

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: P853880

Luminaire Tested: SQ2-FB-100U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853880
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-100U-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

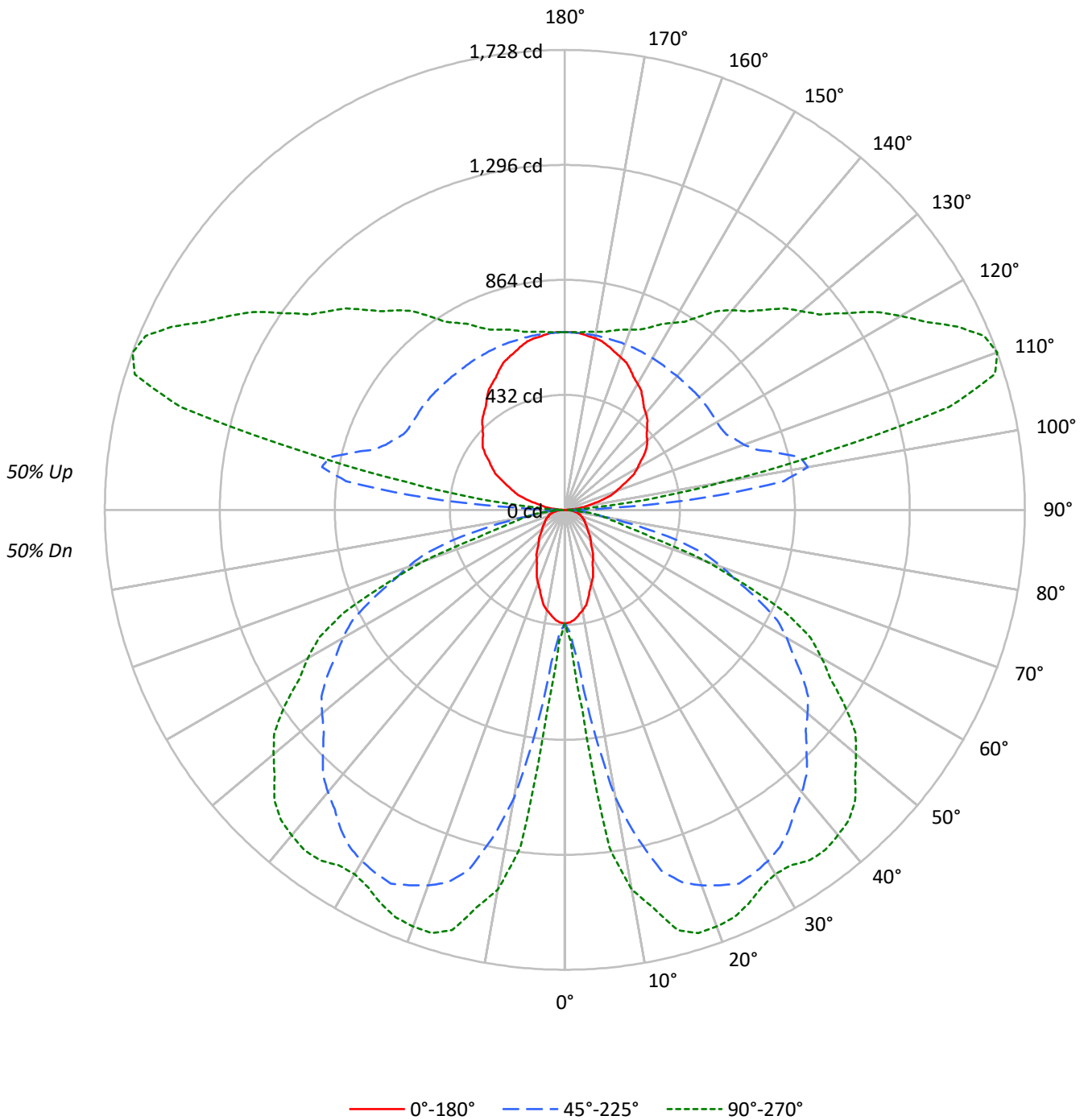
Lumens per Lamp: N/A
Luminaire Lumens: 8372.4 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 70.2
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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50				
1	98	93	89	86	90	86	83	80	73	71	68	61	59	57	50	48	47	42				
2	89	81	75	69	81	75	69	65	64	59	56	53	50	47	43	41	39	35				
3	81	71	63	57	74	66	59	54	56	51	46	46	43	40	38	35	33	29				
4	73	62	54	48	67	58	50	45	49	43	39	41	37	33	33	30	28	24				
5	67	55	47	41	62	51	44	38	43	38	33	36	32	28	30	26	24	21				
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	23	21	18				
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15				
8	53	40	32	26	48	37	30	25	32	26	22	27	22	19	22	19	16	14				
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12				
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	19	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6889	6889	6889
5°	6716	9310	12203
10°	6291	18029	23746
15°	5693	23457	27331
20°	5041	25804	28624
25°	4459	27595	29094
30°	3939	28418	29451
35°	3518	28913	31663
40°	3199	29187	33641
45°	2952	29325	35228
50°	2783	29888	35867
55°	2714	30666	36152
60°	2784	31071	35973
65°	2900	30647	34957
70°	3002	29637	26441
75°	3325	26619	14591
80°	3431	13733	13547
85°	3427	9503	5706

