

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: P845469

Luminaire Tested: SQ2R-F-050D-830-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

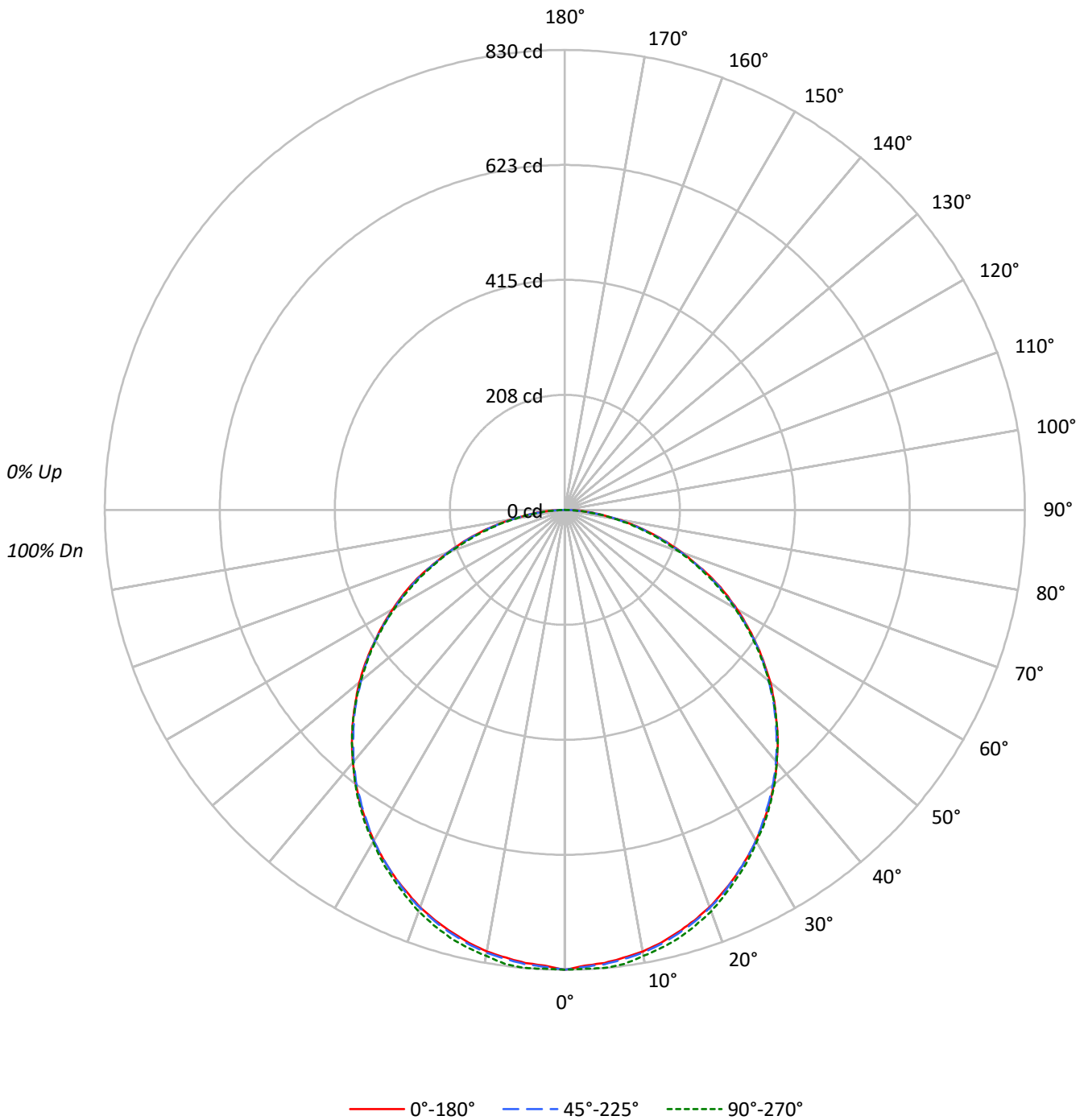
Test Method: LM-79-2019  
Report Number: P845469  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-F-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS  
500 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2329.7 lumens  
Efficiency: N/A  
Efficacy: 130.9 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				
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84				
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70				
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59				
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	57	52	50				
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43				
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38				
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33				
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30				
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27				
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24				

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

	0°	45°	90°
0°	13399	13399	13399
5°	13303	13340	13451
10°	13272	13309	13403
15°	13192	13229	13362
20°	13113	13132	13249
25°	12992	12992	13073
30°	12858	12858	12901
35°	12703	12658	12747
40°	12534	12488	12534
45°	12339	12289	12339
50°	12155	12042	12069
55°	11871	11840	11775
60°	11573	11502	11428
65°	11232	11102	10972
70°	10570	10513	10301
75°	9944	9732	9451
80°	8833	8619	8303
85°	7114	6484	6076

