

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: P855357

Luminaire Tested: SQ2-PH1-150U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

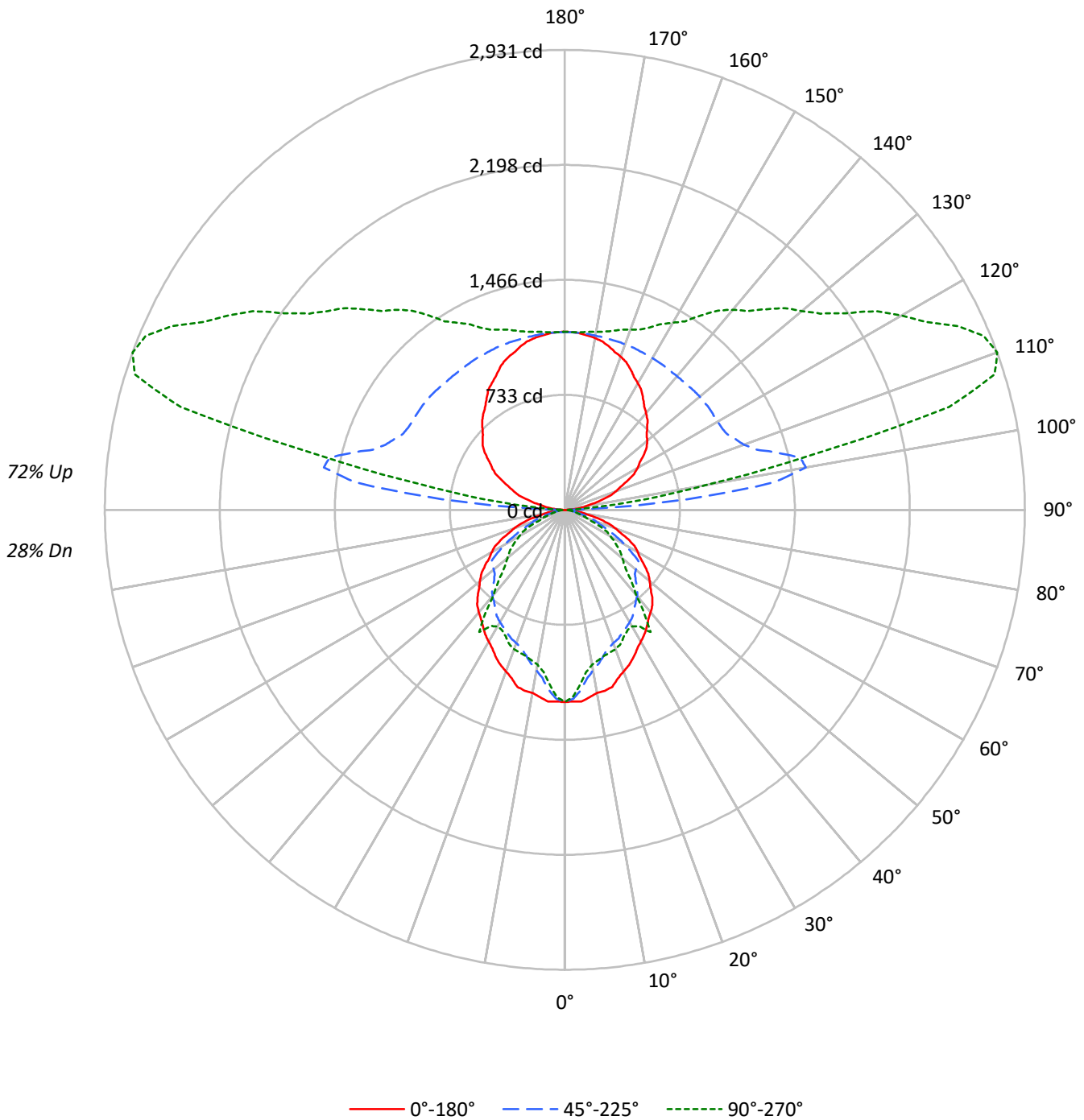
Test Method: LM-79-2019  
Report Number: P855357  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-150U-050D-840-UNV-STD-W-4  
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: 9708.8 lumens  
Efficiency: N/A  
Efficacy: 130.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23  
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

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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	0
RCR																		
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	93	89	85	82	83	80	77	74	62	60	58	46	45	44	32	31	30	24
2	85	78	72	67	76	70	65	61	55	51	48	41	39	37	28	27	26	20
3	77	68	61	56	69	61	55	51	48	44	41	36	33	31	25	23	22	17
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	22	20	19	15
5	65	54	46	40	58	48	42	37	38	33	30	29	26	23	20	18	16	13
6	59	48	40	35	53	43	36	32	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	14	13	10
8	51	39	32	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	22	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

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

	0°	45°	90°
0°	19775	19775	19775
5°	19890	18699	18076
10°	19431	17024	16431
15°	19519	16013	16110
20°	18823	15519	16239
25°	18478	15447	15862
30°	18077	15405	15991
35°	17940	15230	18745
40°	17955	15131	14861
45°	17961	14556	12801
50°	17711	14843	12002
55°	17486	16107	11516
60°	17312	14111	10802
65°	17009	11442	9394
70°	16065	9739	6713
75°	14323	7342	5090
80°	11706	4770	4770
85°	7336	4316	3242

