

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: P855301

Luminaire Tested: SQ2-PR1-150U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855301  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PR1-150U-050D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

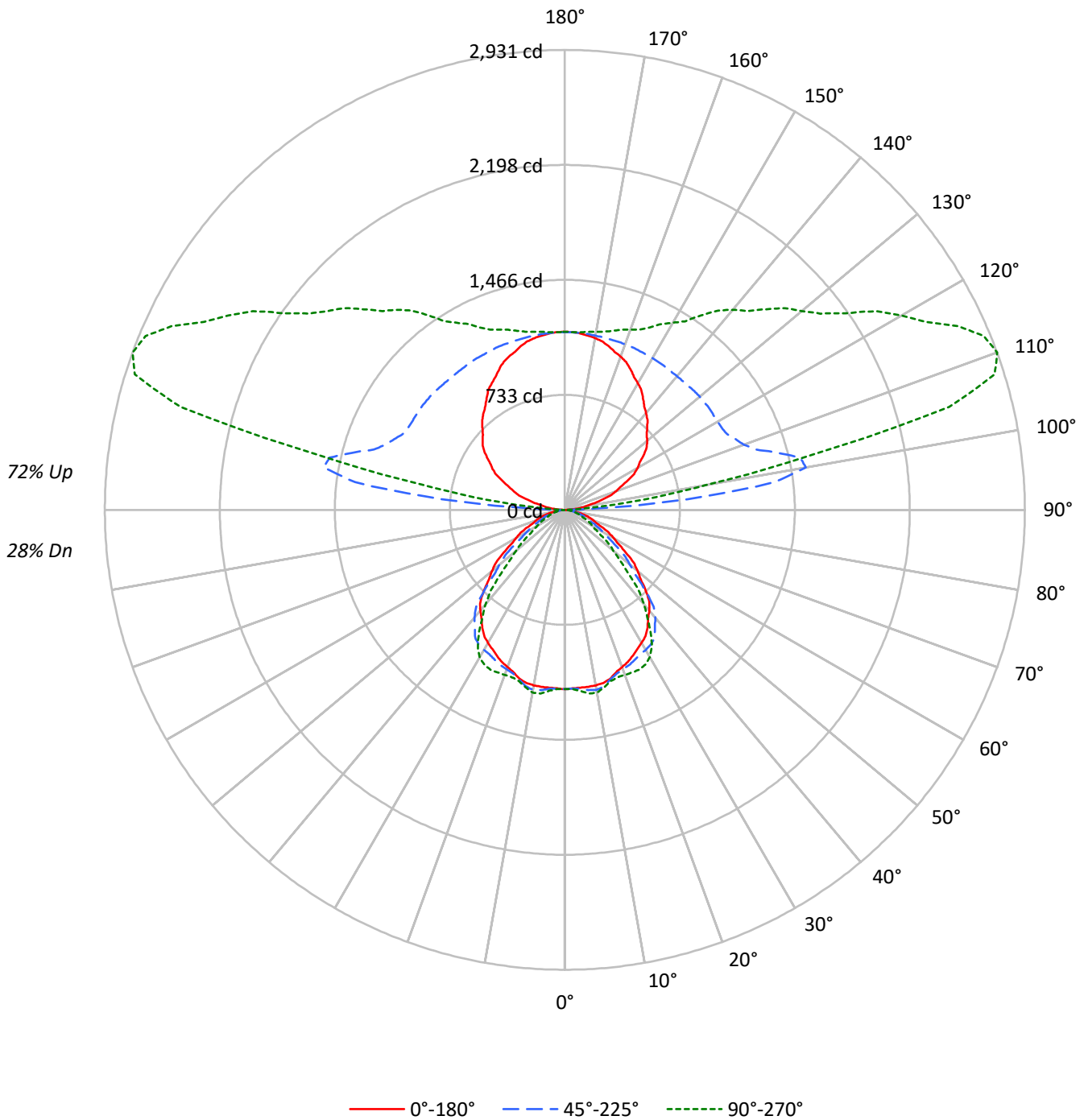
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9749.8 lumens  
Efficiency: N/A  
Efficacy: 131.0 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.34 / 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: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	93	89	86	82	83	80	77	74	63	61	59	47	46	45	32	32	31	24
2	85	78	73	68	76	70	66	61	55	52	49	42	40	38	29	28	27	21
3	78	69	62	57	69	62	56	52	49	45	42	37	34	32	26	24	23	18
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	22	20	16
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14
6	60	49	41	36	54	44	38	33	35	30	27	27	24	21	19	17	16	12
7	56	44	36	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11
8	51	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	22	40	30	24	20	24	20	17	19	16	13	14	12	10	8

