

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: P855057

Luminaire Tested: SQ2-F-150U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

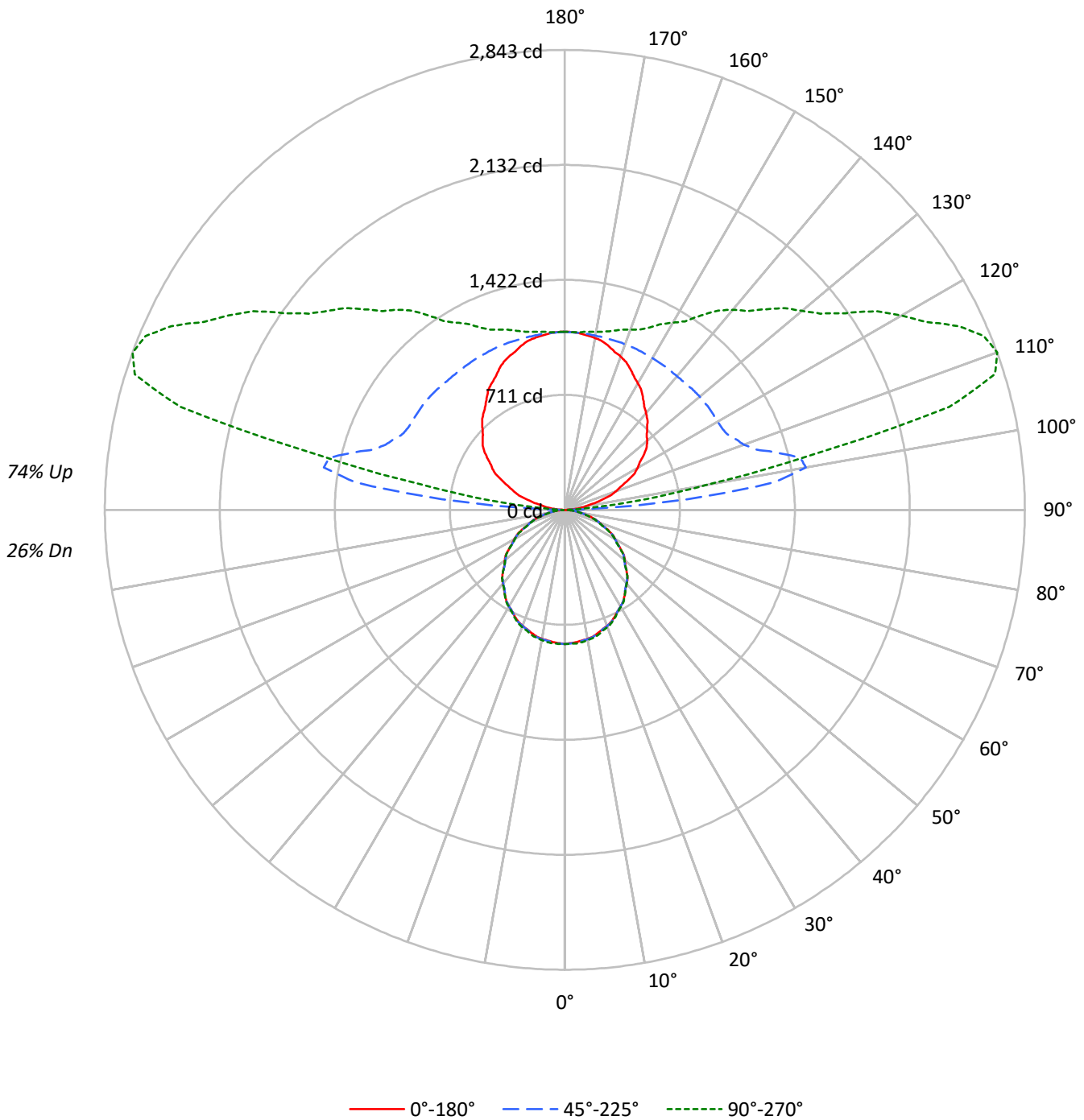
Test Method: LM-79-2019  
Report Number: P855057  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-F-150U-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9120.4 lumens  
Efficiency: N/A  
Efficacy: 122.6 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-Indirect  
  
Input Watts (W): 74.4  
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: P855057  
CATALOG NUMBER: SQ2-F-150U-050D-830-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P855057

CATALOG NUMBER: SQ2-F-150U-050D-830-UNV-STD-W-4

**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	0
RCR																		
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	88	84	81	82	79	75	73	61	59	57	45	43	42	30	29	28	21
2	84	77	71	66	74	69	64	59	53	50	47	39	37	35	26	25	24	18
3	76	67	60	55	68	60	54	49	47	43	39	34	32	29	23	21	20	15
4	70	59	52	46	62	53	47	42	41	37	33	31	28	25	20	19	17	13
5	64	53	45	39	57	47	41	36	37	32	28	27	24	22	18	16	15	11
6	59	47	39	34	52	42	36	31	33	28	25	25	21	19	17	15	13	10
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	9
8	50	38	31	26	44	34	28	23	27	22	19	20	17	15	14	12	10	8
9	46	35	28	23	41	31	25	21	25	20	17	19	15	13	13	11	9	7
10	43	32	25	20	39	29	22	18	23	18	15	17	14	12	12	10	8	6

