.4  | 1469.7 | 2738.1 | 3148.8 | 3205.1 | 3285.7 | 3398.4 | 3483.0 | 3503.1 |
| 37.5° | 351.1  | 449.4  | 1360.2 | 2690.6 | 3053.7 | 3112.5 | 3245.4 | 3381.5 | 3475.7 | 3500.7 |
| 40°   | 322.1  | 410.7  | 1276.4 | 2645.5 | 2979.7 | 3048.1 | 3213.2 | 3362.2 | 3462.8 | 3491.0 |
| 42.5° | 299.6  | 378.5  | 1186.2 | 2587.5 | 2895.9 | 2990.1 | 3174.5 | 3333.2 | 3427.4 | 3449.2 |
| 45°   | 269.8  | 330.2  | 1042.9 | 2480.4 | 2766.2 | 2907.2 | 3108.5 | 3261.5 | 3350.1 | 3374.3 |
| 47.5° | 241.6  | 296.4  | 893.1  | 2358.0 | 2634.2 | 2806.5 | 3012.7 | 3157.6 | 3239.0 | 3255.1 |
| 50°   | 225.5  | 273.8  | 793.2  | 2271.0 | 2540.8 | 2726.0 | 2935.4 | 3080.3 | 3148.8 | 3164.9 |
| 52.5° | 212.6  | 254.5  | 699.8  | 2171.1 | 2444.1 | 2642.2 | 2841.9 | 2974.0 | 3036.0 | 3042.5 |
| 55°   | 193.3  | 229.5  | 575.8  | 2017.3 | 2291.1 | 2496.5 | 2689.7 | 2794.4 | 2838.7 | 2854.8 |
| 57.5° | 182.8  | 211.0  | 478.4  | 1850.6 | 2118.8 | 2324.9 | 2500.5 | 2581.8 | 2617.3 | 2622.9 |
| 60°   | 173.1  | 201.3  | 426.8  | 1731.4 | 2009.3 | 2202.5 | 2355.5 | 2424.0 | 2456.2 | 2468.3 |
| 62.5° | 163.5  | 194.9  | 388.2  | 1609.0 | 1880.4 | 2067.2 | 2200.9 | 2259.7 | 2285.5 | 2287.9 |
| 65°   | 153.0  | 185.2  | 342.3  | 1421.4 | 1679.1 | 1852.2 | 1956.9 | 2005.2 | 2017.3 | 2025.4 |
| 67.5° | 142.5  | 175.6  | 309.2  | 1232.1 | 1471.3 | 1614.7 | 1692.0 | 1733.8 | 1736.3 | 1753.2 |
| 70°   | 132.9  | 169.1  | 289.9  | 1103.3 | 1316.7 | 1453.6 | 1518.0 | 1550.2 | 1546.2 | 1550.2 |
| 72.5° | 126.4  | 159.5  | 277.0  | 971.2  | 1168.5 | 1276.4 | 1334.4 | 1357.0 | 1359.4 | 1360.2 |
| 75°   | 112.7  | 140.9  | 257.7  | 769.1  | 926.1  | 1018.7 | 1063.0 | 1059.0 | 1071.1 | 1075.1 |
| 77.5° | 97.4   | 121.6  | 211.8  | 566.9  | 694.2  | 755.4  | 790.8  | 802.1  | 798.1  | 798.9  |
| 80°   | 84.6   | 108.7  | 173.1  | 434.9  | 539.6  | 587.9  | 620.1  | 628.1  | 624.1  | 628.1  |
| 82.5° | 68.5   | 89.4   | 134.5  | 322.1  | 404.3  | 442.9  | 465.5  | 467.1  | 469.5  | 476.7  |
| 85°   | 40.3   | 52.3   | 80.5   | 177.2  | 225.5  | 245.6  | 261.7  | 265.8  | 269.8  | 269.8  |
| 87.5° | 16.1   | 22.5   | 41.9   | 74.1   | 93.4   | 99.9   | 99.9   | 93.4   | 99.9   | 90.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)