

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P686313

Luminaire Tested: SQ4R-F-100D-93050-1-UNV-STD-W-4\_4000K

Issue Date: 5/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P686313  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2203-586-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4R-F-100D-93050-1-UNV-STD-W-4\_4000K  
Description: CORELITE SQ4R RECESSED LED LUMINAIRE WITH FROSTED LENS, WHITE TUNING 3000K-5000K  
1000 LUMENS PER FOOT  
Light Source: 3000K AND 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

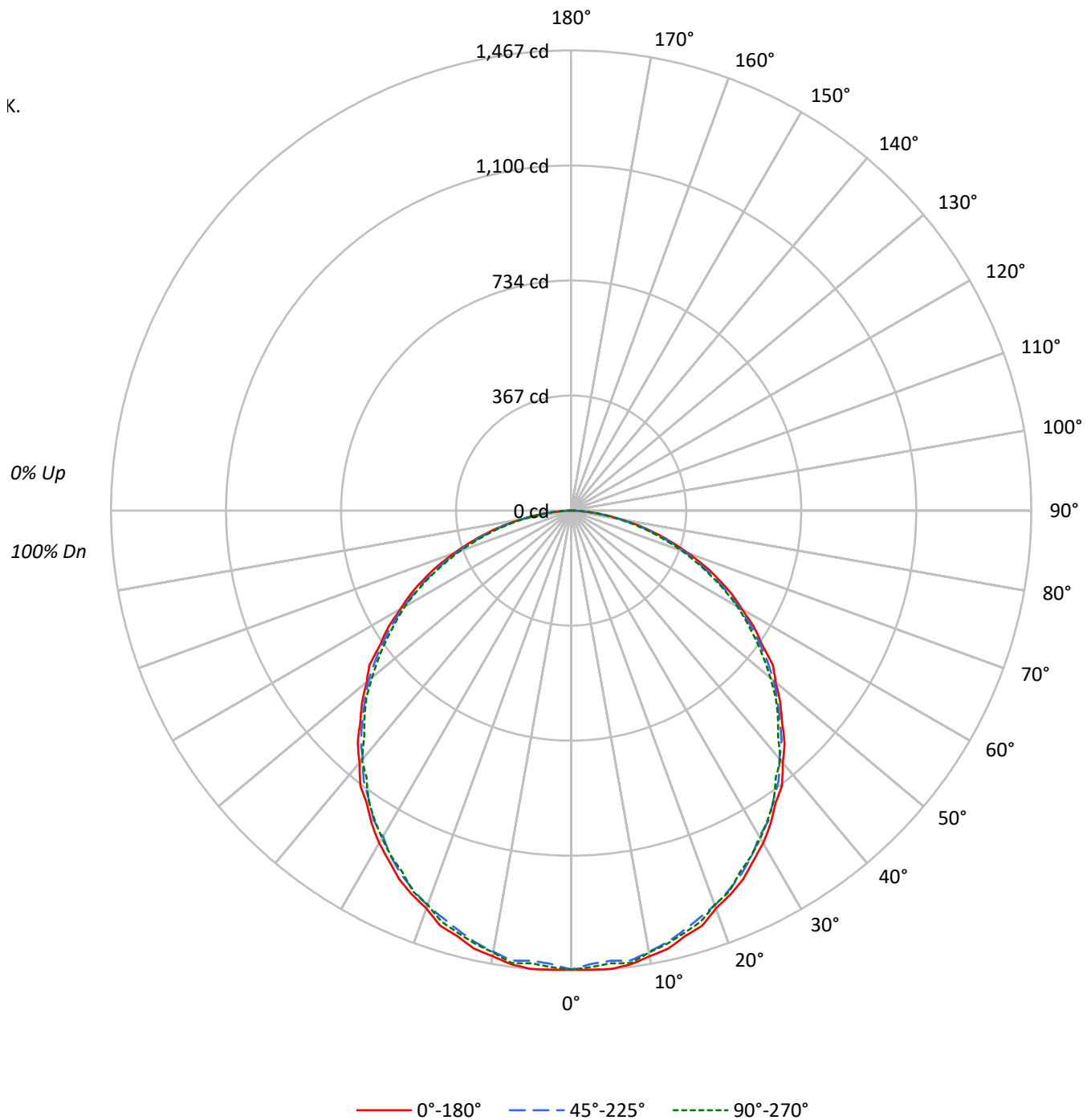
Lumens per Lamp: N/A  
Luminaire Lumens: 4070.1 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.23 / 1.35  
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84				84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70				70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59				59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50				50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43				43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38				38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33				33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30				30
9	56	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27				27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	24				24

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

	0°	45°	90°
0°	14084	14084	14084
5°	14176	13922	14000
10°	14103	13964	13984
15°	13995	13813	13894
20°	13825	13721	13701
25°	13774	13602	13516
30°	13605	13334	13402
35°	13359	13216	13241
40°	13191	12986	13038
45°	12938	12800	12689
50°	12746	12625	12412
55°	12448	12276	12073
60°	12094	11899	11782
65°	11816	11402	11217
70°	11178	10837	10609
75°	10326	10025	9723
80°	8876	8760	8538
85°	6495	6716	6495

