

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: P845481

Luminaire Tested: SQ2R-F-100D-830-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845481
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-830-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS
1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

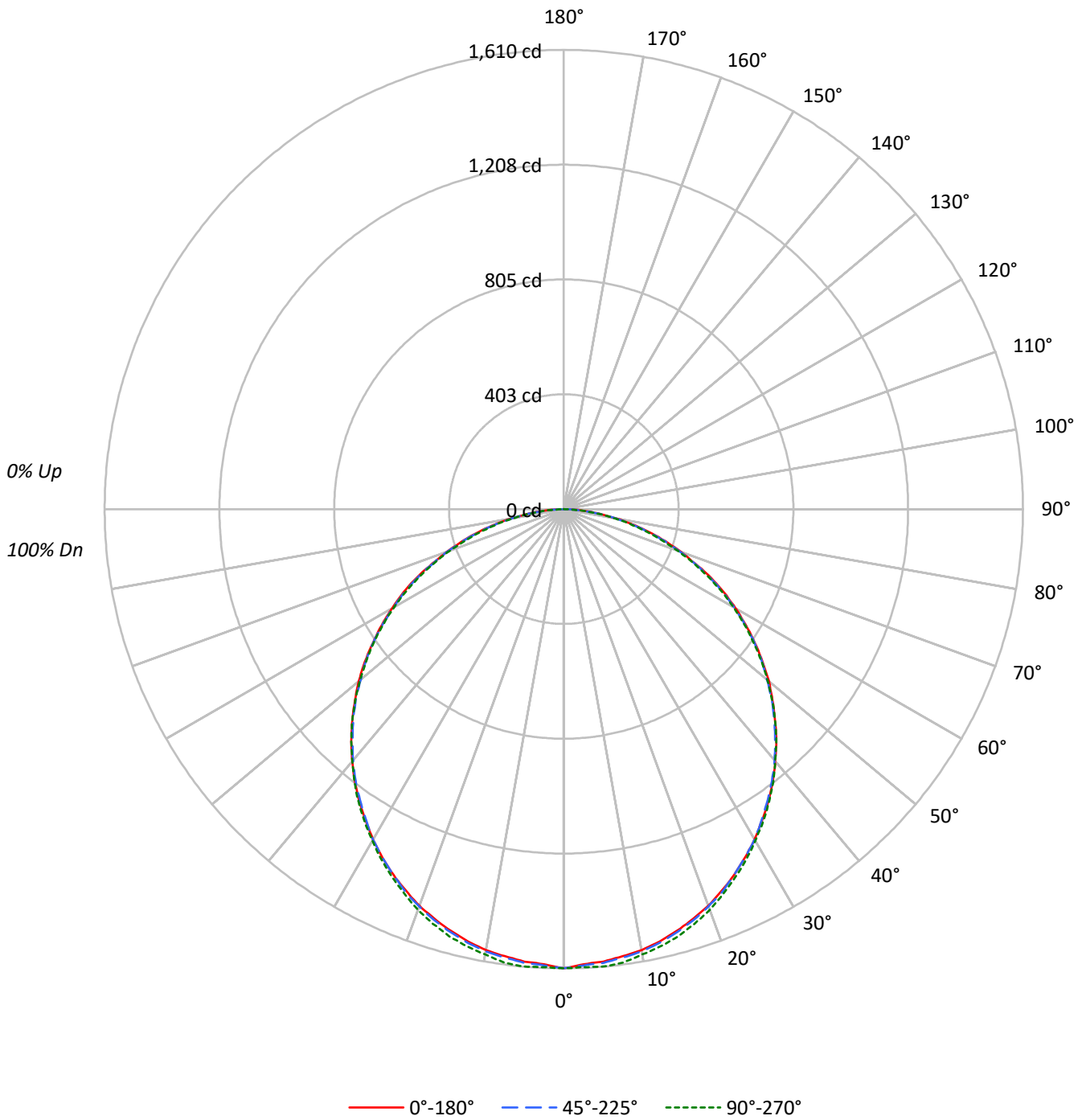
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4518.6 lumens
Efficiency: N/A
Efficacy: 120.2 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°	25988	25988	25988
5°	25804	25875	26088
10°	25743	25814	25994
15°	25586	25660	25916
20°	25433	25471	25697
25°	25199	25199	25354
30°	24940	24940	25022
35°	24638	24551	24725
40°	24312	24219	24312
45°	23934	23834	23934
50°	23576	23355	23410
55°	23026	22964	22840
60°	22449	22307	22165
65°	21784	21532	21280
70°	20497	20394	19978
75°	19289	18877	18334
80°	17127	16718	16104
85°	13820	12597	11782

