

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: P853787

Luminaire Tested: SQ2-FA-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

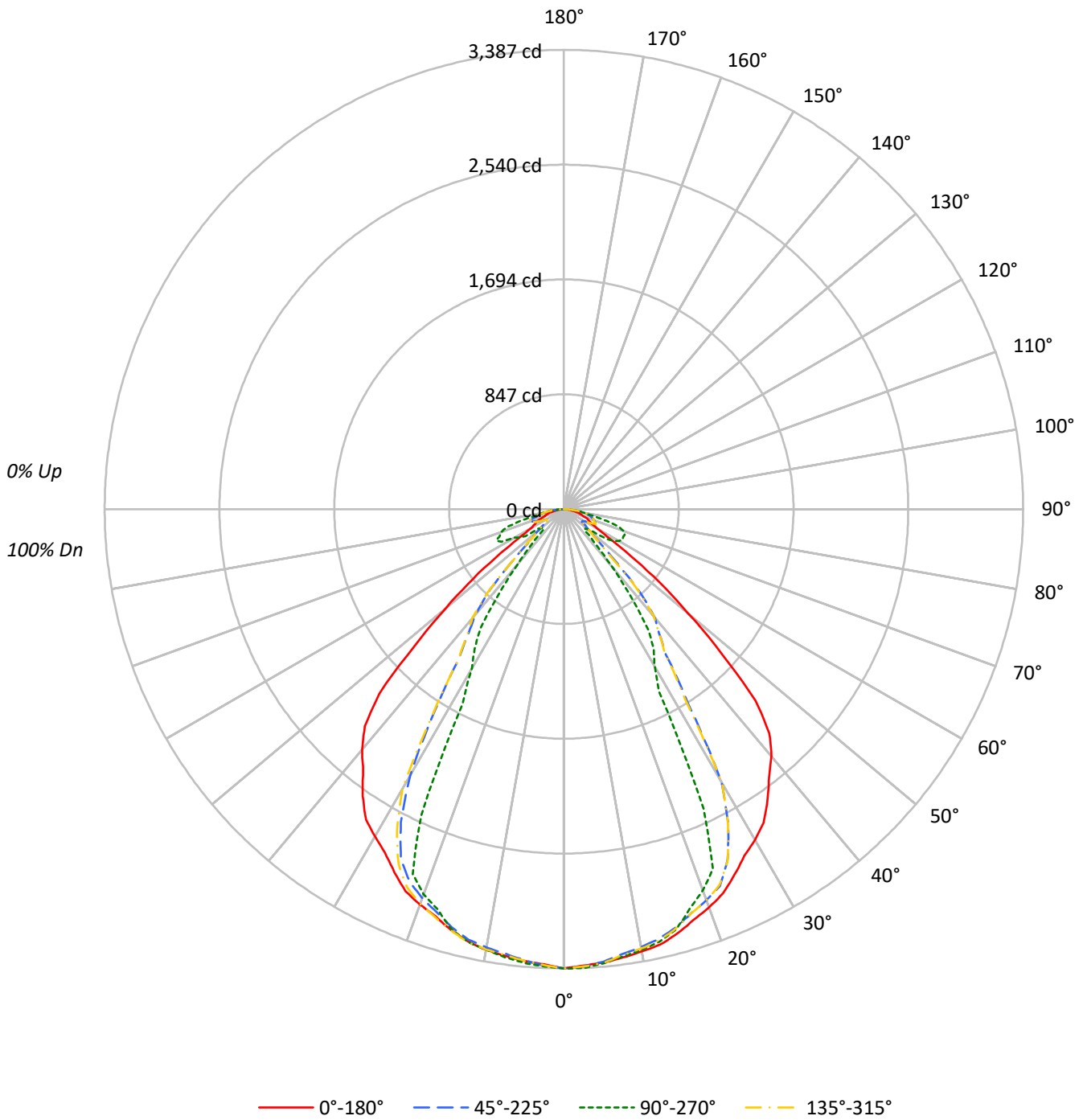
Test Method: LM-79-2019  
Report Number: P853787  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-125D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4946.9 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 49.2  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63				63
5	84	74	66	61	82	73	66	60	71	65	60	69	64	59	67	62	59	57				57
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52				52
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48				48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44				44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41				41
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38				38

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

	0°	90°	180°	270°
0°	54692	54692	54692	54692
5°	54404	54486	54196	54446
10°	54321	54111	54111	54111
15°	54145	53590	53717	53590
20°	53725	51441	53330	51924
25°	53019	43417	52654	44325
30°	52532	24908	51960	25242
35°	51610	21400	50955	21098
40°	50182	11253	48780	11145
45°	45615	4841	43980	4841
50°	30094	5840	28555	5453
55°	16828	10787	15964	9779
60°	9074	15177	8909	13611
65°	8004	18445	8393	20982
70°	7478	22069	7114	23273
75°	7012	18964	7174	19601
80°	5941	13538	5941	14254
85°	5206	7577	4724	8985

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 45615 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	318.8	6.4
10°-20°	904.3	18.3
20°-30°	1233.1	24.9
30°-40°	1036.2	20.9
40°-50°	588.5	11.9
50°-60°	312.3	6.3
60°-70°	287.5	5.8
70°-80°	211.1	4.3
80°-90°	55.1	1.1
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°	2456.2	49.7
0°-40°	3492.4	70.6
0°-60°	4393.2	88.8
0°-90°	4946.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4946.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3387	3387	3387	3387	3387	
