

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: P845637

Luminaire Tested: SQ2R-PW1-050D-830-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845637
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-830-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

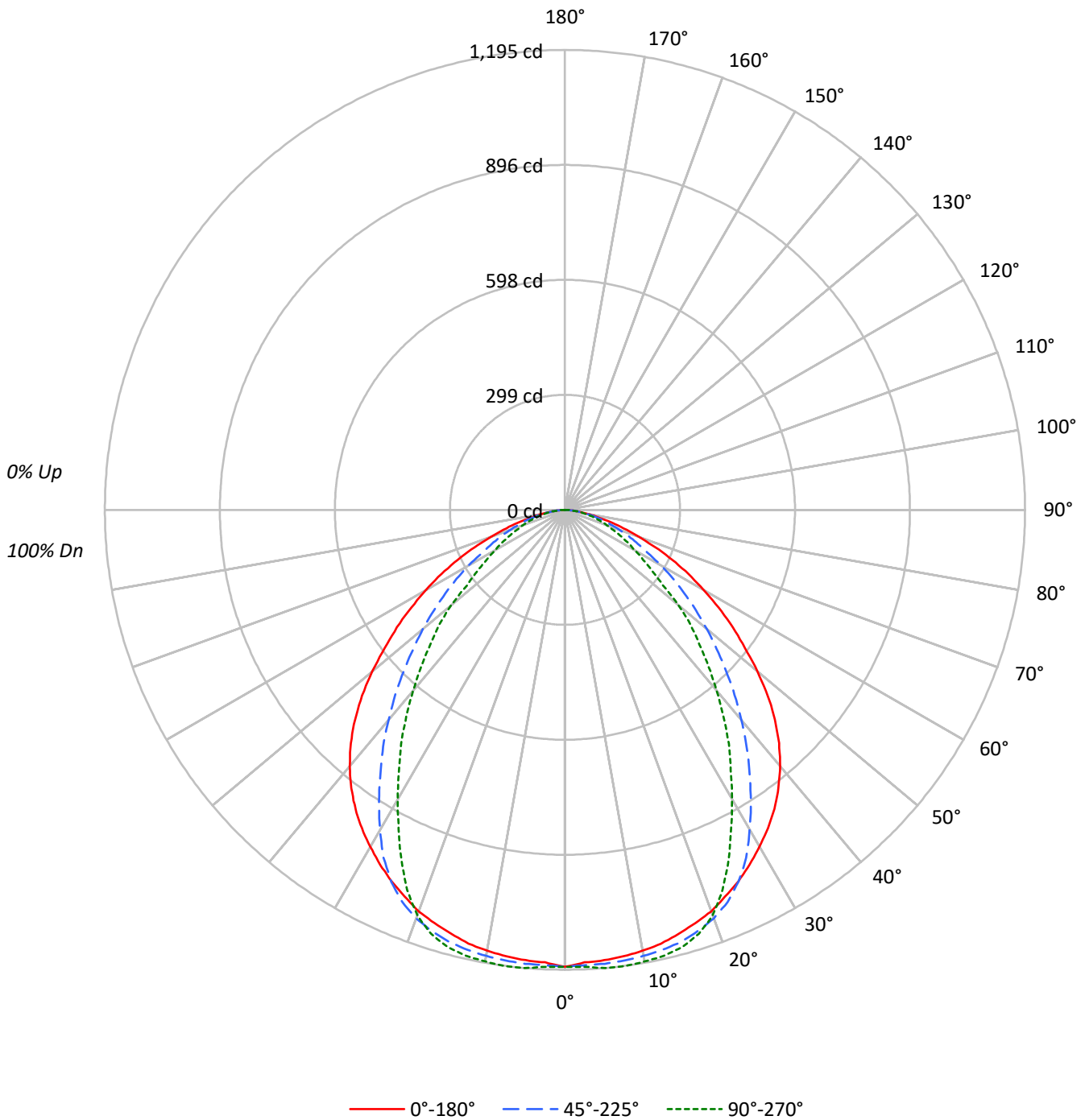
Lumens per Lamp: N/A
Luminaire Lumens: 2633.5 lumens
Efficiency: N/A
Efficacy: 148.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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	35				35
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°	19168	19168	19168
5°	19039	19186	19370
10°	19074	19297	19538
15°	19069	19428	19656
20°	19077	19407	19271
25°	18975	18994	17906
30°	18845	17896	16188
35°	18697	16468	14619
40°	18326	15013	12916
45°	17607	13502	11282
50°	16387	12069	9656
55°	14990	10663	7828
60°	13437	9274	6755
65°	11748	7992	6006
70°	9607	7100	5443
75°	7473	6138	5009
80°	5570	5253	4417
85°	3779	3983	2519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17607 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.1	4.3
10°-20°	327.9	12.4
20°-30°	482.8	18.3
30°-40°	527.4	20.0
40°-50°	472.7	18.0
50°-60°	352.0	13.4
60°-70°	222.4	8.4
70°-80°	110.1	4.2
80°-90°	25.1	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°	923.7	35.1
0°-40°	1451.1	55.1
0°-60°	2275.9	86.4
0°-90°	2633.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2633.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1175	1194	1184	1185	1195	112
15°	1141	1163	1162	1170	1176	322
25°	1065	1089	1066	1022	1005	491
35°	949	938	836	763	742	592
45°	771	708	591	518	494	592
55°	532	480	379	297	278	475
65°	308	282	209	168	157	305
75°	120	129	98	82	80	131
85°	20	26	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°	1187.2	1187.2	1187.2	1187.2	1187.2
2.5°	1177.0	1196.2	1183.8	1184.9	1188.3
5°	1174.7	1194.0	1183.8	1184.9	1195.1
7.5°	1170.2	1189.4	1181.5	1184.9	1195.1
10°	1163.4	1183.8	1177.0	1182.7	1191.7
12.5°	1154.4	1175.9	1171.3	1178.1	1187.2
15°	1140.8	1163.4	1162.3	1170.2	1175.9
17.5°	1126.1	1148.7	1147.6	1152.1	1155.5
20°	1110.3	1132.9	1129.5	1121.6	1121.6
22.5°	1087.7	1112.6	1103.5	1078.6	1069.6
25°	1065.1	1088.8	1066.2	1022.1	1005.1
