

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: P518350

Luminaire Tested: **SQ4-BB-025U-100D-830-1D-UNV-STD-W-8**

Issue Date: 4/29/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P518350  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-32, 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-025U-100D-830-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH BLACK BAFFLE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

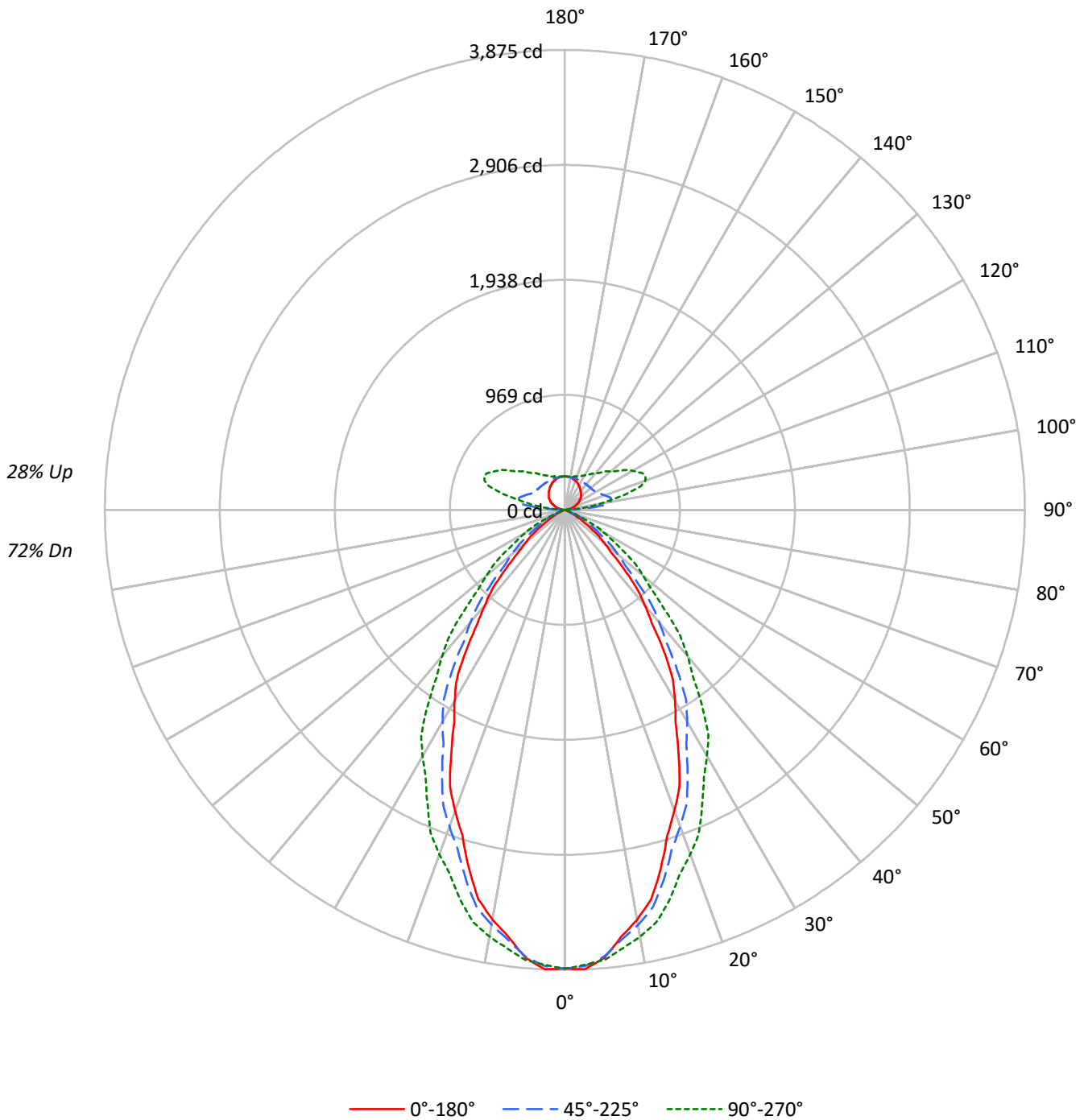
Lumens per Lamp: N/A  
Luminaire Lumens: 6436.5 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97  
Luminous Opening: Rectangular (W 0.29' x L: 8' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 82.2  
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



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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   | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 95 | 95 | 95 | 85 | 85 | 85 | 76 | 76 | 76 | 76 | 76 | 76 | 72 |   |
| 1   | 105 | 102 | 99  | 96  | 100 | 97  | 94  | 92  | 87 | 86 | 84 | 79 | 78 | 76 | 71 | 70 | 69 | 69 | 69 | 69 | 65 |   |
| 2   | 98  | 92  | 87  | 83  | 93  | 88  | 83  | 80  | 80 | 77 | 74 | 73 | 70 | 68 | 66 | 64 | 62 | 62 | 62 | 62 | 59 |   |
| 3   | 91  | 83  | 77  | 72  | 87  | 80  | 74  | 70  | 73 | 69 | 65 | 67 | 63 | 61 | 61 | 58 | 56 | 56 | 56 | 56 | 53 |   |
| 4   | 85  | 76  | 69  | 64  | 81  | 73  | 67  | 62  | 67 | 62 | 58 | 61 | 58 | 55 | 56 | 53 | 51 | 51 | 51 | 51 | 48 |   |
| 5   | 79  | 69  | 62  | 57  | 75  | 66  | 60  | 55  | 61 | 56 | 52 | 57 | 52 | 49 | 52 | 49 | 46 | 46 | 46 | 46 | 44 |   |
| 6   | 74  | 63  | 56  | 51  | 70  | 61  | 55  | 50  | 57 | 51 | 47 | 52 | 48 | 45 | 48 | 45 | 42 | 42 | 42 | 42 | 40 |   |
| 7   | 69  | 58  | 51  | 46  | 66  | 56  | 50  | 45  | 52 | 47 | 43 | 49 | 44 | 41 | 45 | 42 | 39 | 39 | 39 | 39 | 37 |   |
| 8   | 65  | 54  | 47  | 42  | 62  | 52  | 46  | 41  | 49 | 43 | 39 | 45 | 41 | 38 | 42 | 38 | 36 | 36 | 36 | 36 | 34 |   |
| 9   | 61  | 50  | 43  | 39  | 58  | 48  | 42  | 38  | 45 | 40 | 36 | 42 | 38 | 35 | 40 | 36 | 33 | 33 | 33 | 33 | 31 |   |
| 10  | 58  | 47  | 40  | 36  | 55  | 45  | 39  | 35  | 42 | 37 | 33 | 40 | 35 | 32 | 37 | 33 | 31 | 31 | 31 | 31 | 29 |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 17833 | 17833 | 17833 |
