

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: P853847

Luminaire Tested: SQ2-FB-050U-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853847  
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-125D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

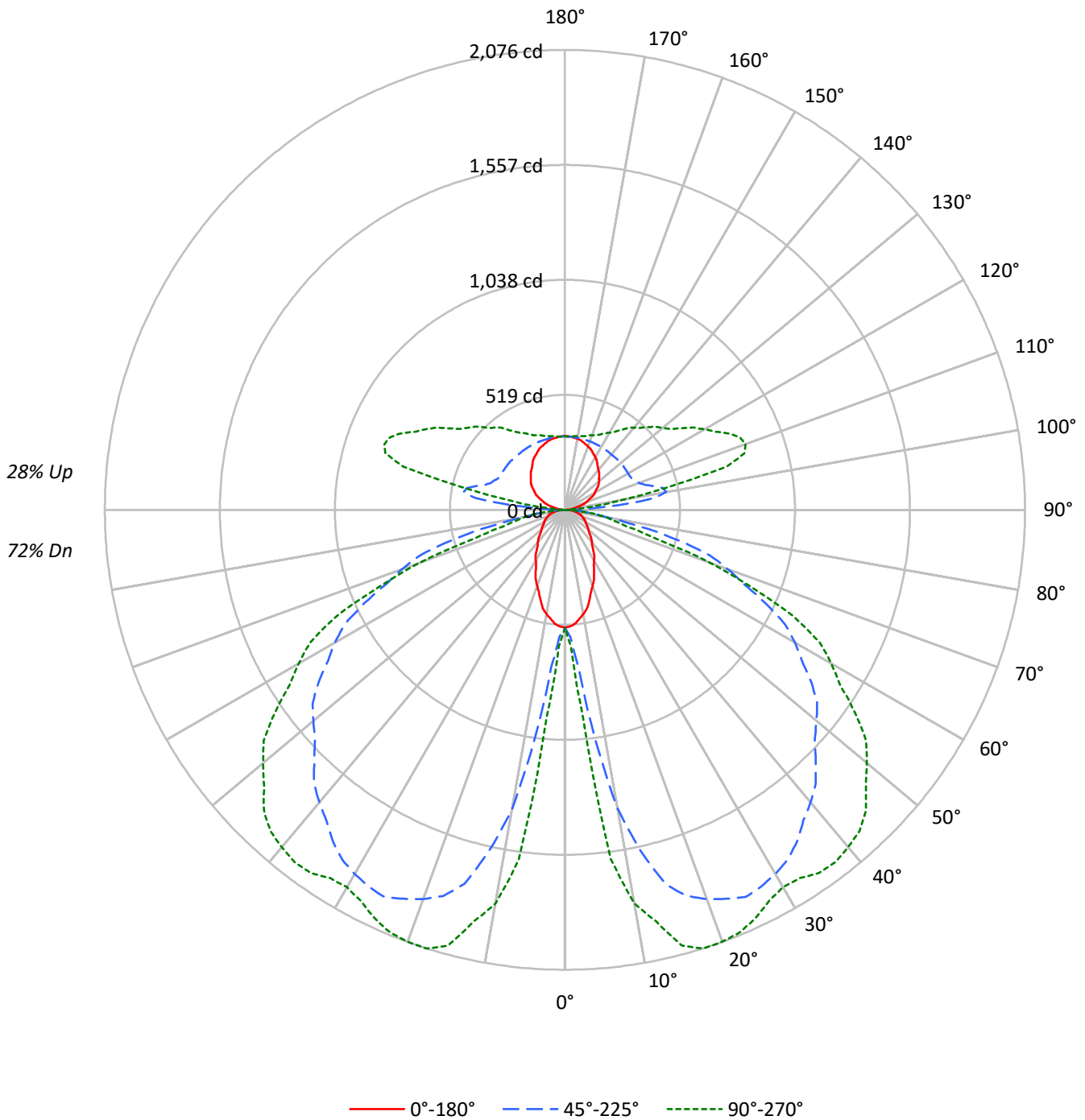
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7313.5 lumens  
Efficiency: N/A  
Efficacy: 114.3 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): 64  
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

TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-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
RCR																				
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72	72	72
1	102	98	94	90	97	93	89	86	83	81	78	75	73	71	67	65	64	60	60	60
2	93	85	78	73	88	81	75	70	73	68	64	65	61	58	58	55	53	49	49	49
3	84	74	66	60	79	70	63	57	63	58	53	57	52	49	51	47	44	41	41	41
4	77	65	57	50	72	62	54	48	56	50	44	50	45	41	45	41	37	34	34	34
5	70	58	49	42	66	55	47	41	50	43	38	45	39	35	40	36	32	29	29	29
6	64	51	43	36	61	49	41	35	44	38	33	40	34	30	36	31	28	25	25	25
7	59	46	38	32	56	44	36	31	40	33	28	36	31	26	33	28	24	22	22	22
8	55	42	33	28	52	40	32	27	36	30	25	33	27	23	30	25	21	19	19	19
9	51	38	30	25	48	36	29	24	33	27	22	30	25	21	27	23	19	17	17	17
10	48	35	27	22	45	33	26	21	30	24	20	28	22	19	25	20	17	15	15	15

