

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: P854180

Luminaire Tested: SQ2-PR1-050U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

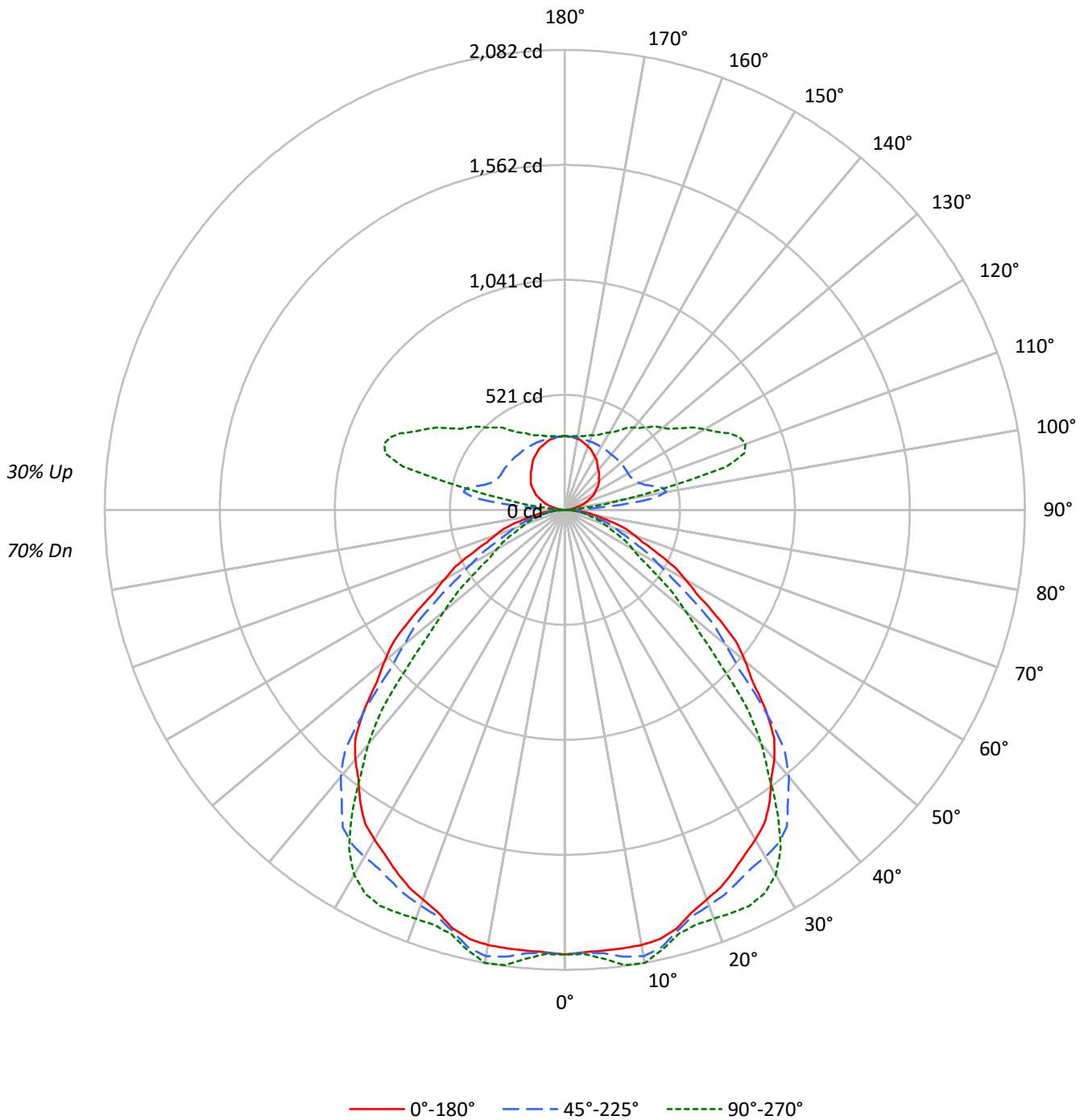
Test Method: LM-79-2019  
Report Number: P854180  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PR1-050U-100D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6911.8 lumens  
Efficiency: N/A  
Efficacy: 131.9 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-Direct  
  
Input Watts (W): 52.4  
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	75	75	75	70				
1	103	99	95	92	97	94	91	88	84	82	80	75	74	72	67	66	65	61				
2	95	88	82	77	89	83	78	73	75	71	67	67	64	61	60	58	56	52				
3	87	78	71	65	82	74	68	62	67	62	58	60	56	53	54	51	48	45				
4	80	69	62	56	75	66	59	54	60	54	50	54	50	46	49	45	42	39				
5	74	62	54	48	70	59	52	47	54	48	44	49	44	40	44	41	37	35				
6	68	56	48	42	64	54	46	41	49	43	38	45	40	36	40	36	33	31				
7	63	51	43	38	60	49	42	36	45	39	34	41	36	32	37	33	30	27				
8	59	47	39	33	56	45	37	33	41	35	31	37	32	29	34	30	27	25				
9	55	43	35	30	52	41	34	29	38	32	28	35	30	26	32	27	24	22				
10	51	39	32	27	49	38	31	26	35	29	25	32	27	24	29	25	22	20				

