

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: P853673

Luminaire Tested: SQ2-F-050U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853673
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-050U-075D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

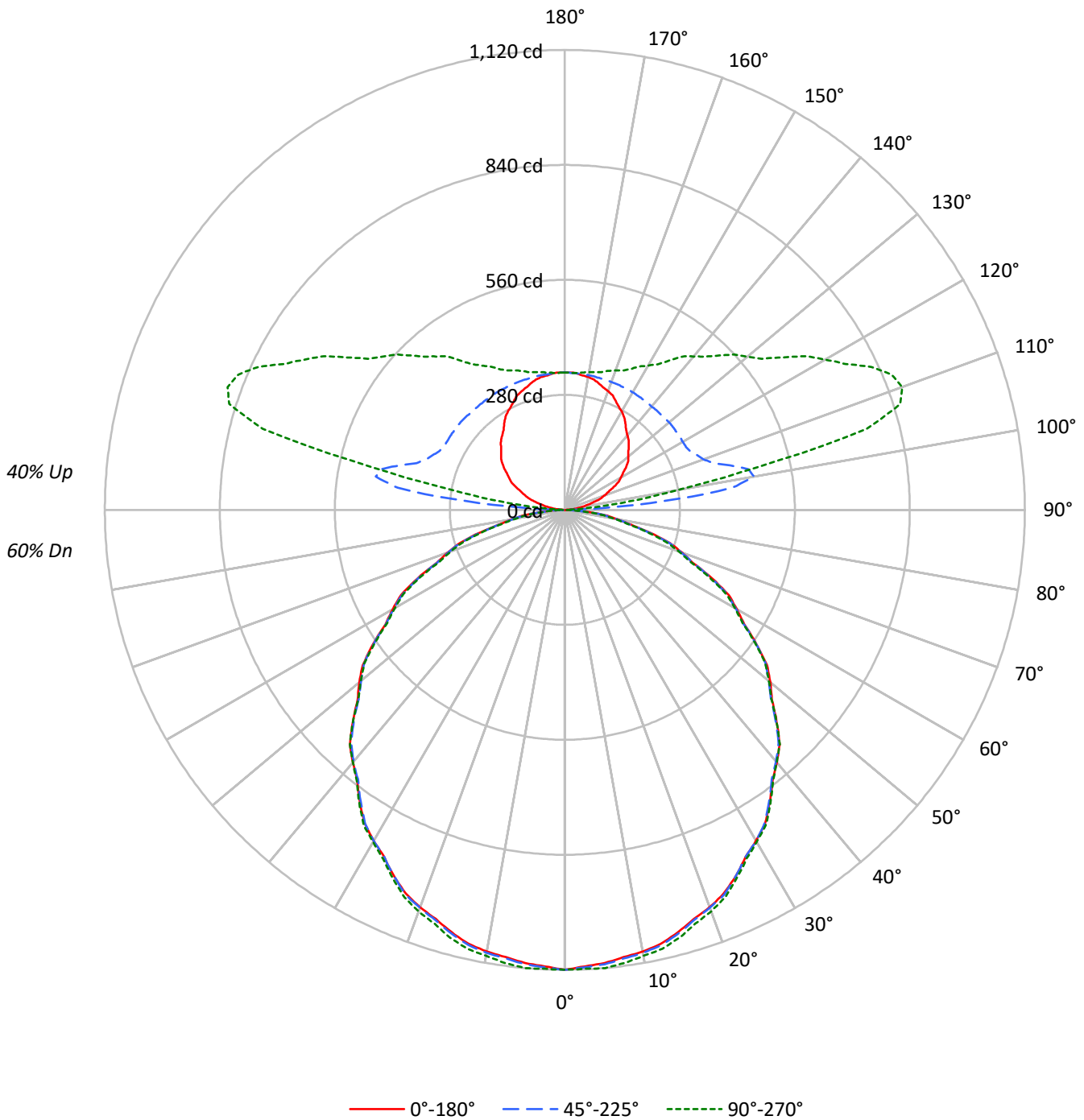
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5223.7 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.5
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

TEST NUMBER: P853673
CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853673

CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60																			
1	100	95	91	88	93	89	86	83	78	75	73	67	65	64	58	56	55	50																			
2	91	83	77	71	85	78	72	68	68	64	60	59	56	53	50	48	46	42																			
3	83	73	65	59	77	68	62	56	60	55	50	52	48	44	45	42	39	35																			
4	76	64	56	50	70	61	53	48	53	47	43	46	42	38	40	36	33	30																			
5	69	57	49	43	65	54	46	41	47	41	37	41	37	33	36	32	29	26																			
6	64	51	43	37	59	48	41	35	43	37	32	37	32	29	32	28	25	23																			
7	59	46	38	33	55	44	36	31	39	33	28	34	29	25	29	26	23	20																			
8	55	42	34	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18																			
9	51	39	31	26	48	36	29	25	32	27	22	29	24	20	25	21	18	16																			
10	48	35	28	23	45	33	27	22	30	24	20	26	22	18	23	19	17	15																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18083	18083	18083
5°	17955	18005	18152
10°	17911	17962	18087
15°	17804	17854	18033
20°	17698	17723	17881
25°	17533	17533	17642
30°	17353	17353	17411
35°	17144	17083	17203
40°	16916	16853	16916
45°	16655	16584	16655
50°	16405	16252	16289
55°	16023	15978	15893
60°	15619	15523	15423
65°	15156	14984	14808
70°	14261	14191	13903
75°	13425	13138	12757
80°	11920	11632	11204
85°	9615	8762	8207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 16758 cd/sqm



TEST NUMBER: P853673

CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.9	2.0
10°-20°	302.5	5.8
20°-30°	455.1	8.7
30°-40°	544.6	10.4
40°-50°	561.9	10.8
50°-60°	506.9	9.7
60°-70°	386.8	7.4
70°-80°	222.4	4.3
80°-90°	58.4	1.1
90°-100°	133.3	2.6
100°-110°	423.0	8.1
110°-120°	414.7	7.9
120°-130°	337.5	6.5
130°-140°	275.2	5.3
140°-150°	214.5	4.1
150°-160°	154.6	3.0
160°-170°	94.4	1.8
170°-180°	31.9	0.6
0°-30°	863.5	16.5
0°-40°	1408.1	27.0
0°-60°	2476.9	47.4
0°-90°	3144.5	60.2
90°-120°	971.1	18.6
90°-150°	1798.2	34.4
90°-180°	2079.0	39.8
0°-180°	5223.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1108	1123	1111	1113	1120	105
15°	1065	1078	1068	1073	1079	300
25°	984	995	984	986	990	453
35°	870	876	867	870	873	544
45°	729	734	726	728	729	563
55°	569	572	568	565	565	509
65°	397	395	392	389	388	390
75°	215	214	211	206	204	227
85°	52	49	47	43	44	60
90°	0	1	3	3	3	3
95°	18	54	242	90	58	21
105°	74	104	417	794	761	78
115°	132	156	337	700	823	130
125°	182	204	332	549	646	162
135°	220	242	330	472	532	170
145°	257	276	330	407	443	161
155°	293	303	331	364	378	135
165°	319	322	332	344	347	90
175°	334	333	334	336	335	32
180°	335	335	335	335	335	



TEST NUMBER: P853673

CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.0	1120.0	1120.0	1120.0	1120.0
2.5°	1112.7	1125.8	1115.1	1117.6	1118.8
5°	1107.8	1122.7	1110.9	1112.6	1120.0
7.5°	1098.6	1114.8	1101.7	1104.6	1113.0
10°	1092.5	1107.5	1095.6	1097.3	1103.2
12.5°	1082.8	1097.7	1085.8	1088.7	1094.7
15°	1065.1	1078.5	1068.1	1072.8	1078.8
17.5°	1044.6	1059.0	1047.4	1051.5	1056.5
20°	1030.0	1041.9	1031.5	1033.2	1040.7
22.5°	1011.7	1023.6	1014.4	1014.9	1021.1
25°	984.2	994.6	984.2	985.8	990.3
27.5°	952.8	961.7	952.8	954.4	958.3
30°	930.8	939.8	930.8	932.4	933.9
32.5°	906.4	914.1	905.2	906.8	910.7
35°	869.8	875.7	866.7	869.8	872.8
37.5°	830.7	835.2	827.6	829.2	831.9
40°	802.6	807.1	799.6	801.1	802.6
42.5°	774.5	777.8	770.3	771.9	774.5
45°	729.4	733.9	726.3	727.9	729.4
47.5°	683.6	686.3	679.9	678.8	681.5
50°	653.1	654.6	647.0	647.0	648.5
52.5°	620.1	621.6	616.5	614.1	615.5
55°	569.2	572.1	567.6	564.6	564.6
57.5°	517.9	520.6	514.8	513.3	513.0
60°	483.7	485.2	480.7	479.1	477.6
62.5°	449.5	449.8	445.3	443.7	442.2
65°	396.7	395.2	392.2	389.1	387.6
67.5°	337.5	339.0	336.0	331.1	331.1
70°	302.1	303.6	300.6	294.5	294.5
72.5°	267.9	267.1	265.2	260.3	257.9
75°	215.2	213.7	210.6	206.0	204.5
77.5°	162.4	160.9	159.3	153.5	154.7
80°	128.2	126.7	125.1	120.5	120.5
82.5°	97.7	95.0	93.4	88.8	88.8
85°	51.9	48.9	47.3	42.8	44.3
87.5°	14.6	13.7	12.8	10.4	10.4
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.4	74.8	24.9	17.5
95°	17.9	53.9	242.2	89.8	57.9
97.5°	33.3	69.9	410.2	256.3	157.3
100°	44.2	79.2	467.5	426.2	276.9
102.5°	56.0	89.4	457.4	625.8	479.0
105°	73.7	103.6	416.9	794.2	761.2
107.5°	91.4	119.0	378.4	811.7	856.2
110°	103.2	129.9	359.0	791.5	873.9