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 36479 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	0.9
10°-20°	326.3	3.9
20°-30°	574.2	6.9
30°-40°	743.2	8.9
40°-50°	819.7	9.8
50°-60°	765.3	9.1
60°-70°	591.5	7.1
70°-80°	272.9	3.3
80°-90°	53.3	0.6
90°-100°	278.8	3.3
100°-110°	843.2	10.1
110°-120°	823.1	9.8
120°-130°	672.6	8.0
130°-140°	549.0	6.6
140°-150°	427.4	5.1
150°-160°	308.1	3.7
160°-170°	188.6	2.3
170°-180°	63.7	0.8
0°-30°	972.0	11.6
0°-40°	1715.2	20.5
0°-60°	3300.3	39.4
0°-90°	4218.0	50.4
90°-120°	1945.0	23.2
90°-150°	3594.0	42.9
90°-180°	4154.0	49.6
0°-180°	8372.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	414	475	574	701	753	38
15°	341	672	1403	1571	1635	95
25°	250	902	1549	1617	1633	115
35°	178	871	1467	1518	1606	112
45°	129	667	1284	1475	1543	100
55°	96	397	1089	1252	1284	87
65°	76	224	802	899	915	74
75°	53	138	427	230	234	55
85°	18	40	51	35	31	19
90°	0	2	13	7	6	3
95°	35	109	526	194	123	41
105°	147	206	828	1572	1494	154
115°	261	311	670	1386	1627	258
125°	365	405	660	1094	1288	324
135°	437	483	656	944	1062	338
145°	510	548	656	812	888	320
155°	582	601	660	728	756	268
165°	636	643	663	689	697	179
175°	665	665	666	672	670	63
180°	668	668	668	668	668	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	426.7	426.7	426.7	426.7	426.7
2.5°	423.5	441.1	461.2	484.4	494.0
5°	414.4	474.6	574.4	700.8	752.9
7.5°	398.4	520.8	835.4	1173.4	1277.7
10°	383.7	554.2	1099.7	1392.3	1448.4
12.5°	367.2	598.7	1265.4	1471.1	1528.9
15°	340.6	671.6	1403.3	1570.9	1635.1
17.5°	313.1	753.6	1467.3	1632.6	1667.5
20°	293.4	810.9	1501.8	1643.8	1665.9
22.5°	275.3	853.9	1526.4	1634.0	1657.7
25°	250.3	902.3	1549.0	1617.0	1633.1
27.5°	226.1	915.0	1539.1	1583.8	1599.4
30°	211.3	911.4	1524.3	1557.7	1579.7
32.5°	198.2	901.5	1503.0	1535.3	1583.0
35°	178.5	870.6	1466.9	1518.1	1606.4
37.5°	161.7	820.8	1419.3	1524.2	1609.3
40°	151.8	783.7	1384.8	1523.9	1596.1
42.5°	142.0	740.2	1345.4	1507.5	1579.7
45°	129.3	666.9	1284.3	1474.6	1542.8
47.5°	117.4	584.4	1227.7	1429.0	1478.8
50°	110.8	528.0	1189.9	1387.8	1427.9
52.5°	104.2	473.3	1152.2	1338.5	1375.4
55°	96.4	397.3	1089.4	1252.2	1284.3
57.5°	89.5	332.2	1018.0	1156.9	1183.0
60°	86.2	296.8	962.2	1087.9	1114.0
62.5°	81.2	264.6	899.8	1015.7	1040.2
65°	75.9	224.4	802.2	899.0	915.0
67.5°	68.5	194.5	698.4	757.6	727.5
70°	63.6	179.9	627.8	646.3	560.1
72.5°	60.3	163.8	550.7	501.8	338.5
75°	53.3	137.6	426.7	229.9	233.9
77.5°	43.5	106.5	280.7	176.5	180.1
80°	36.9	87.1	147.7	143.7	145.7
82.5°	30.4	67.7	101.8	105.8	103.0
85°	18.5	40.5	51.3	34.8	30.8
87.5°	6.6	15.0	10.7	9.7	9.5
90°	0.0	2.0	12.6	7.3	6.3
92.5°	11.7	47.4	170.2	56.4	40.7
95°	34.6	109.4	526.1	194.3	122.6
97.5°	66.9	139.2	829.1	548.6	334.1
100°	87.0	157.7	926.4	895.6	601.5
102.5°	109.6	177.9	906.2	1256.1	1001.4
105°	146.7	206.1	827.9	1572.2	1494.3
107.5°	181.9	238.7	752.4	1603.5	1693.7
110°	205.4	259.7	714.7	1564.1	1728.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	228.0	280.7	692.1	1498.0	1705.4
115°	260.9	311.1	669.6	1385.6	1627.4
117.5°	293.6	341.2	661.7	1280.3	1527.9
120°	315.4	360.5	659.1	1218.9	1456.6
122.5°	335.5	378.2	659.1	1164.8	1384.5
125°	364.7	404.6	660.2	1094.2	1287.9
127.5°	388.4	429.8	659.1	1041.0	1206.2
130°	403.5	446.5	659.1	1010.5	1160.1
132.5°	416.9	460.7	658.3	982.5	1120.7
135°	437.0	483.1	656.0	943.7	1061.5
137.5°	459.4	503.3	656.0	902.2	1011.5
140°	473.7	516.7	656.0	875.3	978.8
142.5°	487.9	529.3	655.2	850.7	941.0
145°	510.3	548.3	656.0	811.8	887.6
147.5°	532.8	564.9	657.3	779.7	837.9
150°	547.0	576.7	658.1	761.9	811.1
152.5°	560.4	586.9	658.9	746.6	786.8
155°	581.6	601.1	660.2	727.9	755.6
157.5°	600.0	615.8	661.5	714.1	733.3
160°	610.9	624.3	662.3	705.6	719.9
162.5°	621.8	631.9	663.1	698.0	709.9
165°	636.1	643.3	663.3	688.7	696.9
167.5°	648.2	651.9	664.6	681.4	684.9
170°	655.0	657.0	665.4	678.0	679.1
172.5°	659.1	660.4	665.4	674.7	674.9
175°	665.4	665.4	666.5	671.7	669.6
177.5°	668.4	667.5	666.7	669.2	667.5
180°	667.5	667.5	667.5	667.5	667.5



