

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: P845474

Luminaire Tested: SQ2R-F-050D-940-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845474
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-1)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-F-050D-940-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

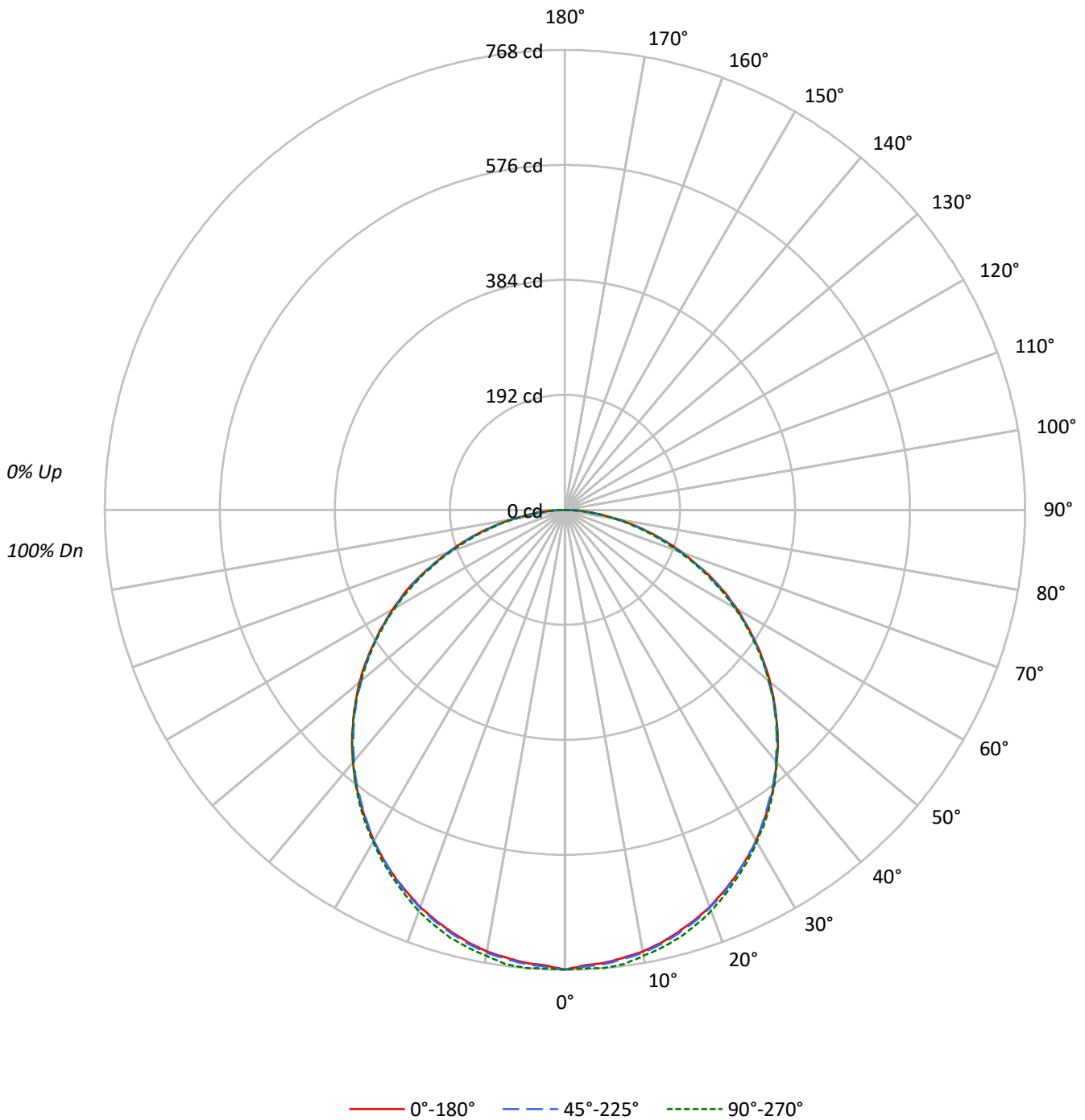
Lumens per Lamp: N/A
Luminaire Lumens: 2155.0 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9973
Total Harmonic Distortion (THDi): 0.0531
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
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	93	91	88	90	88	86	84			84	
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70			70	
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59			59	
4	82	70	61	55	80	69	61	54	66	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	42	36	63	50	42	36	49	41	36	47	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	34	29	41	34	29	40	33	29	39	33	29	27			27	
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24			24	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12395	12395	12395
5°	12306	12340	12443
10°	12277	12311	12396
15°	12202	12237	12359
20°	12129	12148	12256
25°	12018	12018	12093
30°	11895	11895	11934
35°	11749	11708	11791
40°	11594	11550	11594
45°	11415	11367	11415
50°	11243	11138	11165
55°	10981	10953	10894
60°	10705	10637	10572
65°	10388	10269	10147
70°	9777	9725	9526
75°	9201	9002	8740
80°	8173	7978	7680
85°	6595	6002	5613

