

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  
(formerly Eaton)

Brand: CORELITE

Report Number: P518442

Luminaire Tested: **SQ4-BB-050U-075D-940-1D-UNV-STD-W-8**

Issue Date: 4/29/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P518442  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-21, G2-2009-966-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/29/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: CORELITE  
Catalog Number: SQ4-BB-050U-075D-940-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH BLACK BAFFLE  
DOWNLIGHT 750 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

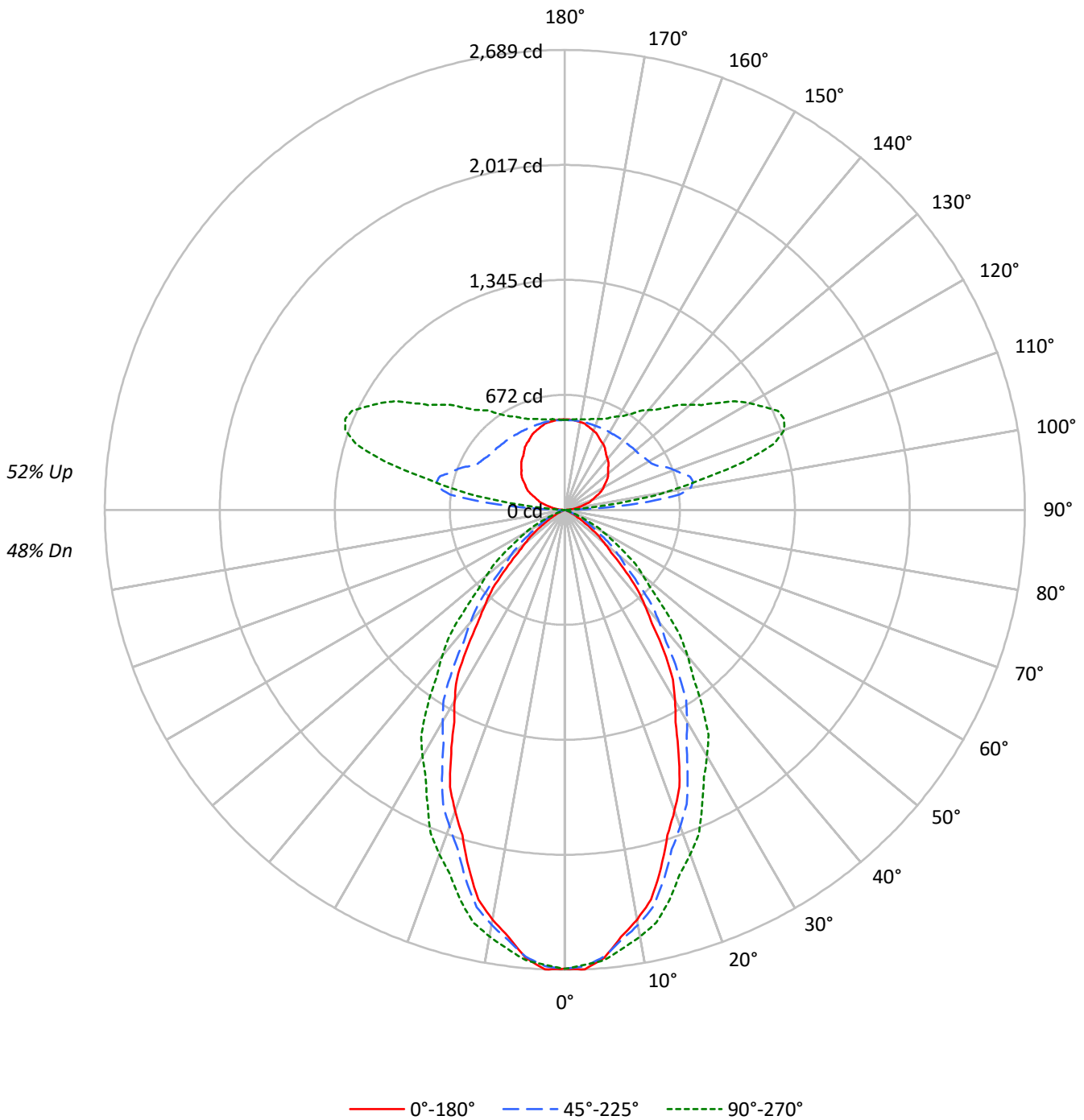
Lumens per Lamp: N/A  
Luminaire Lumens: 6646.6 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97  
Luminous Opening: Rectangular (W 0.29' x L: 8' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 78.1  
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 | 50 | 30 | 10 | 0  |   |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 0   | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 82 | 82 | 82 | 68 | 68 | 68 | 54 | 54 | 54 | 48 | 48 | 48 | 48 |   |
| 1   | 99  | 95  | 92  | 89  | 91 | 88 | 85 | 83 | 75 | 73 | 71 | 62 | 61 | 60 | 51 | 50 | 49 | 44 | 44 | 44 | 44 |   |
| 2   | 92  | 85  | 80  | 76  | 84 | 79 | 75 | 71 | 68 | 64 | 62 | 57 | 55 | 53 | 47 | 45 | 44 | 40 | 40 | 40 | 40 |   |
| 3   | 85  | 77  | 70  | 65  | 78 | 71 | 66 | 62 | 61 | 57 | 54 | 52 | 49 | 47 | 43 | 41 | 40 | 36 | 36 | 36 | 36 |   |
| 4   | 79  | 69  | 62  | 57  | 73 | 64 | 58 | 54 | 56 | 51 | 48 | 47 | 44 | 42 | 40 | 38 | 36 | 32 | 32 | 32 | 32 |   |
| 5   | 73  | 63  | 55  | 50  | 67 | 59 | 52 | 48 | 51 | 46 | 42 | 44 | 40 | 37 | 37 | 34 | 33 | 29 | 29 | 29 | 29 |   |
| 6   | 68  | 57  | 50  | 45  | 63 | 53 | 47 | 42 | 47 | 42 | 38 | 40 | 37 | 34 | 34 | 32 | 30 | 27 | 27 | 27 | 27 |   |
| 7   | 63  | 52  | 45  | 40  | 58 | 49 | 43 | 38 | 43 | 38 | 34 | 37 | 33 | 31 | 32 | 29 | 27 | 25 | 25 | 25 | 25 |   |
| 8   | 59  | 48  | 41  | 36  | 55 | 45 | 39 | 34 | 40 | 35 | 31 | 34 | 31 | 28 | 30 | 27 | 25 | 23 | 23 | 23 | 23 |   |
| 9   | 55  | 44  | 37  | 33  | 51 | 42 | 35 | 31 | 37 | 32 | 28 | 32 | 28 | 26 | 28 | 25 | 23 | 21 | 21 | 21 | 21 |   |
