

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: P845470

Luminaire Tested: SQ2R-F-050D-835-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845470
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-835-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS
500 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

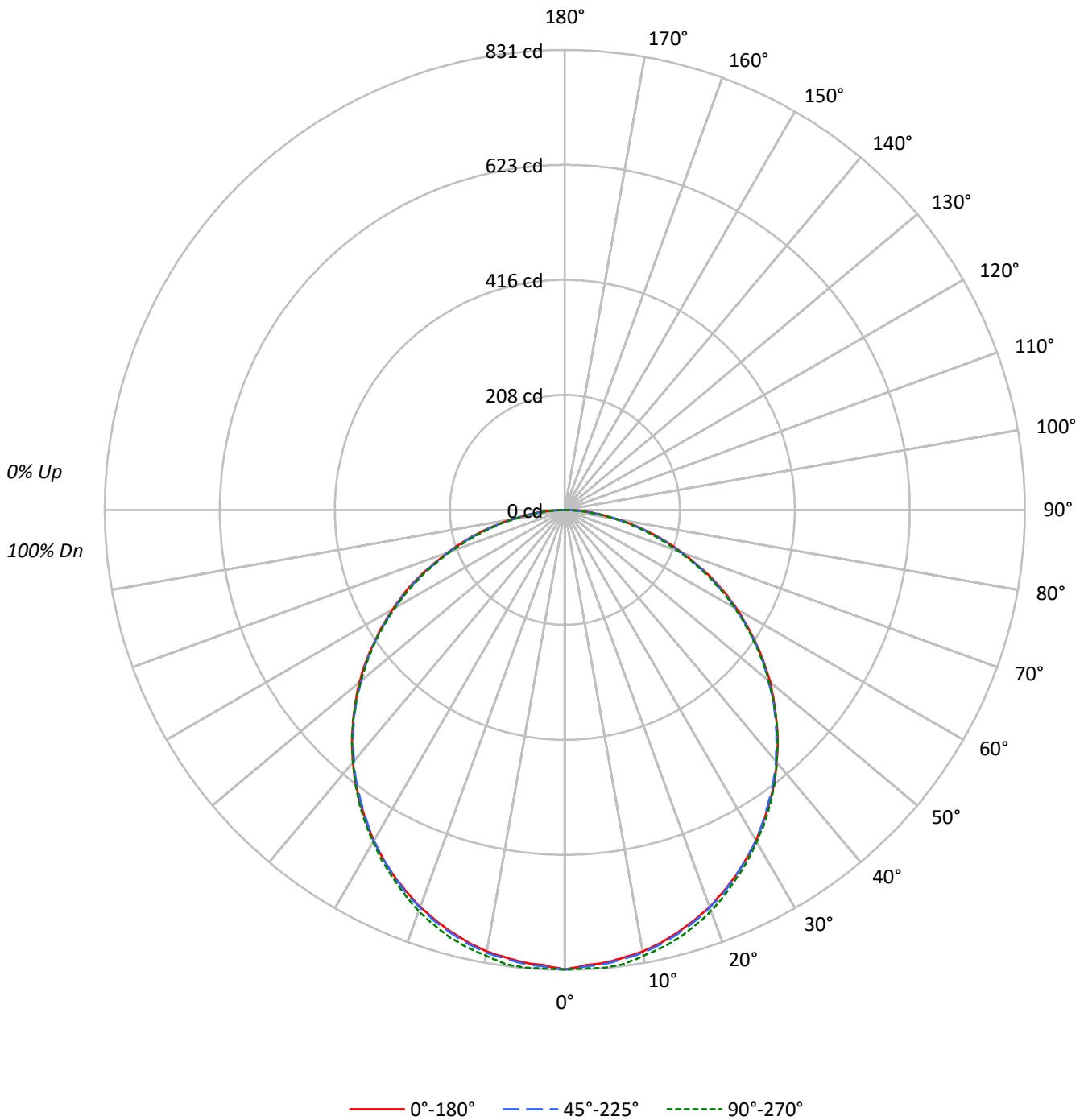
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2331.8 lumens
Efficiency: N/A
Efficacy: 131.0 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°	13411	13411	13411
5°	13316	13353	13462
10°	13285	13321	13414
15°	13203	13242	13374
20°	13125	13144	13261
25°	13003	13003	13083
30°	12870	12870	12913
35°	12713	12670	12759
40°	12547	12499	12547
45°	12351	12300	12351
50°	12167	12052	12082
55°	11882	11851	11786
60°	11583	11512	11438
65°	11240	11110	10980
70°	10579	10523	10310
75°	9956	9744	9457
80°	8842	8629	8312
85°	7132	6502	6076

