

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: P853838

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

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853838  
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-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

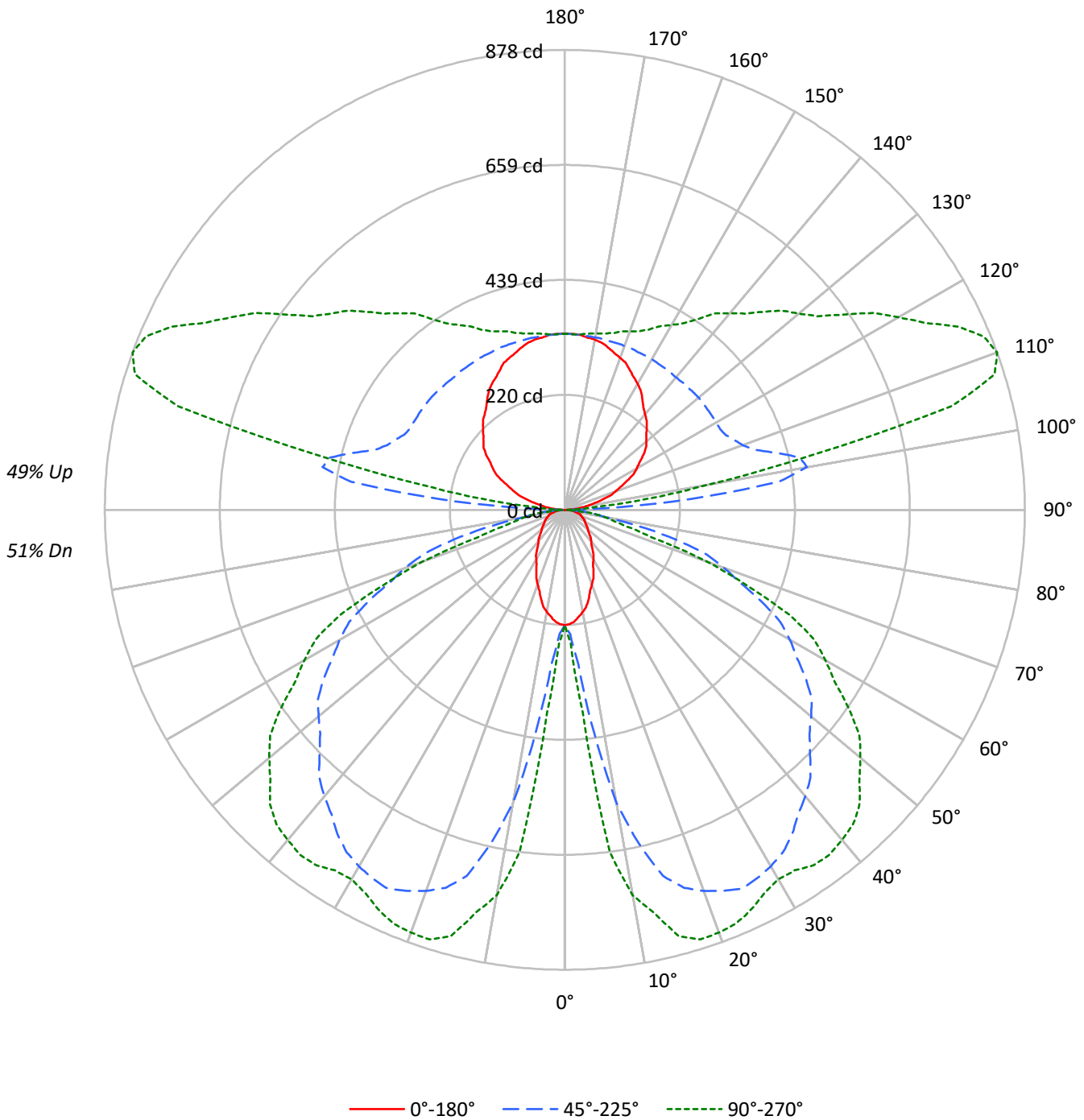
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4263.2 lumens  
Efficiency: N/A  
Efficacy: 130.8 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: General Diffuse  
  
Input Watts (W): 32.6  
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51																
1	98	93	89	86	90	86	83	80	73	71	69	61	60	58	50	49	48	43																
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	44	42	40	35																
3	81	71	63	57	74	66	59	54	56	51	47	47	43	40	38	36	33	29																
4	73	62	54	48	67	58	51	45	49	44	39	41	37	34	34	31	28	24																
5	67	55	47	41	62	51	44	38	44	38	33	37	32	29	30	27	24	21																
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18																
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	24	21	18	16																
8	53	40	32	26	48	37	30	25	32	26	22	27	22	19	22	19	16	14																
9	49	36	29	23	45	34	27	22	29	23	19	25	20	17	20	17	14	12																
10	45	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11																

