

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: P845649

Luminaire Tested: SQ2R-PW1-100D-830-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845649
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-PW1-100D-830-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE WAVES CONTINUOUS LENS
1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

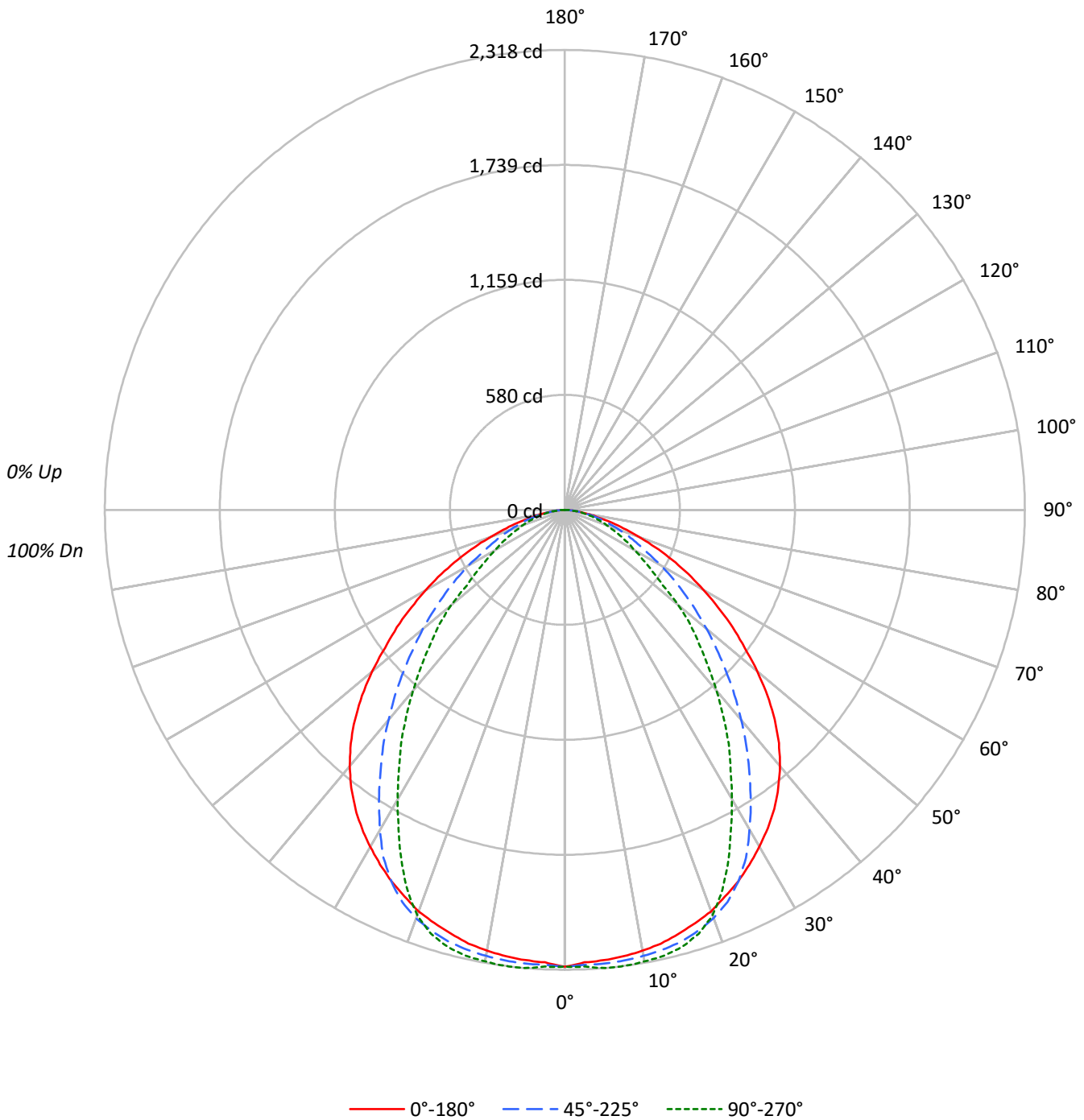
Lumens per Lamp: N/A
Luminaire Lumens: 5107.9 lumens
Efficiency: N/A
Efficacy: 135.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.12 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	59	53	78	67	59	53	65	58	53	63	57	52	61	56	51	49
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	35
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32
10	57	44	37	32	55	44	36	31	43	36	31	42	36	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37177	37177	37177
5°	36929	37212	37569
10°	36997	37428	37895
15°	36986	37683	38123
20°	37002	37642	37378
25°	36802	36841	34730
30°	36551	34711	31400
35°	36265	31943	28355
40°	35544	29120	25052
45°	34150	26188	21882
50°	31782	23410	18728
55°	29076	20679	15187
60°	26059	17986	13101
65°	22789	15499	11645
70°	18633	13770	10560
75°	14504	11903	9713
80°	10804	10191	8563
85°	7317	7725	4872

