

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: P855419

Luminaire Tested: SQ2-FB-100U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

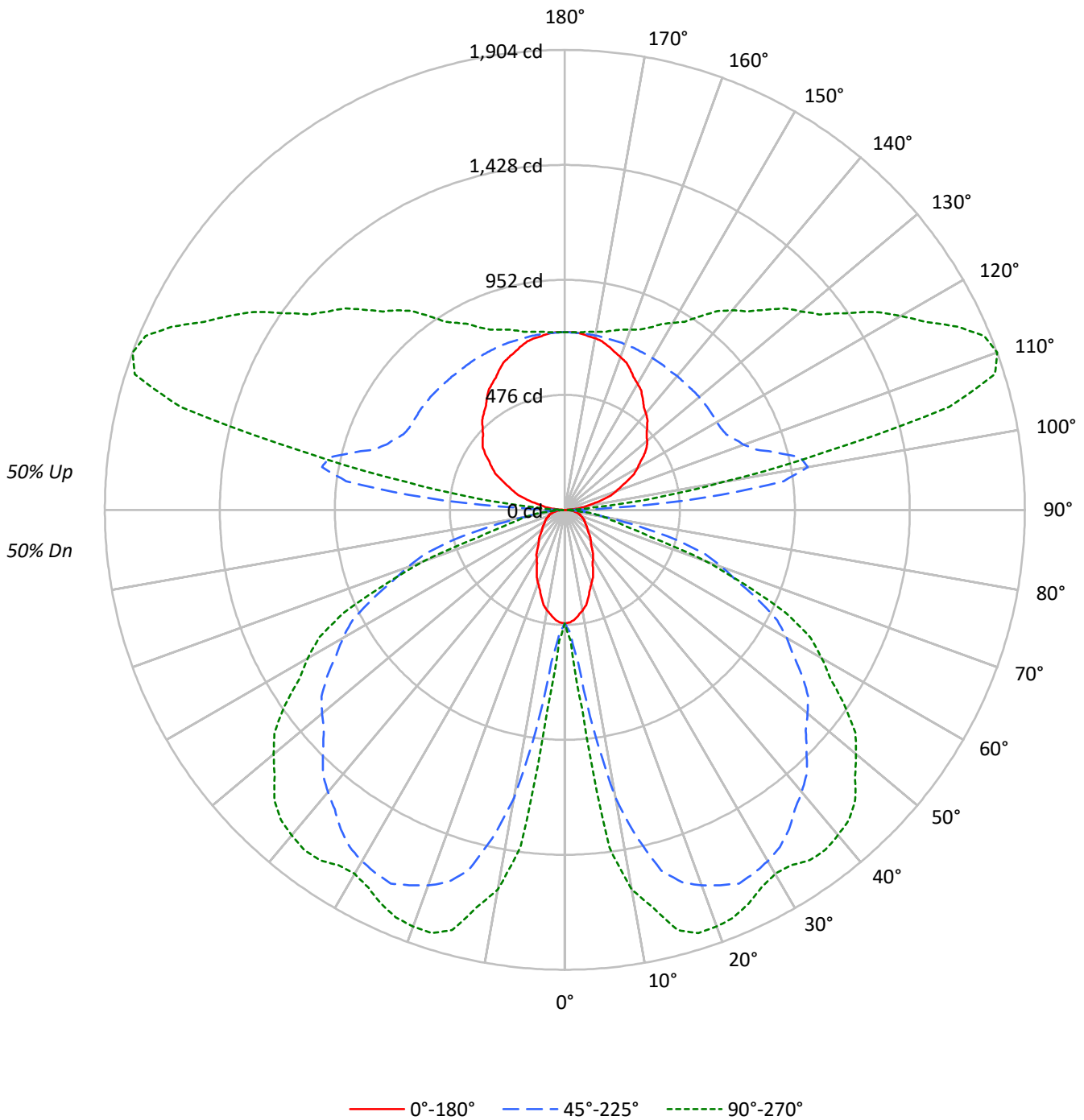
Test Method: LM-79-2019  
Report Number: P855419  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-100U-100D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9224.3 lumens  
Efficiency: N/A  
Efficacy: 131.4 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): 70.2  
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	0
RCR																		
0	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	98	93	89	86	90	86	83	80	73	71	68	61	59	57	50	48	47	42
2	89	81	75	69	81	75	69	65	64	59	56	53	50	47	43	41	39	35
3	81	71	63	57	74	66	59	54	56	51	46	46	43	40	38	35	33	29
4	73	62	54	48	67	58	50	45	49	43	39	41	37	33	33	30	28	24
5	67	55	47	41	62	51	44	38	43	38	33	36	32	28	30	26	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	23	21	18
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	26	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	19	15	13	11

