

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: P845486

Luminaire Tested: SQ2R-F-100D-940-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845486
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-940-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS
1000 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

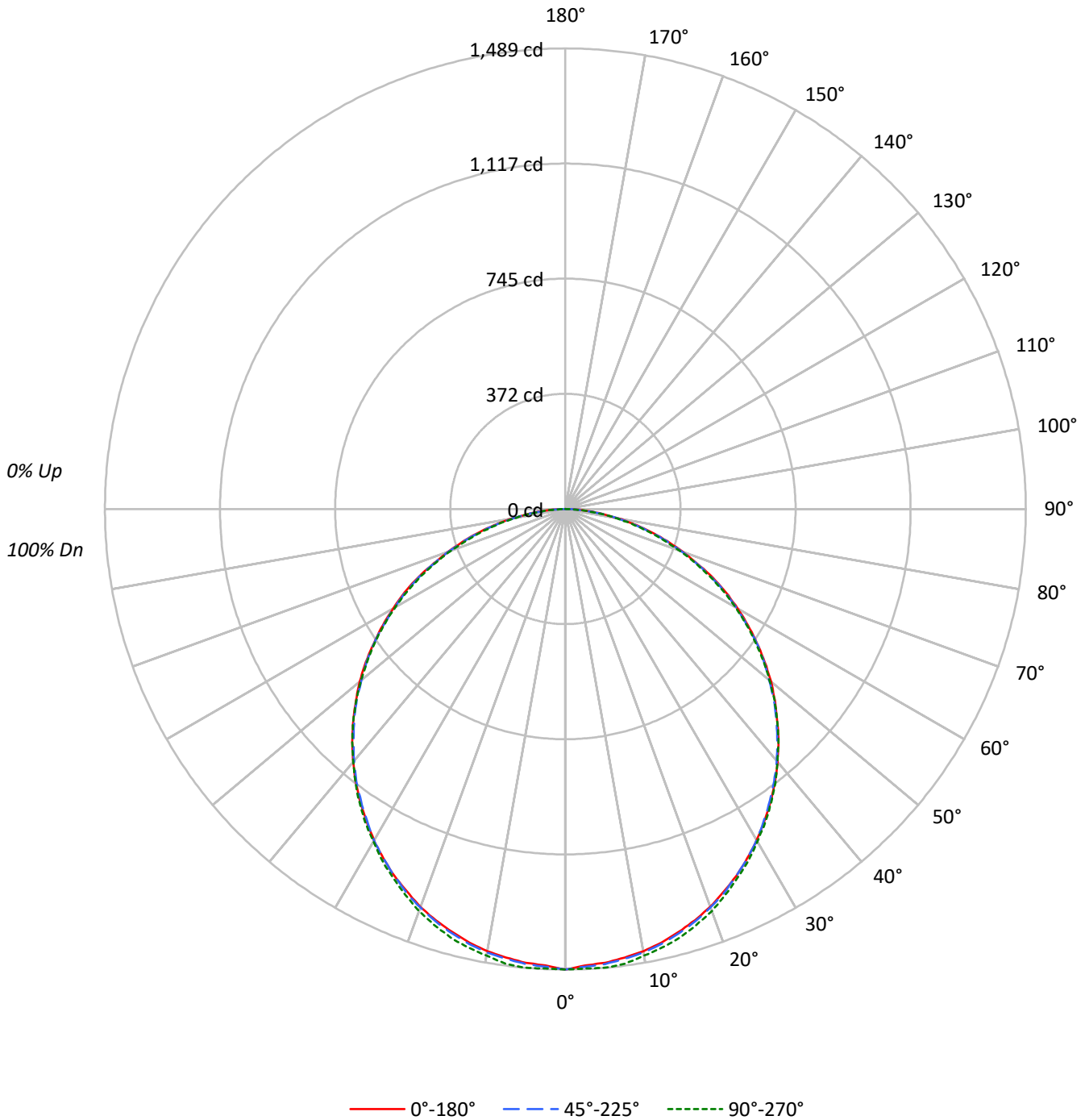
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4179.7 lumens
Efficiency: N/A
Efficacy: 111.2 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°	24040	24040	24040
5°	23869	23934	24131
10°	23812	23879	24045
15°	23667	23734	23972
20°	23526	23562	23770
25°	23309	23309	23453
30°	23070	23070	23144
35°	22789	22710	22870
40°	22489	22403	22489
45°	22140	22048	22140
50°	21808	21604	21655
55°	21298	21242	21126
60°	20764	20634	20502
65°	20149	19916	19683
70°	18958	18864	18482
75°	17841	17461	16956
80°	15844	15463	14905
85°	12782	11652	10893

