

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: P853844

Luminaire Tested: SQ2-FB-050U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853844  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-050U-100D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

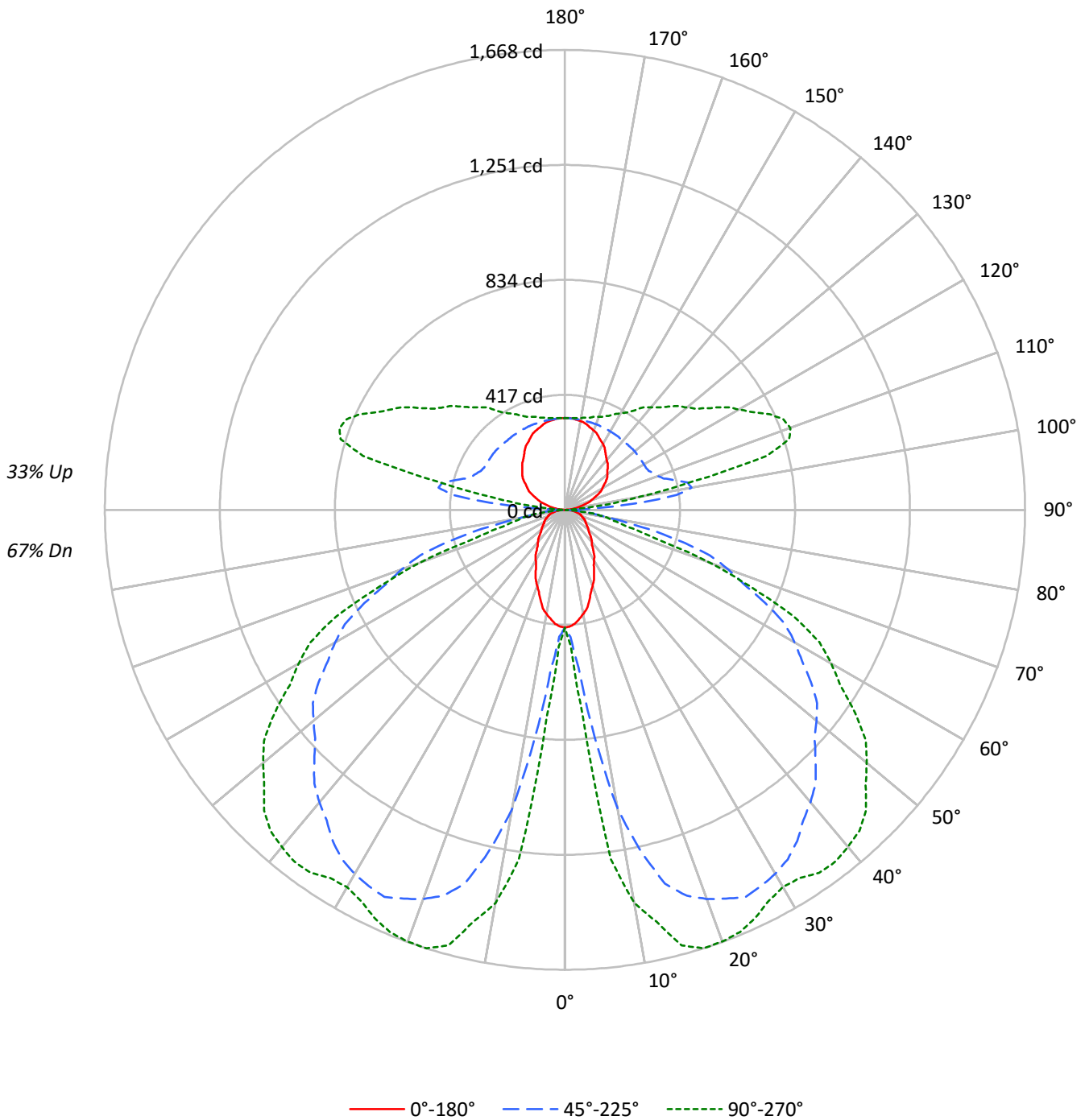
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6287.0 lumens  
Efficiency: N/A  
Efficacy: 120.0 lumens/watt  
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 52.4  
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	50	30	10	50	30	10	50	30	10	0																								
RCR																																																						
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67																																				
1	101	97	93	89	95	91	88	85	81	78	76	72	70	68	63	62	60	56																																				
2	92	84	77	72	86	79	74	69	71	66	62	62	59	56	55	52	50	46																																				
3	83	73	65	59	78	69	62	57	62	56	51	55	50	47	48	45	42	38																																				
4	76	64	56	50	71	61	53	47	54	48	43	48	43	39	42	39	35	32																																				
5	70	57	48	42	65	54	46	40	48	42	37	43	38	34	38	34	30	27																																				
6	64	51	42	36	60	48	40	35	43	37	32	38	33	29	34	30	26	24																																				
7	59	46	37	31	55	43	36	30	39	32	28	35	29	25	31	26	23	20																																				
8	54	41	33	27	51	39	32	26	35	29	24	32	26	22	28	24	20	18																																				
9	51	38	30	24	48	36	28	23	32	26	22	29	24	20	26	21	18	16																																				
10	47	34	27	22	44	33	26	21	30	23	19	27	21	18	24	19	16	14																																				

