

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: P853511

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

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853511  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2104-222-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-BBM-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: -

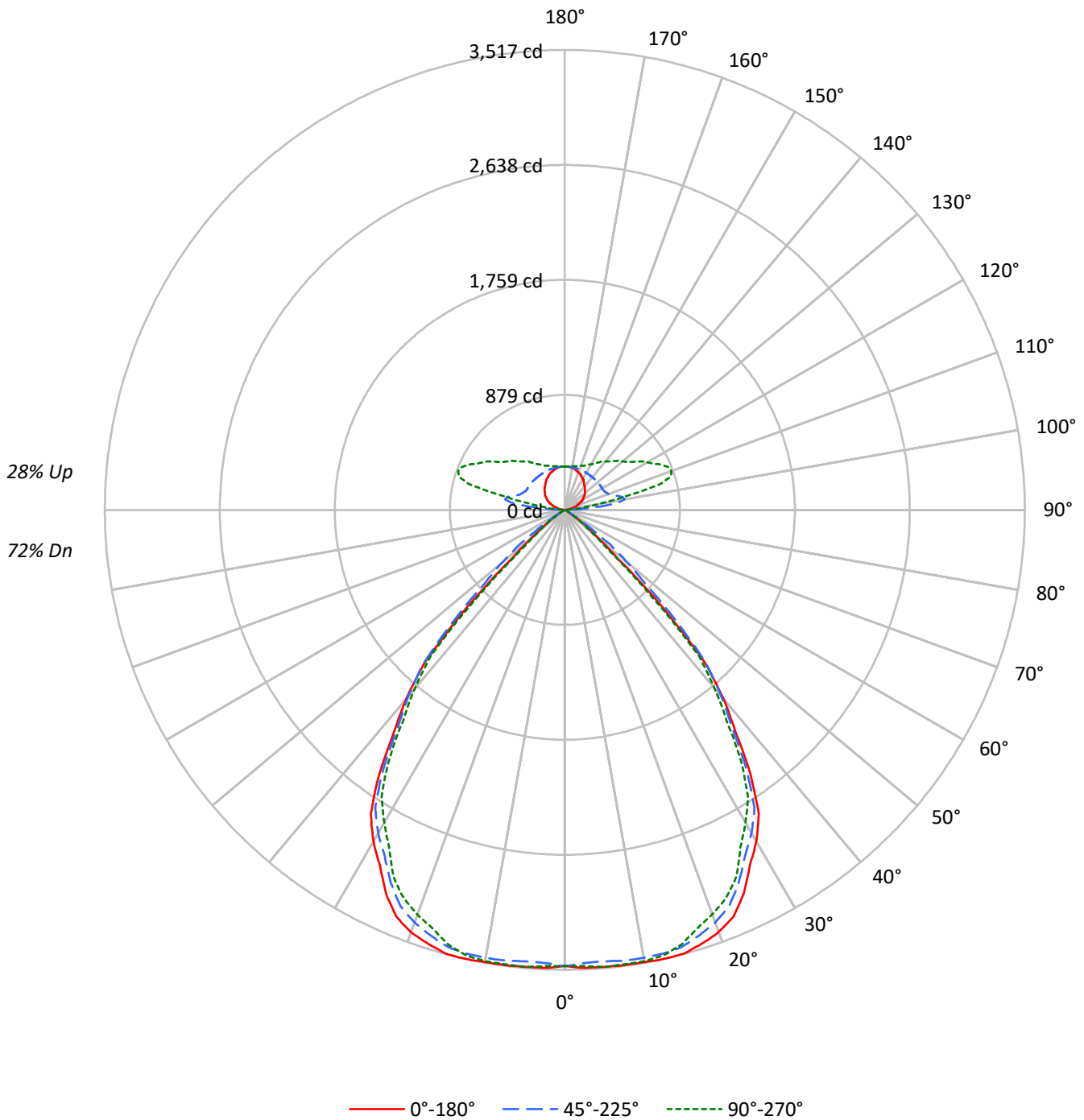
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7331.7 lumens  
Efficiency: N/A  
Efficacy: 113.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.18 / 1.17  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 64.6  
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	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72	72	72	72	
1	105	102	99	96	100	97	95	92	88	86	84	80	78	77	72	71	70	66	66	66	66	
2	99	93	88	84	94	89	84	81	81	78	75	74	71	69	67	65	64	60	60	60	60	
3	92	84	78	74	87	81	76	71	74	70	67	68	65	62	62	60	58	55	55	55	55	
4	86	77	70	65	82	74	68	64	68	63	60	63	59	56	58	55	53	50	50	50	50	
5	80	70	64	58	76	68	62	57	63	58	54	58	54	51	54	50	48	45	45	45	45	
6	75	65	58	53	71	62	56	51	58	53	49	54	49	46	50	46	44	42	42	42	42	
7	70	59	52	48	67	57	51	46	53	48	44	50	45	42	46	43	40	38	38	38	38	
8	66	55	48	43	63	53	47	42	50	44	40	46	42	39	43	40	37	35	35	35	35	
9	62	51	44	39	59	49	43	39	46	41	37	43	39	36	40	37	34	32	32	32	32	
10	58	47	41	36	56	46	40	36	43	38	34	40	36	33	38	34	31	30	30	30	30	