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17961 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.8	1.1
10°-20°	283.5	2.9
20°-30°	415.7	4.3
30°-40°	503.4	5.2
40°-50°	495.0	5.1
50°-60°	430.9	4.4
60°-70°	299.6	3.1
70°-80°	142.0	1.5
80°-90°	32.6	0.3
90°-100°	432.0	4.4
100°-110°	1414.7	14.6
110°-120°	1398.6	14.4
120°-130°	1143.3	11.8
130°-140°	933.0	9.6
140°-150°	726.1	7.5
150°-160°	522.8	5.4
160°-170°	319.8	3.3
170°-180°	108.1	1.1
0°-30°	806.9	8.3
0°-40°	1310.3	13.5
0°-60°	2236.3	23.0
0°-90°	2710.5	27.9
90°-120°	3245.3	33.4
90°-150°	6047.6	62.3
90°-180°	6998.0	72.1
0°-180°	9708.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1225	1225	1225	1225	1225	
5°	1227	1226	1154	1118	1115	115
15°	1168	1040	958	951	964	326
25°	1037	882	867	894	890	477
35°	910	736	773	839	951	570
45°	787	583	638	660	561	605
55°	621	454	572	412	409	555
65°	445	312	300	246	246	437
75°	230	159	118	84	82	243
85°	40	26	23	19	18	53
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1224.8	1224.8	1224.8	1224.8	1224.8
2.5°	1222.0	1234.9	1206.2	1195.0	1193.1
5°	1227.2	1226.0	1153.7	1117.6	1115.3
7.5°	1204.8	1169.5	1083.1	1043.3	1041.4
10°	1185.2	1131.7	1038.4	1002.2	1002.2
12.5°	1180.6	1096.1	1002.0	975.3	980.8
15°	1167.7	1040.1	958.0	951.3	963.8
17.5°	1125.3	987.9	923.7	939.0	953.5
20°	1095.5	959.9	903.2	931.5	945.1
22.5°	1070.3	932.9	888.3	919.2	926.5
25°	1037.2	882.2	867.1	893.7	890.4
27.5°	997.6	835.8	845.8	862.2	864.3
30°	969.6	807.9	826.3	842.9	857.7
32.5°	942.6	775.3	804.8	844.3	878.2
35°	910.2	735.8	772.7	839.3	951.0
37.5°	876.1	689.2	740.3	796.3	831.9
40°	851.9	655.9	717.9	787.1	705.1
42.5°	825.8	629.8	684.3	773.7	635.1
45°	786.6	582.7	637.5	659.7	560.6
47.5°	740.5	546.1	605.8	550.1	511.4
50°	705.1	521.6	590.9	502.9	477.8
52.5°	670.6	496.2	580.6	463.9	447.0
55°	621.2	453.7	572.2	412.4	409.1
57.5°	568.7	410.3	506.0	367.7	373.6
60°	536.1	382.3	437.0	341.3	334.5
62.5°	501.6	355.1	372.7	307.8	300.9
65°	445.2	311.9	299.5	245.9	245.9
67.5°	383.2	267.0	242.6	201.3	173.9
70°	340.3	237.7	206.3	160.4	142.2
72.5°	294.6	206.6	169.0	131.5	110.5
75°	229.6	159.0	117.7	83.9	81.6
77.5°	166.0	114.4	79.2	62.2	62.5
80°	125.9	87.2	51.3	50.1	51.3
82.5°	88.6	59.9	38.2	39.9	40.1
85°	39.6	26.0	23.3	18.6	17.5
87.5°	8.6	8.2	6.5	6.3	6.5
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



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**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



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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	15.19	15.88	16.32	17.00	18.55	13.86	14.55	14.99	15.67	17.22
	3H	17.20	17.82	18.34	18.94	20.51	14.88	15.50	16.02	16.62	18.20
	4H	17.92	18.51	19.07	19.64	21.21	15.09	15.67	16.23	16.80	18.38
	6H	18.40	18.94	19.55	20.07	21.66	15.22	15.76	16.38	16.89	18.48
	8H	18.52	19.03	19.67	20.18	21.76	15.25	15.76	16.41	16.91	18.49
	12H	18.56	19.04	19.72	20.18	21.79	15.24	15.73	16.40	16.87	18.47
4H	2H	15.54	16.13	16.69	17.25	18.83	14.48	15.07	15.63	16.19	17.77
	3H	17.63	18.12	18.79	19.27	20.86	15.64	16.13	16.80	17.28	18.87
	4H	18.44	18.89	19.60	20.03	21.64	15.91	16.36	17.07	17.50	19.11
	6H	19.01	19.40	20.18	20.56	22.16	16.11	16.49	17.28	17.66	19.26
	8H	19.18	19.54	20.35	20.69	22.31	16.16	16.52	17.33	17.68	19.29
	12H	19.24	19.56	20.42	20.73	22.35	16.16	16.49	17.34	17.65	19.27
8H	4H	18.44	18.80	19.61	19.96	21.57	16.11	16.47	17.28	17.63	19.24
	6H	19.09	19.38	20.27	20.58	22.19	16.38	16.67	17.56	17.87	19.48
	8H	19.31	19.57	20.50	20.75	22.38	16.48	16.74	17.67	17.91	19.55
	12H	19.42	19.64	20.61	20.82	22.48	16.52	16.74	17.71	17.92	19.58
12H	4H	18.39	18.71	19.57	19.88	21.50	16.10	16.43	17.28	17.59	19.21
	6H	19.06	19.32	20.25	20.49	22.13	16.41	16.66	17.60	17.84	19.47
	8H	19.29	19.51	20.48	20.69	22.35	16.52	16.74	17.71	17.92	19.58