

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: P855309

Luminaire Tested: SQ2-PR1-100U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855309  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PR1-100U-050D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

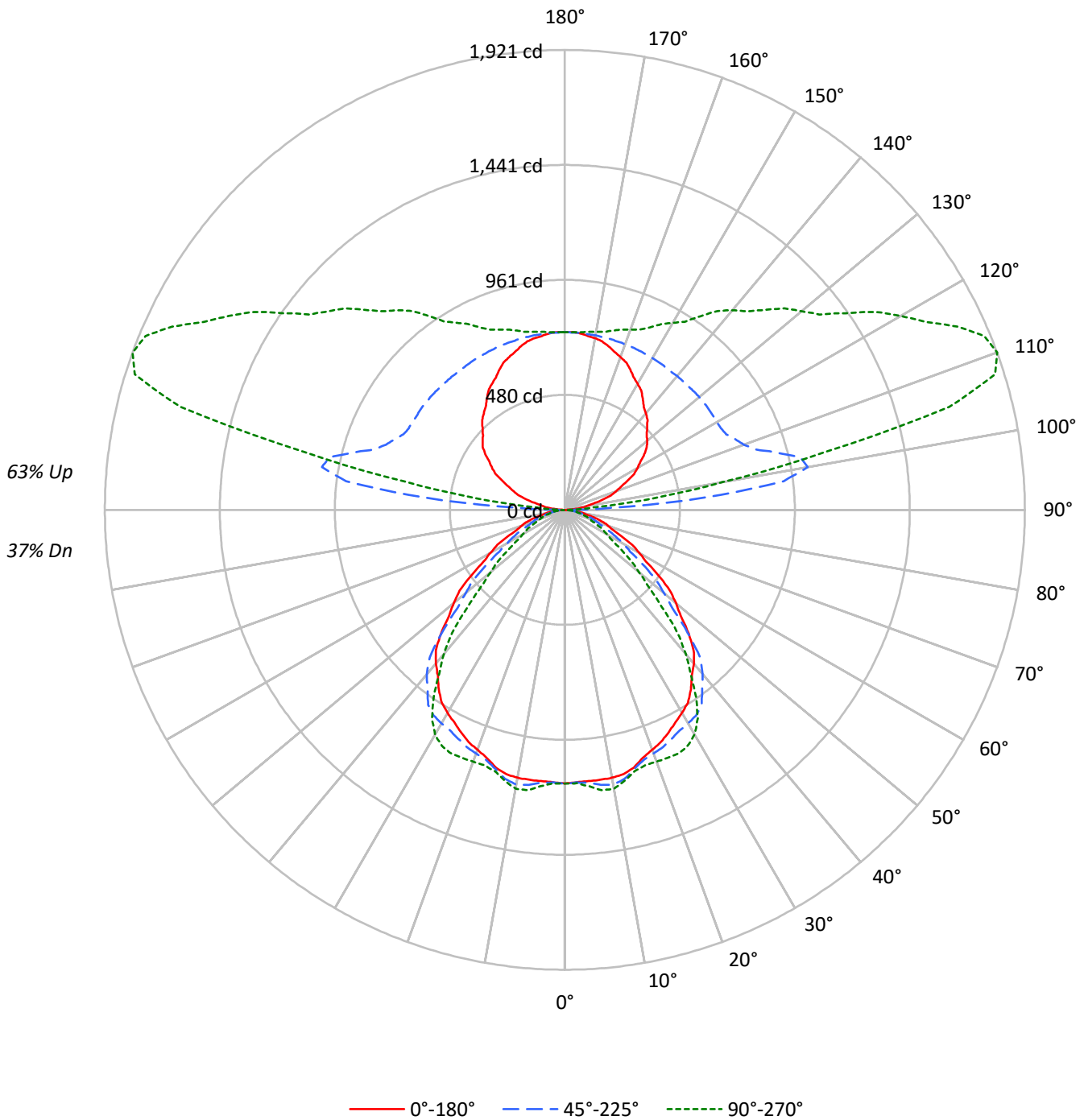
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7370.5 lumens  
Efficiency: N/A  
Efficacy: 146.2 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 50.4  
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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	38	32
2	87	80	75	70	79	73	68	64	60	56	53	47	45	43	36	34	33	28
3	80	71	64	58	72	65	59	54	53	49	45	42	39	37	32	30	29	24
4	73	63	55	50	66	58	51	46	47	43	39	38	34	32	29	27	25	21
5	67	56	48	43	61	51	45	40	42	37	34	34	30	28	26	24	22	18
6	62	50	43	37	56	46	39	35	38	33	29	31	27	24	24	21	19	16
7	57	46	38	33	52	42	35	30	35	30	26	28	24	22	22	19	17	15
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16	13
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	34	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11

