

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: P855552

Luminaire Tested: SQ2-FA-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

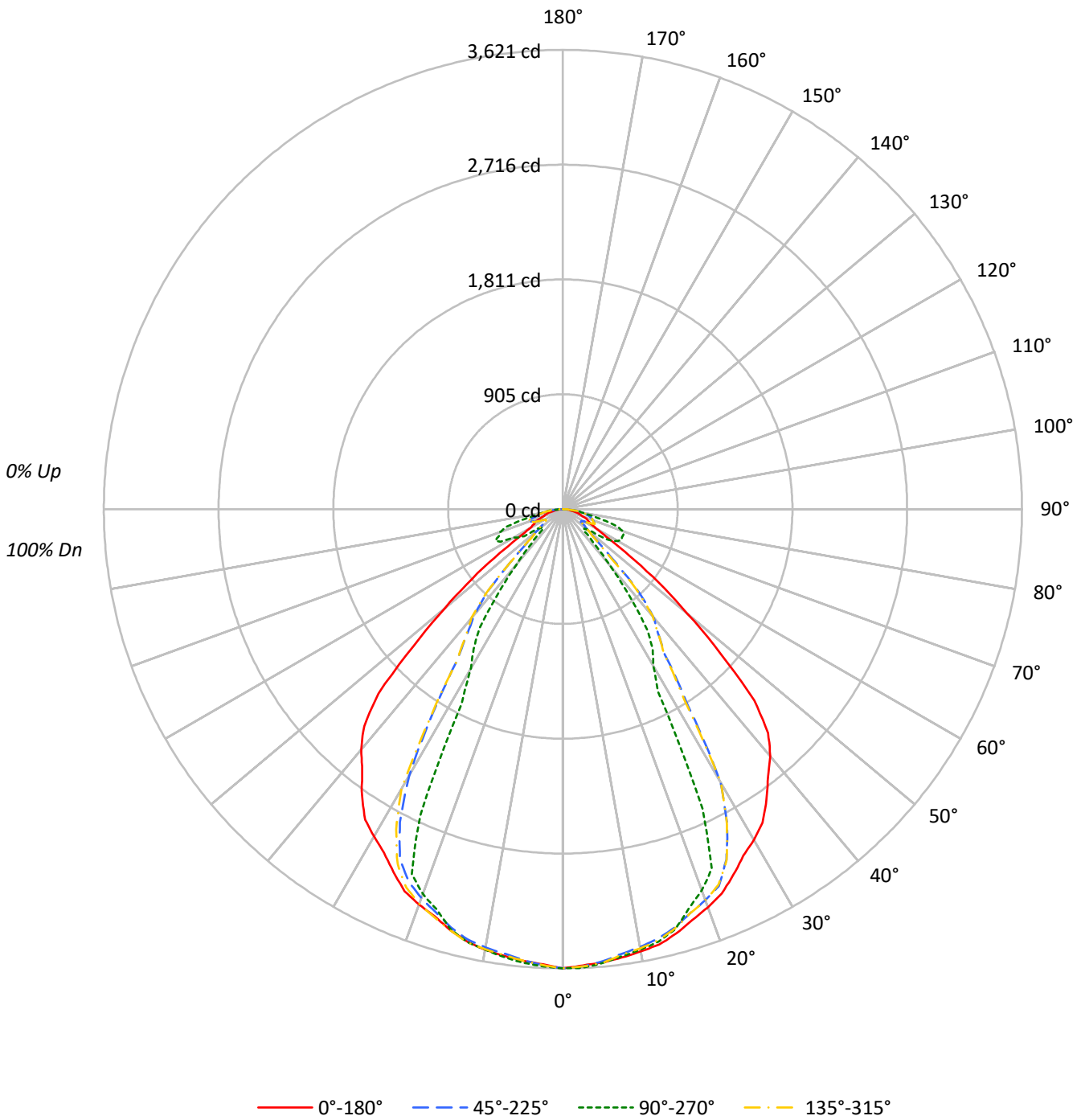
Test Method: LM-79-2019  
Report Number: P855552  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-125D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5287.7 lumens  
Efficiency: N/A  
Efficacy: 107.5 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





TEST NUMBER: P85552

CATALOG NUMBER: SQ2-FA-125D-830-UNV-STD-W-4

**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°	58461	58461	58461	58461
5°	58153	58240	57931	58196
10°	58063	57838	57838	57838
15°	57875	57282	57417	57282
20°	57426	54986	57003	55501
25°	56671	46408	56281	47381
30°	56151	26625	55539	26981
35°	55166	22874	54466	22551
40°	53639	12026	52140	11913
45°	48757	5174	47012	5174
50°	32169	6242	30521	5830
55°	17985	11530	17061	10452
60°	9700	16227	9523	14551
65°	8554	19713	8970	22426
70°	7992	23589	7605	24878
75°	7498	20268	7667	20954
80°	6351	14477	6351	15230
85°	5576	8077	5076	9615

