

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: P853777

Luminaire Tested: SQ2-FA-050D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853777
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-050D-935-UNV-STD-W-4
Description: CORELITE SQ2 SURFACE LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

Summary

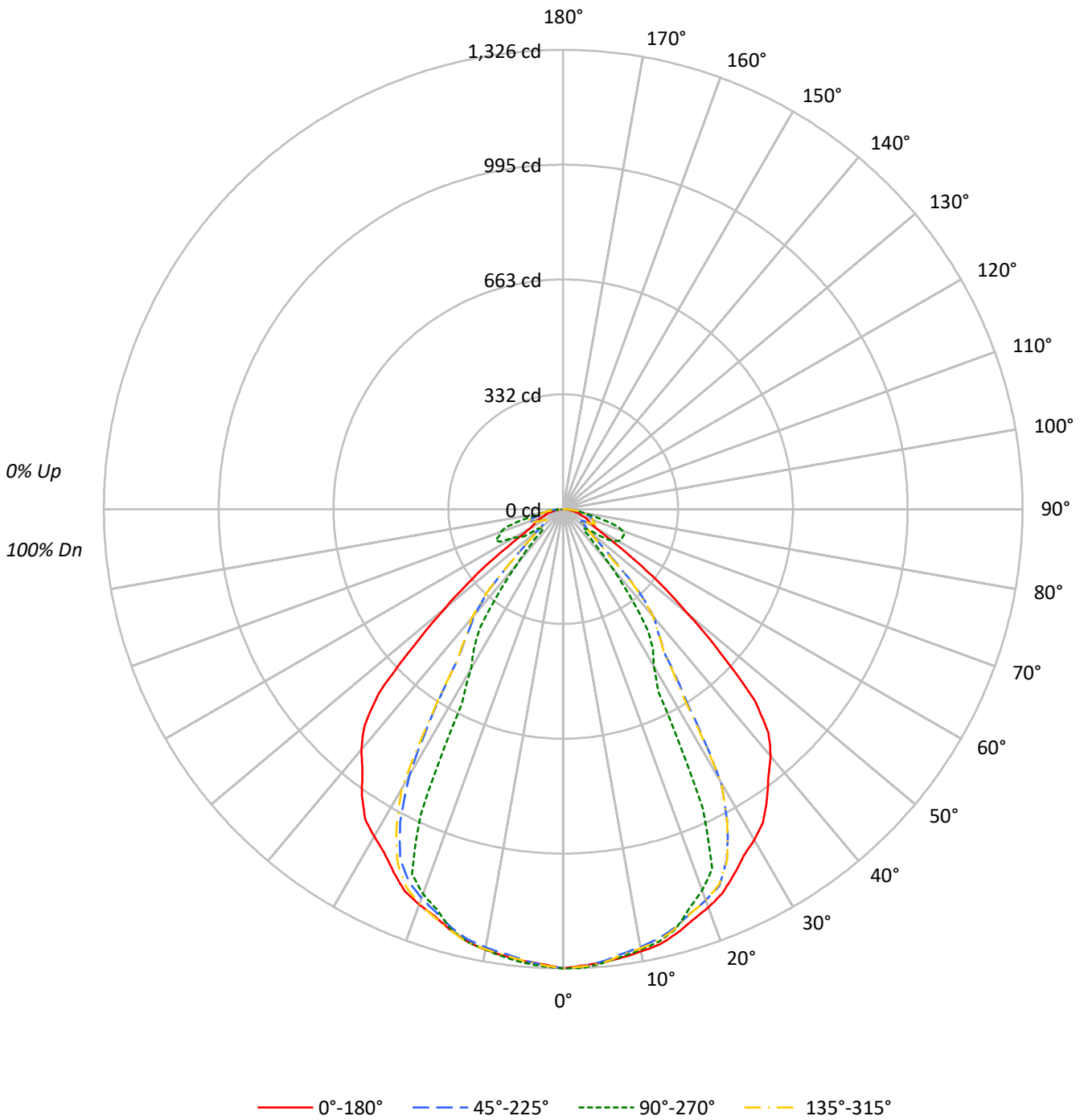
Lumens per Lamp: N/A
Luminaire Lumens: 1936.5 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
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°	21409	21409	21409	21409
5°	21297	21329	21216	21313
10°	21264	21182	21182	21182
15°	21195	20978	21028	20978
20°	21031	20137	20876	20326
25°	20754	16995	20612	17352
30°	20564	9751	20340	9881
35°	20203	8377	19947	8259
40°	19644	4405	19096	4363
45°	17856	1895	17217	1895
50°	11781	2286	11178	2135
55°	6587	4222	6249	3828
60°	3552	5942	3488	5328
65°	3133	7221	3286	8214
70°	2927	8639	2785	9111
75°	2745	7424	2807	7673
80°	2325	5300	2325	5579
85°	2038	2964	1853	3520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17856 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	6.4
10°-20°	354.0	18.3
20°-30°	482.7	24.9
30°-40°	405.6	20.9
40°-50°	230.4	11.9
50°-60°	122.2	6.3
60°-70°	112.5	5.8
70°-80°	82.6	4.3
80°-90°	21.6	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°	961.5	49.7
0°-40°	1367.1	70.6
0°-60°	1719.7	88.8
0°-90°	1936.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1936.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1326	1326	1326	1326	1326	
5°	1314	1316	1309	1315	1314	125
15°	1268	1255	1258	1255	1268	357
25°	1165	954	1157	974	1165	537
35°	1025	425	1012	419	1025	640
45°	782	83	754	83	782	572
55°	234	150	222	136	234	225
65°	82	189	86	215	82	82
75°	44	119	45	123	44	45
85°	11	16	10	19	11	13
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°	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0
2.5°	1318.8	1338.4	1321.2	1319.0	1326.0	1324.4	1322.0	1331.3	1315.6	1331.3	1318.8
5°	1314.0	1336.5	1311.0	1304.3	1316.0	1308.2	1315.0	1328.6	1309.0	1326.6	1307.0
7.5°	1305.8	1325.8	1295.2	1290.9	1302.4	1295.6	1298.4	1317.2	1300.8	1312.3	1294.6
10°	1297.0	1314.6	1284.0	1281.3	1292.0	1285.2	1288.0	1307.7	1292.0	1302.8	1285.0
12.5°	1287.4	1301.1	1270.4	1269.2	1278.4	1273.9	1275.2	1291.7	1279.2	1290.0	1273.0
15°	1268.0	1280.7	1250.0	1245.2	1255.0	1251.1	1253.0	1267.8	1258.0	1264.9	1250.0