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

	0°	45°	90°
0°	6889	6889	6889
5°	6716	9310	12203
10°	6291	18029	23746
15°	5693	23457	27331
20°	5041	25804	28624
25°	4459	27595	29094
30°	3939	28418	29451
35°	3518	28913	31663
40°	3199	29187	33641
45°	2952	29325	35228
50°	2783	29888	35867
55°	2714	30666	36152
60°	2784	31071	35973
65°	2900	30647	34957
70°	3002	29637	26441
75°	3325	26619	14591
80°	3431	13733	13547
85°	3427	9503	5706

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 36479 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.5	1.1
10°-20°	326.3	5.2
20°-30°	574.2	9.1
30°-40°	743.2	11.8
40°-50°	819.7	13.0
50°-60°	765.3	12.2
60°-70°	591.5	9.4
70°-80°	272.9	4.3
80°-90°	52.5	0.8
90°-100°	132.7	2.1
100°-110°	421.1	6.7
110°-120°	412.9	6.6
120°-130°	336.0	5.3
130°-140°	273.9	4.4
140°-150°	213.6	3.4
150°-160°	153.9	2.4
160°-170°	94.0	1.5
170°-180°	31.7	0.5
0°-30°	972.0	15.5
0°-40°	1715.2	27.3
0°-60°	3300.3	52.5
0°-90°	4217.2	67.1
90°-120°	966.7	15.4
90°-150°	1790.2	28.5
90°-180°	2070.0	32.9
0°-180°	6287.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	414	475	574	701	753	38
15°	341	672	1403	1571	1635	95
25°	250	902	1549	1617	1633	115
35°	178	871	1467	1518	1606	112
45°	129	667	1284	1475	1543	100
55°	96	397	1089	1252	1284	87
65°	76	224	802	899	915	74
75°	53	138	427	230	234	55
85°	18	40	51	35	31	19
90°	0	1	3	3	3	2
95°	18	54	241	89	58	21
105°	73	103	415	791	758	77
115°	131	156	335	697	820	129
125°	181	203	330	546	644	161
135°	219	241	328	470	529	169
145°	256	275	328	405	441	160
155°	291	302	329	362	376	134
165°	318	321	330	343	346	90
175°	332	331	332	334	333	31
180°	333	333	333	333	333	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	426.7	426.7	426.7	426.7	426.7
2.5°	423.5	441.1	461.2	484.4	494.0
5°	414.4	474.6	574.4	700.8	752.9
7.5°	398.4	520.8	835.4	1173.4	1277.7
10°	383.7	554.2	1099.7	1392.3	1448.4
12.5°	367.2	598.7	1265.4	1471.1	1528.9
15°	340.6	671.6	1403.3	1570.9	1635.1
17.5°	313.1	753.6	1467.3	1632.6	1667.5
20°	293.4	810.9	1501.8	1643.8	1665.9
22.5°	275.3	853.9	1526.4	1634.0	1657.7
25°	250.3	902.3	1549.0	1617.0	1633.1
27.5°	226.1	915.0	1539.1	1583.8	1599.4
30°	211.3	911.4	1524.3	1557.7	1579.7
32.5°	198.2	901.5	1503.0	1535.3	1583.0
35°	178.5	870.6	1466.9	1518.1	1606.4
37.5°	161.7	820.8	1419.3	1524.2	1609.3
40°	151.8	783.7	1384.8	1523.9	1596.1
42.5°	142.0	740.2	1345.4	1507.5	1579.7
45°	129.3	666.9	1284.3	1474.6	1542.8
47.5°	117.4	584.4	1227.7	1429.0	1478.8
50°	110.8	528.0	1189.9	1387.8	1427.9
52.5°	104.2	473.3	1152.2	1338.5	1375.4
55°	96.4	397.3	1089.4	1252.2	1284.3
57.5°	89.5	332.2	1018.0	1156.9	1183.0
60°	86.2	296.8	962.2	1087.9	1114.0
62.5°	81.2	264.6	899.8	1015.7	1040.2
65°	75.9	224.4	802.2	899.0	915.0
67.5°	68.5	194.5	698.4	757.6	727.5
70°	63.6	179.9	627.8	646.3	560.1
72.5°	60.3	163.8	550.7	501.8	338.5
75°	53.3	137.6	426.7	229.9	233.9
77.5°	43.5	106.5	280.7	176.5	180.1
80°	36.9	87.1	147.7	143.7	145.7
82.5°	30.4	67.7	101.8	105.8	103.0
85°	18.5	40.5	51.3	34.8	30.8
87.5°	6.6	14.8	8.8	8.8	8.8
90°	0.0	1.0	3.1	3.1	3.1
92.5°	5.9	23.3	74.4	24.8	17.4
95°	17.8	53.7	241.1	89.4	57.6
97.5°	33.1	69.6	408.3	255.2	156.6
100°	44.0	78.9	465.4	424.3	275.7
102.5°	55.8	89.0	455.3	623.0	476.9
105°	73.4	103.1	415.1	790.6	757.8
107.5°	91.0	118.4	376.7	808.0	852.3
110°	102.7	129.4	357.4	787.9	869.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	114.5	139.5	346.5	753.2	857.4
115°	131.0	155.6	335.4	696.6	819.6
117.5°	147.2	170.5	331.0	642.2	766.2
120°	157.2	179.8	330.2	608.5	728.4
122.5°	167.3	189.0	330.2	581.5	693.2
125°	181.3	202.8	330.2	546.2	643.5
127.5°	193.7	214.4	330.2	518.8	601.8
130°	201.2	222.8	330.2	502.7	577.5
132.5°	208.8	230.3	329.3	490.0	557.4
135°	219.1	240.6	328.1	469.9	529.3
137.5°	229.1	251.7	327.8	450.6	503.7
140°	235.8	258.4	327.0	437.1	485.3
142.5°	244.2	265.9	327.8	423.6	468.5
145°	255.7	275.2	328.1	405.4	441.3
147.5°	267.3	283.9	328.3	389.3	418.6
150°	275.7	289.0	329.1	380.0	403.5
152.5°	282.4	294.0	329.1	372.3	391.8
155°	291.4	301.6	329.1	361.9	376.3
157.5°	301.0	308.0	330.2	355.5	365.4
160°	306.0	312.2	330.2	351.3	359.5
162.5°	311.1	315.6	330.2	347.9	353.6
165°	317.6	320.7	330.2	342.8	345.9
167.5°	323.7	324.5	331.2	339.2	341.9
170°	327.0	327.0	331.2	337.5	338.5
172.5°	328.7	329.5	331.2	335.8	336.0
175°	332.3	331.2	332.3	334.3	333.3
177.5°	333.3	332.5	332.5	334.1	332.5
180°	333.3	333.3	333.3	333.3	333.3