5°	3357	3362	3344	3359	3357	319
15°	3239	3206	3214	3206	3239	913
25°	2976	2437	2956	2488	2976	1372
35°	2618	1086	2585	1070	2618	1635
45°	1998	212	1926	212	1998	1461
55°	598	383	567	347	598	576
65°	210	483	220	549	210	210
75°	112	304	115	314	112	116
85°	28	41	26	48	28	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4
2.5°	3369.0	3418.9	3375.1	3369.4	3387.4	3383.4	3377.1	3400.7	3360.8	3400.7	3369.0
5°	3356.7	3414.1	3349.0	3331.8	3361.8	3341.8	3359.3	3393.9	3343.9	3388.9	3338.8
7.5°	3335.7	3386.7	3308.7	3297.6	3327.1	3309.6	3316.8	3364.9	3323.0	3352.4	3307.1
10°	3313.3	3358.2	3280.1	3273.0	3300.5	3283.0	3290.3	3340.5	3300.5	3328.0	3282.6
12.5°	3288.7	3323.7	3245.3	3242.3	3265.8	3254.3	3257.6	3299.8	3267.8	3295.3	3252.0
15°	3239.2	3271.7	3193.2	3181.0	3206.0	3196.0	3200.9	3238.6	3213.6	3231.1	3193.2
17.5°	3177.9	3203.9	3125.8	3089.0	3090.0	3102.5	3125.8	3171.2	3148.8	3171.7	3118.1
20°	3126.8	3156.8	3070.6	2998.9	2993.9	3006.4	3070.6	3116.3	3103.8	3128.8	3052.7
22.5°	3067.5	3087.5	3009.3	2888.3	2871.3	2883.8	3001.1	3055.2	3050.7	3067.6	2973.0
25°	2976.1	2996.0	2853.4	2679.3	2437.1	2664.4	2858.6	2955.6	2955.6	2970.6	2845.8
27.5°	2883.1	2883.6	2625.6	1720.7	1517.9	1658.8	2622.0	2832.5	2856.5	2849.0	2603.6
30°	2817.7	2800.2	2327.2	1391.0	1336.0	1371.0	2329.8	2747.1	2787.0	2759.6	2268.5
32.5°	2742.1	2692.6	1718.2	1278.8	1233.9	1264.8	1661.5	2645.6	2715.5	2656.1	1784.1
35°	2618.4	2488.5	1310.5	1130.6	1085.7	1125.7	1300.3	2445.3	2585.2	2425.4	1353.9
37.5°	2485.1	1978.0	1153.6	900.6	803.7	881.1	1148.0	1956.8	2430.9	1911.4	1152.6
40°	2380.9	1554.1	1037.2	658.8	533.9	621.3	1029.5	1482.7	2314.4	1595.1	1011.6
42.5°	2241.9	1365.2	832.8	418.4	327.5	382.9	798.6	1333.6	2171.4	1382.1	805.2
45°	1997.7	1173.4	493.0	229.5	212.0	222.0	454.7	1151.8	1926.1	1126.8	503.2
47.5°	1582.3	894.9	316.8	195.1	214.1	195.1	307.1	866.5	1494.4	865.0	316.3
50°	1198.1	698.5	245.2	197.5	232.5	197.5	237.6	674.7	1136.8	737.1	242.7
