

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: P855009

Luminaire Tested: SQ2-FB-125U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855009  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-125U-100D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

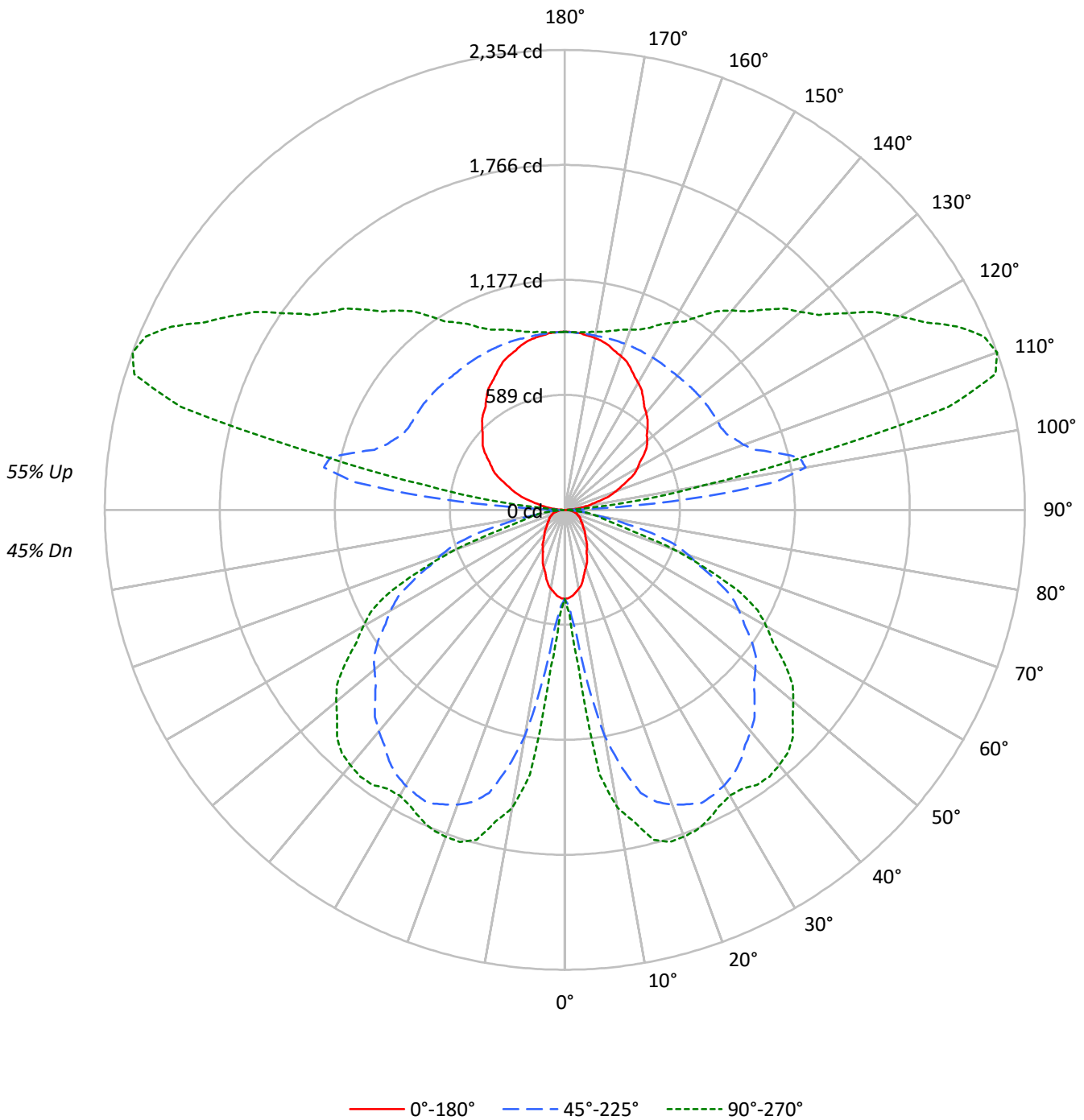
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10127.7 lumens  
Efficiency: N/A  
Efficacy: 124.3 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: General Diffuse  
  
Input Watts (W): 81.5  
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	0
RCR																		
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	96	92	88	85	88	84	81	78	70	68	66	57	55	54	45	44	43	37
2	87	80	74	69	80	73	68	63	61	57	54	50	47	44	39	37	36	31
3	80	70	62	57	72	64	58	52	53	49	45	43	40	37	34	32	30	25
4	72	61	53	47	66	57	49	44	47	42	38	38	34	31	30	27	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	49	40	34	55	45	37	32	37	32	28	31	26	23	24	21	19	16
7	56	44	35	30	51	40	33	28	34	28	24	28	23	20	22	19	16	14
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	25	20	41	30	24	19	25	20	17	21	17	14	17	14	11	9