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 24085 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.2	3.4
10°-20°	435.0	9.6
20°-30°	654.4	14.5
30°-40°	783.0	17.3
40°-50°	807.9	17.9
50°-60°	728.9	16.1
60°-70°	556.1	12.3
70°-80°	319.5	7.1
80°-90°	81.4	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°	1241.7	27.5
0°-40°	2024.8	44.8
0°-60°	3561.5	78.8
0°-90°	4518.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4518.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1610	1610	1610	1610	1610	
5°	1592	1614	1596	1599	1610	151
15°	1531	1550	1535	1540	1550	432
25°	1414	1430	1414	1417	1423	652
35°	1250	1259	1246	1250	1254	782
45°	1048	1055	1044	1046	1048	809
55°	818	822	816	811	811	732
65°	570	568	564	559	557	561
75°	309	307	303	296	294	326
85°	75	70	68	61	64	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1596.5	1620.6	1600.9	1605.2	1607.4
5°	1592.1	1614.0	1596.5	1598.7	1609.6
7.5°	1581.1	1605.2	1585.5	1589.9	1603.1
10°	1570.2	1592.1	1574.5	1576.7	1585.5
12.5°	1552.6	1574.5	1557.0	1561.4	1570.2
15°	1530.7	1550.4	1535.1	1539.5	1550.4
17.5°	1506.6	1528.5	1510.9	1517.5	1524.1
20°	1480.2	1497.8	1482.4	1484.6	1495.6
22.5°	1447.4	1464.9	1451.7	1451.7	1460.5
25°	1414.5	1429.8	1414.5	1416.7	1423.2
27.5°	1377.2	1390.3	1377.2	1379.4	1385.9
30°	1337.7	1350.9	1337.7	1339.9	1342.1
32.5°	1293.8	1304.8	1291.7	1293.8	1300.4
35°	1250.0	1258.8	1245.6	1250.0	1254.4
37.5°	1203.9	1210.5	1199.5	1201.7	1206.1
40°	1153.5	1160.1	1149.1	1151.3	1153.5
42.5°	1103.1	1107.4	1096.5	1098.7	1103.1
45°	1048.2	1054.8	1043.8	1046.0	1048.2
47.5°	993.4	997.8	989.0	986.8	991.2
50°	938.6	940.8	929.8	929.8	932.0
52.5°	879.4	881.6	875.0	870.6	872.8
55°	818.0	822.4	815.8	811.4	811.4
57.5°	756.6	761.0	752.2	750.0	750.0
60°	695.2	697.4	690.8	688.6	686.4
62.5°	633.8	633.8	627.2	625.0	622.8
65°	570.2	568.0	563.6	559.2	557.0
67.5°	497.8	500.0	495.6	489.0	489.0
70°	434.2	436.4	432.0	423.2	423.2
72.5°	372.8	370.6	368.4	361.8	357.5
75°	309.2	307.0	302.6	296.0	293.9
77.5°	245.6	243.4	241.2	232.5	234.6
80°	184.2	182.0	179.8	173.2	173.2
82.5°	129.4	125.0	122.8	116.2	116.2
85°	74.6	70.2	68.0	61.4	63.6
87.5°	26.3	24.1	21.9	17.5	17.5
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	23.08	24.73	23.45	25.04	25.35	23.01	24.65	23.37	24.96	25.28
	3H	24.92	26.40	25.29	26.73	27.09	24.80	26.28	25.17	26.61	26.97
	4H	25.61	27.01	26.01	27.36	27.73	25.46	26.86	25.85	27.20	27.58
	6H	26.12	27.41	26.53	27.78	28.17	25.93	27.23	26.34	27.59	27.98
	8H	26.28	27.51	26.70	27.90	28.30	26.07	27.31	26.50	27.70	28.10
	12H	26.38	27.56	26.80	27.94	28.37	26.15	27.34	26.58	27.72	28.15
4H	2H	23.72	25.12	24.12	25.47	25.84	23.66	25.06	24.06	25.41	25.78
	3H	25.77	26.95	26.18	27.35	27.75	25.67	26.84	26.08	27.24	27.64
	4H	26.60	27.66	27.03	28.07	28.51	26.45	27.51	26.88	27.93	28.36
	6H	27.23	28.16	27.68	28.60	29.05	27.05	27.98	27.50	28.42	28.87
	8H	27.43	28.30	27.89	28.75	29.21	27.23	28.10	27.69	28.54	29.01
	12H	27.57	28.36	28.05	28.83	29.30	27.35	28.13	27.83	28.60	29.07
8H	4H	26.90	27.77	27.36	28.22	28.68	26.78	27.65	27.24	28.09	28.55
	6H	27.65	28.38	28.15	28.86	29.34	27.49	28.21	27.98	28.70	29.17
	8H	27.93	28.58	28.44	29.08	29.57	27.74	28.39	28.25	28.89	29.38
	12H	28.14	28.71	28.64	29.20	29.76	27.91	28.48	28.41	28.97	29.53
12H	4H	26.94	27.72	27.41	28.19	28.66	26.81	27.60	27.29	28.07	28.54
	6H	27.71	28.36	28.21	28.86	29.35	27.55	28.20	28.05	28.70	29.19
	8H	28.04	28.61	28.54	29.10	29.66	27.85	28.42	28.36	28.91	29.47