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13399	13399	13399
5°	13303	13340	13451
10°	13272	13309	13403
15°	13192	13230	13362
20°	13113	13132	13249
25°	12992	12992	13073
30°	12858	12858	12901
35°	12703	12658	12747
40°	12534	12488	12534
45°	12339	12289	12339
50°	12155	12042	12069
55°	11871	11840	11775
60°	11573	11502	11428
65°	11232	11102	10972
70°	10570	10513	10301
75°	9944	9732	9451
80°	8833	8619	8303
85°	7114	6484	6076

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 12415 cd/sqm



TEST NUMBER: P855057

CATALOG NUMBER: SQ2-F-150U-050D-830-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.4	0.9
10°-20°	224.2	2.5
20°-30°	337.2	3.7
30°-40°	403.5	4.4
40°-50°	416.3	4.6
50°-60°	375.6	4.1
60°-70°	286.6	3.1
70°-80°	164.8	1.8
80°-90°	44.2	0.5
90°-100°	419.2	4.6
100°-110°	1372.5	15.0
110°-120°	1356.9	14.9
120°-130°	1109.2	12.2
130°-140°	905.1	9.9
140°-150°	704.4	7.7
150°-160°	507.2	5.6
160°-170°	310.3	3.4
170°-180°	104.8	1.1
0°-30°	639.8	7.0
0°-40°	1043.4	11.4
0°-60°	1835.3	20.1
0°-90°	2330.9	25.6
90°-120°	3148.5	34.5
90°-150°	5867.2	64.3
90°-180°	6790.0	74.4
0°-180°	9120.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	830	830	830	830	830	
5°	821	832	823	824	830	78
15°	789	799	792	795	799	223
25°	729	737	729	730	734	336
35°	644	649	642	644	647	403
45°	540	544	538	539	540	417
55°	422	424	421	418	418	377
65°	294	293	291	288	287	289
75°	159	158	156	153	152	168
85°	38	36	35	32	33	45
90°	1	3	9	8	9	4
95°	59	170	762	272	176	67
105°	239	340	1362	2588	2459	251
115°	430	514	1107	2287	2685	424
125°	598	667	1091	1804	2119	532
135°	720	796	1082	1556	1754	557
145°	842	904	1080	1338	1466	528
155°	960	992	1086	1197	1244	442
165°	1048	1058	1091	1133	1145	295
175°	1096	1096	1097	1104	1102	104
180°	1100	1100	1100	1100	1100	

TEST NUMBER: P855057

CATALOG NUMBER: SQ2-F-150U-050D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	829.9	829.9	829.9	829.9	829.9
2.5°	824.5	834.2	826.3	828.1	829.0
5°	820.8	831.9	823.1	824.4	829.9
7.5°	814.1	826.0	816.3	818.5	824.7
10°	809.5	820.6	811.8	813.0	817.5
12.5°	802.3	813.4	804.6	806.7	811.1
15°	789.2	799.1	791.5	795.0	799.4
17.5°	774.0	784.7	776.1	779.1	782.9
20°	763.2	772.0	764.3	765.6	771.1
22.5°	749.6	758.4	751.7	752.0	756.6
25°	729.3	737.0	729.3	730.5	733.8
27.5°	706.0	712.6	706.0	707.2	710.0
30°	689.7	696.4	689.7	690.8	692.0
32.5°	671.6	677.4	670.7	671.9	674.8
35°	644.5	648.9	642.2	644.5	646.7
37.5°	615.5	618.8	613.3	614.4	616.4
40°	594.7	598.0	592.5	593.6	594.7
42.5°	573.9	576.4	570.7	571.9	573.9
45°	540.4	543.7	538.2	539.3	540.4
47.5°	506.5	508.6	503.8	502.9	504.9
50°	483.9	485.0	479.4	479.4	480.5
52.5°	459.5	460.6	456.8	455.0	456.1
55°	421.7	424.0	420.6	418.3	418.3
57.5°	383.7	385.8	381.5	380.3	380.1
60°	358.4	359.5	356.2	355.0	353.9
62.5°	333.1	333.3	329.9	328.8	327.7
65°	294.0	292.8	290.6	288.3	287.2
67.5°	250.1	251.2	249.0	245.3	245.3
70°	223.9	225.0	222.7	218.2	218.2
72.5°	198.5	197.9	196.5	192.9	191.1
75°	159.4	158.3	156.0	152.6	151.5
77.5°	120.3	119.2	118.0	113.7	114.6
80°	95.0	93.8	92.7	89.3	89.3
82.5°	72.4	70.3	69.2	65.8	65.8
85°	38.4	36.2	35.0	31.7	32.8
87.5°	11.1	10.6	10.9	8.8	9.0
90°	1.1	3.4	9.0	7.9	9.0
92.5°	19.2	70.1	215.3	70.0	56.1
95°	58.8	170.4	762.1	271.5	176.4
97.5°	106.7	224.8	1307.4	790.9	490.2
100°	140.2	252.9	1512.7	1350.9	895.4
102.5°	178.2	288.3	1490.1	1990.5	1543.0
105°	238.6	340.2	1362.3	2588.3	2458.9
107.5°	298.0	391.3	1237.7	2644.2	2786.4
110°	336.9	427.6	1178.0	2579.1	2843.3