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

	0°	45°	90°
0°	7590	7590	7590
5°	7400	10258	13444
10°	6930	19864	26163
15°	6273	25844	30113
20°	5555	28429	31536
25°	4912	30403	32054
30°	4340	31312	32449
35°	3875	31856	34885
40°	3524	32157	37066
45°	3252	32310	38815
50°	3064	32930	39516
55°	2992	33785	39831
60°	3068	34236	39635
65°	3198	33765	38514
70°	3305	32653	29132
75°	3662	29326	16076
80°	3784	15128	14923
85°	3779	10467	6280

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 40192 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	0.9
10°-20°	359.6	3.9
20°-30°	632.6	6.9
30°-40°	818.8	8.9
40°-50°	903.1	9.8
50°-60°	843.2	9.1
60°-70°	651.7	7.1
70°-80°	300.6	3.3
80°-90°	58.7	0.6
90°-100°	307.1	3.3
100°-110°	929.0	10.1
110°-120°	906.9	9.8
120°-130°	741.0	8.0
130°-140°	604.9	6.6
140°-150°	470.9	5.1
150°-160°	339.4	3.7
160°-170°	207.8	2.3
170°-180°	70.2	0.8
0°-30°	1070.9	11.6
0°-40°	1889.8	20.5
0°-60°	3636.1	39.4
0°-90°	4647.1	50.4
90°-120°	2143.0	23.2
90°-150°	3959.8	42.9
90°-180°	4577.0	49.6
0°-180°	9224.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	457	523	633	772	830	42
15°	375	740	1546	1731	1802	105
25°	276	994	1707	1782	1799	127
35°	197	959	1616	1673	1770	124
45°	142	735	1415	1625	1700	110
55°	106	438	1200	1380	1415	96
65°	84	247	884	990	1008	82
75°	59	152	470	253	258	60
85°	20	45	56	38	34	21
90°	0	2	14	8	7	3
95°	38	120	580	214	135	45
105°	162	227	912	1732	1646	170
115°	288	343	738	1527	1793	284
125°	402	446	727	1206	1419	357
135°	481	532	723	1040	1170	373
145°	562	604	723	894	978	352
155°	641	662	727	802	832	295
165°	701	709	731	759	768	197
175°	733	733	734	740	738	70
180°	736	736	736	736	736	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	470.1	470.1	470.1	470.1	470.1
2.5°	466.5	486.0	508.1	533.6	544.2
5°	456.6	522.9	632.9	772.1	829.5
7.5°	439.0	573.7	920.4	1292.8	1407.8
10°	422.7	610.6	1211.6	1533.9	1595.8
12.5°	404.6	659.6	1394.2	1620.7	1684.5
15°	375.3	739.9	1546.1	1730.7	1801.5
17.5°	345.0	830.2	1616.6	1798.8	1837.3
20°	323.3	893.4	1654.6	1811.2	1835.4
22.5°	303.4	940.7	1681.7	1800.3	1826.4
25°	275.7	994.1	1706.6	1781.5	1799.3
27.5°	249.0	1008.1	1695.8	1745.0	1762.2
30°	232.8	1004.1	1679.5	1716.2	1740.5
32.5°	218.4	993.3	1655.9	1691.5	1744.1
35°	196.6	959.1	1616.2	1672.6	1769.9
37.5°	178.1	904.4	1563.7	1679.3	1773.0
40°	167.2	863.4	1525.7	1679.0	1758.6
42.5°	156.4	815.4	1482.4	1660.9	1740.5
45°	142.4	734.7	1415.0	1624.7	1699.9
47.5°	129.2	643.8	1352.6	1574.5	1629.2
50°	122.0	581.8	1311.0	1529.0	1573.2
52.5°	114.8	521.5	1269.5	1474.7	1515.4
55°	106.3	437.7	1200.2	1379.6	1415.0
57.5°	98.6	365.9	1121.6	1274.6	1303.4
60°	95.0	327.0	1060.2	1198.6	1227.4
62.5°	89.5	291.5	991.4	1119.0	1146.1
65°	83.7	247.2	883.8	990.5	1008.1
67.5°	75.5	214.3	769.4	834.7	801.6
70°	70.0	198.2	691.7	712.1	617.1
72.5°	66.4	180.5	606.7	552.9	372.9
75°	58.7	151.6	470.1	253.2	257.7
77.5°	47.9	117.4	309.2	194.5	198.5
80°	40.7	95.9	162.7	158.3	160.5
82.5°	33.4	74.6	112.1	116.5	113.5
85°	20.4	44.6	56.5	38.3	33.9
87.5°	7.2	16.5	11.8	10.6	10.4
90°	0.0	2.2	13.9	8.0	6.9
92.5°	12.9	52.2	187.5	62.2	44.8
95°	38.1	120.5	579.6	214.1	135.1
97.5°	73.7	153.4	913.4	604.5	368.0
100°	95.8	173.8	1020.7	986.7	662.8
102.5°	120.7	195.9	998.5	1383.9	1103.3
105°	161.6	227.1	912.2	1732.3	1646.4
107.5°	200.4	262.9	828.9	1766.6	1866.0
110°	226.3	286.1	787.5	1723.3	1903.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	251.3	309.3	762.5	1650.4	1879.0
115°	287.5	342.7	737.8	1526.6	1793.1
117.5°	323.5	375.8	729.0	1410.6	1683.3
120°	347.5	397.2	726.2	1342.9	1604.9
122.5°	369.7	416.6	726.2	1283.3	1525.4
125°	401.8	445.8	727.3	1205.6	1419.0
127.5°	427.9	473.5	726.2	1146.9	1328.9
130°	444.5	491.9	726.2	1113.3	1278.1
132.5°	459.3	507.6	725.3	1082.5	1234.7
135°	481.4	532.2	722.8	1039.8	1169.6
137.5°	506.1	554.5	722.8	994.1	1114.4
140°	521.9	569.3	722.8	964.4	1078.3
142.5°	537.6	583.2	721.8	937.2	1036.7
145°	562.3	604.0	722.8	894.3	977.9
147.5°	587.0	622.4	724.2	859.0	923.2
150°	602.6	635.4	725.1	839.4	893.6
152.5°	617.4	646.6	725.9	822.5	866.8
155°	640.7	662.2	727.3	801.9	832.4
157.5°	661.1	678.5	728.7	786.8	808.0
160°	673.1	687.8	729.7	777.3	793.2
162.5°	685.1	696.2	730.6	769.0	782.1
165°	700.9	708.7	730.8	758.8	767.8
167.5°	714.2	718.2	732.2	750.8	754.6
170°	721.6	723.8	733.2	747.0	748.2
172.5°	726.2	727.6	733.2	743.3	743.5
175°	733.2	733.2	734.3	740.0	737.8
177.5°	736.4	735.5	734.6	737.2	735.5
180°	735.5	735.5	735.5	735.5	735.5