| 10  | 52  | 41  | 34  | 30  | 48 | 38 | 33 | 29 | 34 | 29 | 26 | 30 | 26 | 24 | 26 | 23 | 21 | 20 | 20 | 20 | 20 |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 12377 | 12377 | 12377 |
| 5°  | 12178 | 12148 | 12238 |
| 10° | 11394 | 11546 | 11869 |
| 15° | 10359 | 10687 | 11282 |
| 20° | 9195  | 9673  | 10520 |
| 25° | 8008  | 8642  | 9666  |
| 30° | 6859  | 7612  | 8857  |
| 35° | 5687  | 6462  | 7880  |
| 40° | 4370  | 5167  | 6715  |
| 45° | 3159  | 3912  | 5402  |
| 50° | 2152  | 2916  | 4285  |
| 55° | 1399  | 2109  | 3330  |
| 60° | 803   | 1485  | 2407  |
| 65° | 213   | 907   | 1218  |
| 70° | 105   | 281   | 351   |
| 75° | 46    | 23    | 0     |
| 80° | 35    | 0     | 0     |
| 85° | 0     | 0     | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 244.9  | 3.7       |
| 10°-20°   | 626.2  | 9.4       |
| 20°-30°   | 783.9  | 11.8      |
| 30°-40°   | 724.1  | 10.9      |
| 40°-50°   | 486.5  | 7.3       |
| 50°-60°   | 251.3  | 3.8       |
| 60°-70°   | 78.7   | 1.2       |
| 70°-80°   | 5.0    | 0.1       |
| 80°-90°   | 2.1    | 0.0       |
| 90°-100°  | 253.2  | 3.8       |
| 100°-110° | 687.8  | 10.3      |
| 110°-120° | 707.2  | 10.6      |
| 120°-130° | 565.4  | 8.5       |
| 130°-140° | 444.3  | 6.7       |
| 140°-150° | 340.7  | 5.1       |
| 150°-160° | 245.0  | 3.7       |
| 160°-170° | 149.8  | 2.3       |
| 170°-180° | 50.5   | 0.8       |
| 0°-30°    | 1654.9 | 24.9      |
| 0°-40°    | 2379.0 | 35.8      |
| 0°-60°    | 3116.8 | 46.9      |
| 0°-90°    | 3202.6 | 48.2      |
| 90°-120°  | 1648.3 | 24.8      |
| 90°-150°  | 2998.6 | 45.1      |
| 90°-180°  | 3444.0 | 51.8      |
| 0°-180°   | 6646.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2683 | 2683  | 2683 | 2683  | 2683 |      |
| 5°   | 2630 | 2603  | 2623 | 2633  | 2643 | 244  |
| 15°  | 2169 | 2161  | 2238 | 2313  | 2362 | 604  |
| 25°  | 1573 | 1586  | 1698 | 1814  | 1899 | 721  |
| 35°  | 1010 | 1035  | 1148 | 1282  | 1399 | 626  |
| 45°  | 484  | 513   | 600  | 716   | 828  | 380  |
| 55°  | 174  | 203   | 262  | 337   | 414  | 162  |
| 65°  | 20   | 37    | 83   | 100   | 112  | 33   |
| 75°  | 3    | 3     | 1    | 0     | 0    | 4    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 2    | 7     | 12   | 15    | 15   | 3    |
| 95°  | 37   | 138   | 441  | 192   | 129  | 40   |