17.5°	1244.0	1254.2	1223.6	1209.2	1209.6	1214.5	1223.6	1241.4	1232.6	1241.6	1220.6
20°	1224.0	1235.7	1202.0	1174.0	1172.0	1176.9	1202.0	1219.9	1215.0	1224.8	1195.0
22.5°	1200.8	1208.6	1178.0	1130.7	1124.0	1128.9	1174.8	1196.0	1194.2	1200.9	1163.8
25°	1165.0	1172.8	1117.0	1048.9	954.0	1043.0	1119.0	1157.0	1157.0	1162.9	1114.0
27.5°	1128.6	1128.8	1027.8	673.6	594.2	649.4	1026.4	1108.8	1118.2	1115.3	1019.2
30°	1103.0	1096.2	911.0	544.5	523.0	536.7	912.0	1075.4	1091.0	1080.3	888.0
32.5°	1073.4	1054.0	672.6	500.6	483.0	495.1	650.4	1035.6	1063.0	1039.7	698.4
35°	1025.0	974.2	513.0	442.6	425.0	440.6	509.0	957.3	1012.0	949.4	530.0
37.5°	972.8	774.3	451.6	352.5	314.6	344.9	449.4	766.0	951.6	748.2	451.2
40°	932.0	608.4	406.0	257.9	209.0	243.2	403.0	580.4	906.0	624.4	396.0
42.5°	877.6	534.4	326.0	163.8	128.2	149.9	312.6	522.1	850.0	541.0	315.2
45°	782.0	459.3	193.0	89.8	83.0	86.9	178.0	450.9	754.0	441.1	197.0
47.5°	619.4	350.3	124.0	76.4	83.8	76.4	120.2	339.2	585.0	338.6	123.8
50°	469.0	273.4	96.0	77.3	91.0	77.3	93.0	264.1	445.0	288.6	95.0
52.5°	347.4	228.5	78.4	84.8	109.4	86.3	76.2	222.4	329.8	232.8	74.2
55°	234.0	179.2	63.0	111.9	150.0	114.8	63.0	174.1	222.0	172.1	61.0
57.5°	148.4	133.3	63.8	143.8	171.2	146.6	64.8	128.5	142.4	129.1	56.0
60°	110.0	105.1	71.0	152.7	184.0	154.7	72.0	101.2	108.0	100.2	60.0
62.5°	90.8	82.8	85.4	165.4	191.2	161.1	87.2	79.0	94.4	75.6	66.4
65°	82.0	53.6	101.0	167.5	189.0	167.5	102.0	50.8	86.0	54.7	90.0
67.5°	74.0	39.8	97.6	166.3	190.2	166.7	95.2	38.0	71.0	37.0	92.0
70°	62.0	35.6	92.0	169.3	183.0	163.4	92.0	34.6	59.0	33.6	108.0
72.5°	51.6	33.8	85.6	156.3	162.2	150.5	86.4	33.6	51.8	30.3	101.6
75°	44.0	33.2	82.0	124.9	119.0	119.0	80.0	32.3	45.0	30.3	79.0
77.5°	33.0	29.5	68.0	81.5	77.0	77.0	66.8	28.5	31.4	26.7	64.2
80°	25.0	27.0	56.0	59.9	57.0	57.0	54.0	26.0	25.0	25.0	53.0
82.5°	19.4	22.9	43.2	44.0	41.8	41.0	42.0	22.7	19.4	21.0	41.0
85°	11.0	15.9	23.0	18.9	16.0	15.0	22.0	14.9	10.0	14.9	22.0
87.5°	4.0	7.1	3.2	3.2	3.2	3.2	3.2	7.1	4.0	6.3	4.0
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°	1326.0	1326.0	1326.0	1326.0	1326.0	1326.0
2.5°	1315.7	1321.2	1321.2	1318.0	1333.7	1318.8
5°	1302.3	1315.0	1309.1	1309.0	1328.7	1314.0
7.5°	1292.9	1304.8	1299.3	1298.2	1317.5	1305.8
10°	1283.2	1292.0	1288.1	1291.0	1308.7	1297.0
12.5°	1269.6	1280.0	1276.1	1280.6	1296.8	1287.4
15°	1246.2	1255.0	1257.0	1259.0	1277.8	1268.0
17.5°	1207.5	1211.8	1221.6	1235.4	1255.0	1244.0