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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	14.14	15.03	15.09	16.00	17.26	22.88	23.77	23.82	24.74	26.00
	3H	14.87	15.67	15.83	16.65	17.94	24.50	25.30	25.46	26.28	27.56
	4H	15.17	15.93	16.15	16.91	18.21	24.68	25.44	25.66	26.42	27.72
	6H	15.39	16.09	16.38	17.08	18.38	24.77	25.47	25.76	26.45	27.76
	8H	15.45	16.12	16.44	17.12	18.42	24.78	25.44	25.77	26.44	27.75
	12H	15.48	16.11	16.48	17.11	18.44	24.75	25.38	25.75	26.38	27.71
4H	2H	18.54	19.30	19.52	20.28	21.58	23.32	24.08	24.30	25.06	26.36
	3H	19.48	20.11	20.47	21.12	22.43	25.15	25.78	26.14	26.79	28.10
	4H	19.76	20.34	20.76	21.34	22.68	25.39	25.97	26.39	26.97	28.30
	6H	19.90	20.39	20.91	21.42	22.75	25.54	26.04	26.55	27.06	28.39
	8H	19.92	20.38	20.93	21.40	22.75	25.56	26.03	26.58	27.05	28.39
	12H	19.91	20.33	20.94	21.37	22.72	25.54	25.96	26.57	26.99	28.34
8H	4H	20.94	21.40	21.95	22.42	23.77	25.51	25.97	26.52	27.00	28.34
	6H	21.18	21.56	22.22	22.62	23.97	25.72	26.10	26.76	27.16	28.51
	8H	21.25	21.59	22.30	22.63	24.00	25.78	26.12	26.83	27.16	28.53
	12H	21.28	21.57	22.33	22.62	24.02	25.78	26.07	26.82	27.11	28.52
12H	4H	20.96	21.38	21.99	22.41	23.76	25.47	25.88	26.50	26.92	28.27
	6H	21.27	21.61	22.32	22.66	24.02	25.70	26.04	26.75	27.09	28.45
	8H	21.38	21.67	22.43	22.72	24.12	25.77	26.07	26.82	27.11	28.51