

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: P845639

Luminaire Tested: SQ2R-PW1-050D-840-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-8)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-PW1-050D-840-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

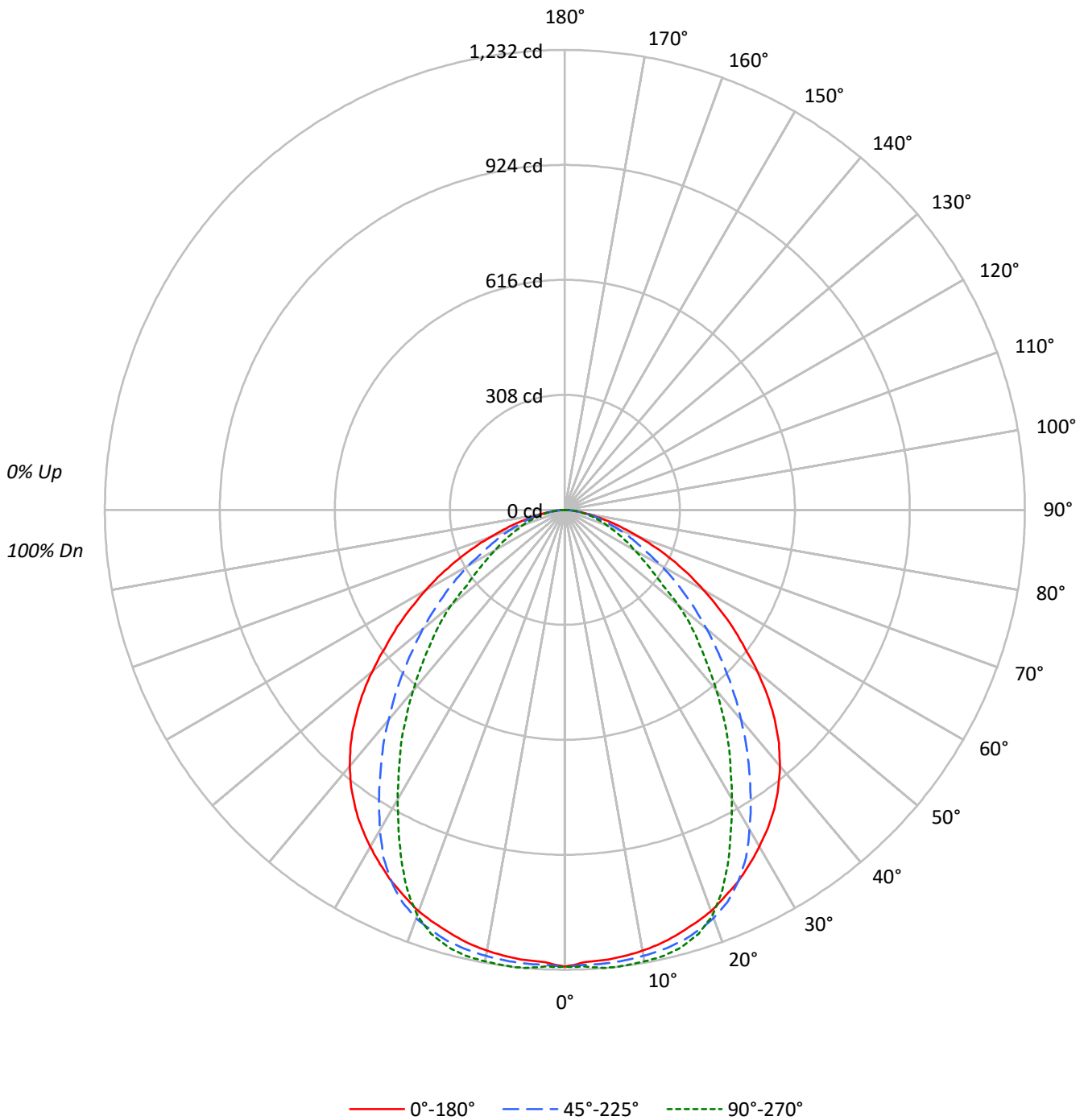
Lumens per Lamp: N/A
Luminaire Lumens: 2714.5 lumens
Efficiency: N/A
Efficacy: 152.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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	100	97	100	97	94	96	93	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74				74
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64				64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56				56
5	80	68	59	53	78	67	59	53	65	58	53	63	57	52	61	56	51	49				49
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	53	46	42	51	46	41	39				39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	36				36
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32				32
10	57	44	37	32	55	44	36	31	43	36	31	42	36	31	41	35	31	29				29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19758	19758	19758
5°	19626	19776	19964
10°	19661	19890	20138
15°	19656	20025	20259
20°	19663	20003	19864
25°	19557	19579	18456
30°	19425	18446	16686
35°	19273	16975	15069
40°	18889	15475	13312
45°	18148	13917	11629
50°	16890	12441	9952
55°	15451	10990	8070
60°	13850	9558	6962
65°	12111	8237	6189
70°	9904	7317	5613
75°	7704	6326	5159
80°	5746	5421	4547
85°	3890	4094	2594