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 48757 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	340.7	6.4
10°-20°	966.7	18.3
20°-30°	1318.0	24.9
30°-40°	1107.6	20.9
40°-50°	629.1	11.9
50°-60°	333.8	6.3
60°-70°	307.3	5.8
70°-80°	225.6	4.3
80°-90°	58.9	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°	2625.4	49.7
0°-40°	3733.0	70.6
0°-60°	4695.8	88.8
0°-90°	5287.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5287.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3621	3621	3621	3621	3621	
5°	3588	3593	3574	3591	3588	341
15°	3462	3427	3435	3427	3462	976
25°	3181	2605	3159	2660	3181	1467
35°	2799	1160	2763	1144	2799	1747
45°	2135	227	2059	227	2135	1561
55°	639	410	606	371	639	615
65°	224	516	235	587	224	225
75°	120	325	123	336	120	124
85°	30	44	27	52	30	35
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°	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8
2.5°	3601.1	3654.5	3607.7	3601.6	3620.8	3616.5	3609.8	3635.0	3592.3	3635.0	3601.1
5°	3588.0	3649.4	3579.7	3561.4	3593.4	3572.0	3590.7	3627.7	3574.3	3622.4	3568.9
7.5°	3565.6	3620.0	3536.7	3524.8	3556.3	3537.6	3545.4	3596.8	3551.9	3583.5	3535.0
10°	3541.5	3589.6	3506.0	3498.5	3527.8	3509.2	3517.0	3570.6	3527.8	3557.2	3508.7
12.5°	3515.3	3552.7	3468.9	3465.6	3490.7	3478.4	3482.0	3527.2	3492.9	3522.3	3476.0
15°	3462.4	3497.1	3413.2	3400.2	3426.9	3416.1	3421.4	3461.8	3435.0	3453.8	3413.2
17.5°	3396.8	3424.6	3341.2	3301.8	3302.8	3316.3	3341.2	3389.7	3365.7	3390.2	3332.9
20°	3342.2	3374.3	3282.1	3205.6	3200.2	3213.5	3282.1	3331.0	3317.6	3344.3	3263.0
22.5°	3278.9	3300.2	3216.6	3087.3	3069.1	3082.5	3207.9	3265.6	3260.9	3279.0	3177.8
25°	3181.1	3202.4	3050.0	2863.9	2605.0	2847.9	3055.4	3159.2	3159.2	3175.3	3041.9
27.5°	3081.7	3082.2	2806.5	1839.3	1622.5	1773.1	2802.6	3027.6	3053.3	3045.3	2783.0
30°	3011.8	2993.2	2487.5	1486.8	1428.1	1465.4	2490.2	2936.3	2979.0	2949.6	2424.8
32.5°	2931.0	2878.2	1836.6	1366.9	1318.9	1352.0	1776.0	2827.9	2902.6	2839.0	1907.1
35°	2798.8	2660.0	1400.8	1208.5	1160.5	1203.2	1389.9	2613.8	2763.3	2592.5	1447.2
37.5°	2656.3	2114.3	1233.1	962.6	859.1	941.8	1227.1	2091.7	2598.4	2043.1	1232.1
40°	2544.9	1661.1	1108.6	704.2	570.6	664.1	1100.5	1584.8	2473.8	1705.0	1081.3
42.5°	2396.4	1459.2	890.2	447.3	350.0	409.3	853.5	1425.5	2321.0	1477.3	860.6
45°	2135.3	1254.2	527.0	245.3	226.6	237.3	486.1	1231.2	2058.9	1204.5	538.0
47.5°	1691.3	956.5	338.6	208.5	228.8	208.5	328.2	926.2	1597.4	924.5	338.1
50°	1280.7	746.7	262.1	211.1	248.5	211.1	253.9	721.1	1215.1	787.9	259.4
52.5°	948.6	623.9	214.0	231.4	298.7	235.7	208.0	607.4	900.6	635.6	202.6
55°	638.9	489.5	172.0	305.5	409.6	313.4	172.0	475.3	606.1	470.0	166.5
57.5°	405.2	364.1	174.2	392.7	467.5	400.2	176.9	351.0	388.8	352.5	152.9
60°	300.4	287.0	193.9	417.0	502.5	422.3	196.6	276.2	294.9	273.5	163.8
62.5°	248.0	226.0	233.1	451.6	522.1	439.8	238.1	215.6	257.8	206.5	181.4
65°	223.9	146.5	275.8	457.3	516.0	457.3	278.5	138.7	234.8	149.4	245.8
67.5°	202.0	108.7	266.5	454.2	519.3	455.3	259.9	103.7	193.9	101.0	251.2
70°	169.3	97.2	251.2	462.3	499.7	446.3	251.2	94.4	161.1	91.7	294.9
72.5°	140.9	92.3	233.7	426.9	442.9	410.9	236.0	91.8	141.4	82.7	277.5
75°	120.2	90.8	223.9	341.0	324.9	324.9	218.4	88.2	122.9	82.9	215.7