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12428 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	3.4
10°-20°	224.5	9.6
20°-30°	337.7	14.5
30°-40°	404.1	17.3
40°-50°	416.9	17.9
50°-60°	376.1	16.1
60°-70°	287.0	12.3
70°-80°	164.9	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°	640.8	27.5
0°-40°	1044.9	44.8
0°-60°	1837.9	78.8
0°-90°	2331.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2331.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	822	833	824	825	831	78
15°	790	800	792	794	800	223
25°	730	738	730	731	734	336
35°	645	650	643	645	647	404
45°	541	544	539	540	541	418
55°	422	424	421	419	419	377
65°	294	293	291	289	287	289
75°	160	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°	830.6	830.6	830.6	830.6	830.6
2.5°	823.9	836.3	826.1	828.4	829.5
5°	821.6	832.9	823.9	825.0	830.6
7.5°	815.9	828.4	818.2	820.5	827.2
10°	810.3	821.6	812.5	813.7	818.2
12.5°	801.2	812.5	803.5	805.7	810.3
15°	789.9	800.1	792.2	794.4	800.1
17.5°	777.5	788.8	779.7	783.1	786.5
20°	763.9	772.9	765.0	766.1	771.8
22.5°	746.9	756.0	749.2	749.2	753.7
25°	729.9	737.8	729.9	731.1	734.4
27.5°	710.7	717.5	710.7	711.8	715.2
30°	690.3	697.1	690.3	691.4	692.6
32.5°	667.7	673.3	666.5	667.7	671.1
35°	645.0	649.6	642.8	645.0	647.3
37.5°	621.3	624.7	619.0	620.2	622.4
40°	595.3	598.6	593.0	594.1	595.3
42.5°	569.2	571.5	565.8	567.0	569.2
45°	540.9	544.3	538.7	539.8	540.9
47.5°	512.6	514.9	510.4	509.2	511.5
50°	484.4	485.5	479.8	479.8	481.0
52.5°	453.8	454.9	451.5	449.3	450.4
55°	422.1	424.4	421.0	418.7	418.7
57.5°	390.4	392.7	388.2	387.0	387.0
60°	358.7	359.9	356.5	355.3	354.2
62.5°	327.1	327.1	323.7	322.5	321.4
65°	294.2	293.1	290.8	288.6	287.4
67.5°	256.9	258.0	255.8	252.4	252.4
70°	224.1	225.2	222.9	218.4	218.4
72.5°	192.4	191.3	190.1	186.7	184.5
75°	159.6	158.4	156.2	152.8	151.6
77.5°	126.7	125.6	124.5	120.0	121.1
80°	95.1	93.9	92.8	89.4	89.4
82.5°	66.8	64.5	63.4	60.0	60.0
85°	38.5	36.2	35.1	31.7	32.8
87.5°	13.6	12.4	11.3	9.1	9.1
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	20.79	22.43	21.15	22.74	23.06	20.71	22.35	21.07	22.66	22.98
	3H	22.62	24.10	23.00	24.43	24.79	22.50	23.98	22.87	24.31	24.67
	4H	23.31	24.71	23.71	25.06	25.43	23.16	24.56	23.56	24.90	25.28
	6H	23.82	25.11	24.23	25.48	25.87	23.63	24.93	24.04	25.29	25.68
	8H	23.98	25.22	24.40	25.61	26.00	23.77	25.01	24.20	25.40	25.80
	12H	24.08	25.26	24.51	25.65	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	23.11	23.48
	3H	23.48	24.65	23.89	25.05	25.45	23.37	24.54	23.78	24.94	25.34
	4H	24.30	25.36	24.73	25.77	26.21	24.15	25.22	24.58	25.63	26.06
	6H	24.93	25.86	25.38	26.30	26.75	24.75	25.68	25.20	26.12	26.57
	8H	25.14	26.00	25.60	26.45	26.91	24.93	25.80	25.39	26.24	26.71
	12H	25.28	26.06	25.76	26.53	27.00	25.05	25.83	25.53	26.30	26.77
8H	4H	24.61	25.47	25.07	25.92	26.38	24.48	25.35	24.94	25.79	26.25
	6H	25.36	26.08	25.85	26.57	27.04	25.19	25.91	25.68	26.40	26.88
	8H	25.63	26.28	26.14	26.79	27.27	25.44	26.09	25.95	26.59	27.08
	12H	25.84	26.41	26.34	26.90	27.46	25.61	26.18	26.12	26.67	27.23
12H	4H	24.64	25.42	25.12	25.89	26.36	24.52	25.30	25.00	25.77	26.24
	6H	25.41	26.06	25.92	26.56	27.05	25.25	25.90	25.76	26.40	26.89
	8H	25.74	26.31	26.24	26.80	27.36	25.55	26.12	26.06	26.61	27.17