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

	0°	45°	90°
0°	7364	7364	7364
5°	7180	9953	13044
10°	6724	19271	25383
15°	6086	25073	29214
20°	5388	27582	30594
25°	4766	29496	31098
30°	4212	30378	31482
35°	3759	30906	33845
40°	3419	31198	35959
45°	3156	31346	37657
50°	2974	31948	38338
55°	2902	32777	38644
60°	2974	33212	38453
65°	3102	32760	37364
70°	3210	31676	28263
75°	3556	28453	15596
80°	3673	14672	14477
85°	3668	10152	6095

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 38993 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	0.8
10°-20°	348.8	3.4
20°-30°	613.7	6.1
30°-40°	794.4	7.8
40°-50°	876.2	8.7
50°-60°	818.1	8.1
60°-70°	632.3	6.2
70°-80°	291.6	2.9
80°-90°	56.7	0.6
90°-100°	348.4	3.4
100°-110°	1134.3	11.2
110°-120°	1122.0	11.1
120°-130°	916.9	9.1
130°-140°	749.4	7.4
140°-150°	583.7	5.8
150°-160°	420.8	4.2
160°-170°	257.2	2.5
170°-180°	86.8	0.9
0°-30°	1039.0	10.3
0°-40°	1833.4	18.1
0°-60°	3527.7	34.8
0°-90°	4508.3	44.5
90°-120°	2604.7	25.7
90°-150°	4854.8	47.9
90°-180°	5619.0	55.5
0°-180°	10127.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	443	507	614	749	805	41
15°	364	718	1500	1679	1748	101
25°	268	964	1656	1728	1746	123
35°	191	930	1568	1623	1717	120
45°	138	713	1373	1576	1649	107
55°	103	425	1164	1338	1373	93
65°	81	240	858	961	978	80
75°	57	147	456	246	250	59
85°	20	43	55	37	33	21
90°	0	3	8	7	7	3
95°	47	144	639	228	140	55
105°	193	278	1124	2146	2032	206
115°	356	425	915	1886	2219	353
125°	495	552	903	1489	1756	441
135°	598	661	898	1285	1450	462
145°	699	750	896	1107	1212	438
155°	798	824	902	991	1028	367
165°	870	878	904	938	949	245
175°	908	908	908	914	912	86
180°	911	911	911	911	911	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	456.1	456.1	456.1	456.1	456.1
2.5°	452.6	471.5	493.0	517.7	528.0
5°	443.0	507.3	614.1	749.1	804.8
7.5°	425.9	556.6	893.0	1254.2	1365.8
10°	410.1	592.3	1175.4	1488.2	1548.2
12.5°	392.6	639.9	1352.6	1572.4	1634.2
15°	364.1	717.8	1500.0	1679.1	1747.7
17.5°	334.7	805.5	1568.4	1745.1	1782.5
20°	313.6	866.8	1605.3	1757.1	1780.6
22.5°	294.3	912.7	1631.5	1746.6	1771.9
25°	267.5	964.4	1655.7	1728.4	1745.6
27.5°	241.6	978.0	1645.2	1692.9	1709.6
30°	225.9	974.2	1629.4	1665.0	1688.6
32.5°	211.9	963.6	1606.5	1641.0	1692.1
35°	190.7	930.5	1568.0	1622.7	1717.1
37.5°	172.8	877.4	1517.1	1629.3	1720.2
40°	162.2	837.7	1480.2	1628.9	1706.1
42.5°	151.7	791.1	1438.2	1611.4	1688.6
45°	138.2	712.8	1372.8	1576.2	1649.2
47.5°	125.4	624.6	1312.2	1527.5	1580.6
50°	118.4	564.4	1271.9	1483.4	1526.3
52.5°	111.4	506.0	1231.6	1430.7	1470.2
55°	103.1	424.7	1164.4	1338.5	1372.8
57.5°	95.7	355.0	1088.1	1236.6	1264.5
60°	92.1	317.3	1028.5	1162.9	1190.8
62.5°	86.8	282.8	961.8	1085.6	1111.9
65°	81.2	239.8	857.5	960.9	978.0
67.5°	73.3	207.9	746.5	809.8	777.7
70°	68.0	192.3	671.0	690.8	598.7
72.5°	64.4	175.1	588.6	536.4	361.8
75°	57.0	147.1	456.1	245.7	250.0
77.5°	46.5	113.9	300.0	188.7	192.5
80°	39.5	93.1	157.8	153.5	155.7
82.5°	32.4	72.4	108.8	113.1	110.1
85°	19.8	43.3	54.8	37.2	32.9
87.5°	7.0	16.3	10.3	10.1	10.1
90°	0.0	3.3	7.8	6.7	6.7
92.5°	16.2	58.0	185.3	61.1	47.0
95°	47.0	143.5	638.6	227.7	140.1
97.5°	88.5	186.7	1083.7	660.1	402.8
100°	115.4	211.8	1251.4	1115.8	723.7
102.5°	145.9	238.8	1230.7	1650.9	1255.1
105°	192.7	278.1	1123.6	2146.2	2032.2
107.5°	243.3	323.7	1022.0	2189.2	2309.8
110°	280.1	353.4	973.5	2135.8	2353.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	310.6	383.1	943.1	2039.5	2320.5
115°	356.3	425.2	915.3	1886.3	2219.3
117.5°	403.3	465.5	904.5	1746.1	2077.4
120°	430.2	491.5	901.8	1659.8	1980.7
122.5°	456.2	516.7	902.7	1584.8	1883.9
125°	495.2	552.1	902.9	1489.3	1755.5
127.5°	528.6	586.8	902.7	1417.7	1639.7
130°	550.1	609.2	901.8	1376.9	1575.1
132.5°	568.9	630.7	900.9	1338.9	1524.9
135°	598.2	660.6	898.5	1285.3	1449.7
137.5°	626.9	689.8	896.0	1230.9	1376.9
140°	647.5	707.8	895.1	1194.0	1332.0
142.5°	667.2	724.9	895.1	1158.7	1281.8
145°	699.1	750.5	896.3	1107.0	1212.2
147.5°	729.9	774.7	897.8	1063.0	1144.3
150°	750.6	790.0	899.7	1036.7	1105.8
152.5°	771.2	803.7	900.4	1016.7	1071.6
155°	797.7	823.9	901.8	991.2	1028.4
157.5°	822.8	841.5	903.2	972.4	998.4
160°	838.0	853.3	904.1	960.6	981.4
162.5°	851.4	863.2	904.1	950.5	966.1
165°	870.5	878.2	904.1	938.0	948.8
167.5°	883.9	888.7	904.3	928.4	934.1
170°	892.9	895.0	905.2	922.0	924.2
172.5°	899.2	900.4	907.0	918.4	918.0
175°	907.5	907.5	907.5	914.1	911.9
177.5°	910.8	909.9	909.0	913.4	909.9
180°	910.8	910.8	910.8	910.8	910.8



