

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: P686314

Luminaire Tested: SQ4R-F-100D-93050-1-UNV-STD-W-4_4500K

Issue Date: 5/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P686314
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_4500K
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

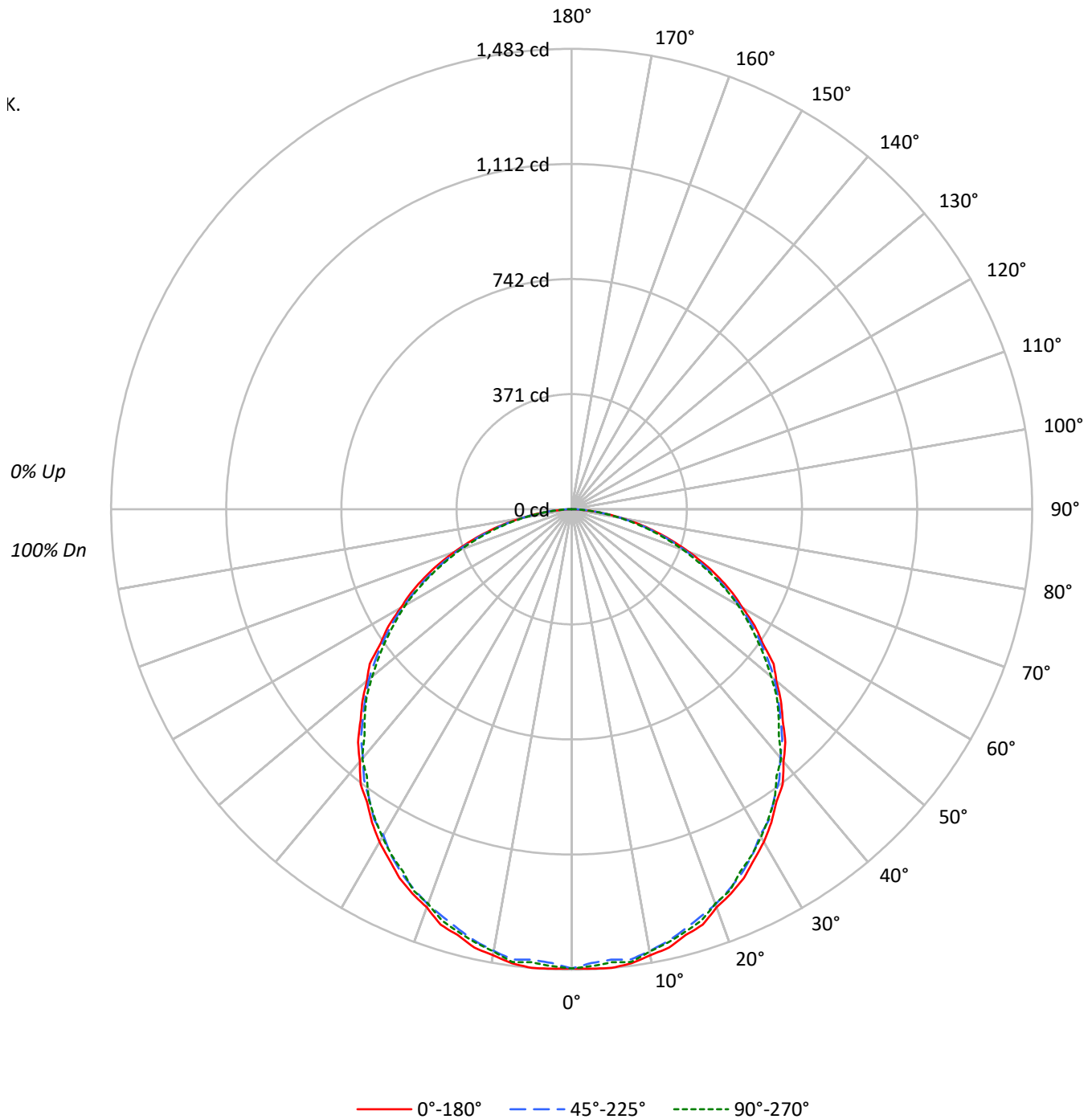
Lumens per Lamp: N/A
Luminaire Lumens: 4115.3 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.23 / 1.35
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 46.4
Input Voltage (V): 120
Input Current (A_{in}): 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°	14240	14240	14240
5°	14334	14077	14156
10°	14259	14119	14140
15°	14150	13967	14048
20°	13979	13874	13853
25°	13927	13754	13667
30°	13756	13482	13551
35°	13508	13363	13388
40°	13337	13131	13182
45°	13081	12943	12831
50°	12887	12764	12550
55°	12585	12414	12208
60°	12229	12030	11913
65°	11948	11527	11340
70°	11302	10955	10727
75°	10441	10136	9831
80°	8970	8860	8632
85°	6561	6793	6561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 13137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	3.4
10°-20°	398.5	9.7
20°-30°	598.3	14.5
30°-40°	714.9	17.4
40°-50°	735.6	17.9
50°-60°	662.9	16.1
60°-70°	503.6	12.2
70°-80°	287.7	7.0
80°-90°	74.0	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°	1136.7	27.6
0°-40°	1851.5	45.0
0°-60°	3250.0	79.0
0°-90°	4115.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4115.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1483	1473	1457	1473	1465	141
15°	1420	1418	1401	1416	1410	401
25°	1311	1297	1295	1297	1287	603
35°	1149	1155	1137	1133	1139	722
45°	961	965	951	944	942	744
55°	750	758	740	733	727	674
65°	524	520	506	498	498	518
75°	281	277	272	266	264	297
85°	59	62	62	59	59	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.1	1479.1	1479.1	1479.1	1479.1
2.5°	1481.2	1481.2	1462.7	1483.2	1473.0
5°	1483.2	1473.0	1456.6	1473.0	1464.8
7.5°	1475.0	1460.7	1462.7	1464.8	1470.9
10°	1458.6	1452.5	1444.3	1452.5	1446.4
12.5°	1446.4	1446.4	1425.9	1434.1	1430.0
15°	1419.7	1417.7	1401.3	1415.6	1409.5
17.5°	1403.3	1393.1	1376.7	1386.9	1389.0
20°	1364.4	1366.5	1354.2	1364.4	1352.1
22.5°	1339.8	1348.0	1325.5	1337.8	1329.6