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 11488 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	3.4
10°-20°	207.5	9.6
20°-30°	312.1	14.5
30°-40°	373.4	17.3
40°-50°	385.3	17.9
50°-60°	347.6	16.1
60°-70°	265.2	12.3
70°-80°	152.4	7.1
80°-90°	38.8	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°	592.2	27.5
0°-40°	965.6	44.8
0°-60°	1698.5	78.8
0°-90°	2155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	759	770	761	762	768	72
15°	730	739	732	734	739	206
25°	675	682	675	676	679	311
35°	596	600	594	596	598	373
45°	500	503	498	499	500	386
55°	390	392	389	387	387	349
65°	272	271	269	267	266	267
75°	148	146	144	141	140	156
85°	36	34	32	29	30	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.7	767.7	767.7	767.7	767.7
2.5°	761.4	772.9	763.5	765.6	766.6
5°	759.3	769.7	761.4	762.4	767.7
7.5°	754.1	765.6	756.1	758.2	764.5
10°	748.8	759.3	750.9	752.0	756.1
12.5°	740.5	750.9	742.6	744.6	748.8
15°	730.0	739.4	732.1	734.2	739.4
17.5°	718.5	729.0	720.6	723.7	726.9
20°	705.9	714.3	707.0	708.0	713.3
22.5°	690.3	698.6	692.4	692.4	696.5
25°	674.6	681.9	674.6	675.6	678.8
27.5°	656.8	663.1	656.8	657.8	661.0
30°	638.0	644.2	638.0	639.0	640.1
32.5°	617.1	622.3	616.0	617.1	620.2
35°	596.1	600.3	594.0	596.1	598.2
37.5°	574.2	577.3	572.1	573.1	575.2
40°	550.1	553.3	548.0	549.1	550.1
42.5°	526.1	528.2	522.9	524.0	526.1
45°	499.9	503.1	497.8	498.9	499.9
47.5°	473.8	475.9	471.7	470.6	472.7
50°	447.6	448.7	443.4	443.4	444.5
52.5°	419.4	420.4	417.3	415.2	416.2
55°	390.1	392.2	389.1	387.0	387.0
57.5°	360.8	362.9	358.7	357.7	357.7
60°	331.5	332.6	329.4	328.4	327.4
62.5°	302.3	302.3	299.1	298.1	297.0
65°	271.9	270.9	268.8	266.7	265.6
67.5°	237.4	238.5	236.4	233.2	233.2
70°	207.1	208.1	206.0	201.8	201.8
72.5°	177.8	176.7	175.7	172.6	170.5
75°	147.5	146.4	144.3	141.2	140.1
77.5°	117.1	116.1	115.0	110.9	111.9
80°	87.9	86.8	85.8	82.6	82.6
82.5°	61.7	59.6	58.6	55.4	55.4
85°	35.6	33.5	32.4	29.3	30.3
87.5°	12.6	11.5	10.5	8.4	8.4
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	20.51	22.15	20.88	22.47	22.78	20.43	22.07	20.80	22.39	22.70
	3H	22.34	23.83	22.72	24.16	24.52	22.22	23.71	22.60	24.04	24.40
	4H	23.04	24.44	23.43	24.78	25.16	22.88	24.28	23.28	24.63	25.01
	6H	23.54	24.84	23.95	25.20	25.60	23.36	24.66	23.77	25.02	25.41
	8H	23.70	24.94	24.13	25.33	25.73	23.50	24.74	23.92	25.13	25.53
	12H	23.80	24.99	24.23	25.37	25.80	23.58	24.77	24.01	25.15	25.58
4H	2H	21.15	22.55	21.55	22.89	23.27	21.09	22.49	21.48	22.83	23.21
	3H	23.20	24.38	23.61	24.77	25.17	23.09	24.27	23.50	24.66	25.06
	4H	24.02	25.08	24.45	25.50	25.93	23.88	24.94	24.31	25.35	25.79
	6H	24.66	25.58	25.11	26.02	26.48	24.48	25.40	24.93	25.84	26.30
	8H	24.86	25.73	25.32	26.17	26.64	24.66	25.53	25.12	25.97	26.44
	12H	25.00	25.78	25.48	26.26	26.73	24.77	25.55	25.25	26.03	26.50
8H	4H	24.33	25.20	24.79	25.64	26.11	24.20	25.07	24.66	25.52	25.98
	6H	25.08	25.81	25.58	26.29	26.77	24.92	25.64	25.41	26.13	26.60
	8H	25.36	26.01	25.87	26.51	27.00	25.17	25.81	25.67	26.32	26.80
	12H	25.56	26.14	26.07	26.63	27.19	25.33	25.91	25.84	26.40	26.96
12H	4H	24.36	25.14	24.84	25.62	26.09	24.24	25.02	24.72	25.50	25.97
	6H	25.13	25.78	25.64	26.29	26.77	24.97	25.62	25.48	26.13	26.61
	8H	25.46	26.04	25.97	26.53	27.09	25.28	25.85	25.78	26.34	26.90