| 105° | 122  | 190   | 756  | 1152  | 1084 | 130  |
| 115° | 217  | 264   | 606  | 1205  | 1372 | 214  |
| 125° | 298  | 340   | 548  | 923   | 1089 | 266  |
| 135° | 360  | 399   | 532  | 752   | 848  | 278  |
| 145° | 416  | 445   | 526  | 639   | 687  | 261  |
| 155° | 470  | 486   | 522  | 574   | 590  | 217  |
| 165° | 509  | 515   | 524  | 546   | 548  | 144  |
| 175° | 528  | 529   | 526  | 532   | 531  | 50   |
| 180° | 528  | 528   | 528  | 528   | 528  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2683.0 | 2683.0 | 2683.0 | 2683.0 | 2683.0 |
| 2.5°   | 2689.2 | 2663.9 | 2670.5 | 2670.4 | 2663.3 |
| 5°     | 2629.8 | 2603.1 | 2623.3 | 2632.6 | 2642.8 |
| 7.5°   | 2518.7 | 2497.9 | 2536.6 | 2565.6 | 2586.7 |
| 10°    | 2432.5 | 2414.7 | 2464.9 | 2504.5 | 2533.7 |
| 12.5°  | 2332.8 | 2319.1 | 2379.8 | 2434.1 | 2471.4 |
| 15°    | 2169.0 | 2161.4 | 2237.8 | 2312.9 | 2362.4 |
| 17.5°  | 1993.5 | 1993.2 | 2080.5 | 2173.7 | 2233.4 |
| 20°    | 1873.0 | 1876.9 | 1970.4 | 2073.2 | 2143.0 |
| 22.5°  | 1752.6 | 1761.5 | 1861.4 | 1968.6 | 2048.5 |
| 25°    | 1573.2 | 1585.9 | 1697.8 | 1814.0 | 1899.0 |
| 27.5°  | 1400.8 | 1419.4 | 1537.1 | 1657.8 | 1761.4 |
| 30°    | 1287.6 | 1309.2 | 1429.1 | 1556.2 | 1662.8 |
| 32.5°  | 1176.5 | 1202.2 | 1319.0 | 1453.4 | 1562.0 |
| 35°    | 1009.9 | 1035.2 | 1147.5 | 1282.5 | 1399.3 |
| 37.5°  | 837.7  | 862.6  | 972.2  | 1105.1 | 1231.3 |
| 40°    | 725.6  | 753.5  | 858.0  | 986.8  | 1115.0 |
| 42.5°  | 623.8  | 651.8  | 750.0  | 876.6  | 997.7  |
| 45°    | 484.2  | 513.4  | 599.7  | 716.4  | 828.1  |
| 47.5°  | 368.4  | 400.1  | 475.9  | 581.5  | 683.3  |
| 50°    | 299.8  | 331.6  | 406.3  | 499.4  | 597.1  |
| 52.5°  | 244.8  | 275.5  | 342.9  | 430.6  | 520.2  |
| 55°    | 173.9  | 203.1  | 262.2  | 336.6  | 414.1  |
| 57.5°  | 120.2  | 145.3  | 198.3  | 260.5  | 321.1  |
| 60°    | 87.0   | 111.1  | 161.0  | 211.4  | 260.9  |
| 62.5°  | 57.9   | 80.0   | 128.8  | 167.4  | 200.7  |
| 65°    | 19.5   | 37.2   | 83.1   | 100.2  | 111.6  |
| 67.5°  | 9.9    | 11.9   | 43.6   | 46.0   | 49.8   |
| 70°    | 7.8    | 7.8    | 20.8   | 22.2   | 26.0   |
| 72.5°  | 5.7    | 5.7    | 8.3    | 10.7   | 11.4   |
| 75°    | 2.6    | 2.6    | 1.3    | 0.0    | 0.0    |
| 77.5°  | 1.3    | 1.3    | 1.0    | 0.0    | 0.0    |
