

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: P853776

Luminaire Tested: SQ2-FA-050D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853776
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-930-UNV-STD-W-4
Description: CORELITE SQ2 SURFACE LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

Summary

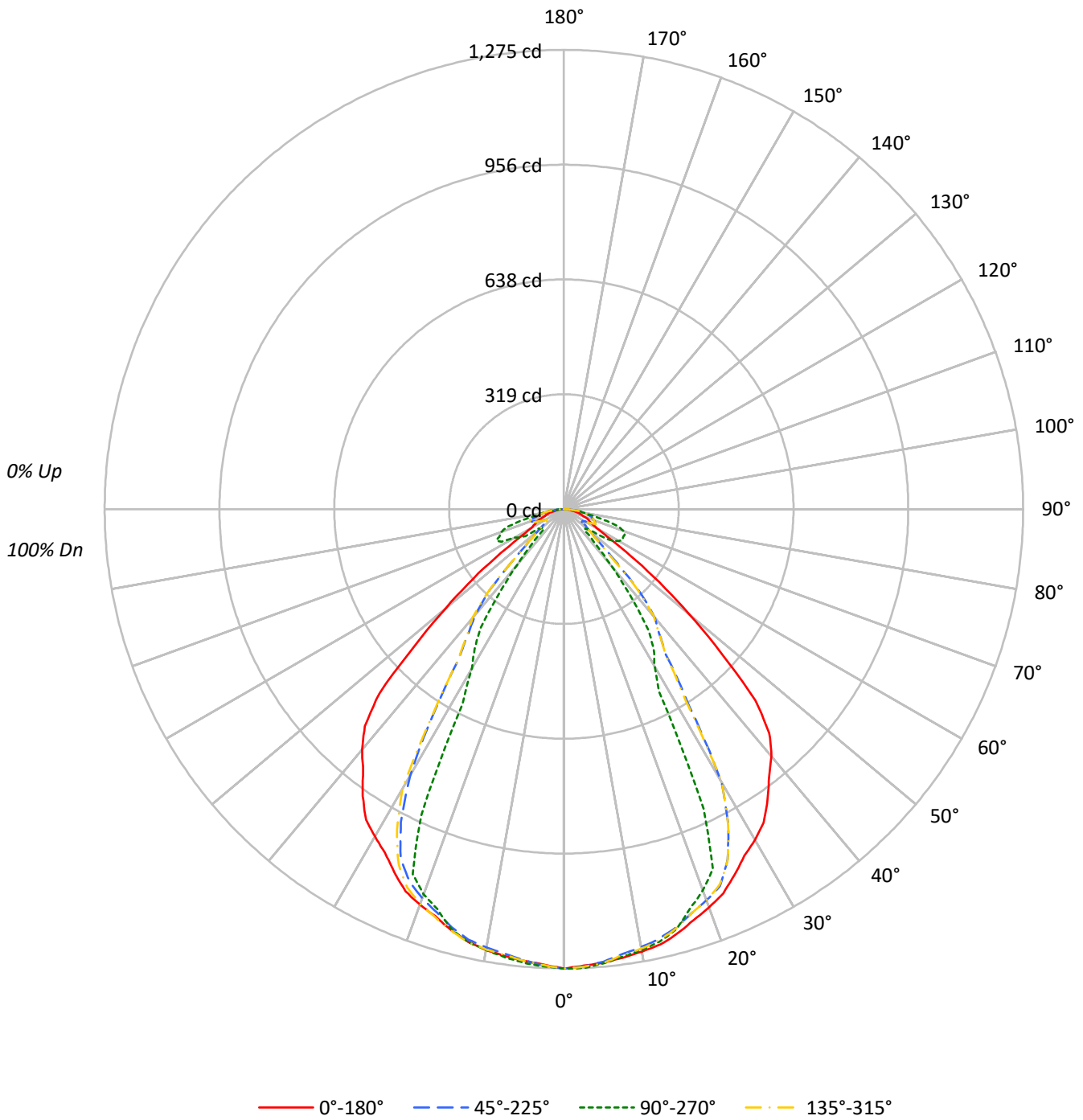
Lumens per Lamp: N/A
Luminaire Lumens: 1862.6 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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				
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70				
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63				
5	84	74	66	61	82	73	66	60	71	65	60	69	64	59	67	62	59	57				
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52				
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48				
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44				
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41				
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	20592	20592	20592	20592
5°	20483	20514	20405	20499
10°	20453	20374	20374	20374
15°	20386	20177	20226	20177
20°	20227	19368	20079	19550
25°	19962	16347	19824	16689
30°	19779	9378	19563	9505
35°	19431	8058	19184	7943
40°	18893	4236	18366	4196
45°	17173	1822	16559	1822
50°	11331	2198	10751	2055
55°	6336	4062	6010	3682
60°	3416	5716	3355	5125
65°	3014	6946	3159	7901
70°	2814	8308	2677	8762
75°	2639	7143	2701	7380
80°	2232	5095	2232	5365
85°	1964	2853	1778	3390