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

	0°	45°	90°
0°	18460	18460	18460
5°	18434	18548	18775
10°	18630	19107	19394
15°	18623	18721	18877
20°	18321	18603	19223
25°	18271	18789	20013
30°	18250	19207	20206
35°	18078	19618	18814
40°	17660	18889	16556
45°	16712	16577	13093
50°	15192	13554	10158
55°	13351	11153	7907
60°	11554	8919	6510
65°	9971	7393	5700
70°	8969	6548	5061
75°	8216	5671	4654
80°	7150	4547	4547
85°	5187	4094	2167

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18066 cd/sqm



TEST NUMBER: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	1.1
10°-20°	319.6	3.3
20°-30°	494.0	5.1
30°-40°	594.2	6.1
40°-50°	533.5	5.5
50°-60°	357.4	3.7
60°-70°	207.9	2.1
70°-80°	106.8	1.1
80°-90°	27.6	0.3
90°-100°	432.0	4.4
100°-110°	1414.7	14.5
110°-120°	1398.6	14.3
120°-130°	1143.3	11.7
130°-140°	933.0	9.6
140°-150°	726.1	7.4
150°-160°	522.8	5.4
160°-170°	319.8	3.3
170°-180°	108.1	1.1
0°-30°	924.0	9.5
0°-40°	1518.3	15.6
0°-60°	2409.2	24.7
0°-90°	2751.5	28.2
90°-120°	3245.3	33.3
90°-150°	6047.6	62.0
90°-180°	6998.0	71.8
0°-180°	9749.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1137	1157	1144	1147	1158	109
15°	1114	1160	1120	1124	1129	313
25°	1026	1067	1055	1094	1123	473
35°	917	925	995	976	954	572
45°	732	791	726	612	573	560
55°	474	492	396	306	281	426
65°	261	267	194	157	149	264
75°	132	128	91	77	75	140
85°	28	22	22	15	12	35
90°	1	4	9	8	9	4
95°	61	176	786	280	182	69
105°	246	351	1404	2668	2534	259
115°	443	529	1141	2358	2768	437
125°	616	687	1124	1859	2184	548
135°	742	821	1115	1604	1807	574
145°	868	932	1113	1379	1511	544
155°	989	1022	1120	1234	1282	455
165°	1080	1090	1124	1168	1180	304
175°	1129	1129	1130	1138	1136	107
180°	1134	1134	1134	1134	1134	



TEST NUMBER: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1138.6	1152.2	1139.5	1140.6	1143.3
5°	1137.4	1156.8	1144.4	1147.0	1158.4
7.5°	1137.2	1164.8	1158.9	1166.0	1181.0
10°	1136.3	1169.4	1165.4	1166.9	1182.9
12.5°	1130.7	1169.2	1151.4	1150.0	1158.6
15°	1114.1	1159.7	1120.0	1123.6	1129.3
17.5°	1085.0	1132.7	1094.8	1107.6	1118.8
20°	1066.3	1113.1	1082.7	1099.4	1118.8
22.5°	1049.6	1096.3	1071.5	1094.9	1121.6
25°	1025.6	1066.6	1054.7	1093.8	1123.4
27.5°	1000.4	1024.5	1038.6	1091.0	1111.8
30°	978.9	994.9	1030.2	1075.9	1083.8
32.5°	955.6	965.2	1019.0	1042.8	1032.5
35°	917.2	925.2	995.3	976.1	954.5
37.5°	871.5	887.9	941.9	886.8	861.9
40°	837.9	865.3	896.2	814.0	785.5
42.5°	796.9	840.7	835.6	730.8	696.0
45°	731.9	791.2	726.0	612.1	573.4
47.5°	655.2	716.0	609.5	507.8	471.5
50°	604.8	653.8	539.6	444.3	404.4
52.5°	553.6	588.9	479.9	384.7	348.5
55°	474.3	492.5	396.2	305.9	280.9
57.5°	401.6	413.3	323.7	247.1	228.7
60°	357.8	365.7	276.2	216.4	201.6
62.5°	317.7	323.9	238.0	190.4	179.2
65°	261.0	266.8	193.5	157.1	149.2
67.5°	216.1	219.0	159.2	130.6	123.1
70°	190.0	191.1	138.7	112.9	107.2
72.5°	166.7	165.0	119.1	98.0	94.2
75°	131.7	128.3	90.9	76.9	74.6
77.5°	98.4	94.7	63.9	59.2	59.2
80°	76.9	72.4	48.9	48.9	48.9
82.5°	57.3	50.9	37.8	37.8	36.8
85°	28.0	22.3	22.1	15.0	11.7
87.5°	7.7	8.2	4.7	4.4	4.7
90°	1.2	3.5	9.3	8.2	9.3
92.5°	19.8	72.3	221.9	72.1	57.8
95°	60.6	175.6	785.5	279.8	181.8
97.5°	110.0	231.7	1347.6	815.2	505.3
100°	144.5	260.7	1559.2	1392.4	922.9
102.5°	183.7	297.2	1535.9	2051.7	1590.4
105°	245.9	350.7	1404.2	2667.8	2534.5
107.5°	307.2	403.3	1275.8	2725.5	2872.0
110°	347.3	440.8	1214.2	2658.4	2930.8