52.5°	887.5	583.7	200.3	216.5	279.5	220.5	194.7	568.2	842.5	594.7	189.5
55°	597.8	457.9	160.9	285.8	383.2	293.3	160.9	444.7	567.1	439.7	155.8
57.5°	379.1	340.6	163.0	367.4	437.3	374.4	165.5	328.3	363.8	329.8	143.1
60°	281.0	268.5	181.4	390.1	470.0	395.1	183.9	258.4	275.9	255.9	153.3
62.5°	232.0	211.5	218.2	422.5	488.4	411.5	222.8	201.7	241.2	193.2	169.6
65°	209.5	137.0	258.0	427.9	482.8	427.9	260.6	129.8	219.7	139.8	229.9
67.5°	189.0	101.6	249.3	424.9	485.9	425.9	243.2	96.9	181.4	94.5	235.0
70°	158.4	90.9	235.0	432.5	467.5	417.5	235.0	88.3	150.7	85.8	275.9
72.5°	131.8	86.4	218.7	399.4	414.4	384.4	220.7	85.9	132.3	77.4	259.5
75°	112.4	84.9	209.5	319.0	304.0	304.0	204.4	82.5	115.0	77.5	201.8
77.5°	84.3	75.3	173.7	208.2	196.7	196.7	170.6	72.7	80.2	68.2	164.0
80°	63.9	68.9	143.1	153.1	145.6	145.6	137.9	66.4	63.9	63.9	135.4
82.5°	49.6	58.6	110.4	112.3	106.8	104.8	107.3	58.1	49.6	53.6	104.7
85°	28.1	40.6	58.8	48.4	40.9	38.4	56.2	38.0	25.5	38.0	56.2
87.5°	10.2	18.2	8.2	8.2	8.2	8.2	8.2	18.2	10.2	16.2	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3387.4	3387.4	3387.4	3387.4	3387.4	3387.4
2.5°	3361.1	3375.1	3375.1	3366.9	3406.9	3369.0
5°	3326.8	3359.3	3344.3	3343.9	3394.2	3356.7
7.5°	3302.7	3333.2	3319.2	3316.3	3365.7	3335.7
10°	3278.0	3300.5	3290.5	3297.9	3343.2	3313.3
12.5°	3243.4	3269.8	3259.8	3271.4	3312.7	3288.7
15°	3183.5	3206.0	3211.0	3216.2	3264.2	3239.2
17.5°	3084.6	3095.6	3120.6	3155.9	3205.9	3177.9
20°	3007.1	3022.0	3037.0	3098.7	3156.8	3126.8
22.5°	2918.7	2913.7	2948.7	3021.0	3093.5	3067.5
25°	2680.5	2488.1	2700.5	2886.7	2983.6	2976.1
27.5°	1866.4	1619.6	1837.9	2664.4	2868.1	2883.1
30°	1468.8	1353.9	1466.3	2378.3	2782.7	2817.7
32.5°	1304.1	1225.2	1293.6	1810.2	2675.1	2742.1
35°	1125.3	1070.4	1125.3	1353.9	2463.6	2618.4
37.5°	900.7	788.3	898.7	1170.0	1991.5	2485.1
40°	671.2	528.8	651.2	1047.4	1591.5	2380.9
42.5°	447.2	340.8	423.2	824.6	1376.6	2241.9
45°	242.0	212.0	232.0	498.1	1123.4	1997.7
47.5°	189.8	200.8	189.8	314.2	859.4	1582.3