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17173 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	6.4
10°-20°	340.5	18.3
20°-30°	464.3	24.9
30°-40°	390.1	20.9
40°-50°	221.6	11.9
50°-60°	117.6	6.3
60°-70°	108.3	5.8
70°-80°	79.5	4.3
80°-90°	20.8	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°	924.8	49.7
0°-40°	1314.9	70.6
0°-60°	1654.1	88.8
0°-90°	1862.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1862.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1275	1275	1275	1275	1275	
5°	1264	1266	1259	1265	1264	120
15°	1220	1207	1210	1207	1220	344
25°	1120	918	1113	937	1120	517
35°	986	409	973	403	986	615
45°	752	80	725	80	752	550
55°	225	144	214	131	225	217
65°	79	182	83	207	79	79
75°	42	114	43	118	42	44
85°	11	15	10	18	11	12
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°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1268.4	1287.2	1270.7	1268.6	1275.4	1273.8	1271.5	1280.4	1265.4	1280.4	1268.4
5°	1263.8	1285.4	1260.9	1254.4	1265.7	1258.2	1264.8	1277.8	1259.0	1275.9	1257.1
7.5°	1255.9	1275.1	1245.7	1241.6	1252.7	1246.1	1248.8	1266.9	1251.1	1262.2	1245.2
10°	1247.5	1264.4	1235.0	1232.3	1242.7	1236.1	1238.8	1257.7	1242.7	1253.0	1235.9
12.5°	1238.2	1251.4	1221.9	1220.7	1229.6	1225.2	1226.5	1242.4	1230.3	1240.7	1224.4
15°	1219.6	1231.8	1202.3	1197.7	1207.1	1203.3	1205.1	1219.4	1210.0	1216.5	1202.3
17.5°	1196.5	1206.3	1176.9	1163.0	1163.4	1168.1	1176.9	1194.0	1185.5	1194.2	1174.0
20°	1177.2	1188.5	1156.1	1129.1	1127.2	1131.9	1156.1	1173.3	1168.6	1178.0	1149.4
22.5°	1154.9	1162.5	1133.0	1087.5	1081.1	1085.8	1129.9	1150.3	1148.6	1155.0	1119.3
25°	1120.5	1128.0	1074.3	1008.8	917.6	1003.1	1076.3	1112.8	1112.8	1118.5	1071.5
27.5°	1085.5	1085.7	988.5	647.9	571.5	624.5	987.2	1066.5	1075.5	1072.7	980.3
30°	1060.9	1054.3	876.2	523.7	503.0	516.2	877.2	1034.3	1049.3	1039.0	854.1
32.5°	1032.4	1013.8	646.9	481.5	464.6	476.2	625.6	996.1	1022.4	1000.0	671.7
35°	985.8	936.9	493.4	425.7	408.8	423.8	489.6	920.7	973.3	913.2	509.8
37.5°	935.6	744.7	434.4	339.1	302.6	331.7	432.2	736.8	915.3	719.6	434.0
40°	896.4	585.1	390.5	248.0	201.0	233.9	387.6	558.2	871.4	600.6	380.9
42.5°	844.1	514.0	313.5	157.5	123.3	144.2	300.7	502.1	817.5	520.4	303.2
45°	752.1	441.8	185.6	86.4	79.8	83.6	171.2	433.7	725.2	424.3	189.5
47.5°	595.7	336.9	119.3	73.5	80.6	73.5	115.6	326.2	562.7	325.7	119.1
50°	451.1	263.0	92.3	74.4	87.5	74.4	89.4	254.0	428.0	277.5	91.4
52.5°	334.1	219.8	75.4	81.5	105.2	83.0	73.3	213.9	317.2	223.9	71.4
55°	225.1	172.4	60.6	107.6	144.3	110.4	60.6	167.4	213.5	165.6	58.7
57.5°	142.7	128.2	61.4	138.3	164.7	141.0	62.3	123.6	137.0	124.2	53.9
60°	105.8	101.1	68.3	146.9	177.0	148.8	69.2	97.3	103.9	96.4	57.7
62.5°	87.3	79.6	82.1	159.1	183.9	154.9	83.9	75.9	90.8	72.7	63.9
65°	78.9	51.6	97.1	161.1	181.8	161.1	98.1	48.9	82.7	52.6	86.6
67.5°	71.2	38.3	93.9	160.0	182.9	160.4	91.6	36.5	68.3	35.6	88.5
70°	59.6	34.2	88.5	162.8	176.0	157.2	88.5	33.2	56.7	32.3	103.9
72.5°	49.6	32.5	82.3	150.4	156.0	144.7	83.1	32.3	49.8	29.1	97.7
75°	42.3	32.0	78.9	120.1	114.5	114.5	76.9	31.1	43.3	29.2	76.0
