

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: P853778

Luminaire Tested: SQ2-FA-0U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853778  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-0U-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

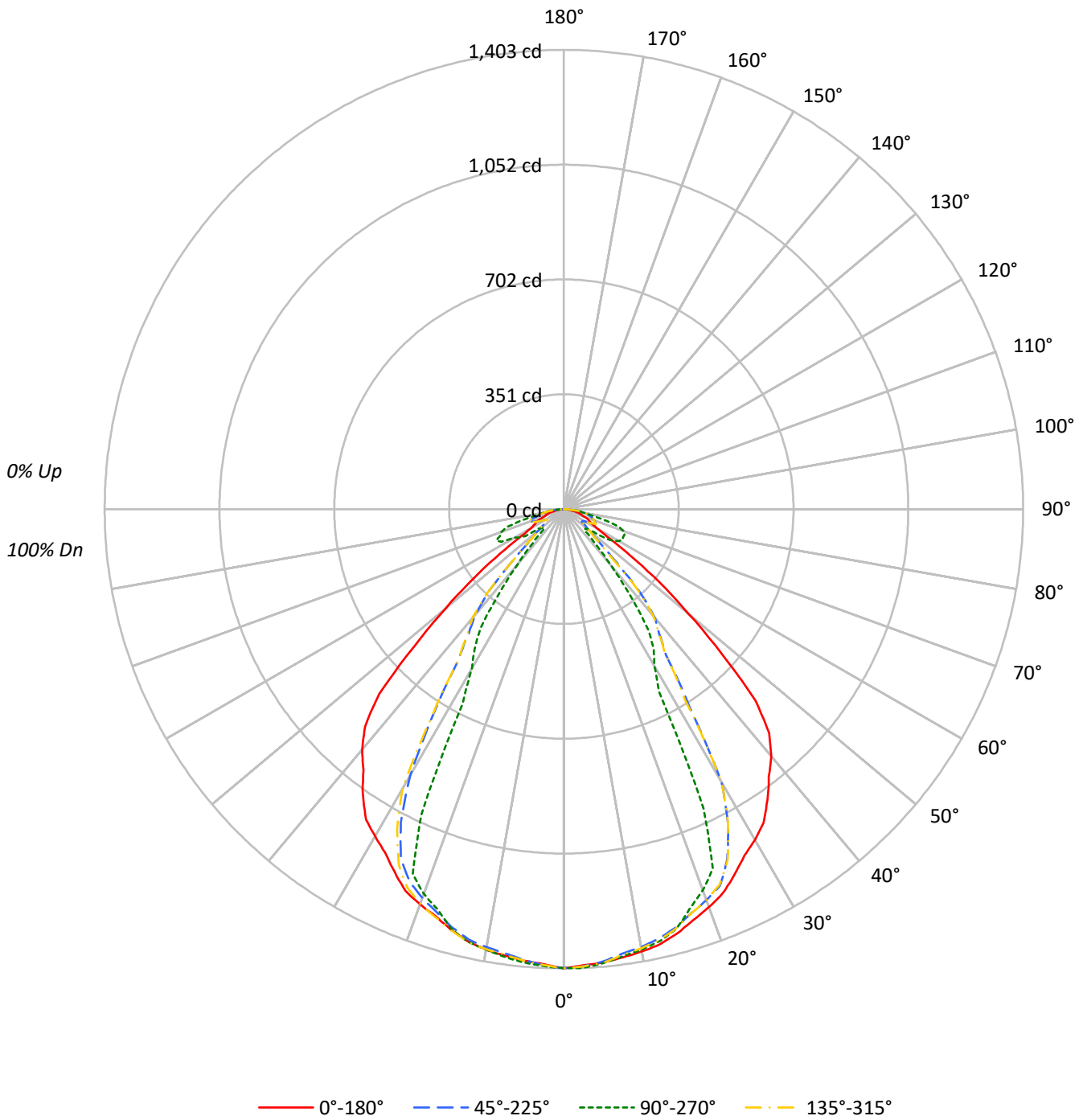
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2048.4 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.8  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63
5	84	74	66	61	82	73	66	61	71	65	60	69	64	59	67	62	59	57
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38

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

	0°	90°	180°	270°
0°	22646	22646	22646	22646
5°	22527	22561	22441	22545
10°	22492	22405	22405	22405
15°	22420	22190	22243	22190
20°	22246	21301	22082	21500
25°	21953	17977	21802	18355
30°	21752	10314	21515	10452
35°	21370	8862	21100	8736
40°	20778	4660	20198	4616
45°	18888	2005	18212	2005
50°	12461	2419	11823	2258
55°	6967	4467	6609	4051
60°	3759	6284	3688	5635
65°	3312	7637	3477	8688
70°	3097	9139	2946	9640
75°	2901	7854	2969	8116
80°	2455	5607	2455	5904
85°	2149	3131	1964	3724