20°	1177.1	1183.0	1188.9	1213.0	1235.7	1224.0
22.5°	1142.6	1140.6	1154.3	1182.6	1211.0	1200.8
25°	1049.3	974.0	1057.1	1130.0	1167.9	1165.0
27.5°	730.6	634.0	719.5	1043.0	1122.7	1128.6
30°	575.0	530.0	574.0	931.0	1089.3	1103.0
32.5°	510.5	479.6	506.4	708.6	1047.2	1073.4
35°	440.5	419.0	440.5	530.0	964.4	1025.0
37.5°	352.6	308.6	351.8	458.0	779.6	972.8
40°	262.7	207.0	254.9	410.0	623.0	932.0
42.5°	175.1	133.4	165.7	322.8	538.9	877.6
45°	94.7	83.0	90.8	195.0	439.8	782.0
47.5°	74.3	78.6	74.3	123.0	336.4	619.4
50°	71.3	85.0	71.3	95.0	278.3	469.0
52.5°	77.7	92.2	76.9	75.0	227.1	347.4
55°	88.1	136.0	89.1	61.0	166.5	234.0
57.5°	125.4	153.0	126.8	57.8	128.3	148.4
60°	128.8	165.0	127.8	61.0	99.2	110.0
62.5°	152.4	204.2	152.2	69.8	73.8	90.8
65°	195.4	215.0	197.4	89.0	52.7	82.0
67.5°	185.5	199.4	183.6	95.4	36.3	74.0
70°	182.2	193.0	180.3	109.0	33.6	62.0
72.5°	170.0	171.4	166.5	101.0	30.3	51.6
75°	131.8	123.0	126.9	87.0	30.3	44.0
77.5°	81.9	78.4	79.0	66.4	26.7	33.0
80°	62.0	60.0	59.0	56.0	25.0	25.0
82.5°	46.0	44.0	43.0	43.2	21.0	19.4
85°	21.0	19.0	18.0	25.0	14.9	11.0
87.5°	4.0	4.0	3.2	4.0	5.6	4.0
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	14.64	15.96	15.01	16.27	16.58	13.50	14.81	13.87	15.12	15.44
	3H	15.37	16.54	15.75	16.87	17.24	19.68	20.85	20.06	21.18	21.55
	4H	15.80	16.89	16.20	17.24	17.63	20.97	22.07	21.37	22.42	22.80
	6H	16.17	17.18	16.58	17.55	17.94	21.60	22.61	22.01	22.98	23.37
	8H	16.30	17.26	16.73	17.65	18.05	21.73	22.69	22.16	23.08	23.49
	12H	16.38	17.30	16.81	17.68	18.11	21.78	22.70	22.22	23.08	23.51
4H	2H	15.08	16.18	15.48	16.53	16.91	14.08	15.17	14.48	15.52	15.91
	3H	16.11	17.02	16.52	17.42	17.82	20.43	21.34	20.84	21.74	22.15
	4H	16.68	17.50	17.11	17.92	18.36	21.89	22.71	22.32	23.13	23.57
	6H	17.17	17.88	17.63	18.33	18.80	22.65	23.36	23.11	23.80	24.27
	8H	17.35	18.01	17.82	18.46	18.93	22.82	23.48	23.29	23.93	24.40
	12H	17.48	18.07	17.97	18.55	19.03	22.90	23.49	23.38	23.97	24.44
8H	4H	17.80	18.47	18.27	18.91	19.38	22.04	22.70	22.51	23.15	23.62
	6H	18.42	18.97	18.92	19.46	19.94	22.93	23.47	23.43	23.97	24.45
	8H	18.66	19.14	19.18	19.66	20.15	23.18	23.66	23.70	24.18	24.67
	12H	18.85	19.28	19.36	19.77	20.34	23.32	23.74	23.83	24.24	24.81
12H	4H	17.97	18.56	18.45	19.04	19.51	22.02	22.61	22.50	23.09	23.56
	6H	18.69	19.18	19.21	19.70	20.19	22.93	23.42	23.46	23.94	24.43
	8H	19.02	19.44	19.53	19.94	20.51	23.24	23.66	23.75	24.16	24.73