

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: P855554

Luminaire Tested: SQ2-FA-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855554
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-100D-835-UNV-STD-W-4
Description: CORELITE SQ2 SURFACE LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

Summary

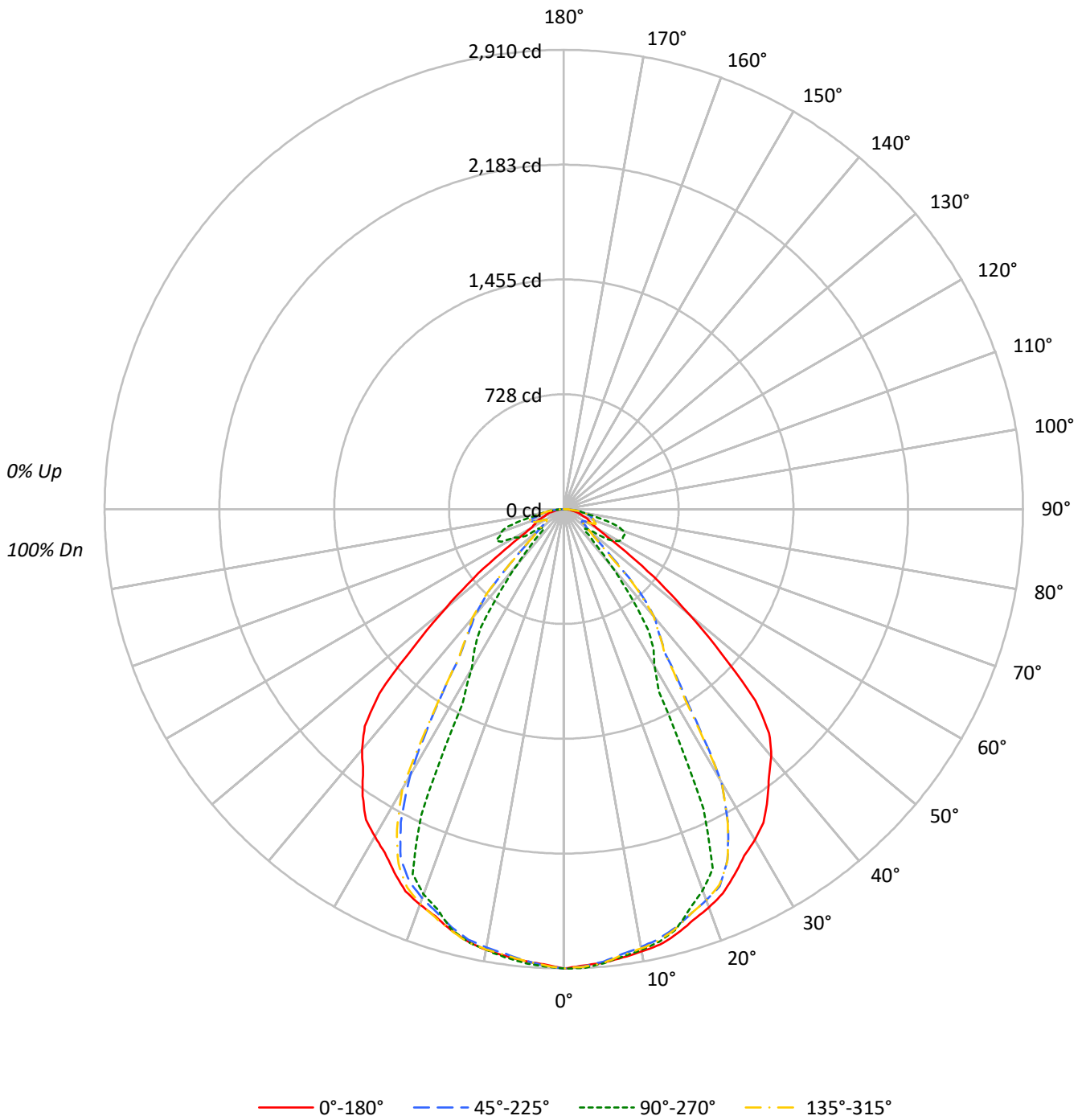
Lumens per Lamp: N/A
Luminaire Lumens: 4250.5 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63				63
5	84	74	66	61	82	73	66	60	71	65	60	69	64	59	67	62	59	57				57
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52				52
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48				48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44				44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41				41
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38				38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	46992	46992	46992	46992
5°	46746	46817	46567	46780
10°	46673	46493	46493	46493
15°	46522	46046	46156	46046
20°	46161	44201	45823	44615
25°	45555	37303	45243	38085
30°	45136	21403	44646	21690
35°	44346	18386	43781	18128
40°	43117	9670	41914	9577
45°	39192	4160	37787	4160
50°	25859	5016	24533	4687
55°	14460	9267	13717	8403
60°	7798	13043	7656	11693
65°	6873	15851	7213	18029
70°	6425	18958	6113	19997
75°	6020	16294	6163	16843
80°	5105	11641	5105	12245
85°	4465	6502	4076	7744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 39192 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.9	6.4
10°-20°	777.0	18.3
20°-30°	1059.5	24.9
30°-40°	890.3	20.9
40°-50°	505.7	11.9
50°-60°	268.3	6.3
60°-70°	247.0	5.8
70°-80°	181.4	4.3
80°-90°	47.4	1.1
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°	2110.4	49.7
0°-40°	3000.7	70.6
0°-60°	3774.7	88.8
0°-90°	4250.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4250.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2910	2910	2910	2910	2910	
5°	2884	2889	2873	2886	2884	274
15°	2783	2755	2761	2755	2783	785
25°	2557	2094	2540	2138	2557	1179
35°	2250	933	2221	920	2250	1405
45°	1716	182	1655	182	1716	1255
55°	514	329	487	298	514	495
65°	180	415	189	472	180	181
75°	96	261	99	270	96	100
85°	24	35	22	42	24	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2894.7	2937.6	2900.0	2895.0	2910.5	2907.0	2901.7	2922.0	2887.7	2922.0	2894.7
5°	2884.2	2933.5	2877.6	2862.8	2888.6	2871.4	2886.3	2916.1	2873.2	2911.8	2868.8
7.5°	2866.2	2910.0	2842.9	2833.3	2858.7	2843.6	2849.9	2891.2	2855.2	2880.5	2841.6
10°	2846.8	2885.4	2818.3	2812.3	2835.8	2820.8	2827.1	2870.2	2835.8	2859.5	2820.4