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

	0°	45°	90°
0°	3552	3552	3552
5°	3464	4801	6292
10°	3243	9296	12244
15°	2935	12094	14091
20°	2600	13304	14758
25°	2298	14227	15000
30°	2032	14652	15185
35°	1813	14907	16324
40°	1650	15049	17344
45°	1521	15120	18162
50°	1434	15410	18492
55°	1399	15812	18641
60°	1434	16020	18548
65°	1494	15801	18025
70°	1548	15281	13633
75°	1716	13724	7523
80°	1767	7085	6983
85°	1760	4891	2946

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 18807 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.9	0.9
10°-20°	168.3	3.9
20°-30°	296.0	6.9
30°-40°	383.2	9.0
40°-50°	422.6	9.9
50°-60°	394.6	9.3
60°-70°	305.0	7.2
70°-80°	140.7	3.3
80°-90°	27.3	0.6
90°-100°	134.0	3.1
100°-110°	424.9	10.0
110°-120°	416.6	9.8
120°-130°	339.0	8.0
130°-140°	276.4	6.5
140°-150°	215.5	5.1
150°-160°	155.3	3.6
160°-170°	94.9	2.2
170°-180°	32.0	0.8
0°-30°	501.2	11.8
0°-40°	884.3	20.7
0°-60°	1701.6	39.9
0°-90°	2174.5	51.0
90°-120°	975.5	22.9
90°-150°	1806.5	42.4
90°-180°	2089.0	49.0
0°-180°	4263.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	220	220	220	220	220	
5°	214	245	296	361	388	20
15°	176	346	724	810	843	49
25°	129	465	799	834	842	59
35°	92	449	756	783	828	58
45°	67	344	662	760	795	52
55°	50	205	562	646	662	45
65°	39	116	414	464	472	38
75°	28	71	220	118	121	28
85°	10	21	26	18	16	10
90°	0	1	3	3	3	1
95°	18	54	243	90	58	21
105°	74	104	419	798	765	78
115°	132	157	338	703	827	131
125°	183	205	333	551	649	163
135°	221	243	331	474	534	171
145°	258	278	331	409	445	162
155°	294	304	332	365	380	136
165°	320	324	333	346	349	90
175°	335	334	335	337	336	32
180°	336	336	336	336	336	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	220.0	220.0	220.0	220.0	220.0
2.5°	218.3	227.4	237.8	249.7	254.7
5°	213.7	244.7	296.2	361.3	388.2
7.5°	205.4	268.5	430.7	605.0	658.8
10°	197.8	285.7	567.0	717.8	746.8
12.5°	189.3	308.7	652.4	758.5	788.3
15°	175.6	346.2	723.5	809.9	843.0
17.5°	161.4	388.5	756.5	841.8	859.8
20°	151.3	418.1	774.3	847.5	858.9
22.5°	142.0	440.2	787.0	842.5	854.7
25°	129.0	465.2	798.6	833.7	842.0
27.5°	116.6	471.7	793.5	816.6	824.6
30°	109.0	469.9	785.9	803.1	814.5
32.5°	102.2	464.8	774.9	791.6	816.2
35°	92.0	448.8	756.3	782.7	828.2
37.5°	83.4	423.2	731.8	785.9	829.7
40°	78.3	404.1	714.0	785.7	822.9
42.5°	73.2	381.6	693.7	777.3	814.5
45°	66.6	343.8	662.2	760.3	795.4
47.5°	60.5	301.3	633.0	736.8	762.4
50°	57.1	272.2	613.5	715.5	736.2
52.5°	53.7	244.0	594.0	690.1	709.1
55°	49.7	204.9	561.7	645.6	662.2
57.5°	46.1	171.3	524.9	596.5	609.9
60°	44.4	153.0	496.1	560.9	574.4
62.5°	41.9	136.4	463.9	523.7	536.3
65°	39.1	115.7	413.6	463.5	471.8
67.5°	35.3	100.3	360.1	390.6	375.1
70°	32.8	92.8	323.7	333.2	288.8
72.5°	31.1	84.5	283.9	258.7	174.5
75°	27.5	70.9	220.0	118.5	120.6
77.5°	22.4	54.9	144.7	91.0	92.9
80°	19.0	44.9	76.2	74.1	75.1
82.5°	15.7	34.9	52.5	54.5	53.1
85°	9.5	20.9	26.4	17.9	15.9
87.5°	3.4	7.7	4.9	4.9	4.9
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.5	75.1	25.0	17.6
95°	18.0	54.2	243.3	90.2	58.2
97.5°	33.4	70.2	412.1	257.5	158.0
100°	44.4	79.6	469.6	428.1	278.2
102.5°	56.3	89.8	459.5	628.7	481.2
105°	74.0	104.0	418.8	797.8	764.7
107.5°	91.8	119.5	380.1	815.4	860.1
110°	103.7	130.5	360.7	795.1	877.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	115.5	140.7	349.7	760.1	865.2
115°	132.2	157.0	338.5	703.0	827.1
117.5°	148.5	172.1	334.0	648.0	773.2
120°	158.7	181.4	333.2	614.1	735.1
122.5°	168.8	190.7	333.2	586.8	699.5
125°	183.0	204.7	333.2	551.2	649.4
127.5°	195.5	216.3	333.2	523.5	607.3
130°	203.1	224.8	333.2	507.3	582.8
132.5°	210.7	232.4	332.3	494.4	562.5
135°	221.1	242.8	331.1	474.1	534.1
137.5°	231.2	254.0	330.8	454.7	508.3
140°	238.0	260.7	330.0	441.1	489.7
142.5°	246.4	268.4	330.8	427.5	472.8
145°	258.1	277.7	331.1	409.1	445.3
147.5°	269.7	286.5	331.3	392.9	422.4
150°	278.2	291.6	332.1	383.4	407.2
152.5°	284.9	296.7	332.1	375.7	395.4
155°	294.0	304.4	332.1	365.2	379.7
157.5°	303.8	310.8	333.2	358.8	368.7
160°	308.8	315.0	333.2	354.5	362.8
162.5°	313.9	318.5	333.2	351.1	356.9
165°	320.5	323.6	333.2	345.9	349.0
167.5°	326.6	327.4	334.2	342.3	345.0
170°	330.0	330.0	334.2	340.6	341.6
172.5°	331.7	332.5	334.2	338.9	339.1
175°	335.3	334.2	335.3	337.4	336.3
177.5°	336.3	335.5	335.5	337.1	335.5
180°	336.3	336.3	336.3	336.3	336.3