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

	0°	45°	90°
0°	56349	56349	56349
5°	56854	56154	56854
10°	57581	57028	57459
15°	58741	57842	57526
20°	59077	57701	56594
25°	57647	56049	55205
30°	54588	53213	51482
35°	48817	47674	46343
40°	39757	39178	37578
45°	24268	27494	21861
50°	7920	15388	6965
55°	2700	5430	2790
60°	203	1566	68
65°	42	80	0
70°	0	52	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 27540 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	334.0	4.6
10°-20°	980.7	13.4
20°-30°	1449.4	19.8
30°-40°	1489.5	20.3
40°-50°	860.4	11.7
50°-60°	149.1	2.0
60°-70°	5.6	0.1
70°-80°	0.1	0.0
80°-90°	0.5	0.0
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°	2764.0	37.7
0°-40°	4253.6	58.0
0°-60°	5263.0	71.8
0°-90°	5269.2	71.9
90°-120°	963.3	13.1
90°-150°	1783.9	24.3
90°-180°	2063.0	28.1
0°-180°	7331.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3490	3490	3490	3490	3490	
5°	3508	3498	3465	3515	3508	335
15°	3514	3540	3460	3466	3442	990
25°	3236	3265	3146	3110	3099	1479
35°	2477	2478	2419	2381	2351	1524
45°	1063	1206	1204	1140	957	812
55°	96	111	193	109	99	107
65°	1	1	2	1	0	2
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	1	3	3	3	1
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3490.0	3490.0	3490.0	3490.0	3490.0
2.5°	3506.0	3496.1	3468.0	3499.9	3492.5
5°	3507.9	3497.6	3464.7	3515.1	3507.9
7.5°	3511.3	3504.9	3476.7	3516.3	3504.7
10°	3512.1	3513.1	3478.4	3513.0	3504.7
12.5°	3517.2	3527.3	3475.0	3502.7	3488.7
15°	3514.2	3540.0	3460.4	3466.2	3441.5
17.5°	3478.8	3515.9	3413.8	3388.9	3357.9
20°	3438.3	3475.4	3358.2	3324.8	3293.8
22.5°	3366.6	3407.0	3281.4	3244.7	3216.2
25°	3235.9	3264.7	3146.2	3110.1	3098.8
27.5°	3063.8	3074.1	2982.4	2934.8	2908.2
30°	2928.0	2925.9	2854.2	2799.5	2761.4
32.5°	2760.1	2770.4	2698.1	2646.8	2607.9
35°	2476.7	2477.7	2418.7	2381.1	2351.2
37.5°	2146.1	2140.9	2100.1	2049.5	2032.6
40°	1886.3	1893.5	1858.8	1801.5	1782.9
42.5°	1585.1	1632.8	1608.3	1540.8	1518.1
45°	1062.8	1206.1	1204.1	1139.8	957.4
47.5°	543.8	723.2	831.1	650.9	436.7
50°	315.3	428.7	612.6	338.1	277.3
52.5°	199.7	253.7	435.5	219.8	184.5
55°	95.9	111.4	192.9	109.4	99.1
57.5°	35.0	52.1	85.6	53.2	37.5
60°	6.3	21.8	48.5	14.5	2.1
62.5°	2.1	6.0	28.3	3.7	1.3
65°	1.1	1.1	2.1	1.0	0.0
67.5°	0.0	1.0	1.1	0.0	0.0
70°	0.0	1.0	1.1	0.0	0.0
72.5°	0.0	0.2	0.2	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.2	0.6	0.6	0.6
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



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**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



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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	3.68	4.51	4.46	5.28	6.22	3.29	4.12	4.07	4.90	5.83
	3H	3.49	4.23	4.29	5.01	5.98	3.10	3.84	3.90	4.62	5.59
	4H	3.39	4.08	4.21	4.87	5.85	3.00	3.69	3.82	4.48	5.46
	6H	3.29	3.91	4.11	4.72	5.71	2.90	3.52	3.72	4.33	5.32
	8H	3.23	3.82	4.06	4.64	5.63	2.84	3.43	3.67	4.25	5.24
	12H	3.17	3.73	4.01	4.54	5.56	2.78	3.34	3.62	4.16	5.17
4H	2H	3.40	4.08	4.22	4.88	5.86	3.01	3.70	3.83	4.49	5.47
	3H	3.21	3.77	4.03	4.60	5.59	2.82	3.38	3.64	4.21	5.20
	4H	3.09	3.60	3.93	4.43	5.45	2.71	3.21	3.54	4.04	5.06
	6H	2.99	3.42	3.84	4.27	5.30	2.60	3.03	3.45	3.88	4.91
	8H	2.92	3.32	3.78	4.17	5.21	2.53	2.93	3.39	3.78	4.82
	12H	2.85	3.21	3.73	4.08	5.12	2.46	2.82	3.34	3.69	4.73
8H	4H	2.92	3.32	3.78	4.17	5.21	2.53	2.94	3.39	3.78	4.82
	6H	2.80	3.13	3.68	4.02	5.06	2.41	2.74	3.30	3.63	4.67
	8H	2.74	3.03	3.63	3.91	4.97	2.35	2.64	3.24	3.53	4.58
	12H	2.67	2.93	3.56	3.80	4.92	2.28	2.54	3.18	3.41	4.53
12H	4H	2.85	3.21	3.73	4.08	5.12	2.46	2.82	3.34	3.69	4.73
	6H	2.74	3.03	3.63	3.91	4.97	2.35	2.64	3.24	3.53	4.58
	8H	2.67	2.93	3.56	3.80	4.92	2.28	2.54	3.18	3.41	4.53