TEST NUMBER: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	385.5	476.2	1176.9	2541.7	2890.7
115°	442.9	529.4	1140.8	2357.5	2767.6
117.5°	498.6	579.4	1127.1	2176.3	2592.8
120°	534.9	611.3	1123.3	2070.7	2476.2
122.5°	567.6	642.0	1123.3	1979.6	2356.1
125°	616.5	687.1	1124.5	1859.0	2183.8
127.5°	658.0	729.9	1123.1	1770.2	2052.9
130°	684.1	756.9	1122.2	1716.5	1971.7
132.5°	707.4	782.1	1119.4	1670.3	1901.8
135°	742.4	820.9	1115.2	1603.5	1807.4
137.5°	779.2	857.0	1112.6	1533.8	1718.2
140°	805.2	880.5	1111.7	1489.7	1664.1
142.5°	831.3	902.0	1111.7	1442.8	1600.7
145°	868.1	932.0	1112.8	1379.3	1511.4
147.5°	906.8	959.9	1114.5	1324.0	1423.8
150°	931.0	977.8	1116.3	1292.0	1376.2
152.5°	955.3	996.5	1117.3	1265.5	1335.2
155°	989.3	1022.4	1119.8	1234.0	1281.8
157.5°	1019.8	1043.8	1122.4	1209.2	1243.8
160°	1039.4	1058.9	1123.3	1195.1	1222.4
162.5°	1056.2	1071.9	1123.3	1183.7	1203.7
165°	1080.2	1090.5	1124.5	1168.0	1180.4
167.5°	1100.5	1105.5	1125.9	1155.7	1162.5
170°	1111.7	1114.0	1126.8	1149.1	1151.3
172.5°	1120.1	1121.5	1129.6	1144.3	1144.8
175°	1129.2	1129.2	1130.3	1138.5	1136.1
177.5°	1133.8	1132.9	1132.0	1137.5	1133.8
180°	1133.8	1133.8	1133.8	1133.8	1133.8

-----



TEST NUMBER: P855301

CATALOG NUMBER: SQ2-PR1-150U-050D-840-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	14.42	15.10	15.55	16.22	17.77	11.15	11.82	12.28	12.94	14.50
	3H	15.64	16.24	16.78	17.37	18.94	12.20	12.80	13.34	13.93	15.50
	4H	16.09	16.66	17.23	17.78	19.36	12.59	13.16	13.74	14.29	15.86
	6H	16.39	16.92	17.55	18.05	19.63	12.91	13.44	14.07	14.57	16.15
	8H	16.47	16.97	17.63	18.11	19.69	12.99	13.49	14.15	14.64	16.22
	12H	16.49	16.97	17.66	18.11	19.71	13.00	13.47	14.16	14.61	16.21
4H	2H	14.48	15.05	15.63	16.18	17.75	11.69	12.27	12.85	13.39	14.97
	3H	15.93	16.41	17.09	17.56	19.15	12.94	13.42	14.10	14.57	16.16
	4H	16.52	16.96	17.68	18.10	19.71	13.44	13.88	14.60	15.02	16.63
	6H	16.96	17.34	18.13	18.50	20.10	13.87	14.24	15.04	15.40	17.00
	8H	17.09	17.44	18.26	18.60	20.21	13.99	14.34	15.15	15.49	17.10
	12H	17.14	17.45	18.32	18.62	20.24	14.00	14.32	15.18	15.48	17.10
8H	4H	16.53	16.88	17.70	18.04	19.65	13.74	14.08	14.90	15.24	16.85
	6H	17.08	17.36	18.26	18.56	20.17	14.26	14.55	15.45	15.75	17.36
	8H	17.28	17.52	18.47	18.70	20.33	14.45	14.70	15.64	15.87	17.50
	12H	17.37	17.59	18.57	18.77	20.43	14.50	14.72	15.70	15.90	17.56
12H	4H	16.48	16.80	17.67	17.97	19.58	13.74	14.06	14.93	15.23	16.84
	6H	17.06	17.31	18.25	18.49	20.12	14.32	14.57	15.51	15.75	17.38
	8H	17.27	17.49	18.46	18.66	20.32	14.52	14.74	15.72	15.92	17.58