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 22279 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	3.4
10°-20°	402.4	9.6
20°-30°	605.4	14.5
30°-40°	724.3	17.3
40°-50°	747.3	17.9
50°-60°	674.2	16.1
60°-70°	514.4	12.3
70°-80°	295.6	7.1
80°-90°	75.3	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°	1148.6	27.5
0°-40°	1872.9	44.8
0°-60°	3294.4	78.8
0°-90°	4179.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4179.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1489	1489	1489	1489	1489	
5°	1473	1493	1477	1479	1489	140
15°	1416	1434	1420	1424	1434	400
25°	1308	1323	1308	1310	1316	603
35°	1156	1164	1152	1156	1160	723
45°	970	976	966	968	970	748
55°	757	761	755	750	750	677
65°	527	525	521	517	515	519
75°	286	284	280	274	272	302
85°	69	65	63	57	59	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1488.9	1488.9	1488.9	1488.9	1488.9
2.5°	1476.7	1499.1	1480.8	1484.9	1486.9
5°	1472.7	1493.0	1476.7	1478.8	1488.9
7.5°	1462.5	1484.9	1466.6	1470.7	1482.8
10°	1452.4	1472.7	1456.5	1458.5	1466.6
12.5°	1436.2	1456.5	1440.2	1444.3	1452.4
15°	1415.9	1434.1	1419.9	1424.0	1434.1
17.5°	1393.6	1413.9	1397.6	1403.7	1409.8
20°	1369.2	1385.5	1371.3	1373.3	1383.4
22.5°	1338.8	1355.0	1342.9	1342.9	1351.0
25°	1308.4	1322.6	1308.4	1310.4	1316.5
27.5°	1273.9	1286.1	1273.9	1275.9	1282.0
30°	1237.4	1249.6	1237.4	1239.4	1241.4
32.5°	1196.8	1207.0	1194.8	1196.8	1202.9
35°	1156.2	1164.4	1152.2	1156.2	1160.3
37.5°	1113.6	1119.7	1109.6	1111.6	1115.7
40°	1067.0	1073.1	1062.9	1065.0	1067.0
42.5°	1020.3	1024.4	1014.2	1016.3	1020.3
45°	969.6	975.7	965.6	967.6	969.6
47.5°	918.9	923.0	914.9	912.8	916.9
50°	868.2	870.2	860.1	860.1	862.1
52.5°	813.4	815.5	809.4	805.3	807.3
55°	756.6	760.7	754.6	750.5	750.5
57.5°	699.8	703.9	695.8	693.7	693.7
60°	643.0	645.1	639.0	636.9	634.9
62.5°	586.2	586.2	580.1	578.1	576.1
65°	527.4	525.4	521.3	517.3	515.2
67.5°	460.5	462.5	458.4	452.4	452.4
70°	401.6	403.7	399.6	391.5	391.5
72.5°	344.8	342.8	340.8	334.7	330.6
75°	286.0	284.0	279.9	273.8	271.8
77.5°	227.2	225.2	223.1	215.0	217.0
80°	170.4	168.4	166.3	160.3	160.3
82.5°	119.7	115.6	113.6	107.5	107.5
85°	69.0	64.9	62.9	56.8	58.8
87.5°	24.3	22.3	20.3	16.2	16.2
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	22.81	24.45	23.18	24.77	25.08	22.73	24.38	23.10	24.69	25.00
	3H	24.65	26.13	25.02	26.46	26.82	24.53	26.01	24.90	26.34	26.70
	4H	25.34	26.74	25.74	27.08	27.46	25.19	26.58	25.58	26.93	27.31
	6H	25.85	27.14	26.26	27.51	27.90	25.66	26.96	26.07	27.32	27.71
	8H	26.00	27.24	26.43	27.63	28.03	25.80	27.04	26.23	27.43	27.83
	12H	26.10	27.29	26.53	27.67	28.10	25.88	27.07	26.31	27.45	27.88
4H	2H	23.45	24.85	23.85	25.20	25.57	23.39	24.79	23.79	25.13	25.51
	3H	25.50	26.68	25.91	27.07	27.47	25.39	26.57	25.80	26.97	27.37
	4H	26.32	27.39	26.76	27.80	28.23	26.18	27.24	26.61	27.66	28.09
	6H	26.96	27.89	27.41	28.33	28.78	26.78	27.71	27.23	28.15	28.60
	8H	27.16	28.03	27.62	28.47	28.94	26.96	27.83	27.42	28.27	28.74
	12H	27.30	28.08	27.78	28.56	29.03	27.08	27.86	27.55	28.33	28.80
8H	4H	26.63	27.50	27.09	27.94	28.41	26.51	27.38	26.97	27.82	28.28
	6H	27.38	28.11	27.88	28.59	29.07	27.22	27.94	27.71	28.43	28.90
	8H	27.66	28.31	28.17	28.81	29.30	27.47	28.12	27.98	28.62	29.11
	12H	27.86	28.44	28.37	28.93	29.49	27.64	28.21	28.14	28.70	29.26
12H	4H	26.66	27.45	27.14	27.92	28.39	26.54	27.32	27.02	27.80	28.27
	6H	27.43	28.08	27.94	28.59	29.08	27.28	27.93	27.78	28.43	28.92
	8H	27.77	28.34	28.27	28.83	29.39	27.58	28.15	28.09	28.64	29.20