| 5°  | 17547 | 17503 | 17633 |
| 10° | 16418 | 16637 | 17101 |
| 15° | 14925 | 15399 | 16256 |
| 20° | 13249 | 13938 | 15159 |
| 25° | 11538 | 12452 | 13927 |
| 30° | 9883  | 10969 | 12762 |
| 35° | 8194  | 9311  | 11354 |
| 40° | 6296  | 7444  | 9675  |
| 45° | 4551  | 5637  | 7784  |
| 50° | 3100  | 4201  | 6174  |
| 55° | 2015  | 3039  | 4798  |
| 60° | 1156  | 2140  | 3468  |
| 65° | 307   | 1307  | 1755  |
| 70° | 151   | 403   | 504   |
| 75° | 66    | 34    | 0     |
| 80° | 50    | 0     | 0     |
| 85° | 0     | 0     | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 352.8  | 5.5       |
| 10°-20°   | 902.2  | 14.0      |
| 20°-30°   | 1129.5 | 17.5      |
| 30°-40°   | 1043.3 | 16.2      |
| 40°-50°   | 701.0  | 10.9      |
| 50°-60°   | 362.1  | 5.6       |
| 60°-70°   | 113.4  | 1.8       |
| 70°-80°   | 7.2    | 0.1       |
| 80°-90°   | 1.6    | 0.0       |
| 90°-100°  | 137.1  | 2.1       |
| 100°-110° | 360.4  | 5.6       |
| 110°-120° | 373.8  | 5.8       |
| 120°-130° | 299.8  | 4.7       |
| 130°-140° | 235.2  | 3.7       |
| 140°-150° | 180.5  | 2.8       |
| 150°-160° | 130.0  | 2.0       |
| 160°-170° | 79.6   | 1.2       |
| 170°-180° | 26.9   | 0.4       |
| 0°-30°    | 2384.5 | 37.0      |
| 0°-40°    | 3427.8 | 53.3      |
| 0°-60°    | 4490.9 | 69.8      |
| 0°-90°    | 4613.1 | 71.7      |
| 90°-120°  | 871.3  | 13.5      |
| 90°-150°  | 1586.9 | 24.7      |
| 90°-180°  | 1823.0 | 28.3      |
| 0°-180°   | 6436.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3866 | 3866  | 3866 | 3866  | 3866 |      |
| 5°   | 3789 | 3751  | 3780 | 3793  | 3808 | 351  |
| 15°  | 3125 | 3114  | 3224 | 3333  | 3404 | 870  |
| 25°  | 2267 | 2285  | 2446 | 2614  | 2736 | 1039 |
| 35°  | 1455 | 1492  | 1653 | 1848  | 2016 | 901  |
| 45°  | 698  | 740   | 864  | 1032  | 1193 | 548  |
| 55°  | 251  | 293   | 378  | 485   | 597  | 234  |
| 65°  | 28   | 54    | 120  | 144   | 161  | 47   |
| 75°  | 4    | 4     | 2    | 0     | 0    | 5    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 2    | 5     | 14   | 7     | 7    | 2    |
| 95°  | 18   | 71    | 236  | 122   | 83   | 20   |
| 105° | 65   | 98    | 398  | 605   | 564  | 69   |
| 115° | 115  | 140   | 319  | 637   | 727  | 114  |
| 125° | 160  | 180   | 290  | 491   | 579  | 142  |
| 135° | 191  | 211   | 281  | 396   | 449  | 148  |