12.5°	2825.8	2855.8	2788.4	2785.8	2806.0	2796.1	2798.9	2835.3	2807.8	2831.4	2794.2
15°	2783.2	2811.1	2743.7	2733.2	2754.7	2746.1	2750.3	2782.6	2761.3	2776.2	2743.7
17.5°	2730.5	2752.8	2685.7	2654.1	2655.0	2665.7	2685.7	2724.8	2705.5	2725.3	2679.1
20°	2686.6	2712.4	2638.4	2576.8	2572.5	2583.2	2638.4	2677.6	2666.9	2688.3	2623.0
22.5°	2635.6	2652.8	2585.6	2481.7	2467.1	2477.9	2578.6	2625.0	2621.2	2635.8	2554.5
25°	2557.1	2574.3	2451.7	2302.1	2093.9	2289.2	2456.2	2539.6	2539.6	2552.5	2445.2
27.5°	2477.2	2477.7	2256.0	1478.5	1304.2	1425.2	2252.9	2433.8	2454.4	2447.9	2237.1
30°	2421.0	2406.0	1999.5	1195.2	1148.0	1177.9	2001.8	2360.3	2394.7	2371.1	1949.1
32.5°	2356.0	2313.6	1476.4	1098.7	1060.1	1086.7	1427.6	2273.2	2333.3	2282.1	1533.0
35°	2249.9	2138.2	1126.0	971.5	932.8	967.2	1117.2	2101.0	2221.2	2084.0	1163.4
37.5°	2135.2	1699.5	991.2	773.8	690.5	757.1	986.4	1681.3	2088.7	1642.3	990.3
40°	2045.7	1335.3	891.2	566.1	458.8	533.8	884.5	1273.9	1988.6	1370.6	869.2
42.5°	1926.3	1173.0	715.6	359.5	281.4	329.1	686.1	1145.9	1865.7	1187.5	691.9
45°	1716.4	1008.2	423.6	197.2	182.2	190.8	390.7	989.6	1654.9	968.3	432.4
47.5°	1359.6	769.0	272.2	167.6	183.9	167.6	263.8	744.5	1284.0	743.2	271.7
50°	1029.5	600.2	210.7	169.6	199.7	169.6	204.2	579.8	976.7	633.4	208.6
52.5°	762.5	501.6	172.1	186.0	240.1	189.4	167.3	488.2	723.9	510.9	162.8
55°	513.7	393.5	138.3	245.6	329.2	252.0	138.3	382.2	487.3	377.9	133.9
57.5°	325.7	292.6	140.0	315.7	375.8	321.7	142.3	282.1	312.6	283.4	122.9
60°	241.5	230.7	155.8	335.2	403.9	339.5	158.0	222.0	237.1	219.9	131.7
62.5°	199.3	181.7	187.4	363.0	419.6	353.5	191.4	173.3	207.2	166.0	145.8
65°	179.9	117.7	221.7	367.7	414.9	367.7	223.8	111.5	188.8	120.1	197.6
67.5°	162.4	87.4	214.2	365.1	417.5	366.0	208.9	83.3	155.8	81.1	201.9
70°	136.1	78.1	201.9	371.6	401.6	358.7	201.9	75.8	129.5	73.7	237.1
72.5°	113.3	74.2	187.9	343.1	356.0	330.2	189.7	73.8	113.7	66.4	223.1
75°	96.5	73.0	179.9	274.1	261.2	261.2	175.6	70.8	98.8	66.5	173.4
77.5°	72.4	64.7	149.3	178.9	169.0	169.0	146.7	62.5	68.9	58.6	140.9
80°	54.9	59.2	122.9	131.5	125.2	125.2	118.5	57.0	54.9	54.9	116.3
82.5°	42.6	50.4	94.8	96.4	91.8	90.1	92.2	49.9	42.6	46.1	90.0
85°	24.1	34.9	50.5	41.5	35.1	32.9	48.3	32.7	22.0	32.7	48.3
87.5°	8.8	15.6	7.0	7.0	7.0	7.0	7.0	15.6	8.8	13.9	8.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2887.9	2900.0	2900.0	2892.9	2927.3	2894.7
5°	2858.5	2886.3	2873.4	2873.2	2916.3	2884.2
7.5°	2837.8	2863.9	2851.9	2849.4	2891.9	2866.2
10°	2816.5	2835.8	2827.2	2833.7	2872.6	2846.8
12.5°	2786.7	2809.5	2801.0	2810.8	2846.4	2825.8
