

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: P845615

Luminaire Tested: SQ2R-PR1-050D-840-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

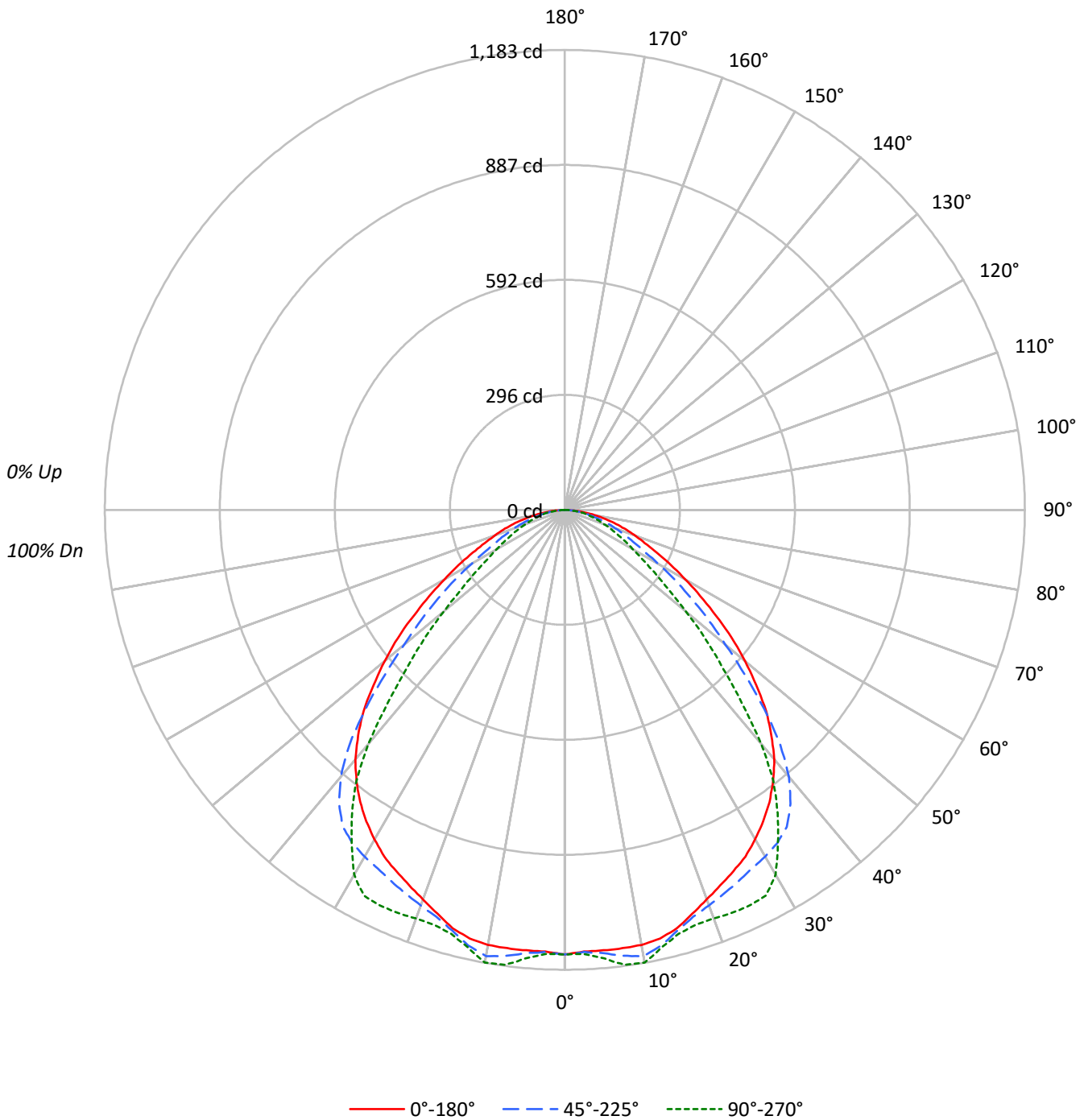
Test Method: LM-79-2019  
Report Number: P845615  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-PR1-050D-840-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE RIPPLE CONTINUOUS LENS  
500 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2750.6 lumens  
Efficiency: N/A  
Efficacy: 154.5 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

TEST NUMBER: P845615  
CATALOG NUMBER: SQ2R-PR1-050D-840-UNV-STD-W-4

### 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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65				
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	50				
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44				
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	45	41	39				
8	64	51	43	38	63	51	43	38	49	42	38	48	42	37	47	41	37	35				
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29				

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

	0°	45°	90°
0°	18460	18460	18460
5°	18434	18548	18775
10°	18630	19107	19394
15°	18623	18720	18877
20°	18321	18603	19223
25°	18271	18789	20013
30°	18250	19207	20206
35°	18078	19618	18814
40°	17660	18889	16556
45°	16712	16577	13093
50°	15192	13554	10158
55°	13351	11153	7907
60°	11554	8919	6510
65°	9971	7393	5700
70°	8969	6548	5061
75°	8216	5671	4654
80°	7150	4547	4547
85°	5187	4094	2167