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 12417 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.5	3.4
10°-20°	224.3	9.6
20°-30°	337.4	14.5
30°-40°	403.7	17.3
40°-50°	416.5	17.9
50°-60°	375.8	16.1
60°-70°	286.7	12.3
70°-80°	164.7	7.1
80°-90°	42.0	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°	640.2	27.5
0°-40°	1043.9	44.8
0°-60°	1836.2	78.8
0°-90°	2329.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2329.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	830	830	830	830	830	
5°	821	832	823	824	830	78
15°	789	799	791	794	799	223
25°	729	737	729	730	734	336
35°	644	649	642	644	647	403
45°	540	544	538	539	540	417
55°	422	424	421	418	418	377
65°	294	293	291	288	287	289
75°	159	158	156	153	152	168
85°	38	36	35	32	33	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	829.9	829.9	829.9	829.9	829.9
2.5°	823.1	835.5	825.4	827.6	828.8
5°	820.8	832.2	823.1	824.2	829.9
7.5°	815.2	827.6	817.5	819.7	826.5
10°	809.5	820.8	811.8	812.9	817.5
12.5°	800.5	811.8	802.8	805.0	809.5
15°	789.2	799.4	791.4	793.7	799.4
17.5°	776.8	788.1	779.0	782.4	785.8
20°	763.2	772.2	764.3	765.4	771.1
22.5°	746.2	755.3	748.5	748.5	753.0
25°	729.3	737.2	729.3	730.4	733.8
27.5°	710.0	716.8	710.0	711.2	714.6
30°	689.7	696.5	689.7	690.8	692.0
32.5°	667.1	672.7	665.9	667.1	670.5
35°	644.5	649.0	642.2	644.5	646.7
37.5°	620.7	624.1	618.5	619.6	621.9
40°	594.7	598.1	592.5	593.6	594.7
42.5°	568.7	571.0	565.3	566.5	568.7
45°	540.4	543.8	538.2	539.3	540.4
47.5°	512.2	514.4	509.9	508.8	511.1
50°	483.9	485.0	479.4	479.4	480.5
52.5°	453.4	454.5	451.1	448.9	450.0
55°	421.7	424.0	420.6	418.3	418.3
57.5°	390.1	392.3	387.8	386.7	386.7
60°	358.4	359.5	356.2	355.0	353.9
62.5°	326.8	326.8	323.4	322.2	321.1
65°	294.0	292.8	290.6	288.3	287.2
67.5°	256.7	257.8	255.5	252.1	252.1
70°	223.9	225.0	222.7	218.2	218.2
72.5°	192.2	191.1	189.9	186.6	184.3
75°	159.4	158.3	156.0	152.6	151.5
77.5°	126.6	125.5	124.4	119.8	121.0
80°	95.0	93.8	92.7	89.3	89.3
82.5°	66.7	64.4	63.3	59.9	59.9
85°	38.4	36.2	35.0	31.7	32.8
87.5°	13.6	12.4	11.3	9.0	9.0
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	20.78	22.42	21.15	22.74	23.05	20.70	22.34	21.07	22.66	22.97
	3H	22.62	24.10	22.99	24.43	24.79	22.50	23.98	22.87	24.31	24.67
	4H	23.31	24.71	23.71	25.05	25.43	23.15	24.55	23.55	24.90	25.28
	6H	23.81	25.11	24.22	25.48	25.87	23.63	24.93	24.04	25.29	25.68
	8H	23.97	25.21	24.40	25.60	26.00	23.77	25.01	24.20	25.40	25.80
	12H	24.07	25.26	24.50	25.64	26.07	23.85	25.04	24.28	25.42	25.85
4H	2H	21.42	22.82	21.82	23.17	23.54	21.36	22.76	21.76	23.10	23.48
	3H	23.47	24.65	23.88	25.04	25.44	23.36	24.54	23.77	24.94	25.33
	4H	24.29	25.36	24.72	25.77	26.20	24.15	25.21	24.58	25.62	26.06
	6H	24.93	25.85	25.38	26.30	26.75	24.75	25.67	25.20	26.11	26.57
	8H	25.13	26.00	25.59	26.44	26.91	24.93	25.80	25.39	26.24	26.71
	12H	25.27	26.05	25.75	26.53	27.00	25.04	25.83	25.52	26.30	26.77
8H	4H	24.60	25.47	25.06	25.91	26.38	24.48	25.34	24.94	25.79	26.25
	6H	25.35	26.08	25.85	26.56	27.04	25.19	25.91	25.68	26.40	26.87
	8H	25.63	26.28	26.14	26.78	27.27	25.44	26.08	25.94	26.59	27.08
	12H	25.83	26.41	26.34	26.90	27.46	25.61	26.18	26.11	26.67	27.23
12H	4H	24.63	25.41	25.11	25.89	26.36	24.51	25.29	24.99	25.77	26.24
	6H	25.40	26.05	25.91	26.56	27.04	25.24	25.89	25.75	26.40	26.89
	8H	25.73	26.31	26.24	26.80	27.36	25.55	26.12	26.05	26.61	27.17