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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	15.19	16.27	15.98	17.09	18.09	23.93	25.01	24.72	25.83	26.83
	3H	15.94	16.91	16.74	17.74	18.77	25.57	26.54	26.37	27.37	28.40
	4H	16.25	17.17	17.07	18.00	19.04	25.76	26.68	26.58	27.51	28.55
	6H	16.48	17.33	17.31	18.17	19.22	25.86	26.70	26.69	27.55	28.60
	8H	16.55	17.35	17.39	18.21	19.27	25.87	26.68	26.71	27.54	28.59
	12H	16.58	17.35	17.43	18.20	19.29	25.85	26.62	26.70	27.47	28.55
4H	2H	19.62	20.54	20.45	21.37	22.41	24.40	25.32	25.23	26.15	27.19
	3H	20.58	21.34	21.41	22.21	23.26	26.25	27.01	27.09	27.88	28.94
	4H	20.87	21.56	21.72	22.43	23.51	26.50	27.19	27.35	28.06	29.14
	6H	21.01	21.61	21.88	22.50	23.59	26.66	27.26	27.52	28.15	29.23
	8H	21.04	21.60	21.91	22.48	23.59	26.69	27.25	27.56	28.13	29.23
	12H	21.04	21.55	21.93	22.45	23.56	26.67	27.17	27.56	28.08	29.19
8H	4H	22.06	22.62	22.93	23.51	24.61	26.63	27.19	27.50	28.08	29.18
	6H	22.31	22.77	23.21	23.70	24.80	26.85	27.31	27.75	28.24	29.34
	8H	22.38	22.79	23.29	23.71	24.83	26.91	27.32	27.82	28.24	29.36
	12H	22.42	22.78	23.33	23.69	24.86	26.92	27.28	27.83	28.19	29.36
12H	4H	22.09	22.60	22.98	23.50	24.61	26.60	27.10	27.49	28.00	29.11
	6H	22.41	22.82	23.32	23.74	24.86	26.83	27.25	27.74	28.16	29.28
	8H	22.52	22.88	23.43	23.79	24.97	26.91	27.27	27.83	28.18	29.36