77.5°	90.1	80.5	185.7	222.5	210.3	210.3	182.4	77.7	85.7	72.9	175.2
80°	68.3	73.6	152.9	163.6	155.7	155.7	147.4	70.9	68.3	68.3	144.7
82.5°	53.0	62.6	117.9	120.0	114.1	112.0	114.6	62.1	53.0	57.2	111.9
85°	30.1	43.4	62.8	51.7	43.6	41.0	60.0	40.7	27.4	40.7	60.0
87.5°	11.0	19.4	8.7	8.7	8.7	8.7	8.7	19.4	11.0	17.3	11.0
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°	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8
2.5°	3592.6	3607.7	3607.7	3598.8	3641.7	3601.1
5°	3556.0	3590.7	3574.6	3574.3	3628.0	3588.0
7.5°	3530.3	3562.9	3547.8	3544.8	3597.6	3565.6
10°	3503.9	3527.8	3517.2	3525.1	3573.6	3541.5
12.5°	3466.8	3495.2	3484.4	3496.7	3540.9	3515.3
15°	3402.8	3426.9	3432.2	3437.8	3489.1	3462.4
17.5°	3297.2	3308.9	3335.6	3373.4	3426.8	3396.8
20°	3214.2	3230.2	3246.3	3312.2	3374.3	3342.2
22.5°	3119.8	3114.5	3151.9	3229.1	3306.7	3278.9
25°	2865.2	2659.6	2886.5	3085.5	3189.1	3181.1
27.5°	1994.9	1731.1	1964.5	2848.0	3065.7	3081.7
30°	1570.0	1447.2	1567.3	2542.1	2974.4	3011.8
32.5°	1394.0	1309.6	1382.8	1934.9	2859.4	2931.0
35°	1202.9	1144.1	1202.9	1447.2	2633.3	2798.8
37.5°	962.7	842.7	960.7	1250.6	2128.8	2656.3
40°	717.4	565.2	696.0	1119.6	1701.2	2544.9
42.5°	478.0	364.3	452.4	881.4	1471.5	2396.4
45°	258.7	226.6	248.0	532.4	1200.9	2135.3
47.5°	202.8	214.6	202.8	335.9	918.6	1691.3
50°	194.7	232.1	194.7	259.4	760.0	1280.7
52.5°	212.2	251.8	210.1	204.8	620.2	948.6
55°	240.5	371.3	243.2	166.5	454.7	638.9
57.5°	342.5	417.8	346.2	157.8	350.2	405.2
60°	351.7	450.6	349.1	166.5	271.0	300.4
62.5°	416.1	557.6	415.5	190.6	201.5	248.0
65°	533.7	587.0	539.0	243.0	143.8	223.9
67.5°	506.5	544.5	501.2	260.5	99.0	202.0
70°	497.6	527.0	492.3	297.6	91.9	169.3
72.5°	464.2	468.0	454.6	275.8	82.7	140.9
75°	359.9	335.9	346.5	237.5	82.8	120.2
77.5°	223.6	214.0	215.7	181.4	73.0	90.1
80°	169.1	163.8	161.1	152.9	68.3	68.3
82.5°	125.5	120.2	117.5	117.9	57.2	53.0
85°	57.2	51.9	49.2	68.3	40.7	30.1
87.5°	11.0	11.0	8.8	11.0	15.2	11.0
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	18.14	19.45	18.50	19.76	20.07	16.99	18.30	17.36	18.61	18.93
	3H	18.86	20.03	19.24	20.36	20.73	23.17	24.34	23.55	24.67	25.04
	4H	19.29	20.38	19.69	20.74	21.12	24.46	25.56	24.86	25.91	26.29
	6H	19.66	20.67	20.08	21.04	21.44	25.09	26.10	25.50	26.47	26.86
	8H	19.79	20.75	20.22	21.14	21.54	25.22	26.18	25.65	26.57	26.98
	12H	19.87	20.79	20.31	21.17	21.60	25.27	26.19	25.71	26.57	27.00
4H	2H	18.57	19.67	18.97	20.02	20.40	17.57	18.66	17.97	19.01	19.40
	3H	19.60	20.51	20.01	20.91	21.31	23.92	24.83	24.33	25.23	25.64
	4H	20.17	20.99	20.60	21.41	21.85	25.38	26.20	25.81	26.62	27.06
	6H	20.66	21.38	21.13	21.82	22.29	26.14	26.85	26.60	27.29	27.76
	8H	20.84	21.51	21.31	21.95	22.42	26.31	26.97	26.78	27.42	27.89
	12H	20.98	21.56	21.46	22.05	22.52	26.39	26.98	26.87	27.46	27.93
8H	4H	21.29	21.96	21.76	22.40	22.87	25.53	26.19	26.00	26.64	27.11
	6H	21.91	22.46	22.41	22.95	23.43	26.42	26.96	26.92	27.46	27.94
	8H	22.15	22.63	22.67	23.15	23.64	26.67	27.15	27.19	27.67	28.16
	12H	22.34	22.77	22.85	23.26	23.83	26.81	27.23	27.32	27.73	28.30
12H	4H	21.46	22.05	21.94	22.53	23.00	25.51	26.10	25.99	26.58	27.05
	6H	22.19	22.67	22.71	23.19	23.68	26.42	26.91	26.94	27.43	27.92
	8H	22.51	22.93	23.02	23.43	24.00	26.73	27.15	27.24	27.65	28.22