

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: P845483

Luminaire Tested: SQ2R-F-100D-840-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

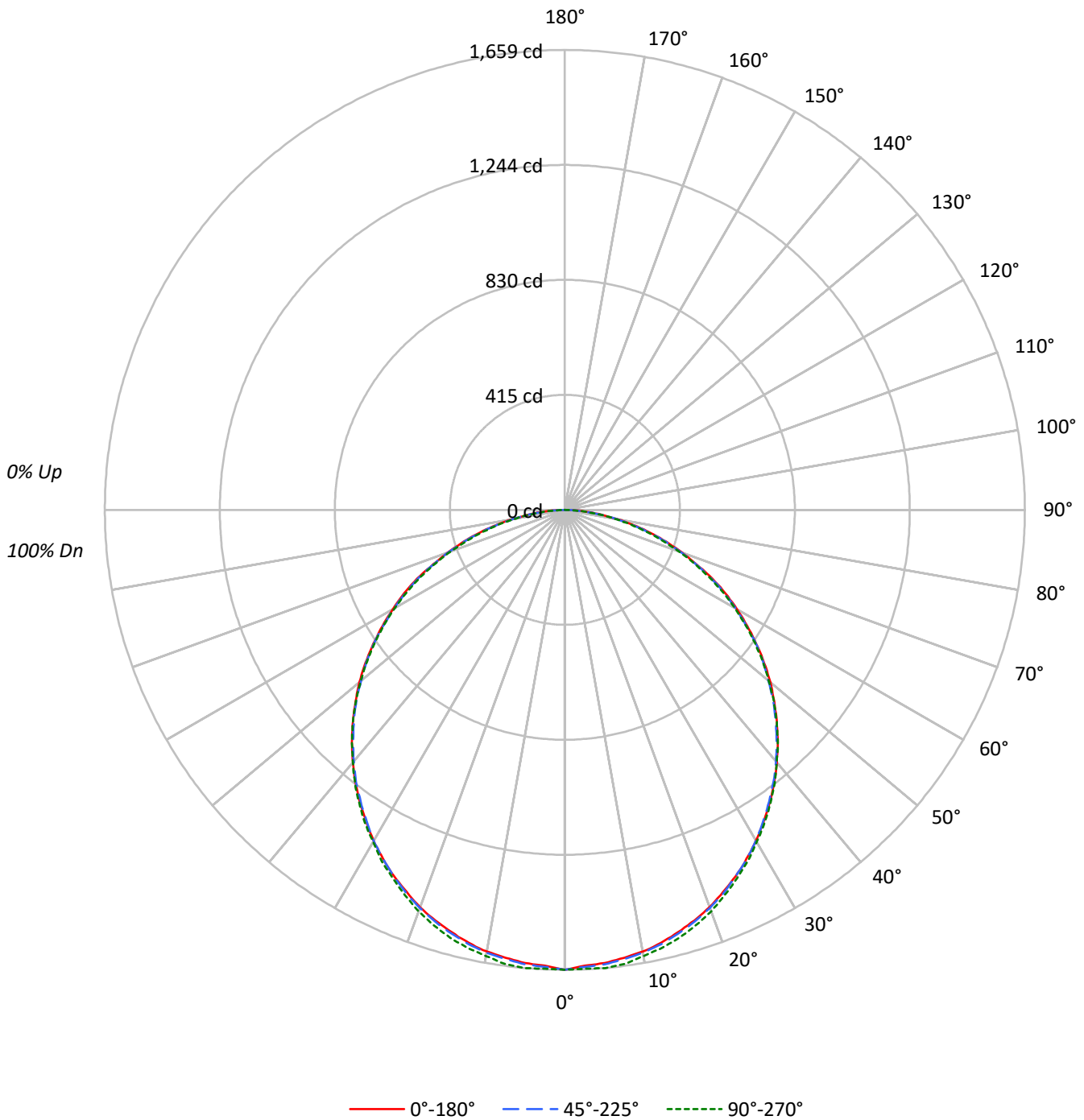
Test Method: LM-79-2019  
Report Number: P845483  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-F-100D-840-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS  
1000 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4657.5 lumens  
Efficiency: N/A  
Efficacy: 123.9 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): 37.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9969  
Total Harmonic Distortion (THDi): 0.066  
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°	26788	26788	26788
5°	26597	26671	26890
10°	26534	26607	26793
15°	26372	26449	26713
20°	26216	26254	26488
25°	25972	25972	26135
30°	25706	25706	25790
35°	25395	25306	25484
40°	25060	24963	25060
45°	24672	24567	24672
50°	24300	24074	24131
55°	23733	23671	23541
60°	23137	22992	22846
65°	22453	22193	21933
70°	21130	21021	20597
75°	19881	19457	18896
80°	17657	17239	16606
85°	14246	12986	12153