15°	2735.3	2754.7	2758.9	2763.4	2804.6	2783.2
17.5°	2650.4	2659.9	2681.3	2711.6	2754.6	2730.5
20°	2583.7	2596.6	2609.5	2662.5	2712.4	2686.6
22.5°	2507.9	2503.6	2533.6	2595.7	2658.1	2635.6
25°	2303.2	2137.8	2320.3	2480.3	2563.6	2557.1
27.5°	1603.7	1391.6	1579.1	2289.4	2464.3	2477.2
30°	1262.0	1163.4	1259.9	2043.4	2391.0	2421.0
32.5°	1120.5	1052.7	1111.5	1555.4	2298.5	2356.0
35°	966.9	919.7	966.9	1163.4	2116.8	2249.9
37.5°	773.9	677.3	772.2	1005.3	1711.2	2135.2
40°	576.7	454.4	559.5	899.9	1367.5	2045.7
42.5°	384.2	292.8	363.6	708.5	1182.8	1926.3
45°	207.9	182.2	199.4	428.0	965.3	1716.4
47.5°	163.1	172.5	163.1	270.0	738.4	1359.6
50°	156.5	186.6	156.5	208.6	610.9	1029.5
52.5°	170.7	202.3	168.8	164.7	498.5	762.5
55°	193.4	298.5	195.6	133.9	365.5	513.7
57.5°	275.3	335.9	278.3	126.9	281.6	325.7
60°	282.8	362.1	280.7	133.9	217.8	241.5
62.5°	334.4	448.3	334.1	153.2	161.9	199.3
65°	429.0	471.9	433.3	195.3	115.7	179.9
67.5°	407.2	437.6	402.9	209.4	79.6	162.4
70°	400.0	423.6	395.7	239.2	73.9	136.1
72.5°	373.2	376.2	365.5	221.7	66.4	113.3
75°	289.3	270.0	278.6	190.9	66.5	96.5
77.5°	179.8	172.1	173.4	145.8	58.7	72.4
80°	136.0	131.7	129.6	122.9	54.9	54.9
82.5°	100.8	96.5	94.4	94.8	46.1	42.6
85°	45.9	41.8	39.6	54.9	32.7	24.1
87.5°	8.8	8.8	7.0	8.8	12.2	8.8
90°	0.0	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	17.38	18.69	17.74	19.00	19.32	16.23	17.55	16.60	17.86	18.17
	3H	18.10	19.27	18.48	19.60	19.97	22.41	23.58	22.79	23.91	24.28
	4H	18.53	19.63	18.93	19.98	20.36	23.70	24.80	24.11	25.15	25.53
	6H	18.90	19.91	19.32	20.28	20.68	24.33	25.34	24.74	25.71	26.10
	8H	19.03	19.99	19.46	20.38	20.78	24.46	25.42	24.89	25.81	26.22
	12H	19.11	20.03	19.55	20.41	20.84	24.52	25.43	24.95	25.82	26.25
4H	2H	17.81	18.91	18.22	19.26	19.64	16.81	17.91	17.21	18.26	18.64
	3H	18.84	19.75	19.25	20.15	20.56	23.16	24.07	23.57	24.48	24.88
	4H	19.41	20.23	19.84	20.65	21.09	24.62	25.44	25.06	25.86	26.30
	6H	19.90	20.62	20.37	21.06	21.53	25.38	26.09	25.84	26.53	27.00
	8H	20.08	20.75	20.55	21.19	21.66	25.55	26.21	26.02	26.66	27.13
	12H	20.22	20.80	20.70	21.29	21.76	25.63	26.22	26.12	26.70	27.18
8H	4H	20.53	21.20	21.00	21.65	22.12	24.77	25.43	25.24	25.88	26.35
	6H	21.15	21.70	21.66	22.19	22.67	25.66	26.20	26.16	26.70	27.18
	8H	21.39	21.87	21.91	22.39	22.88	25.91	26.39	26.43	26.91	27.40
	12H	21.58	22.01	22.09	22.50	23.07	26.05	26.48	26.56	26.97	27.54
12H	4H	20.70	21.29	21.18	21.77	22.24	24.75	25.34	25.23	25.82	26.29
	6H	21.43	21.91	21.95	22.43	22.92	25.67	26.15	26.19	26.67	27.16
	8H	21.75	22.17	22.26	22.67	23.24	25.97	26.40	26.48	26.89	27.46