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

	0°	45°	90°
0°	18460	18460	18460
5°	18434	18548	18775
10°	18630	19107	19394
15°	18623	18721	18877
20°	18321	18603	19223
25°	18271	18789	20013
30°	18250	19207	20206
35°	18078	19618	18814
40°	17660	18889	16556
45°	16712	16577	13093
50°	15192	13554	10158
55°	13351	11153	7907
60°	11554	8919	6510
65°	9971	7393	5700
70°	8969	6548	5061
75°	8216	5671	4654
80°	7150	4547	4547
85°	5187	4094	2167

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18066 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	1.5
10°-20°	319.6	4.3
20°-30°	494.0	6.7
30°-40°	594.2	8.1
40°-50°	533.5	7.2
50°-60°	357.4	4.8
60°-70°	207.9	2.8
70°-80°	106.8	1.4
80°-90°	27.7	0.4
90°-100°	310.0	4.2
100°-110°	937.4	12.7
110°-120°	915.1	12.4
120°-130°	747.8	10.1
130°-140°	610.4	8.3
140°-150°	475.2	6.4
150°-160°	342.6	4.6
160°-170°	209.7	2.8
170°-180°	70.8	1.0
0°-30°	924.0	12.5
0°-40°	1518.3	20.6
0°-60°	2409.2	32.7
0°-90°	2751.6	37.3
90°-120°	2162.5	29.3
90°-150°	3995.9	54.2
90°-180°	4619.0	62.7
0°-180°	7370.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1137	1157	1144	1147	1158	109
15°	1114	1160	1120	1124	1129	313
25°	1026	1067	1055	1094	1123	473
35°	917	925	995	976	954	572
45°	732	791	726	612	573	560
55°	474	492	396	306	281	426
65°	261	267	194	157	149	264
75°	132	128	91	77	75	140
85°	28	22	22	15	12	35
90°	0	2	14	8	7	3
95°	38	122	585	216	136	46
105°	163	229	920	1748	1661	171
115°	290	346	744	1540	1809	287
125°	405	450	734	1217	1432	360
135°	486	537	729	1049	1180	376
145°	567	610	729	902	987	355
155°	647	668	734	809	840	298
165°	707	715	738	766	775	199
175°	740	740	741	747	744	70
180°	742	742	742	742	742	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1138.6	1152.2	1139.5	1140.6	1143.3
5°	1137.4	1156.8	1144.4	1147.0	1158.4
7.5°	1137.2	1164.8	1158.9	1166.0	1181.0
10°	1136.3	1169.4	1165.4	1166.9	1182.9
12.5°	1130.7	1169.2	1151.4	1150.0	1158.6
15°	1114.1	1159.7	1120.0	1123.6	1129.3
17.5°	1085.0	1132.7	1094.8	1107.6	1118.8
20°	1066.3	1113.1	1082.7	1099.4	1118.8
22.5°	1049.6	1096.3	1071.5	1094.9	1121.6
25°	1025.6	1066.6	1054.7	1093.8	1123.4
27.5°	1000.4	1024.5	1038.6	1091.0	1111.8
30°	978.9	994.9	1030.2	1075.9	1083.8
32.5°	955.6	965.2	1019.0	1042.8	1032.5
35°	917.2	925.2	995.3	976.1	954.5
37.5°	871.5	887.9	941.9	886.8	861.9
40°	837.9	865.3	896.2	814.0	785.5
42.5°	796.9	840.7	835.6	730.8	696.0
45°	731.9	791.2	726.0	612.1	573.4
47.5°	655.2	716.0	609.5	507.8	471.5
50°	604.8	653.8	539.6	444.3	404.4
52.5°	553.6	588.9	479.9	384.7	348.5
55°	474.3	492.5	396.2	305.9	280.9
57.5°	401.6	413.3	323.7	247.1	228.7
60°	357.8	365.7	276.2	216.4	201.6
62.5°	317.7	323.9	238.0	190.4	179.2
65°	261.0	266.8	193.5	157.1	149.2
67.5°	216.1	219.0	159.2	130.6	123.1
70°	190.0	191.1	138.7	112.9	107.2
72.5°	166.7	165.0	119.1	98.0	94.2
75°	131.7	128.3	90.9	76.9	74.6
77.5°	98.4	94.7	63.9	59.2	59.2
80°	76.9	72.4	48.9	48.9	48.9
82.5°	57.3	50.9	37.8	37.8	36.8
85°	28.0	22.3	22.1	15.0	11.7
87.5°	7.5	7.9	5.6	4.4	4.2
90°	0.0	2.3	14.0	8.2	7.0
92.5°	13.1	52.7	189.3	62.7	45.2
95°	38.5	121.6	584.9	216.1	136.4
97.5°	74.4	154.8	921.8	610.0	371.4
100°	96.7	175.3	1030.0	995.7	668.7
102.5°	121.9	197.8	1007.6	1396.6	1113.3
105°	163.2	229.2	920.4	1748.0	1661.4
107.5°	202.3	265.4	836.5	1782.7	1883.1
110°	228.3	288.8	794.6	1739.0	1921.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	253.5	312.1	769.4	1665.5	1896.1
115°	290.1	345.9	744.5	1540.5	1809.4
117.5°	326.4	379.3	735.6	1423.4	1698.7
120°	350.7	400.8	732.8	1355.1	1619.4
122.5°	373.0	420.5	732.8	1295.1	1539.3
125°	405.4	449.8	734.0	1216.6	1431.9
127.5°	431.8	477.8	732.8	1157.4	1341.0
130°	448.6	496.5	732.8	1123.4	1289.7
132.5°	463.5	512.2	731.9	1092.3	1245.9
135°	485.9	537.1	729.3	1049.2	1180.2
137.5°	510.8	559.5	729.3	1003.1	1124.5
140°	526.6	574.4	729.3	973.1	1088.3
142.5°	542.5	588.5	728.4	945.7	1046.3
145°	567.4	609.5	729.3	902.5	986.9
147.5°	592.4	628.2	730.7	866.9	931.6
150°	608.2	641.2	731.6	847.1	901.8
152.5°	623.1	652.5	732.6	830.1	874.8
155°	646.7	668.2	734.0	809.3	840.0
157.5°	667.1	684.7	735.4	793.9	815.3
160°	679.2	694.1	736.3	784.4	800.4
162.5°	691.3	702.5	737.2	776.0	789.2
165°	707.2	715.2	737.5	765.7	774.8
167.5°	720.7	724.9	738.9	757.6	761.5
170°	728.1	730.5	739.8	753.8	754.9
172.5°	732.8	734.2	739.8	750.1	750.3
175°	739.8	739.8	741.0	746.8	744.5
177.5°	743.1	742.1	741.2	744.0	742.1
180°	742.1	742.1	742.1	742.1	742.1