TEST NUMBER: P855057

CATALOG NUMBER: SQ2-F-150U-050D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	374.0	462.0	1141.8	2465.9	2804.4
115°	429.6	513.7	1106.8	2287.2	2685.1
117.5°	483.7	562.2	1093.4	2111.4	2515.5
120°	519.0	593.0	1089.8	2008.9	2402.4
122.5°	550.6	622.9	1089.8	1920.5	2285.8
125°	598.1	666.6	1091.0	1803.6	2118.7
127.5°	638.4	708.1	1089.6	1717.4	1991.6
130°	663.7	734.4	1088.7	1665.3	1912.9
132.5°	686.3	758.8	1086.0	1620.4	1845.1
135°	720.2	796.4	1081.9	1555.7	1753.5
137.5°	755.9	831.5	1079.4	1488.0	1666.9
140°	781.2	854.2	1078.5	1445.3	1614.4
142.5°	806.5	875.1	1078.5	1399.7	1552.9
145°	842.2	904.2	1079.7	1338.1	1466.3
147.5°	879.8	931.3	1081.2	1284.5	1381.3
150°	903.3	948.6	1083.0	1253.4	1335.2
152.5°	926.8	966.8	1083.9	1227.8	1295.4
155°	959.8	991.9	1086.4	1197.2	1243.6
157.5°	989.4	1012.7	1088.9	1173.2	1206.7
160°	1008.4	1027.3	1089.8	1159.5	1185.9
162.5°	1024.7	1040.0	1089.8	1148.4	1167.8
165°	1048.0	1057.9	1091.0	1133.1	1145.2
167.5°	1067.7	1072.5	1092.3	1121.3	1127.8
170°	1078.5	1080.8	1093.2	1114.8	1117.0
172.5°	1086.7	1088.0	1095.9	1110.2	1110.6
175°	1095.5	1095.5	1096.6	1104.5	1102.3
177.5°	1100.0	1099.1	1098.2	1103.6	1100.0
180°	1100.0	1100.0	1100.0	1100.0	1100.0



TEST NUMBER: P855057

CATALOG NUMBER: SQ2-F-150U-050D-830-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	14.13	14.82	15.27	15.95	17.53	14.05	14.74	15.20	15.87	17.45
	3H	15.90	16.51	17.05	17.65	19.25	15.78	16.39	16.93	17.53	19.13
	4H	16.55	17.13	17.71	18.27	19.87	16.40	16.98	17.56	18.12	19.72
	6H	17.01	17.54	18.18	18.69	20.30	16.82	17.36	17.99	18.50	20.11
	8H	17.14	17.65	18.31	18.81	20.41	16.94	17.45	18.11	18.61	20.21
	12H	17.21	17.69	18.38	18.84	20.47	16.99	17.47	18.16	18.62	20.25
4H	2H	14.66	15.24	15.83	16.38	17.99	14.60	15.18	15.77	16.32	17.92
	3H	16.63	17.12	17.80	18.28	19.90	16.52	17.01	17.69	18.18	19.79
	4H	17.42	17.86	18.59	19.02	20.65	17.27	17.72	18.44	18.87	20.50
	6H	17.99	18.38	19.17	19.55	21.18	17.81	18.20	18.99	19.37	21.00
	8H	18.18	18.53	19.35	19.70	21.34	17.98	18.33	19.15	19.50	21.14
	12H	18.27	18.59	19.46	19.77	21.42	18.04	18.37	19.24	19.55	21.19
8H	4H	17.65	18.00	18.82	19.17	20.81	17.52	17.88	18.70	19.05	20.69
	6H	18.36	18.65	19.55	19.86	21.50	18.19	18.48	19.39	19.70	21.33
	8H	18.62	18.88	19.82	20.07	21.72	18.43	18.69	19.63	19.87	21.53
	12H	18.78	19.01	19.99	20.19	21.88	18.55	18.78	19.76	19.96	21.65
12H	4H	17.63	17.96	18.82	19.13	20.78	17.51	17.83	18.70	19.01	20.66
	6H	18.40	18.65	19.60	19.84	21.50	18.24	18.50	19.44	19.68	21.34
	8H	18.68	18.91	19.89	20.09	21.78	18.50	18.72	19.70	19.91	21.59