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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	13.80	14.69	14.75	15.66	16.93	22.54	23.43	23.49	24.40	25.66
	3H	14.54	15.34	15.50	16.31	17.60	24.16	24.96	25.12	25.94	27.23
	4H	14.84	15.59	15.81	16.58	17.87	24.35	25.10	25.32	26.09	27.38
	6H	15.06	15.75	16.04	16.74	18.05	24.43	25.13	25.42	26.12	27.43
	8H	15.11	15.78	16.11	16.78	18.09	24.44	25.10	25.43	26.11	27.41
	12H	15.14	15.78	16.14	16.77	18.10	24.41	25.04	25.41	26.04	27.37
4H	2H	18.21	18.96	19.19	19.94	21.24	22.99	23.74	23.97	24.73	26.02
	3H	19.14	19.77	20.13	20.78	22.09	24.82	25.45	25.81	26.46	27.77
	4H	19.43	20.00	20.43	21.01	22.34	25.05	25.63	26.05	26.64	27.97
	6H	19.56	20.06	20.57	21.08	22.41	25.20	25.70	26.21	26.73	28.06
	8H	19.58	20.04	20.59	21.07	22.41	25.23	25.69	26.24	26.71	28.06
	12H	19.58	19.99	20.61	21.03	22.38	25.20	25.62	26.23	26.66	28.01
8H	4H	20.60	21.07	21.62	22.09	23.43	25.18	25.64	26.19	26.66	28.00
	6H	20.84	21.23	21.88	22.29	23.63	25.38	25.76	26.42	26.83	28.17
	8H	20.91	21.25	21.96	22.30	23.66	25.44	25.78	26.49	26.83	28.19
	12H	20.94	21.24	21.99	22.28	23.69	25.44	25.73	26.49	26.78	28.18
12H	4H	20.62	21.04	21.65	22.08	23.43	25.13	25.55	26.16	26.58	27.93
	6H	20.94	21.27	21.98	22.32	23.68	25.37	25.70	26.41	26.75	28.11
	8H	21.04	21.34	22.09	22.38	23.79	25.43	25.73	26.48	26.77	28.18