| 145° | 222  | 236   | 278  | 338   | 364  | 139  |
| 155° | 251  | 258   | 278  | 305   | 314  | 115  |
| 165° | 270  | 274   | 278  | 289   | 292  | 76   |
| 175° | 281  | 281   | 280  | 283   | 283  | 27   |
| 180° | 281  | 281   | 281  | 281   | 281  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3865.8 | 3865.8 | 3865.8 | 3865.8 | 3865.8 |
| 2.5°   | 3874.8 | 3838.2 | 3847.9 | 3847.6 | 3837.4 |
| 5°     | 3789.2 | 3750.8 | 3779.8 | 3793.2 | 3807.9 |
| 7.5°   | 3629.1 | 3599.1 | 3654.9 | 3696.7 | 3727.1 |
| 10°    | 3504.9 | 3479.3 | 3551.6 | 3608.7 | 3650.8 |
| 12.5°  | 3361.2 | 3341.5 | 3428.9 | 3507.2 | 3561.0 |
| 15°    | 3125.2 | 3114.2 | 3224.3 | 3332.6 | 3403.9 |
| 17.5°  | 2872.4 | 2872.0 | 2997.7 | 3132.0 | 3218.0 |
| 20°    | 2698.8 | 2704.3 | 2839.1 | 2987.2 | 3087.8 |
| 22.5°  | 2525.2 | 2538.0 | 2682.0 | 2836.4 | 2951.7 |
| 25°    | 2266.8 | 2285.0 | 2446.3 | 2613.7 | 2736.2 |
| 27.5°  | 2018.4 | 2045.1 | 2214.8 | 2388.7 | 2537.9 |
| 30°    | 1855.3 | 1886.4 | 2059.2 | 2242.2 | 2395.8 |
| 32.5°  | 1695.2 | 1732.1 | 1900.6 | 2094.1 | 2250.7 |
| 35°    | 1455.1 | 1491.6 | 1653.3 | 1847.9 | 2016.1 |
| 37.5°  | 1207.1 | 1242.9 | 1400.8 | 1592.4 | 1774.1 |
| 40°    | 1045.5 | 1085.7 | 1236.2 | 1421.9 | 1606.6 |
| 42.5°  | 898.8  | 939.1  | 1080.6 | 1263.0 | 1437.5 |
| 45°    | 697.6  | 739.7  | 864.1  | 1032.3 | 1193.2 |
| 47.5°  | 530.8  | 576.5  | 685.6  | 837.8  | 984.5  |
| 50°    | 432.0  | 477.7  | 585.4  | 719.5  | 860.3  |
| 52.5°  | 352.7  | 397.0  | 494.1  | 620.5  | 749.6  |
| 55°    | 250.6  | 292.7  | 377.8  | 485.1  | 596.6  |
| 57.5°  | 173.2  | 209.4  | 285.8  | 375.3  | 462.7  |
| 60°    | 125.3  | 160.1  | 231.9  | 304.6  | 375.9  |
| 62.5°  | 83.4   | 115.2  | 185.5  | 241.2  | 289.1  |
| 65°    | 28.1   | 53.7   | 119.7  | 144.4  | 160.8  |
| 67.5°  | 14.2   | 17.1   | 62.8   | 66.3   | 71.8   |
| 70°    | 11.2   | 11.2   | 29.9   | 31.9   | 37.4   |
| 72.5°  | 8.2    | 8.2    | 12.0   | 15.4   | 16.5   |
| 75°    | 3.7    | 3.7    | 1.9    | 0.0    | 0.0    |
| 77.5°  | 1.9    | 1.9    | 1.5    | 0.0    | 0.0    |
| 80°    | 1.9    | 1.9    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 0.4    | 0.4    | 0.0    | 0.0    | 0.0    |
| 85°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 0.4    | 1.1    | 2.9    | 1.4    | 1.4    |
