

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: P845613

Luminaire Tested: SQ2R-PR1-050D-830-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

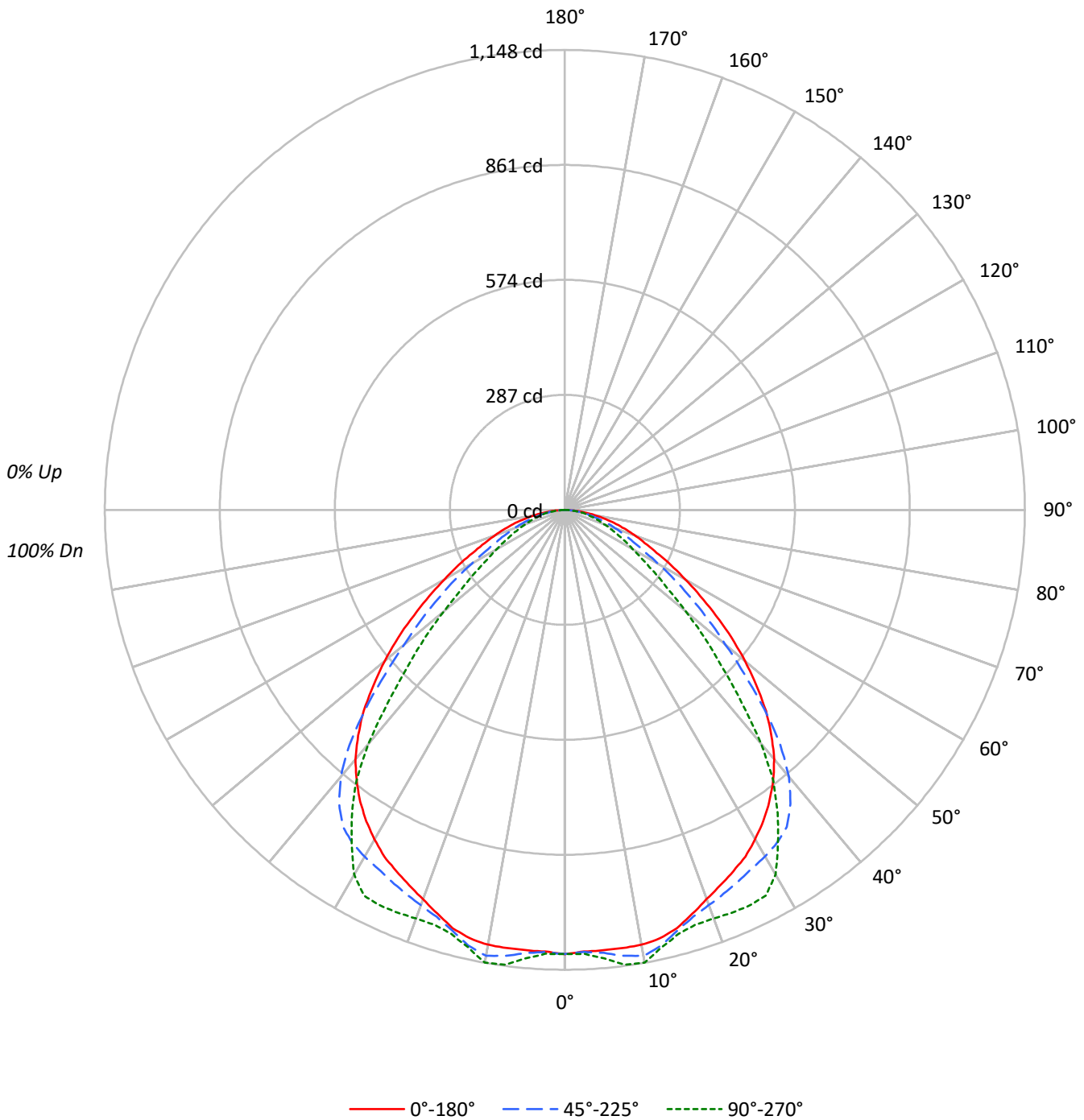
Test Method: LM-79-2019  
Report Number: P845613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-PR1-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE RIPPLE CONTINUOUS LENS  
500 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2668.5 lumens  
Efficiency: N/A  
Efficacy: 149.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.33 / 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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				75
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44				44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	45	41	39				39
8	64	51	43	38	63	51	43	38	49	42	38	48	42	37	47	41	37	35				35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32				32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29				29

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

	0°	45°	90°
0°	17909	17909	17909
5°	17885	17995	18216
10°	18074	18536	18815
15°	18068	18161	18313
20°	17775	18048	18649
25°	17726	18228	19417
30°	17706	18634	19604
35°	17538	19032	18252
40°	17133	18326	16063
45°	16212	16084	12702
50°	14740	13150	9854
55°	12954	10821	7671
60°	11208	8654	6316
65°	9677	7171	5528
70°	8700	6349	4910
75°	7973	5502	4517
80°	6936	4417	4417
85°	5020	3983	2093

