

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: P854887

Luminaire Tested: SQ2-PR1-150U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854887  
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-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: -

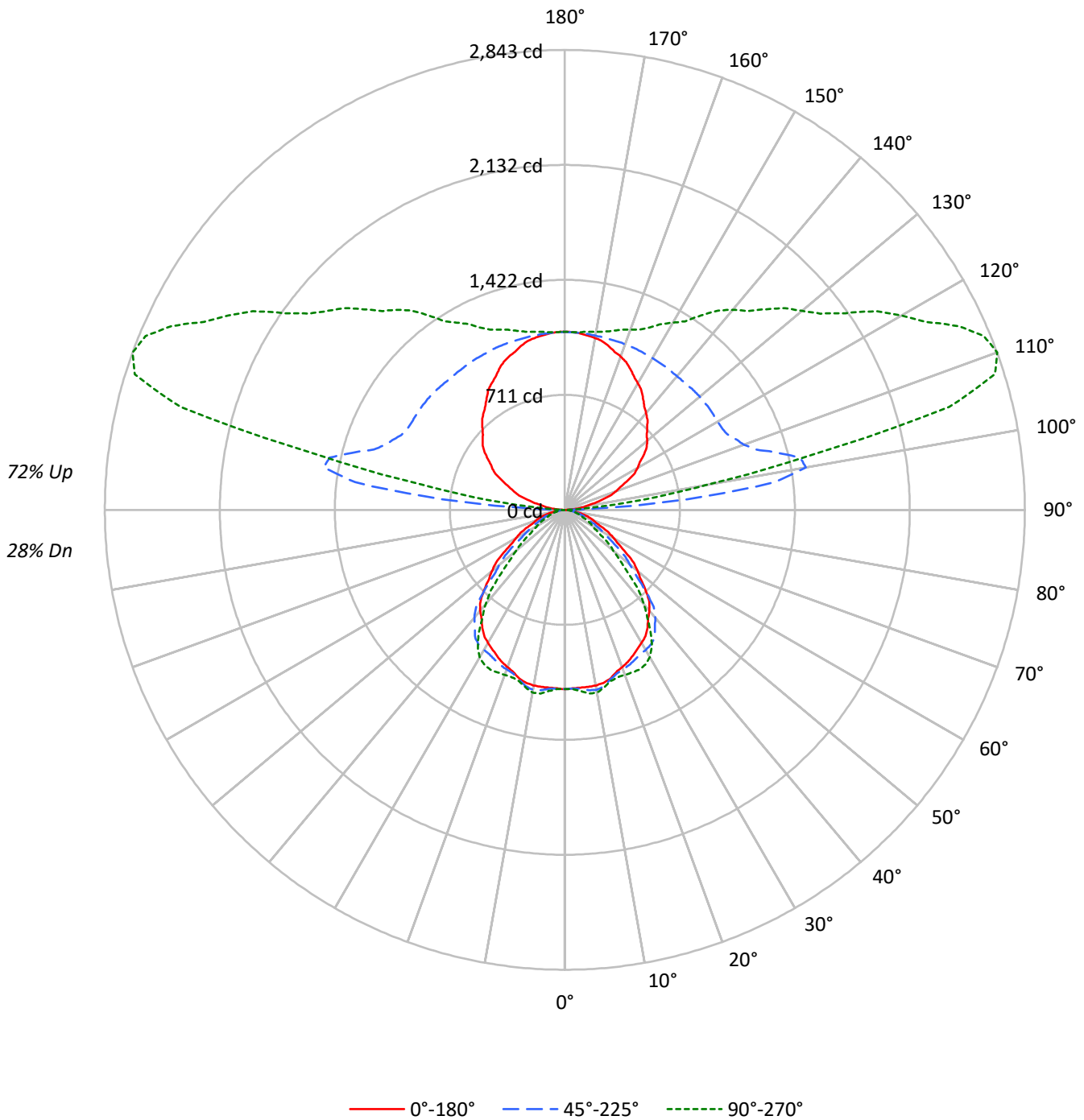
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9459.0 lumens  
Efficiency: N/A  
Efficacy: 127.1 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

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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	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°	17909	17909	17909
5°	17885	17995	18216
10°	18074	18536	18815
15°	18068	18161	18313
20°	17775	18048	18649
25°	17726	18228	19417
30°	17706	18634	19604
35°	17538	19032	18252
40°	17133	18326	16063
45°	16212	16084	12702
50°	14740	13150	9854
55°	12954	10821	7671
60°	11208	8654	6316
65°	9677	7171	5528
70°	8700	6349	4910
75°	7973	5502	4517
80°	6936	4417	4417
85°	5020	3983	2093