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18888 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.0	6.4
10°-20°	374.5	18.3
20°-30°	510.6	24.9
30°-40°	429.1	20.9
40°-50°	243.7	11.9
50°-60°	129.3	6.3
60°-70°	119.0	5.8
70°-80°	87.4	4.3
80°-90°	22.8	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1017.0	49.7
0°-40°	1446.1	70.6
0°-60°	1819.1	88.8
0°-90°	2048.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2048.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1403	1403	1403	1403	1403	
5°	1390	1392	1385	1391	1390	132
15°	1341	1328	1331	1328	1341	378
25°	1232	1009	1224	1030	1232	568
35°	1084	450	1070	443	1084	677
45°	827	88	798	88	827	605
55°	248	159	235	144	248	238
65°	87	200	91	227	87	87
75°	46	126	48	130	46	48
85°	12	17	11	20	12	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6
2.5°	1395.0	1415.7	1397.5	1395.2	1402.6	1401.0	1398.4	1408.2	1391.6	1408.2	1395.0
5°	1389.9	1413.7	1386.7	1379.6	1392.0	1383.8	1391.0	1405.3	1384.6	1403.2	1382.5
7.5°	1381.2	1402.3	1370.0	1365.4	1377.6	1370.4	1373.4	1393.3	1376.0	1388.2	1369.4
10°	1371.9	1390.6	1358.2	1355.3	1366.6	1359.4	1362.4	1383.2	1366.6	1378.0	1359.2
12.5°	1361.8	1376.3	1343.8	1342.5	1352.3	1347.5	1348.9	1366.3	1353.1	1364.5	1346.5
15°	1341.3	1354.7	1322.2	1317.2	1327.5	1323.4	1325.4	1341.0	1330.7	1337.9	1322.2
17.5°	1315.9	1326.6	1294.3	1279.1	1279.5	1284.7	1294.3	1313.1	1303.8	1313.3	1291.1
20°	1294.7	1307.1	1271.4	1241.8	1239.7	1244.9	1271.4	1290.4	1285.2	1295.5	1264.0
22.5°	1270.2	1278.4	1246.1	1196.0	1188.9	1194.1	1242.7	1265.1	1263.2	1270.2	1231.0
25°	1232.3	1240.6	1181.5	1109.4	1009.1	1103.2	1183.6	1223.8	1223.8	1230.1	1178.4
27.5°	1193.8	1194.0	1087.2	712.5	628.5	686.9	1085.7	1172.9	1182.8	1179.7	1078.1
30°	1166.7	1159.5	963.6	576.0	553.2	567.7	964.7	1137.5	1154.0	1142.7	939.3
32.5°	1135.4	1114.9	711.5	529.5	510.9	523.7	688.0	1095.5	1124.4	1099.8	738.7
35°	1084.2	1030.4	542.6	468.2	449.6	466.1	538.4	1012.5	1070.5	1004.3	560.6
37.5°	1029.0	819.0	477.7	372.9	332.8	364.8	475.4	810.3	1006.6	791.5	477.3
40°	985.8	643.5	429.5	272.8	221.1	257.3	426.3	613.9	958.3	660.5	418.9
42.5°	928.3	565.3	344.8	173.3	135.6	158.6	330.7	552.2	899.1	572.3	333.4
45°	827.2	485.9	204.2	95.0	87.8	91.9	188.3	476.9	797.6	466.6	208.4
47.5°	655.2	370.6	131.2	80.8	88.6	80.8	127.1	358.8	618.8	358.2	131.0
50°	496.1	289.2	101.5	81.8	96.3	81.8	98.4	279.4	470.7	305.2	100.5
52.5°	367.5	241.7	82.9	89.7	115.7	91.3	80.6	235.3	348.9	246.3	78.5
55°	247.5	189.6	66.6	118.3	158.7	121.4	66.6	184.1	234.8	182.1	64.5
57.5°	157.0	141.0	67.5	152.1	181.1	155.0	68.5	135.9	150.6	136.6	59.2
60°	116.4	111.2	75.1	161.5	194.6	163.6	76.2	107.0	114.2	106.0	63.5
62.5°	96.0	87.6	90.3	174.9	202.2	170.4	92.2	83.5	99.9	80.0	70.2
65°	86.7	56.7	106.8	177.2	199.9	177.2	107.9	53.7	91.0	57.9	95.2
67.5°	78.3	42.1	103.2	176.0	201.2	176.4	100.7	40.1	75.1	39.1	97.3
70°	65.6	37.7	97.3	179.1	193.6	172.9	97.3	36.6	62.4	35.5	114.2
72.5°	54.6	35.8	90.5	165.4	171.6	159.2	91.4	35.6	54.8	32.0	107.5
75°	46.5	35.2	86.7	132.1	125.9	125.9	84.6	34.2	47.6	32.1	83.6
77.5°	34.9	31.2	71.9	86.2	81.4	81.4	70.7	30.1	33.2	28.2	67.9
80°	26.4	28.5	59.2	63.4	60.3	60.3	57.1	27.5	26.4	26.4	56.1
82.5°	20.5	24.2	45.7	46.5	44.2	43.4	44.4	24.0	20.5	22.2	43.4
85°	11.6	16.8	24.3	20.0	16.9	15.9	23.3	15.7	10.6	15.7	23.3
87.5°	4.2	7.5	3.4	3.4	3.4	3.4	3.4	7.5	4.2	6.7	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6
2.5°	1391.7	1397.5	1397.5	1394.1	1410.7	1395.0
5°	1377.5	1391.0	1384.8	1384.6	1405.4	1389.9
7.5°	1367.6	1380.2	1374.4	1373.2	1393.7	1381.2
10°	1357.3	1366.6	1362.5	1365.6	1384.3	1371.9
12.5°	1343.0	1354.0	1349.8	1354.6	1371.7	1361.8
15°	1318.2	1327.5	1329.6	1331.7	1351.6	1341.3
17.5°	1277.3	1281.8	1292.2	1306.8	1327.5	1315.9
20°	1245.1	1251.3	1257.6	1283.1	1307.1	1294.7
22.5°	1208.6	1206.5	1221.0	1250.9	1280.9	1270.2
25°	1109.9	1030.3	1118.2	1195.3	1235.4	1232.3
27.5°	772.8	670.6	761.0	1103.3	1187.6	1193.8
30°	608.2	560.6	607.2	984.8	1152.2	1166.7
32.5°	540.0	507.3	535.6	749.5	1107.7	1135.4
35°	466.0	443.2	466.0	560.6	1020.1	1084.2
37.5°	373.0	326.4	372.1	484.5	824.6	1029.0
40°	277.9	219.0	269.6	433.7	659.0	985.8
42.5°	185.2	141.1	175.2	341.4	570.0	928.3
45°	100.2	87.8	96.1	206.3	465.2	827.2
47.5°	78.6	83.1	78.6	130.1	355.9	655.2
50°	75.4	89.9	75.4	100.5	294.4	496.1
52.5°	82.2	97.5	81.4	79.3	240.3	367.5
55°	93.2	143.9	94.2	64.5	176.2	247.5
57.5°	132.7	161.8	134.1	61.1	135.7	157.0
60°	136.3	174.5	135.2	64.5	105.0	116.4
62.5°	161.2	216.0	161.0	73.8	78.0	96.0
65°	206.7	227.4	208.8	94.1	55.7	86.7
67.5°	196.2	210.9	194.2	100.9	38.4	78.3
70°	192.8	204.2	190.7	115.3	35.6	65.6
72.5°	179.9	181.3	176.1	106.8	32.0	54.6
75°	139.4	130.1	134.2	92.0	32.1	46.5
77.5°	86.7	82.9	83.6	70.2	28.3	34.9
80°	65.5	63.5	62.4	59.2	26.4	26.4
82.5°	48.6	46.5	45.5	45.7	22.2	20.5
85°	22.2	20.1	19.1	26.4	15.8	11.6
87.5°	4.2	4.2	3.4	4.2	5.9	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0