77.5°	31.7	28.4	65.4	78.4	74.1	74.1	64.2	27.4	30.2	25.7	61.7
80°	24.0	25.9	53.9	57.6	54.8	54.8	51.9	25.0	24.0	24.0	51.0
82.5°	18.7	22.0	41.5	42.3	40.2	39.5	40.4	21.9	18.7	20.2	39.4
85°	10.6	15.3	22.1	18.2	15.4	14.4	21.2	14.3	9.6	14.3	21.2
87.5°	3.8	6.9	3.1	3.1	3.1	3.1	3.1	6.9	3.8	6.1	3.8
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°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1265.5	1270.7	1270.7	1267.7	1282.7	1268.4
5°	1252.5	1264.8	1259.1	1259.0	1277.9	1263.8
7.5°	1243.5	1255.0	1249.7	1248.6	1267.2	1255.9
10°	1234.2	1242.7	1238.9	1241.7	1258.7	1247.5
12.5°	1221.1	1231.1	1227.3	1231.7	1247.3	1238.2
15°	1198.6	1207.1	1208.9	1210.9	1229.0	1219.6
17.5°	1161.4	1165.5	1174.9	1188.2	1207.0	1196.5
20°	1132.2	1137.8	1143.5	1166.7	1188.5	1177.2
22.5°	1098.9	1097.0	1110.2	1137.4	1164.7	1154.9
25°	1009.2	936.8	1016.7	1086.8	1123.3	1120.5
27.5°	702.7	609.8	692.0	1003.2	1079.9	1085.5
30°	553.0	509.8	552.1	895.4	1047.7	1060.9
32.5°	491.0	461.3	487.0	681.5	1007.2	1032.4
35°	423.7	403.0	423.7	509.8	927.5	985.8
37.5°	339.1	296.8	338.4	440.5	749.8	935.6
40°	252.7	199.1	245.2	394.3	599.2	896.4
42.5°	168.4	128.3	159.3	310.5	518.3	844.1
45°	91.1	79.8	87.4	187.6	423.0	752.1
47.5°	71.5	75.6	71.5	118.3	323.6	595.7
50°	68.6	81.8	68.6	91.4	267.7	451.1
52.5°	74.8	88.7	74.0	72.1	218.5	334.1
55°	84.7	130.8	85.7	58.7	160.2	225.1
57.5°	120.6	147.2	122.0	55.6	123.4	142.7
60°	123.9	158.7	123.0	58.7	95.5	105.8
62.5°	146.6	196.4	146.4	67.1	71.0	87.3
65°	188.0	206.8	189.9	85.6	50.7	78.9
67.5°	178.4	191.8	176.5	91.8	34.9	71.2
70°	175.3	185.6	173.4	104.8	32.4	59.6
72.5°	163.5	164.9	160.2	97.1	29.1	49.6
75°	126.8	118.3	122.1	83.7	29.2	42.3
77.5°	78.8	75.4	76.0	63.9	25.7	31.7
80°	59.6	57.7	56.8	53.9	24.0	24.0
82.5°	44.2	42.3	41.4	41.5	20.2	18.7
85°	20.2	18.3	17.3	24.0	14.3	10.6
87.5°	3.8	3.8	3.1	3.8	5.4	3.8
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	14.51	15.82	14.88	16.13	16.45	13.37	14.68	13.73	14.99	15.31
	3H	15.24	16.41	15.61	16.74	17.10	19.54	20.72	19.92	21.05	21.41
	4H	15.66	16.76	16.06	17.11	17.49	20.84	21.93	21.24	22.28	22.67
	6H	16.03	17.05	16.45	17.42	17.81	21.46	22.47	21.87	22.84	23.24
	8H	16.16	17.12	16.59	17.51	17.92	21.60	22.56	22.03	22.95	23.35
	12H	16.25	17.16	16.68	17.55	17.98	21.65	22.57	22.08	22.95	23.38
4H	2H	14.95	16.04	15.35	16.39	16.78	13.94	15.04	14.34	15.39	15.77
	3H	15.97	16.88	16.38	17.29	17.69	20.29	21.21	20.71	21.61	22.01
	4H	16.54	17.36	16.98	17.78	18.23	21.75	22.58	22.19	22.99	23.44
	6H	17.04	17.75	17.50	18.20	18.66	22.51	23.22	22.97	23.67	24.13
	8H	17.21	17.88	17.68	18.32	18.79	22.68	23.35	23.15	23.79	24.27
	12H	17.35	17.94	17.83	18.42	18.89	22.76	23.35	23.25	23.84	24.31
8H	4H	17.67	18.33	18.14	18.78	19.25	21.90	22.57	22.37	23.01	23.48
	6H	18.29	18.83	18.79	19.33	19.81	22.79	23.34	23.29	23.83	24.31
	8H	18.52	19.01	19.04	19.52	20.01	23.04	23.53	23.56	24.04	24.53
	12H	18.71	19.14	19.23	19.63	20.20	23.18	23.61	23.70	24.11	24.68
12H	4H	17.83	18.42	18.32	18.90	19.38	21.88	22.47	22.37	22.95	23.43
	6H	18.56	19.05	19.08	19.56	20.05	22.80	23.29	23.32	23.80	24.29
	8H	18.88	19.31	19.39	19.80	20.37	23.10	23.53	23.62	24.02	24.59