TEST NUMBER: P853673

CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.0	140.1	348.1	756.6	861.2
115°	131.6	156.3	336.9	699.8	823.3
117.5°	147.8	171.3	332.5	645.1	769.6
120°	157.9	180.6	331.6	611.3	731.7
122.5°	168.0	189.9	331.6	584.1	696.4
125°	182.1	203.8	331.6	548.7	646.4
127.5°	194.6	215.4	331.6	521.2	604.5
130°	202.1	223.8	331.6	505.0	580.1
132.5°	209.7	231.3	330.8	492.2	559.9
135°	220.0	241.7	329.5	472.0	531.7
137.5°	230.2	252.8	329.3	452.7	506.0
140°	236.9	259.5	328.5	439.1	487.5
142.5°	245.3	267.1	329.3	425.5	470.6
145°	256.9	276.5	329.5	407.2	443.2
147.5°	268.5	285.2	329.8	391.1	420.5
150°	276.9	290.3	330.6	381.7	405.3
152.5°	283.6	295.4	330.6	374.0	393.6
155°	292.7	303.0	330.6	363.6	378.0
157.5°	302.4	309.4	331.6	357.1	367.0
160°	307.4	313.6	331.6	352.9	361.1
162.5°	312.5	317.0	331.6	349.5	355.2
165°	319.0	322.1	331.6	344.4	347.4
167.5°	325.1	325.9	332.7	340.8	343.4
170°	328.5	328.5	332.7	339.0	340.1
172.5°	330.2	331.0	332.7	337.3	337.5
175°	333.8	332.7	333.8	335.8	334.8
177.5°	334.8	334.0	334.0	335.6	334.0
180°	334.8	334.8	334.8	334.8	334.8



TEST NUMBER: P853673

CATALOG NUMBER: SQ2-F-050U-075D-940-UNV-STD-W-4

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	18.91	19.89	19.77	20.77	21.89	18.83	19.81	19.70	20.70	21.81
	3H	20.70	21.58	21.58	22.47	23.62	20.58	21.46	21.46	22.35	23.50
	4H	21.37	22.19	22.26	23.10	24.25	21.21	22.04	22.10	22.94	24.10
	6H	21.84	22.61	22.74	23.51	24.68	21.66	22.42	22.56	23.33	24.49
	8H	21.98	22.71	22.89	23.64	24.80	21.78	22.51	22.69	23.43	24.60
	12H	22.06	22.75	22.98	23.67	24.86	21.84	22.53	22.75	23.45	24.64
4H	2H	19.48	20.31	20.37	21.21	22.36	19.42	20.24	20.31	21.15	22.30
	3H	21.48	22.17	22.38	23.10	24.27	21.37	22.06	22.27	22.99	24.16
	4H	22.27	22.90	23.19	23.83	25.02	22.13	22.76	23.04	23.69	24.88
	6H	22.87	23.41	23.80	24.36	25.56	22.69	23.23	23.62	24.18	25.38
	8H	23.06	23.57	23.99	24.51	25.72	22.86	23.37	23.79	24.31	25.52
	12H	23.16	23.63	24.12	24.59	25.80	22.94	23.40	23.89	24.36	25.57
8H	4H	22.53	23.04	23.46	23.98	25.19	22.40	22.91	23.33	23.86	25.06
	6H	23.25	23.67	24.21	24.66	25.87	23.08	23.51	24.04	24.49	25.70
	8H	23.52	23.89	24.49	24.87	26.09	23.32	23.70	24.29	24.68	25.90
	12H	23.69	24.02	24.67	24.99	26.26	23.46	23.79	24.44	24.76	26.04
12H	4H	22.53	22.99	23.48	23.95	25.16	22.41	22.87	23.36	23.83	25.04
	6H	23.29	23.67	24.26	24.65	25.87	23.13	23.51	24.10	24.49	25.71
	8H	23.59	23.92	24.57	24.89	26.17	23.41	23.73	24.38	24.71	25.98