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 17555 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.1	4.0
10°-20°	310.2	11.6
20°-30°	479.7	18.0
30°-40°	577.6	21.6
40°-50°	518.5	19.4
50°-60°	346.1	13.0
60°-70°	201.1	7.5
70°-80°	103.4	3.9
80°-90°	24.9	0.9
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°	897.0	33.6
0°-40°	1474.5	55.3
0°-60°	2339.2	87.7
0°-90°	2668.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2668.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1109	1109	1109	1109	1109	
5°	1104	1123	1110	1113	1124	105
15°	1081	1126	1086	1090	1096	304
25°	995	1036	1023	1060	1090	459
35°	890	898	966	948	926	555
45°	710	769	704	595	556	544
55°	460	478	384	297	272	413
65°	253	259	188	153	145	255
75°	128	124	88	75	72	135
85°	27	22	22	15	11	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1109.2	1109.2	1109.2	1109.2	1109.2
2.5°	1103.5	1120.5	1104.6	1105.8	1109.2
5°	1103.5	1122.7	1110.3	1112.6	1123.9
7.5°	1103.5	1129.5	1122.7	1130.6	1145.3
10°	1102.4	1135.2	1130.6	1131.8	1147.6
12.5°	1095.6	1135.2	1113.7	1111.4	1118.2
15°	1080.9	1126.1	1086.5	1089.9	1095.6
17.5°	1057.1	1104.6	1065.1	1076.4	1085.4
20°	1034.5	1080.9	1050.4	1066.2	1085.4
22.5°	1014.2	1060.5	1036.8	1060.5	1088.8
25°	995.0	1035.7	1023.2	1060.5	1089.9
27.5°	975.7	1001.7	1009.7	1061.7	1085.4
30°	949.7	965.6	999.5	1043.6	1051.5
32.5°	921.5	929.4	985.9	1004.0	989.3
35°	889.8	897.7	965.6	947.5	926.0
37.5°	853.6	867.2	924.9	878.5	854.8
40°	812.9	840.1	869.5	790.3	762.1
42.5°	763.2	810.7	796.0	689.7	653.5
45°	710.0	768.8	704.4	594.7	556.3
47.5°	647.9	711.2	608.3	508.8	473.7
50°	586.8	635.4	523.5	431.9	392.3
52.5°	524.6	556.3	451.1	359.5	324.5
55°	460.2	478.3	384.4	297.4	272.5
57.5°	400.2	412.7	325.6	247.6	228.4
60°	347.1	355.0	268.0	210.3	195.6
62.5°	298.5	304.1	221.6	178.6	168.5
65°	253.3	258.9	187.7	152.6	144.7
67.5°	216.0	219.3	159.4	131.2	123.2
70°	184.3	185.4	134.5	109.7	104.0
72.5°	156.0	153.8	110.8	91.6	88.2
75°	127.8	124.4	88.2	74.6	72.4
77.5°	100.6	97.2	65.6	59.9	59.9
80°	74.6	70.1	47.5	47.5	47.5
82.5°	50.9	44.1	33.9	33.9	32.8
85°	27.1	21.5	21.5	14.7	11.3
87.5°	9.0	9.0	3.4	3.4	3.4
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	20.73	22.23	21.10	22.54	22.85	17.46	18.96	17.83	19.27	19.58
	3H	22.01	23.35	22.39	23.68	24.04	18.57	19.91	18.95	20.24	20.60
	4H	22.49	23.74	22.89	24.09	24.47	19.00	20.25	19.40	20.60	20.98
	6H	22.84	23.99	23.25	24.36	24.75	19.36	20.52	19.77	20.88	21.27
	8H	22.94	24.03	23.36	24.42	24.83	19.46	20.56	19.89	20.95	21.35
	12H	22.98	24.03	23.41	24.42	24.85	19.49	20.54	19.92	20.92	21.35
4H	2H	20.88	22.14	21.28	22.48	22.86	18.10	19.35	18.50	19.70	20.08
	3H	22.41	23.44	22.82	23.84	24.25	19.43	20.46	19.84	20.86	21.26
	4H	23.03	23.96	23.46	24.37	24.81	19.95	20.88	20.39	21.30	21.74
	6H	23.51	24.32	23.97	24.76	25.22	20.42	21.23	20.88	21.67	22.13
	8H	23.65	24.41	24.12	24.85	25.32	20.55	21.31	21.02	21.75	22.22
	12H	23.74	24.41	24.22	24.89	25.36	20.60	21.27	21.09	21.75	22.22
8H	4H	23.10	23.85	23.56	24.29	24.76	20.30	21.05	20.77	21.50	21.97
	6H	23.67	24.29	24.16	24.78	25.26	20.86	21.48	21.35	21.97	22.45
	8H	23.86	24.42	24.38	24.93	25.42	21.04	21.60	21.56	22.11	22.60
	12H	23.99	24.49	24.50	24.98	25.55	21.13	21.62	21.64	22.12	22.68
12H	4H	23.08	23.75	23.57	24.23	24.70	20.34	21.02	20.83	21.50	21.97
	6H	23.65	24.21	24.17	24.72	25.21	20.92	21.47	21.43	21.99	22.47
	8H	23.89	24.38	24.40	24.88	25.44	21.15	21.64	21.66	22.14	22.70