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 34150 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.3	4.3
10°-20°	635.9	12.4
20°-30°	936.4	18.3
30°-40°	1023.0	20.0
40°-50°	916.9	18.0
50°-60°	682.8	13.4
60°-70°	431.3	8.4
70°-80°	213.5	4.2
80°-90°	48.7	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°	1791.6	35.1
0°-40°	2814.6	55.1
0°-60°	4414.3	86.4
0°-90°	5107.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5107.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2303	2303	2303	2303	2303	
5°	2278	2316	2296	2298	2318	217
15°	2213	2257	2254	2270	2281	625
25°	2066	2112	2068	1982	1950	952
35°	1840	1820	1621	1480	1439	1149
45°	1496	1373	1147	1004	958	1148
55°	1033	932	735	577	540	922
65°	596	546	406	327	305	591
75°	232	250	191	160	156	254
85°	40	50	42	28	26	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2302.6	2302.6	2302.6	2302.6	2302.6
2.5°	2282.9	2320.2	2296.0	2298.2	2304.8
5°	2278.5	2315.8	2296.0	2298.2	2318.0
7.5°	2269.7	2307.0	2291.6	2298.2	2318.0
10°	2256.6	2296.0	2282.9	2293.8	2311.4
12.5°	2239.0	2280.7	2271.9	2285.1	2302.6
15°	2212.7	2256.6	2254.4	2269.7	2280.7
17.5°	2184.2	2228.1	2225.9	2234.6	2241.2
20°	2153.5	2197.3	2190.8	2175.4	2175.4
22.5°	2109.6	2157.9	2140.3	2092.1	2074.5
25°	2065.8	2111.8	2068.0	1982.4	1949.5
27.5°	2015.3	2054.8	1978.1	1859.6	1813.6
30°	1960.5	1989.0	1861.8	1728.1	1684.2
32.5°	1903.5	1910.1	1743.4	1603.1	1554.8
35°	1839.9	1820.2	1620.6	1480.2	1438.6
37.5°	1767.5	1714.9	1504.4	1357.4	1311.4
40°	1686.4	1603.1	1381.6	1234.6	1188.6
42.5°	1596.5	1486.8	1265.3	1118.4	1070.2
45°	1495.6	1372.8	1146.9	1004.4	958.3
47.5°	1386.0	1263.1	1035.1	896.9	859.6
50°	1265.3	1146.9	932.0	793.9	745.6
52.5°	1142.5	1039.5	831.1	688.6	618.4
55°	1032.9	932.0	734.6	576.7	539.5
57.5°	916.7	826.7	646.9	497.8	467.1
60°	807.0	730.3	557.0	436.4	405.7
62.5°	701.7	636.0	469.3	379.4	355.3
65°	596.5	546.0	405.7	326.8	304.8
67.5°	493.4	460.5	348.7	276.3	261.0
70°	394.7	386.0	291.7	234.6	223.7
72.5°	309.2	315.8	236.8	195.2	188.6
75°	232.5	250.0	190.8	160.1	155.7
77.5°	168.9	195.2	149.1	125.0	120.6
80°	116.2	142.5	109.6	92.1	92.1
82.5°	72.4	92.1	70.2	63.6	63.6
85°	39.5	50.4	41.7	28.5	26.3
87.5°	13.2	19.7	8.8	6.6	6.6
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	23.52	25.03	23.89	25.34	25.65	20.03	21.53	20.39	21.84	22.16
	3H	24.89	26.24	25.27	26.57	26.93	21.28	22.62	21.66	22.95	23.31
	4H	25.30	26.56	25.70	26.91	27.29	21.75	23.01	22.15	23.36	23.74
	6H	25.53	26.70	25.95	27.06	27.46	22.10	23.26	22.51	23.63	24.02
	8H	25.58	26.69	26.01	27.08	27.48	22.19	23.30	22.62	23.69	24.09
	12H	25.60	26.66	26.03	27.04	27.47	22.22	23.28	22.65	23.66	24.09
4H	2H	23.70	24.96	24.10	25.31	25.69	20.78	22.04	21.18	22.39	22.77
	3H	25.31	26.35	25.72	26.75	27.15	22.23	23.27	22.64	23.67	24.07
	4H	25.84	26.78	26.27	27.19	27.63	22.80	23.73	23.23	24.15	24.59
	6H	26.21	27.02	26.66	27.46	27.92	23.23	24.05	23.69	24.49	24.95
	8H	26.30	27.06	26.76	27.50	27.97	23.35	24.11	23.81	24.55	25.02
	12H	26.34	27.02	26.82	27.50	27.97	23.40	24.08	23.88	24.56	25.03
8H	4H	25.92	26.68	26.39	27.13	27.60	23.17	23.93	23.63	24.37	24.84
	6H	26.38	27.01	26.88	27.50	27.98	23.69	24.32	24.19	24.81	25.29
	8H	26.53	27.09	27.05	27.60	28.09	23.86	24.42	24.37	24.93	25.42
	12H	26.62	27.12	27.13	27.61	28.18	23.94	24.44	24.45	24.93	25.50
12H	4H	25.91	26.59	26.39	27.07	27.54	23.21	23.89	23.69	24.37	24.84
	6H	26.37	26.94	26.89	27.45	27.94	23.76	24.32	24.27	24.83	25.32
	8H	26.57	27.06	27.08	27.56	28.12	23.97	24.47	24.48	24.96	25.53