

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: P855571

Luminaire Tested: SQ2-F-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

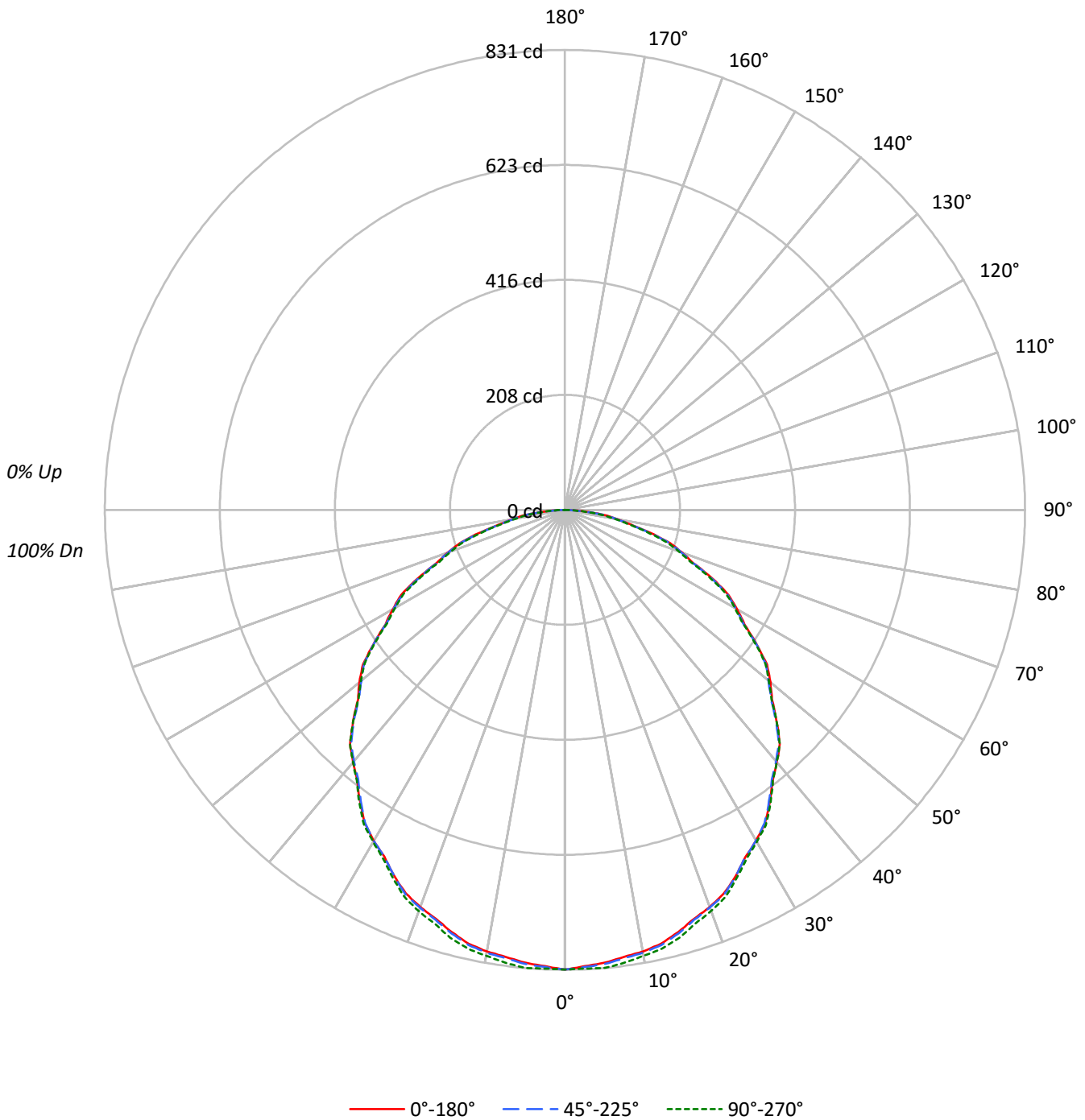
Test Method: LM-79-2019  
Report Number: P855571  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-F-050D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2331.8 lumens  
Efficiency: N/A  
Efficacy: 131.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.8  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84				
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70				
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59				
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	57	52	50				
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43				
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38				
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33				
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30				
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27				
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24				

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

	0°	45°	90°
0°	13411	13411	13411
5°	13316	13353	13462
10°	13285	13321	13414
15°	13203	13242	13374
20°	13125	13144	13261
25°	13003	13003	13083
30°	12870	12870	12913
35°	12713	12670	12759
40°	12547	12499	12547
45°	12351	12300	12351
50°	12167	12052	12082
55°	11882	11851	11786
60°	11583	11512	11438
65°	11240	11110	10980
70°	10579	10523	10310
75°	9956	9744	9457
80°	8842	8629	8312
85°	7132	6502	6076