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	4.3
10°-20°	337.9	12.4
20°-30°	497.6	18.3
30°-40°	543.6	20.0
40°-50°	487.3	18.0
50°-60°	362.9	13.4
60°-70°	229.2	8.4
70°-80°	113.5	4.2
80°-90°	25.9	1.0
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°	952.1	35.1
0°-40°	1495.7	55.1
0°-60°	2345.9	86.4
0°-90°	2714.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2714.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1224	1224	1224	1224	1224	
5°	1211	1231	1220	1221	1232	115
15°	1176	1199	1198	1206	1212	332
25°	1098	1122	1099	1054	1036	506
35°	978	967	861	787	764	610
45°	795	730	610	534	509	610
55°	549	495	390	306	287	490
65°	317	290	216	174	162	314
75°	124	133	101	85	83	135
85°	21	27	22	15	14	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1223.7	1223.7	1223.7	1223.7	1223.7
2.5°	1213.2	1233.0	1220.2	1221.3	1224.8
5°	1210.9	1230.7	1220.2	1221.3	1231.8
7.5°	1206.2	1226.0	1217.8	1221.3	1231.8
10°	1199.2	1220.2	1213.2	1219.0	1228.3
12.5°	1189.9	1212.0	1207.4	1214.4	1223.7
15°	1175.9	1199.2	1198.0	1206.2	1212.0
17.5°	1160.7	1184.0	1182.9	1187.5	1191.0
20°	1144.4	1167.7	1164.2	1156.1	1156.1
22.5°	1121.1	1146.8	1137.4	1111.8	1102.5
25°	1097.8	1122.3	1099.0	1053.5	1036.0
27.5°	1071.0	1092.0	1051.2	988.3	963.8
30°	1041.9	1057.0	989.4	918.3	895.0
32.5°	1011.6	1015.1	926.5	851.9	826.3
35°	977.8	967.3	861.2	786.6	764.5
37.5°	939.3	911.3	799.5	721.4	696.9
40°	896.2	851.9	734.2	656.1	631.6
42.5°	848.4	790.1	672.4	594.4	568.7
45°	794.8	729.5	609.5	533.8	509.3
47.5°	736.5	671.3	550.1	476.6	456.8
50°	672.4	609.5	495.3	421.9	396.2
52.5°	607.2	552.4	441.7	365.9	328.6
55°	548.9	495.3	390.4	306.5	286.7
57.5°	487.1	439.4	343.8	264.5	248.2
60°	428.9	388.1	296.0	231.9	215.6
62.5°	372.9	338.0	249.4	201.6	188.8
65°	317.0	290.2	215.6	173.6	162.0
67.5°	262.2	244.7	185.3	146.8	138.7
70°	209.8	205.1	155.0	124.7	118.9
72.5°	164.3	167.8	125.9	103.7	100.2
75°	123.5	132.9	101.4	85.1	82.7
77.5°	89.7	103.7	79.2	66.4	64.1
80°	61.8	75.8	58.3	48.9	48.9
82.5°	38.5	48.9	37.3	33.8	33.8
85°	21.0	26.8	22.1	15.2	14.0
87.5°	7.0	10.5	4.7	3.5	3.5
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	21.33	22.83	21.69	23.14	23.46	17.83	19.33	18.20	19.65	19.96
	3H	22.70	24.04	23.08	24.37	24.73	19.08	20.43	19.46	20.76	21.12
	4H	23.10	24.36	23.50	24.71	25.09	19.56	20.82	19.96	21.17	21.55
	6H	23.34	24.50	23.75	24.87	25.26	19.90	21.07	20.32	21.43	21.83
	8H	23.39	24.49	23.81	24.88	25.29	20.00	21.10	20.42	21.49	21.89
	12H	23.40	24.46	23.83	24.84	25.27	20.03	21.08	20.46	21.47	21.90
4H	2H	21.51	22.77	21.91	23.12	23.50	18.59	19.85	18.99	20.20	20.58
	3H	23.11	24.15	23.52	24.55	24.95	20.03	21.07	20.44	21.47	21.87
	4H	23.64	24.58	24.08	25.00	25.44	20.60	21.54	21.03	21.95	22.39
	6H	24.01	24.82	24.47	25.27	25.73	21.03	21.85	21.49	22.29	22.75
	8H	24.10	24.86	24.56	25.31	25.77	21.15	21.91	21.62	22.36	22.82
	12H	24.14	24.82	24.63	25.30	25.77	21.20	21.88	21.68	22.36	22.83
8H	4H	23.73	24.49	24.19	24.93	25.40	20.97	21.73	21.43	22.17	22.64
	6H	24.19	24.81	24.68	25.31	25.78	21.50	22.12	21.99	22.61	23.09
	8H	24.33	24.90	24.85	25.41	25.90	21.66	22.22	22.18	22.73	23.22
	12H	24.43	24.93	24.94	25.42	25.98	21.75	22.25	22.26	22.74	23.30
12H	4H	23.71	24.39	24.20	24.87	25.34	21.01	21.69	21.50	22.17	22.64
	6H	24.18	24.74	24.69	25.25	25.74	21.56	22.13	22.08	22.64	23.12
	8H	24.37	24.87	24.88	25.36	25.93	21.78	22.27	22.29	22.77	23.33