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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	15.60	16.33	16.66	17.39	18.83	12.32	13.05	13.39	14.11	15.56
	3H	16.82	17.47	17.89	18.54	20.01	13.38	14.03	14.45	15.10	16.56
	4H	17.26	17.88	18.35	18.96	20.43	13.77	14.39	14.86	15.46	16.93
	6H	17.58	18.14	18.67	19.22	20.70	14.09	14.66	15.19	15.74	17.22
	8H	17.65	18.19	18.75	19.29	20.76	14.18	14.72	15.28	15.81	17.28
	12H	17.68	18.19	18.78	19.28	20.78	14.18	14.69	15.28	15.78	17.28
4H	2H	15.66	16.27	16.75	17.35	18.82	12.87	13.49	13.97	14.56	16.03
	3H	17.12	17.63	18.22	18.73	20.21	14.13	14.64	15.23	15.74	17.22
	4H	17.71	18.18	18.81	19.27	20.77	14.63	15.10	15.73	16.19	17.69
	6H	18.15	18.56	19.27	19.67	21.17	15.06	15.46	16.17	16.57	18.07
	8H	18.28	18.66	19.40	19.76	21.28	15.18	15.55	16.29	16.66	18.17
	12H	18.33	18.67	19.46	19.79	21.31	15.19	15.53	16.32	16.65	18.17
8H	4H	17.72	18.10	18.84	19.21	20.72	14.93	15.30	16.04	16.41	17.92
	6H	18.27	18.58	19.40	19.73	21.24	15.46	15.76	16.59	16.91	18.42
	8H	18.47	18.74	19.61	19.87	21.40	15.64	15.91	16.78	17.04	18.57
	12H	18.57	18.80	19.71	19.93	21.49	15.70	15.94	16.84	17.06	18.63
12H	4H	17.68	18.02	18.81	19.13	20.65	14.94	15.28	16.06	16.39	17.91
	6H	18.25	18.53	19.39	19.66	21.18	15.52	15.79	16.65	16.92	18.44
	8H	18.46	18.70	19.60	19.83	21.39	15.72	15.96	16.86	17.08	18.65