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 12993 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.3	3.4
10°-20°	394.1	9.7
20°-30°	591.7	14.5
30°-40°	707.0	17.4
40°-50°	727.5	17.9
50°-60°	655.6	16.1
60°-70°	498.1	12.2
70°-80°	284.5	7.0
80°-90°	73.2	1.8
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°	1124.2	27.6
0°-40°	1831.2	45.0
0°-60°	3214.3	79.0
0°-90°	4070.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4070.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1463	1463	1463	1463	1463	
5°	1467	1457	1441	1457	1449	139
15°	1404	1402	1386	1400	1394	397
25°	1297	1283	1280	1283	1272	596
35°	1137	1143	1124	1120	1127	714
45°	950	954	940	934	932	736
55°	742	750	731	725	719	667
65°	519	515	500	492	492	512
75°	278	274	270	263	261	294
85°	59	61	61	59	59	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1462.9	1462.9	1462.9	1462.9	1462.9
2.5°	1464.9	1464.9	1446.7	1466.9	1456.8
5°	1466.9	1456.8	1440.6	1456.8	1448.7
7.5°	1458.8	1444.7	1446.7	1448.7	1454.8
10°	1442.6	1436.6	1428.4	1436.6	1430.5
12.5°	1430.5	1430.5	1410.2	1418.3	1414.3
15°	1404.1	1402.1	1385.9	1400.1	1394.0
17.5°	1387.9	1377.8	1361.6	1371.7	1373.7
20°	1349.4	1351.5	1339.3	1349.4	1337.3
22.5°	1325.1	1333.2	1310.9	1323.1	1315.0
25°	1296.7	1282.6	1280.5	1282.6	1272.4
27.5°	1258.3	1256.2	1244.1	1240.0	1242.0
30°	1223.8	1227.9	1199.5	1199.5	1205.6
32.5°	1183.3	1181.3	1171.1	1161.0	1167.1
35°	1136.7	1142.8	1124.5	1120.5	1126.6
37.5°	1104.3	1096.2	1086.0	1079.9	1071.8
40°	1049.6	1053.6	1033.3	1033.3	1037.4
42.5°	1007.0	1005.0	992.8	984.7	976.6
45°	950.3	954.3	940.1	934.1	932.0
47.5°	903.7	901.6	891.5	879.4	885.4
50°	851.0	849.0	842.9	830.7	828.7
52.5°	810.5	802.4	788.2	778.0	774.0
55°	741.6	749.7	731.4	725.4	719.3
57.5°	690.9	686.9	676.7	666.6	664.6
60°	628.1	628.1	618.0	611.9	611.9
62.5°	577.5	571.4	559.2	555.2	553.1
65°	518.7	514.6	500.5	492.4	492.4
67.5°	459.9	455.9	441.7	433.6	433.6
70°	397.1	393.1	385.0	378.9	376.9
72.5°	336.3	334.3	326.2	320.1	316.1
75°	277.6	273.5	269.5	263.4	261.4
77.5°	220.9	216.8	212.7	206.7	204.6
80°	160.1	158.0	158.0	152.0	154.0
82.5°	109.4	109.4	107.4	103.3	105.4
85°	58.8	60.8	60.8	58.8	58.8
87.5°	20.3	24.3	26.3	24.3	24.3
90°	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	20.96	22.60	21.33	22.91	23.23	20.77	22.41	21.14	22.73	23.04
	3H	22.80	24.28	23.18	24.61	24.97	22.56	24.04	22.94	24.37	24.73
	4H	23.48	24.88	23.88	25.23	25.60	23.22	24.61	23.62	24.96	25.34
	6H	23.96	25.26	24.37	25.62	26.01	23.69	24.98	24.10	25.35	25.74
	8H	24.10	25.34	24.53	25.73	26.13	23.83	25.07	24.26	25.46	25.86
	12H	24.18	25.37	24.61	25.75	26.18	23.92	25.10	24.35	25.48	25.91
4H	2H	21.57	22.97	21.97	23.31	23.69	21.42	22.82	21.82	23.17	23.54
	3H	23.63	24.80	24.04	25.20	25.60	23.43	24.60	23.84	25.00	25.40
	4H	24.44	25.50	24.87	25.91	26.35	24.21	25.27	24.65	25.69	26.12
	6H	25.04	25.97	25.50	26.41	26.86	24.80	25.73	25.26	26.17	26.63
	8H	25.23	26.10	25.69	26.54	27.00	24.99	25.86	25.45	26.30	26.76
	12H	25.35	26.13	25.83	26.60	27.07	25.11	25.89	25.59	26.37	26.84
8H	4H	24.74	25.61	25.20	26.05	26.51	24.54	25.41	25.00	25.85	26.31
	6H	25.45	26.17	25.95	26.66	27.14	25.24	25.96	25.73	26.45	26.92
	8H	25.71	26.35	26.22	26.86	27.34	25.49	26.14	26.00	26.65	27.13
	12H	25.89	26.46	26.39	26.95	27.51	25.68	26.25	26.18	26.74	27.30
12H	4H	24.77	25.55	25.25	26.02	26.49	24.57	25.35	25.05	25.83	26.30
	6H	25.50	26.15	26.01	26.66	27.14	25.30	25.94	25.81	26.45	26.94
	8H	25.81	26.38	26.32	26.87	27.43	25.60	26.18	26.11	26.67	27.23