25°	1311.1	1296.8	1294.8	1296.8	1286.6
27.5°	1272.2	1270.2	1257.9	1253.8	1255.8
30°	1237.4	1241.5	1212.8	1212.8	1219.0
32.5°	1196.4	1194.4	1184.1	1173.9	1180.0
35°	1149.3	1155.4	1137.0	1132.9	1139.1
37.5°	1116.5	1108.3	1098.1	1091.9	1083.7
40°	1061.2	1065.3	1044.8	1044.8	1048.9
42.5°	1018.2	1016.1	1003.8	995.7	987.5
45°	960.8	964.9	950.6	944.4	942.4
47.5°	913.7	911.7	901.4	889.1	895.3
50°	860.4	858.4	852.2	840.0	837.9
52.5°	819.5	811.3	796.9	786.7	782.6
55°	749.8	758.0	739.6	733.4	727.3
57.5°	698.6	694.5	684.3	674.0	672.0
60°	635.1	635.1	624.8	618.7	618.7
62.5°	583.9	577.7	565.4	561.3	559.3
65°	524.5	520.4	506.0	497.8	497.8
67.5°	465.0	460.9	446.6	438.4	438.4
70°	401.5	397.4	389.2	383.1	381.1
72.5°	340.1	338.0	329.8	323.7	319.6
75°	280.7	276.6	272.5	266.3	264.3
77.5°	223.3	219.2	215.1	209.0	206.9
80°	161.8	159.8	159.8	153.6	155.7
82.5°	110.6	110.6	108.6	104.5	106.5
85°	59.4	61.5	61.5	59.4	59.4
87.5°	20.5	24.6	26.6	24.6	24.6
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	21.00	22.64	21.36	22.95	23.27	20.81	22.45	21.18	22.77	23.08
	3H	22.84	24.32	23.22	24.65	25.01	22.60	24.08	22.97	24.41	24.77
	4H	23.52	24.92	23.92	25.27	25.64	23.26	24.65	23.65	25.00	25.38
	6H	24.00	25.29	24.41	25.66	26.05	23.73	25.02	24.14	25.39	25.78
	8H	24.14	25.38	24.57	25.77	26.17	23.87	25.11	24.30	25.50	25.90
	12H	24.22	25.41	24.65	25.79	26.22	23.96	25.14	24.38	25.52	25.95
4H	2H	21.61	23.01	22.01	23.35	23.73	21.46	22.86	21.86	23.20	23.58
	3H	23.67	24.84	24.08	25.24	25.64	23.47	24.64	23.88	25.04	25.44
	4H	24.48	25.54	24.91	25.95	26.39	24.25	25.31	24.68	25.73	26.16
	6H	25.08	26.01	25.53	26.45	26.90	24.84	25.77	25.30	26.21	26.66
	8H	25.27	26.13	25.73	26.58	27.04	25.03	25.90	25.49	26.34	26.80
	12H	25.38	26.16	25.86	26.64	27.11	25.15	25.93	25.63	26.40	26.87
8H	4H	24.78	25.64	25.24	26.09	26.55	24.58	25.44	25.04	25.89	26.35
	6H	25.49	26.21	25.99	26.70	27.18	25.28	26.00	25.77	26.49	26.96
	8H	25.75	26.39	26.25	26.90	27.38	25.53	26.18	26.04	26.68	27.17
	12H	25.92	26.50	26.43	26.99	27.55	25.71	26.28	26.22	26.77	27.33
12H	4H	24.81	25.59	25.29	26.06	26.53	24.61	25.39	25.09	25.87	26.33
	6H	25.54	26.19	26.05	26.69	27.18	25.33	25.98	25.84	26.49	26.97
	8H	25.85	26.42	26.35	26.91	27.47	25.64	26.21	26.15	26.70	27.26