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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	13.48	14.31	14.47	15.33	16.67	22.21	23.05	23.21	24.06	25.41
	3H	14.21	14.96	15.21	15.98	17.34	23.83	24.58	24.84	25.60	26.97
	4H	14.50	15.21	15.53	16.24	17.61	24.01	24.72	25.03	25.75	27.12
	6H	14.72	15.37	15.75	16.40	17.79	24.10	24.75	25.13	25.78	27.17
	8H	14.78	15.40	15.81	16.45	17.83	24.10	24.72	25.14	25.77	27.15
	12H	14.80	15.40	15.85	16.44	17.84	24.07	24.66	25.11	25.70	27.11
4H	2H	17.87	18.58	18.90	19.61	20.98	22.65	23.36	23.68	24.39	25.76
	3H	18.80	19.40	19.84	20.45	21.84	24.48	25.07	25.51	26.12	27.51
	4H	19.08	19.63	20.13	20.67	22.08	24.71	25.25	25.76	26.30	27.71
	6H	19.21	19.68	20.27	20.75	22.15	24.86	25.32	25.91	26.39	27.80
	8H	19.24	19.67	20.29	20.73	22.15	24.88	25.32	25.94	26.38	27.80
	12H	19.23	19.62	20.30	20.69	22.12	24.85	25.25	25.93	26.32	27.75
8H	4H	20.26	20.69	21.31	21.75	23.17	24.83	25.26	25.88	26.32	27.74
	6H	20.49	20.85	21.57	21.95	23.37	25.03	25.39	26.11	26.49	27.91
	8H	20.56	20.88	21.65	21.96	23.40	25.09	25.41	26.18	26.49	27.93
	12H	20.59	20.87	21.68	21.95	23.43	25.09	25.36	26.18	26.44	27.92
12H	4H	20.27	20.67	21.35	21.74	23.17	24.78	25.17	25.85	26.25	27.67
	6H	20.59	20.90	21.67	21.99	23.43	25.01	25.33	26.10	26.42	27.85
	8H	20.69	20.97	21.78	22.05	23.53	25.08	25.36	26.17	26.44	27.92