27.5°	1039.1	1059.4	1019.8	958.8	935.0
30°	1010.8	1025.5	959.9	890.9	868.3
32.5°	981.4	984.8	898.9	826.5	801.6
35°	948.6	938.4	835.5	763.2	741.7
37.5°	911.3	884.2	775.6	699.9	676.1
40°	869.5	826.5	712.3	636.6	612.8
42.5°	823.1	766.6	652.4	576.6	551.8
45°	771.1	707.8	591.3	517.8	494.1
47.5°	714.6	651.3	533.7	462.4	443.2
50°	652.4	591.3	480.5	409.3	384.4
52.5°	589.1	535.9	428.5	355.0	318.8
55°	532.5	480.5	378.8	297.4	278.1
57.5°	472.6	426.3	333.5	256.7	240.8
60°	416.1	376.5	287.2	225.0	209.2
62.5°	361.8	327.9	242.0	195.6	183.2
65°	307.5	281.5	209.2	168.5	157.2
67.5°	254.4	237.4	179.8	142.5	134.5
70°	203.5	199.0	150.4	121.0	115.3
72.5°	159.4	162.8	122.1	100.6	97.2
75°	119.8	128.9	98.4	82.5	80.3
77.5°	87.1	100.6	76.9	64.4	62.2
80°	59.9	73.5	56.5	47.5	47.5
82.5°	37.3	47.5	36.2	32.8	32.8
85°	20.4	26.0	21.5	14.7	13.6
87.5°	6.8	10.2	4.5	3.4	3.4
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	21.22	22.72	21.59	23.04	23.35	17.73	19.23	18.09	19.54	19.86
	3H	22.59	23.94	22.97	24.27	24.63	18.98	20.32	19.36	20.65	21.01
	4H	23.00	24.26	23.40	24.61	24.99	19.45	20.71	19.85	21.06	21.44
	6H	23.23	24.39	23.64	24.76	25.15	19.80	20.96	20.21	21.33	21.72
	8H	23.28	24.39	23.71	24.78	25.18	19.89	21.00	20.32	21.39	21.79
	12H	23.30	24.36	23.73	24.74	25.17	19.92	20.98	20.35	21.36	21.79
4H	2H	21.40	22.66	21.80	23.01	23.39	18.48	19.74	18.88	20.09	20.47
	3H	23.00	24.05	23.42	24.45	24.85	19.93	20.97	20.34	21.37	21.77
	4H	23.54	24.48	23.97	24.89	25.33	20.49	21.43	20.93	21.85	22.29
	6H	23.90	24.72	24.36	25.16	25.62	20.93	21.74	21.39	22.19	22.65
	8H	23.99	24.75	24.46	25.20	25.67	21.05	21.81	21.51	22.25	22.72
	12H	24.04	24.72	24.52	25.20	25.67	21.10	21.78	21.58	22.26	22.73
8H	4H	23.62	24.38	24.09	24.83	25.29	20.86	21.63	21.33	22.07	22.54
	6H	24.08	24.71	24.58	25.20	25.68	21.39	22.02	21.89	22.51	22.99
	8H	24.23	24.79	24.74	25.30	25.79	21.56	22.12	22.07	22.63	23.12
	12H	24.32	24.82	24.83	25.31	25.88	21.64	22.14	22.15	22.63	23.20
12H	4H	23.61	24.29	24.09	24.77	25.24	20.91	21.59	21.39	22.07	22.54
	6H	24.07	24.64	24.59	25.15	25.64	21.46	22.02	21.97	22.53	23.02
	8H	24.26	24.76	24.77	25.25	25.82	21.67	22.17	22.18	22.66	23.23