50°	182.2	217.1	182.2	242.7	711.0	1198.1
52.5°	198.6	235.5	196.6	191.6	580.2	887.5
55°	225.0	347.4	227.5	155.8	425.4	597.8
57.5°	320.4	390.8	323.9	147.7	327.6	379.1
60°	329.1	421.5	326.6	155.8	253.5	281.0
62.5°	389.3	521.6	388.8	178.3	188.5	232.0
65°	499.3	549.2	504.3	227.4	134.5	209.5
67.5°	473.9	509.4	468.9	243.7	92.6	189.0
70°	465.6	493.0	460.6	278.4	85.9	158.4
72.5°	434.4	437.9	425.4	258.0	77.4	131.8
75°	336.7	314.2	324.2	222.2	77.4	112.4
77.5°	209.3	200.3	201.8	169.6	68.3	84.3
80°	158.3	153.3	150.8	143.1	63.9	63.9
82.5°	117.4	112.4	109.9	110.4	53.6	49.6
85°	53.5	48.5	46.0	63.9	38.1	28.1
87.5°	10.2	10.2	8.2	10.2	14.2	10.2
90°	0.0	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	17.90	19.21	18.27	19.53	19.84	16.76	18.07	17.13	18.38	18.70
	3H	18.63	19.80	19.01	20.13	20.50	22.94	24.11	23.32	24.44	24.80
	4H	19.06	20.15	19.46	20.50	20.89	24.23	25.33	24.63	25.68	26.06
	6H	19.43	20.44	19.84	20.81	21.20	24.85	25.87	25.27	26.24	26.63
	8H	19.56	20.52	19.99	20.91	21.31	24.99	25.95	25.42	26.34	26.74
	12H	19.64	20.56	20.07	20.94	21.37	25.04	25.96	25.47	26.34	26.77
4H	2H	18.34	19.44	18.74	19.79	20.17	17.33	18.43	17.74	18.78	19.17
	3H	19.36	20.28	19.78	20.68	21.08	23.69	24.60	24.10	25.00	25.41
	4H	19.94	20.76	20.37	21.18	21.62	25.15	25.97	25.58	26.39	26.83
	6H	20.43	21.14	20.89	21.59	22.05	25.90	26.62	26.37	27.06	27.53
	8H	20.61	21.27	21.08	21.72	22.19	26.08	26.74	26.54	27.19	27.66
	12H	20.74	21.33	21.23	21.81	22.29	26.16	26.75	26.64	27.23	27.70
8H	4H	21.06	21.73	21.53	22.17	22.64	25.30	25.96	25.76	26.41	26.88
	6H	21.68	22.23	22.18	22.72	23.20	26.19	26.73	26.69	27.23	27.71
	8H	21.91	22.40	22.44	22.92	23.41	26.43	26.92	26.96	27.44	27.93
	12H	22.11	22.53	22.62	23.03	23.60	26.58	27.00	27.09	27.50	28.07
12H	4H	21.23	21.82	21.71	22.30	22.77	25.28	25.87	25.76	26.35	26.82
	6H	21.95	22.44	22.47	22.96	23.45	26.19	26.68	26.71	27.20	27.69
	8H	22.28	22.70	22.79	23.20	23.77	26.50	26.92	27.01	27.42	27.99