| 90°    | 1.8    | 5.3    | 14.4   | 7.2    | 7.2    |
| 92.5°  | 7.6    | 36.5   | 80.8   | 35.8   | 23.1   |
| 95°    | 18.0   | 70.9   | 236.2  | 121.7  | 83.0   |
| 97.5°  | 31.4   | 77.9   | 353.5  | 281.1  | 207.0  |
| 100°   | 41.5   | 83.8   | 389.5  | 394.7  | 306.6  |
| 102.5° | 50.1   | 89.6   | 399.6  | 491.7  | 416.2  |
| 105°   | 64.9   | 98.4   | 398.5  | 605.0  | 564.5  |
| 107.5° | 80.1   | 111.1  | 375.8  | 663.9  | 673.7  |
| 110°   | 90.2   | 118.4  | 357.1  | 679.0  | 721.4  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°           | 22.5° | 45°   | 67.5° | 90°   |
|--------|--------------|-------|-------|-------|-------|
| 112.5° | <b>100.3</b> | 127.1 | 339.8 | 669.4 | 734.3 |
| 115°   | <b>115.4</b> | 140.1 | 319.2 | 636.8 | 726.8 |
| 117.5° | <b>130.2</b> | 152.8 | 305.1 | 591.6 | 691.4 |
| 120°   | <b>138.9</b> | 160.0 | 299.4 | 561.3 | 658.2 |
| 122.5° | <b>147.5</b> | 168.7 | 295.0 | 530.9 | 626.5 |
| 125°   | <b>160.5</b> | 179.9 | 290.3 | 490.7 | 578.9 |
| 127.5° | <b>171.0</b> | 190.7 | 286.4 | 458.3 | 532.7 |
| 130°   | <b>176.7</b> | 197.9 | 284.9 | 438.0 | 506.7 |
| 132.5° | <b>182.5</b> | 203.7 | 283.5 | 420.5 | 482.2 |
| 135°   | <b>191.2</b> | 210.6 | 281.3 | 396.1 | 449.0 |
| 137.5° | <b>200.2</b> | 219.2 | 281.0 | 377.9 | 421.3 |
| 140°   | <b>207.4</b> | 225.0 | 279.5 | 363.4 | 404.0 |
| 142.5° | <b>213.2</b> | 229.4 | 279.5 | 353.2 | 388.1 |
| 145°   | <b>221.8</b> | 235.9 | 277.7 | 337.8 | 364.3 |
| 147.5° | <b>230.5</b> | 244.2 | 277.7 | 325.1 | 347.0 |
| 150°   | <b>236.2</b> | 248.6 | 277.7 | 317.8 | 335.4 |
| 152.5° | <b>242.0</b> | 251.5 | 277.7 | 311.9 | 325.3 |
| 155°   | <b>250.7</b> | 257.7 | 277.7 | 305.0 | 313.8 |
| 157.5° | <b>257.2</b> | 263.9 | 277.7 | 298.8 | 305.1 |
| 160°   | <b>261.5</b> | 266.8 | 277.7 | 295.8 | 299.4 |
| 162.5° | <b>265.8</b> | 269.7 | 277.7 | 292.9 | 296.5 |
| 165°   | <b>270.5</b> | 274.0 | 277.7 | 288.6 | 292.1 |
| 167.5° | <b>274.8</b> | 276.6 | 279.5 | 286.8 | 288.2 |
| 170°   | <b>277.7</b> | 279.5 | 279.5 | 286.7 | 286.7 |
| 172.5° | <b>279.2</b> | 279.5 | 279.5 | 285.3 | 283.9 |
| 175°   | <b>281.3</b> | 281.3 | 279.5 | 283.1 | 283.1 |
| 177.5° | <b>281.3</b> | 281.3 | 279.9 | 282.7 | 281.3 |
| 180°   | <b>281.3</b> | 281.3 | 281.3 | 281.3 | 281.3 |

(END OF REPORT)