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

	0°	45°	90°
0°	8578	8578	8578
5°	8363	11593	15195
10°	7832	22448	29568
15°	7089	29207	34033
20°	6277	32129	35641
25°	5553	34360	36225
30°	4905	35386	36672
35°	4380	36001	39425
40°	3984	36343	41890
45°	3674	36516	43863
50°	3464	37216	44661
55°	3381	38185	45017
60°	3465	38689	44792
65°	3610	38158	43526
70°	3739	36902	32922
75°	4142	33144	18166
80°	4277	17099	16867
85°	4261	11838	7095

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 45422 cd/sqm



TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	1.2
10°-20°	406.4	5.6
20°-30°	714.9	9.8
30°-40°	925.4	12.7
40°-50°	1020.7	14.0
50°-60°	953.0	13.0
60°-70°	736.5	10.1
70°-80°	339.7	4.6
80°-90°	65.3	0.9
90°-100°	132.3	1.8
100°-110°	419.6	5.7
110°-120°	411.4	5.6
120°-130°	334.8	4.6
130°-140°	273.0	3.7
140°-150°	212.8	2.9
150°-160°	153.3	2.1
160°-170°	93.7	1.3
170°-180°	31.6	0.4
0°-30°	1210.3	16.5
0°-40°	2135.7	29.2
0°-60°	4109.4	56.2
0°-90°	5250.9	71.8
90°-120°	963.3	13.2
90°-150°	1783.9	24.4
90°-180°	2063.0	28.2
0°-180°	7313.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	516	591	715	873	938	48
15°	424	836	1747	1956	2036	118
25°	312	1123	1929	2014	2033	143
35°	222	1084	1826	1890	2000	140
45°	161	830	1599	1836	1921	125
55°	120	495	1356	1559	1599	108
65°	94	279	999	1119	1139	93
75°	66	171	531	286	291	68
85°	23	50	64	43	38	24
90°	0	1	3	3	3	2
95°	18	54	240	89	57	21
105°	73	103	414	788	755	77
115°	131	155	334	694	817	129
125°	181	202	329	544	641	161
135°	218	240	327	468	528	169
145°	255	274	327	404	440	160
155°	290	301	328	361	375	134
165°	316	320	329	342	345	89
175°	331	330	331	333	332	31
180°	332	332	332	332	332	



TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	531.3	531.3	531.3	531.3	531.3
2.5°	527.3	549.2	574.3	603.1	615.1
5°	516.0	591.0	715.3	872.6	937.5
7.5°	496.1	648.5	1040.2	1461.1	1591.0
10°	477.7	690.0	1369.2	1733.6	1803.5
12.5°	457.3	745.5	1575.7	1831.7	1903.7
15°	424.1	836.2	1747.3	1956.1	2036.0
17.5°	389.8	938.3	1827.0	2032.9	2076.3
20°	365.3	1009.7	1869.9	2046.8	2074.3
22.5°	342.8	1063.2	1900.6	2034.6	2064.1
25°	311.7	1123.4	1928.7	2013.5	2033.4
27.5°	281.5	1139.3	1916.4	1972.1	1991.5
30°	263.1	1134.9	1898.0	1939.5	1967.0
32.5°	246.8	1122.5	1871.5	1911.7	1971.1
35°	222.2	1084.0	1826.5	1890.3	2000.2
37.5°	201.3	1022.1	1767.2	1897.9	2003.8
40°	189.0	975.8	1724.3	1897.5	1987.5
42.5°	176.8	921.6	1675.3	1877.1	1967.0
45°	160.9	830.3	1599.2	1836.1	1921.0
47.5°	146.1	727.6	1528.7	1779.4	1841.3
50°	137.9	657.5	1481.6	1728.0	1778.0
52.5°	129.8	589.4	1434.6	1666.6	1712.6
55°	120.1	494.7	1356.5	1559.2	1599.2
57.5°	111.4	413.6	1267.6	1440.5	1473.0
60°	107.3	369.6	1198.1	1354.7	1387.1
62.5°	101.2	329.5	1120.4	1264.7	1295.2
65°	94.5	279.4	998.8	1119.4	1139.3
67.5°	85.3	242.2	869.6	943.3	905.8
70°	79.2	224.1	781.7	804.8	697.4
72.5°	75.1	204.0	685.6	624.8	421.5
75°	66.4	171.3	531.3	286.2	291.2
77.5°	54.2	132.6	349.5	219.8	224.3
80°	46.0	108.4	183.9	178.9	181.4
82.5°	37.8	84.3	126.7	131.7	128.2
85°	23.0	50.5	63.9	43.3	38.3
87.5°	8.2	18.4	10.8	10.8	10.8
90°	0.0	1.0	3.1	3.1	3.1
92.5°	5.8	23.2	74.2	24.7	17.3
95°	17.8	53.5	240.2	89.1	57.4
97.5°	33.0	69.4	406.9	254.3	156.0
100°	43.9	78.6	463.7	422.8	274.7
102.5°	55.6	88.7	453.7	620.9	475.2
105°	73.1	102.7	413.6	787.8	755.2
107.5°	90.7	118.0	375.4	805.2	849.4
110°	102.4	128.9	356.2	785.2	866.9



TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	114.1	139.0	345.3	750.6	854.4
115°	130.6	155.1	334.2	694.2	816.8
117.5°	146.6	169.9	329.8	639.9	763.5
120°	156.7	179.1	329.0	606.4	725.9
122.5°	166.7	188.3	329.0	579.5	690.8
125°	180.7	202.1	329.0	544.3	641.3
127.5°	193.0	213.6	329.0	517.0	599.7
130°	200.5	222.0	329.0	501.0	575.5
132.5°	208.1	229.5	328.2	488.3	555.5
135°	218.3	239.7	326.9	468.2	527.5
137.5°	228.3	250.8	326.7	449.1	502.0
140°	235.0	257.5	325.9	435.6	483.6
142.5°	243.4	265.0	326.7	422.1	466.9
145°	254.9	274.3	326.9	404.0	439.7
147.5°	266.3	282.9	327.1	388.0	417.2
150°	274.7	288.0	328.0	378.6	402.1
152.5°	281.4	293.0	328.0	371.0	390.4
155°	290.4	300.6	328.0	360.7	375.0
157.5°	300.0	306.9	329.0	354.3	364.1
160°	305.0	311.1	329.0	350.1	358.3
162.5°	310.0	314.5	329.0	346.7	352.4
165°	316.5	319.5	329.0	341.6	344.7
167.5°	322.5	323.4	330.1	338.1	340.7
170°	325.9	325.9	330.1	336.3	337.4
172.5°	327.5	328.4	330.1	334.7	334.9
175°	331.1	330.1	331.1	333.2	332.1
177.5°	332.1	331.3	331.3	332.9	331.3
180°	332.1	332.1	332.1	332.1	332.1

TEST NUMBER: P853847

CATALOG NUMBER: SQ2-FB-050U-125D-940-UNV-STD-W-4

**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	16.31	17.46	17.05	18.22	19.14	25.05	26.19	25.79	26.96	27.88
	3H	17.07	18.09	17.82	18.87	19.82	26.69	27.72	27.45	28.50	29.45
	4H	17.38	18.35	18.15	19.13	20.09	26.89	27.86	27.66	28.64	29.60
	6H	17.61	18.51	18.39	19.30	20.27	26.99	27.88	27.77	28.68	29.65
	8H	17.68	18.53	18.47	19.34	20.32	27.00	27.86	27.80	28.67	29.64
	12H	17.72	18.53	18.52	19.34	20.34	26.98	27.80	27.78	28.60	29.61
4H	2H	20.75	21.72	21.52	22.50	23.46	25.53	26.50	26.30	27.28	28.24
	3H	21.71	22.52	22.50	23.34	24.31	27.38	28.19	28.17	29.01	29.99
	4H	22.00	22.74	22.81	23.56	24.56	27.63	28.37	28.43	29.18	30.19
	6H	22.15	22.79	22.97	23.63	24.64	27.79	28.43	28.61	29.27	30.29
	8H	22.18	22.77	23.00	23.61	24.64	27.83	28.42	28.65	29.26	30.28
	12H	22.19	22.72	23.03	23.58	24.61	27.81	28.35	28.66	29.21	30.24
8H	4H	23.20	23.80	24.03	24.63	25.66	27.77	28.37	28.60	29.21	30.23
	6H	23.45	23.94	24.31	24.82	25.85	27.99	28.48	28.85	29.36	30.39
	8H	23.53	23.96	24.39	24.84	25.88	28.06	28.49	28.92	29.37	30.41
	12H	23.57	23.95	24.44	24.82	25.92	28.06	28.45	28.93	29.31	30.41
12H	4H	23.23	23.77	24.08	24.63	25.66	27.74	28.27	28.58	29.13	30.17
	6H	23.55	23.99	24.41	24.86	25.91	27.98	28.41	28.84	29.29	30.33
	8H	23.67	24.05	24.54	24.92	26.02	28.06	28.44	28.93	29.31	30.41