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 24825 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.9	3.4
10°-20°	448.4	9.6
20°-30°	674.6	14.5
30°-40°	807.1	17.3
40°-50°	832.8	17.9
50°-60°	751.3	16.1
60°-70°	573.2	12.3
70°-80°	329.4	7.1
80°-90°	84.0	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°	1279.9	27.5
0°-40°	2087.0	44.8
0°-60°	3671.0	78.8
0°-90°	4657.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4657.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1659	1659	1659	1659	1659	
5°	1641	1664	1646	1648	1659	156
15°	1578	1598	1582	1587	1598	445
25°	1458	1474	1458	1460	1467	672
35°	1288	1298	1284	1288	1293	806
45°	1080	1087	1076	1078	1080	834
55°	843	848	841	836	836	754
65°	588	585	581	576	574	578
75°	319	316	312	305	303	336
85°	77	72	70	63	66	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1659.1	1659.1	1659.1	1659.1	1659.1
2.5°	1645.6	1670.4	1650.1	1654.6	1656.9
5°	1641.0	1663.6	1645.6	1647.8	1659.1
7.5°	1629.7	1654.6	1634.2	1638.8	1652.3
10°	1618.4	1641.0	1622.9	1625.2	1634.2
12.5°	1600.3	1622.9	1604.9	1609.4	1618.4
15°	1577.7	1598.1	1582.3	1586.8	1598.1
17.5°	1552.9	1575.5	1557.4	1564.2	1571.0
20°	1525.8	1543.8	1528.0	1530.3	1541.6
22.5°	1491.8	1509.9	1496.4	1496.4	1505.4
25°	1457.9	1473.8	1457.9	1460.2	1467.0
27.5°	1419.5	1433.1	1419.5	1421.8	1428.6
30°	1378.8	1392.4	1378.8	1381.1	1383.3
32.5°	1333.6	1344.9	1331.4	1333.6	1340.4
35°	1288.4	1297.5	1283.9	1288.4	1292.9
37.5°	1240.9	1247.7	1236.4	1238.7	1243.2
40°	1189.0	1195.7	1184.4	1186.7	1189.0
42.5°	1137.0	1141.5	1130.2	1132.4	1137.0
45°	1080.5	1087.2	1075.9	1078.2	1080.5
47.5°	1023.9	1028.5	1019.4	1017.2	1021.7
50°	967.4	969.7	958.4	958.4	960.7
52.5°	906.4	908.7	901.9	897.4	899.6
55°	843.1	847.6	840.9	836.3	836.3
57.5°	779.8	784.3	775.3	773.0	773.0
60°	716.5	718.8	712.0	709.8	707.5
62.5°	653.2	653.2	646.5	644.2	641.9
65°	587.7	585.4	580.9	576.4	574.1
67.5°	513.1	515.4	510.8	504.1	504.1
70°	447.6	449.8	445.3	436.3	436.3
72.5°	384.3	382.0	379.7	373.0	368.4
75°	318.7	316.5	311.9	305.2	302.9
77.5°	253.2	250.9	248.6	239.6	241.9
80°	189.9	187.6	185.4	178.6	178.6
82.5°	133.4	128.8	126.6	119.8	119.8
85°	76.9	72.3	70.1	63.3	65.6
87.5°	27.1	24.9	22.6	18.1	18.1
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	23.19	24.83	23.55	25.14	25.46	23.11	24.75	23.48	25.07	25.38
	3H	25.02	26.51	25.40	26.83	27.19	24.90	26.39	25.28	26.71	27.07
	4H	25.71	27.11	26.11	27.46	27.84	25.56	26.96	25.96	27.31	27.68
	6H	26.22	27.52	26.63	27.88	28.27	26.04	27.33	26.45	27.70	28.09
	8H	26.38	27.62	26.81	28.01	28.41	26.18	27.42	26.60	27.81	28.21
	12H	26.48	27.67	26.91	28.05	28.48	26.26	27.44	26.69	27.83	28.25
4H	2H	23.83	25.22	24.22	25.57	25.95	23.76	25.16	24.16	25.51	25.89
	3H	25.88	27.05	26.29	27.45	27.85	25.77	26.95	26.18	27.34	27.74
	4H	26.70	27.76	27.13	28.18	28.61	26.56	27.62	26.99	28.03	28.47
	6H	27.33	28.26	27.79	28.70	29.16	27.15	28.08	27.61	28.52	28.98
	8H	27.54	28.41	28.00	28.85	29.32	27.34	28.21	27.80	28.65	29.11
	12H	27.68	28.46	28.16	28.94	29.40	27.45	28.23	27.93	28.71	29.18
8H	4H	27.01	27.88	27.47	28.32	28.79	26.88	27.75	27.34	28.19	28.66
	6H	27.76	28.48	28.25	28.97	29.44	27.59	28.32	28.09	28.80	29.28
	8H	28.04	28.68	28.54	29.19	29.68	27.84	28.49	28.35	29.00	29.48
	12H	28.24	28.81	28.75	29.30	29.86	28.01	28.59	28.52	29.08	29.64
12H	4H	27.04	27.82	27.52	28.30	28.77	26.92	27.70	27.40	28.18	28.64
	6H	27.81	28.46	28.32	28.97	29.45	27.65	28.30	28.16	28.81	29.29
	8H	28.14	28.71	28.65	29.20	29.76	27.96	28.53	28.46	29.02	29.58