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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	14.84	16.15	15.21	16.46	16.78	13.70	15.01	14.06	15.32	15.64
	3H	15.57	16.74	15.95	17.07	17.43	19.87	21.05	20.25	21.38	21.74
	4H	15.99	17.09	16.40	17.44	17.82	21.17	22.26	21.57	22.61	23.00
	6H	16.36	17.38	16.78	17.75	18.14	21.79	22.80	22.21	23.17	23.57
	8H	16.49	17.45	16.92	17.84	18.25	21.93	22.89	22.36	23.28	23.68
	12H	16.58	17.49	17.01	17.88	18.31	21.98	22.90	22.41	23.28	23.71
4H	2H	15.28	16.37	15.68	16.72	17.11	14.27	15.37	14.67	15.72	16.10
	3H	16.30	17.21	16.71	17.62	18.02	20.62	21.54	21.04	21.94	22.34
	4H	16.87	17.69	17.31	18.11	18.56	22.08	22.91	22.52	23.32	23.77
	6H	17.37	18.08	17.83	18.53	18.99	22.84	23.55	23.30	24.00	24.46
	8H	17.54	18.21	18.01	18.65	19.13	23.01	23.68	23.48	24.12	24.60
	12H	17.68	18.27	18.16	18.75	19.22	23.09	23.68	23.58	24.17	24.64
8H	4H	18.00	18.66	18.47	19.11	19.58	22.23	22.90	22.70	23.34	23.81
	6H	18.62	19.16	19.12	19.66	20.14	23.12	23.67	23.62	24.16	24.64
	8H	18.85	19.34	19.37	19.85	20.34	23.37	23.86	23.89	24.37	24.86
	12H	19.04	19.47	19.56	19.96	20.53	23.51	23.94	24.03	24.43	25.01
12H	4H	18.16	18.75	18.65	19.23	19.71	22.21	22.80	22.70	23.28	23.76
	6H	18.89	19.38	19.41	19.89	20.38	23.13	23.62	23.65	24.13	24.62
	8H	19.21	19.64	19.72	20.13	20.70	23.43	23.86	23.95	24.35	24.92