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 17527 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.1	1.1
10°-20°	310.1	3.3
20°-30°	479.3	5.1
30°-40°	576.5	6.1
40°-50°	517.6	5.5
50°-60°	346.8	3.7
60°-70°	201.7	2.1
70°-80°	103.6	1.1
80°-90°	26.8	0.3
90°-100°	419.2	4.4
100°-110°	1372.5	14.5
110°-120°	1356.9	14.3
120°-130°	1109.2	11.7
130°-140°	905.1	9.6
140°-150°	704.4	7.4
150°-160°	507.2	5.4
160°-170°	310.3	3.3
170°-180°	104.8	1.1
0°-30°	896.5	9.5
0°-40°	1473.0	15.6
0°-60°	2337.4	24.7
0°-90°	2669.4	28.2
90°-120°	3148.5	33.3
90°-150°	5867.2	62.0
90°-180°	6790.0	71.8
0°-180°	9459.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1109	1109	1109	1109	1109	
5°	1104	1122	1110	1113	1124	105
15°	1081	1125	1086	1090	1096	304
25°	995	1035	1023	1061	1090	459
35°	890	898	966	947	926	555
45°	710	768	704	594	556	543
55°	460	478	384	297	272	414
65°	253	259	188	152	145	256
75°	128	124	88	75	72	136
85°	27	22	22	15	11	34
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1109.2	1109.2	1109.2	1109.2	1109.2
2.5°	1104.6	1117.9	1105.5	1106.6	1109.2
5°	1103.5	1122.3	1110.3	1112.8	1123.9
7.5°	1103.3	1130.1	1124.3	1131.2	1145.8
10°	1102.4	1134.5	1130.6	1132.1	1147.6
12.5°	1096.9	1134.4	1117.1	1115.7	1124.1
15°	1080.9	1125.1	1086.5	1090.1	1095.6
17.5°	1052.6	1098.9	1062.1	1074.6	1085.4
20°	1034.5	1079.9	1050.4	1066.6	1085.4
22.5°	1018.3	1063.6	1039.5	1062.2	1088.1
25°	995.0	1034.8	1023.2	1061.2	1089.9
27.5°	970.5	993.9	1007.6	1058.5	1078.6
30°	949.7	965.2	999.5	1043.8	1051.5
32.5°	927.1	936.4	988.6	1011.7	1001.7
35°	889.8	897.6	965.6	947.0	926.0
37.5°	845.5	861.4	913.8	860.3	836.2
40°	812.9	839.5	869.5	789.8	762.1
42.5°	773.1	815.6	810.7	709.0	675.2
45°	710.0	767.6	704.4	593.8	556.3
47.5°	635.6	694.7	591.3	492.6	457.5
50°	586.8	634.3	523.5	431.0	392.3
52.5°	537.1	571.3	465.6	373.2	338.1
55°	460.2	477.8	384.4	296.8	272.5
57.5°	389.6	400.9	314.1	239.7	221.8
60°	347.1	354.8	268.0	210.0	195.6
62.5°	308.2	314.2	230.9	184.7	173.9
65°	253.3	258.8	187.7	152.4	144.7
67.5°	209.6	212.4	154.4	126.7	119.4
70°	184.3	185.4	134.5	109.6	104.0
72.5°	161.7	160.1	115.6	95.1	91.4
75°	127.8	124.5	88.2	74.6	72.4
77.5°	95.4	91.9	62.0	57.4	57.4
80°	74.6	70.2	47.5	47.5	47.5
82.5°	55.6	49.4	36.6	36.6	35.7
85°	27.1	21.6	21.5	14.6	11.3
87.5°	7.5	7.9	4.5	4.3	4.5
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



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**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



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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	14.32	14.99	15.45	16.11	17.67	11.04	11.72	12.17	12.84	14.39
	3H	15.54	16.14	16.68	17.27	18.84	12.10	12.70	13.23	13.82	15.39
	4H	15.98	16.55	17.13	17.68	19.25	12.49	13.06	13.63	14.18	15.76
	6H	16.29	16.81	17.44	17.94	19.53	12.81	13.33	13.96	14.46	16.05
	8H	16.37	16.86	17.52	18.01	19.59	12.89	13.39	14.05	14.53	16.11
	12H	16.39	16.86	17.55	18.00	19.60	12.89	13.36	14.05	14.50	16.10
4H	2H	14.37	14.94	15.53	16.07	17.65	11.59	12.16	12.74	13.29	14.86
	3H	15.83	16.30	16.99	17.46	19.04	12.84	13.31	14.00	14.47	16.05
	4H	16.42	16.85	17.58	17.99	19.60	13.34	13.77	14.50	14.92	16.52
	6H	16.86	17.23	18.03	18.40	19.99	13.76	14.14	14.93	15.30	16.90
	8H	16.99	17.34	18.15	18.49	20.10	13.88	14.23	15.05	15.39	17.00
	12H	17.03	17.35	18.22	18.52	20.13	13.90	14.21	15.08	15.38	17.00
8H	4H	16.43	16.78	17.60	17.93	19.55	13.63	13.98	14.80	15.13	16.75
	6H	16.97	17.26	18.16	18.46	20.07	14.16	14.45	15.35	15.65	17.25
	8H	17.17	17.42	18.36	18.60	20.23	14.34	14.59	15.54	15.77	17.40
	12H	17.27	17.49	18.46	18.66	20.32	14.40	14.62	15.59	15.79	17.46
12H	4H	16.38	16.69	17.56	17.86	19.48	13.64	13.95	14.82	15.12	16.74
	6H	16.96	17.21	18.15	18.38	20.01	14.22	14.47	15.41	15.65	17.28
	8H	17.16	17.38	18.36	18.56	20.22	14.42	14.64	15.61	15.81	17.48