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 12426 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.5	3.4
10°-20°	224.4	9.6
20°-30°	337.5	14.5
30°-40°	403.9	17.3
40°-50°	416.7	17.9
50°-60°	375.9	16.1
60°-70°	286.9	12.3
70°-80°	164.9	7.1
80°-90°	43.0	1.8
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°	640.4	27.5
0°-40°	1044.3	44.8
0°-60°	1836.9	78.8
0°-90°	2331.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2331.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	822	833	824	825	831	78
15°	790	800	792	796	800	223
25°	730	738	730	731	734	336
35°	645	650	643	645	647	403
45°	541	544	539	540	541	417
55°	422	424	421	419	419	377
65°	294	293	291	289	287	289
75°	160	158	156	153	152	168
85°	38	36	35	32	33	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	830.6	830.6	830.6	830.6	830.6
2.5°	825.2	834.9	827.0	828.8	829.7
5°	821.6	832.7	823.9	825.1	830.6
7.5°	814.8	826.8	817.1	819.2	825.4
10°	810.3	821.4	812.5	813.8	818.2
12.5°	803.0	814.1	805.3	807.4	811.9
15°	789.9	799.9	792.2	795.7	800.1
17.5°	774.7	785.4	776.8	779.8	783.6
20°	763.9	772.7	765.0	766.2	771.8
22.5°	750.3	759.1	752.3	752.7	757.3
25°	729.9	737.6	729.9	731.2	734.4
27.5°	706.6	713.3	706.6	707.9	710.7
30°	690.3	697.0	690.3	691.4	692.6
32.5°	672.2	678.0	671.3	672.5	675.4
35°	645.0	649.5	642.8	645.0	647.3
37.5°	616.1	619.4	613.8	614.9	617.0
40°	595.3	598.5	593.0	594.1	595.3
42.5°	574.4	576.9	571.3	572.4	574.4
45°	540.9	544.2	538.7	539.8	540.9
47.5°	507.0	509.0	504.3	503.4	505.4
50°	484.4	485.5	479.8	479.8	481.0
52.5°	459.9	461.0	457.2	455.4	456.5
55°	422.1	424.4	421.0	418.7	418.7
57.5°	384.1	386.1	381.8	380.7	380.5
60°	358.7	359.9	356.5	355.3	354.2
62.5°	333.4	333.6	330.2	329.1	328.0
65°	294.2	293.1	290.8	288.6	287.4
67.5°	250.3	251.5	249.2	245.6	245.6
70°	224.1	225.2	222.9	218.4	218.4
72.5°	198.7	198.0	196.7	193.1	191.3
75°	159.6	158.4	156.2	152.8	151.6
77.5°	120.4	119.3	118.1	113.8	114.8
80°	95.1	93.9	92.8	89.4	89.4
82.5°	72.4	70.4	69.3	65.9	65.9
85°	38.5	36.2	35.1	31.7	32.8
87.5°	10.9	10.0	9.1	7.2	7.2
90°	0.0	0.0	0.0	0.0	0.0

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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	20.79	22.43	21.15	22.74	23.06	20.71	22.35	21.07	22.66	22.98
	3H	22.62	24.10	22.99	24.43	24.79	22.50	23.98	22.87	24.31	24.67
	4H	23.31	24.71	23.71	25.06	25.43	23.16	24.56	23.55	24.90	25.28
	6H	23.82	25.11	24.23	25.48	25.87	23.63	24.93	24.04	25.29	25.68
	8H	23.98	25.22	24.40	25.61	26.00	23.77	25.01	24.20	25.40	25.80
	12H	24.08	25.26	24.51	25.65	26.07	23.85	25.04	24.28	25.42	25.85
4H	2H	21.42	22.82	21.82	23.17	23.54	21.36	22.76	21.76	23.11	23.48
	3H	23.48	24.65	23.88	25.05	25.45	23.37	24.54	23.78	24.94	25.34
	4H	24.30	25.36	24.73	25.77	26.21	24.15	25.22	24.58	25.63	26.06
	6H	24.93	25.86	25.38	26.30	26.75	24.75	25.68	25.20	26.12	26.57
	8H	25.14	26.00	25.59	26.45	26.91	24.93	25.80	25.39	26.24	26.71
	12H	25.27	26.06	25.75	26.53	27.00	25.05	25.83	25.53	26.30	26.77
8H	4H	24.61	25.47	25.06	25.92	26.38	24.48	25.35	24.94	25.79	26.25
	6H	25.36	26.08	25.85	26.57	27.04	25.19	25.91	25.68	26.40	26.87
	8H	25.63	26.28	26.14	26.79	27.27	25.44	26.09	25.95	26.59	27.08
	12H	25.84	26.41	26.34	26.90	27.46	25.61	26.18	26.11	26.67	27.23
12H	4H	24.64	25.42	25.12	25.89	26.36	24.51	25.30	24.99	25.77	26.24
	6H	25.41	26.06	25.91	26.56	27.05	25.25	25.90	25.76	26.40	26.89
	8H	25.74	26.31	26.24	26.80	27.36	25.55	26.12	26.06	26.61	27.17