| 80°    | 1.3    | 1.3    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 0.3    | 0.3    | 0.0    | 0.0    | 0.0    |
| 85°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 0.3    | 1.3    | 2.4    | 3.1    | 3.1    |
| 90°    | 1.7    | 6.7    | 11.9   | 15.3   | 15.3   |
| 92.5°  | 15.3   | 69.3   | 120.4  | 51.7   | 43.8   |
| 95°    | 37.3   | 138.5  | 441.0  | 191.9  | 128.9  |
| 97.5°  | 61.7   | 152.9  | 676.0  | 525.9  | 369.4  |
| 100°   | 78.0   | 162.6  | 747.9  | 758.2  | 612.3  |
| 102.5° | 94.3   | 172.2  | 766.9  | 937.7  | 809.0  |
| 105°   | 122.1  | 190.1  | 756.4  | 1151.7 | 1083.8 |
| 107.5° | 150.9  | 211.0  | 712.7  | 1262.3 | 1281.2 |
| 110°   | 171.3  | 226.0  | 680.1  | 1284.0 | 1365.3 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 188.9 | 241.0 | 647.5 | 1266.0 | 1388.4 |
| 115°   | 217.1 | 263.5 | 605.5 | 1204.6 | 1372.1 |
| 117.5° | 243.5 | 288.0 | 578.7 | 1117.6 | 1306.3 |
| 120°   | 261.2 | 304.3 | 566.5 | 1059.2 | 1246.6 |
| 122.5° | 276.1 | 319.2 | 558.3 | 1000.7 | 1181.4 |
| 125°   | 298.5 | 340.0 | 547.8 | 923.0  | 1088.8 |
| 127.5° | 318.5 | 359.6 | 542.0 | 864.1  | 1006.4 |
| 130°   | 330.7 | 370.5 | 539.3 | 827.2  | 954.9  |
| 132.5° | 342.9 | 382.7 | 536.6 | 795.6  | 908.7  |
| 135°   | 359.6 | 399.4 | 532.5 | 751.8  | 848.0  |
| 137.5° | 377.5 | 413.7 | 530.5 | 713.1  | 794.1  |
| 140°   | 388.4 | 423.2 | 529.2 | 688.5  | 761.5  |
| 142.5° | 399.2 | 431.4 | 527.8 | 669.3  | 730.3  |
| 145°   | 415.5 | 445.4 | 525.8 | 638.8  | 686.9  |
| 147.5° | 433.8 | 459.4 | 524.1 | 614.8  | 652.6  |
| 150°   | 446.1 | 467.6 | 524.1 | 601.1  | 630.9  |
| 152.5° | 455.6 | 474.5 | 522.7 | 588.7  | 613.3  |
| 155°   | 469.8 | 486.4 | 522.4 | 573.6  | 590.2  |
| 157.5° | 483.7 | 496.6 | 522.4 | 563.4  | 576.0  |
| 160°   | 491.8 | 503.5 | 522.4 | 556.5  | 566.5  |
| 162.5° | 500.0 | 508.9 | 523.7 | 551.0  | 558.3  |
| 165°   | 508.8 | 515.4 | 524.1 | 546.2  | 547.8  |
| 167.5° | 518.0 | 521.3 | 525.8 | 540.4  | 541.7  |
| 170°   | 520.7 | 524.0 | 525.8 | 537.6  | 537.6  |
| 172.5° | 523.4 | 525.4 | 525.8 | 534.9  | 534.9  |
| 175°   | 527.5 | 529.1 | 525.8 | 532.5  | 530.9  |
| 177.5° | 528.8 | 528.8 | 524.7 | 530.1  | 527.5  |
| 180°   | 527.5 | 527.5 | 527.5 | 527.5  | 527.5  |

(END OF REPORT)