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18096 cd/sqm



TEST NUMBER: P845615

CATALOG NUMBER: SQ2R-PR1-050D-840-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	4.0
10°-20°	319.7	11.6
20°-30°	494.4	18.0
30°-40°	595.3	21.6
40°-50°	534.4	19.4
50°-60°	356.8	13.0
60°-70°	207.3	7.5
70°-80°	106.5	3.9
80°-90°	25.6	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°	924.5	33.6
0°-40°	1519.9	55.3
0°-60°	2411.1	87.7
0°-90°	2750.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2750.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1137	1157	1144	1147	1158	109
15°	1114	1161	1120	1123	1129	313
25°	1026	1068	1055	1093	1123	473
35°	917	925	995	977	954	572
45°	732	792	726	613	573	560
55°	474	493	396	306	281	426
65°	261	267	194	157	149	263
75°	132	128	91	77	75	140
85°	28	22	22	15	12	35
90°	0	0	0	0	0	



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CATALOG NUMBER: SQ2R-PR1-050D-840-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1137.4	1154.9	1138.6	1139.8	1143.3
5°	1137.4	1157.2	1144.4	1146.8	1158.4
7.5°	1137.4	1164.2	1157.2	1165.4	1180.6
10°	1136.3	1170.1	1165.4	1166.6	1182.9
12.5°	1129.3	1170.1	1147.9	1145.6	1152.6
15°	1114.1	1160.7	1119.9	1123.4	1129.3
17.5°	1089.6	1138.6	1097.8	1109.5	1118.8
20°	1066.3	1114.1	1082.7	1099.0	1118.8
22.5°	1045.4	1093.1	1068.7	1093.1	1122.3
25°	1025.6	1067.5	1054.7	1093.1	1123.4
27.5°	1005.7	1032.5	1040.7	1094.3	1118.8
30°	978.9	995.3	1030.2	1075.7	1083.8
32.5°	949.8	958.0	1016.2	1034.9	1019.7
35°	917.2	925.3	995.3	976.6	954.5
37.5°	879.9	893.9	953.3	905.5	881.0
40°	837.9	865.9	896.2	814.6	785.5
42.5°	786.6	835.6	820.4	710.9	673.6
45°	731.9	792.5	726.0	613.0	573.4
47.5°	667.8	733.0	627.0	524.4	488.3
50°	604.8	655.0	539.6	445.2	404.4
52.5°	540.7	573.4	465.0	370.6	334.5
55°	474.3	493.0	396.2	306.5	280.9
57.5°	412.6	425.4	335.6	255.2	235.4
60°	357.8	365.9	276.2	216.8	201.6
62.5°	307.7	313.5	228.4	184.1	173.6
65°	261.0	266.9	193.5	157.3	149.2
67.5°	222.6	226.1	164.3	135.2	127.0
70°	190.0	191.1	138.7	113.0	107.2
72.5°	160.8	158.5	114.2	94.4	90.9
75°	131.7	128.2	90.9	76.9	74.6
77.5°	103.7	100.2	67.6	61.8	61.8
80°	76.9	72.3	48.9	48.9	48.9
82.5°	52.4	45.5	35.0	35.0	33.8
85°	28.0	22.1	22.1	15.2	11.7
87.5°	9.3	9.3	3.5	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P845615

CATALOG NUMBER: SQ2R-PR1-050D-840-UNV-STD-W-4

**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	20.84	22.33	21.20	22.65	22.96	17.57	19.06	17.93	19.37	19.69
	3H	22.12	23.45	22.49	23.78	24.14	18.68	20.01	19.06	20.34	20.70
	4H	22.60	23.85	23.00	24.20	24.58	19.11	20.36	19.51	20.71	21.08
	6H	22.94	24.10	23.36	24.46	24.86	19.47	20.62	19.88	20.99	21.38
	8H	23.04	24.14	23.47	24.53	24.93	19.57	20.67	19.99	21.06	21.46
	12H	23.09	24.14	23.52	24.52	24.95	19.59	20.65	20.03	21.03	21.46
4H	2H	20.99	22.24	21.39	22.59	22.97	18.21	19.46	18.61	19.81	20.19
	3H	22.52	23.55	22.93	23.95	24.35	19.53	20.56	19.94	20.96	21.36
	4H	23.13	24.06	23.57	24.48	24.92	20.06	20.99	20.49	21.40	21.84
	6H	23.62	24.42	24.08	24.87	25.33	20.52	21.33	20.98	21.77	22.23
	8H	23.76	24.51	24.22	24.96	25.43	20.66	21.41	21.12	21.85	22.32
	12H	23.84	24.51	24.32	24.99	25.46	20.71	21.38	21.19	21.86	22.33
8H	4H	23.20	23.95	23.67	24.40	24.87	20.41	21.16	20.87	21.60	22.07
	6H	23.77	24.39	24.27	24.88	25.36	20.96	21.58	21.46	22.07	22.55
	8H	23.97	24.53	24.48	25.04	25.53	21.14	21.70	21.66	22.21	22.70
	12H	24.10	24.59	24.61	25.08	25.65	21.23	21.73	21.74	22.22	22.79
12H	4H	23.19	23.86	23.67	24.34	24.81	20.45	21.12	20.93	21.60	22.07
	6H	23.76	24.32	24.27	24.83	25.31	21.02	21.58	21.53	22.09	22.58
	8H	23.99	24.49	24.50	24.98	25.55	21.25	21.75	21.76	22.24	22.81