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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	11.56	12.46	12.50	13.42	14.67	20.30	21.19	21.24	22.16	23.41
	3H	12.29	13.10	13.25	14.07	15.35	21.92	22.73	22.88	23.70	24.98
	4H	12.59	13.36	13.56	14.33	15.62	22.10	22.87	23.07	23.84	25.13
	6H	12.81	13.52	13.79	14.50	15.80	22.19	22.89	23.17	23.88	25.17
	8H	12.87	13.54	13.86	14.54	15.84	22.20	22.87	23.18	23.86	25.16
	12H	12.90	13.54	13.89	14.53	15.85	22.17	22.81	23.16	23.80	25.12
4H	2H	15.96	16.72	16.94	17.70	18.99	20.74	21.51	21.72	22.48	23.77
	3H	16.90	17.54	17.88	18.54	19.84	22.57	23.21	23.56	24.21	25.51
	4H	17.18	17.76	18.18	18.76	20.09	22.81	23.39	23.81	24.39	25.72
	6H	17.32	17.82	18.32	18.84	20.16	22.96	23.46	23.97	24.48	25.80
	8H	17.34	17.81	18.35	18.82	20.16	22.99	23.45	23.99	24.47	25.81
	12H	17.33	17.75	18.36	18.79	20.13	22.96	23.38	23.99	24.41	25.76
8H	4H	18.36	18.83	19.37	19.85	21.18	22.93	23.40	23.94	24.42	25.75
	6H	18.60	18.99	19.63	20.04	21.38	23.14	23.53	24.17	24.58	25.92
	8H	18.67	19.01	19.71	20.06	21.41	23.20	23.54	24.24	24.58	25.94
	12H	18.70	19.00	19.75	20.04	21.43	23.20	23.49	24.24	24.53	25.93
12H	4H	18.38	18.80	19.41	19.83	21.18	22.89	23.31	23.91	24.34	25.68
	6H	18.70	19.04	19.74	20.08	21.43	23.12	23.46	24.16	24.51	25.86
	8H	18.80	19.10	19.85	20.14	21.53	23.19	23.49	24.24	24.53	25.93