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

	0°	45°	90°
0°	32495	32495	32495
5°	32454	32653	33052
10°	32795	33636	34141
15°	32784	32956	33230
20°	32254	32747	33840
25°	32163	33077	35234
30°	32130	33812	35572
35°	31824	34535	33119
40°	31091	33253	29145
45°	29419	29186	23048
50°	26746	23860	17882
55°	23505	19634	13917
60°	20337	15700	11460
65°	17559	13012	10032
70°	15786	11523	8908
75°	14460	9981	8191
80°	12590	8015	8015
85°	9114	7225	3798

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 31800 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.4	2.8
10°-20°	562.6	8.1
20°-30°	869.7	12.6
30°-40°	1046.1	15.1
40°-50°	939.3	13.6
50°-60°	629.2	9.1
60°-70°	366.0	5.3
70°-80°	188.0	2.7
80°-90°	46.8	0.7
90°-100°	132.7	1.9
100°-110°	421.1	6.1
110°-120°	412.9	6.0
120°-130°	336.0	4.9
130°-140°	273.9	4.0
140°-150°	213.6	3.1
150°-160°	153.9	2.2
160°-170°	94.0	1.4
170°-180°	31.7	0.5
0°-30°	1626.7	23.5
0°-40°	2672.8	38.7
0°-60°	4241.3	61.4
0°-90°	4842.0	70.1
90°-120°	966.7	14.0
90°-150°	1790.2	25.9
90°-180°	2070.0	29.9
0°-180°	6911.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2013	2013	2013	2013	2013	
5°	2002	2036	2015	2019	2039	191
15°	1961	2042	1972	1978	1988	551
25°	1805	1878	1857	1926	1978	833
35°	1615	1629	1752	1718	1680	1007
45°	1288	1393	1278	1078	1009	986
55°	835	867	698	539	494	750
65°	460	470	341	277	263	465
75°	232	226	160	135	131	246
85°	49	39	39	26	20	61
90°	0	1	3	3	3	3
95°	18	54	241	89	58	21
105°	73	103	415	791	758	77
115°	131	156	335	697	820	129
125°	181	203	330	546	644	161
135°	219	241	328	470	529	169
145°	256	275	328	405	441	160
155°	291	302	329	362	376	134
165°	318	321	330	343	346	90
175°	332	331	332	334	333	31
180°	333	333	333	333	333	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2012.6	2012.6	2012.6	2012.6	2012.6
2.5°	2004.4	2028.5	2006.1	2007.8	2012.6
5°	2002.4	2036.5	2014.7	2019.2	2039.3
7.5°	2002.0	2050.5	2040.1	2052.6	2079.1
10°	2000.3	2058.5	2051.6	2054.3	2082.4
12.5°	1990.5	2058.3	2027.0	2024.5	2039.7
15°	1961.3	2041.6	1971.6	1978.0	1988.0
17.5°	1910.0	1993.9	1927.3	1949.9	1969.5
20°	1877.2	1959.5	1905.9	1935.4	1969.5
22.5°	1847.7	1929.9	1886.2	1927.5	1974.5
25°	1805.4	1877.6	1856.7	1925.6	1977.8
27.5°	1761.1	1803.6	1828.4	1920.7	1957.2
30°	1723.4	1751.4	1813.6	1894.0	1908.0
32.5°	1682.3	1699.2	1793.9	1835.8	1817.7
35°	1614.6	1628.7	1752.1	1718.4	1680.3
37.5°	1534.2	1563.1	1658.1	1561.1	1517.4
40°	1475.1	1523.3	1577.7	1432.9	1382.8
42.5°	1402.9	1479.9	1471.0	1286.6	1225.2
45°	1288.4	1392.7	1278.2	1077.6	1009.4
47.5°	1153.4	1260.5	1073.0	893.9	830.1
50°	1064.8	1151.0	949.9	782.1	711.9
52.5°	974.5	1036.7	844.9	677.2	613.4
55°	835.0	867.1	697.5	538.6	494.4
57.5°	707.0	727.4	569.9	435.0	402.5
60°	629.8	643.9	486.2	381.0	354.9
62.5°	559.3	570.1	418.9	335.2	315.5
65°	459.6	469.6	340.6	276.6	262.6
67.5°	380.4	385.6	280.2	229.9	216.6
70°	334.4	336.4	244.1	198.8	188.7
72.5°	293.4	290.6	209.7	172.6	165.8
75°	231.8	225.8	160.0	135.3	131.3
77.5°	173.2	166.7	112.4	104.2	104.2
80°	135.4	127.4	86.2	86.2	86.2
82.5°	100.9	89.7	66.5	66.4	64.8
85°	49.2	39.2	39.0	26.5	20.5
87.5°	13.1	13.3	5.6	5.6	5.6
90°	0.0	1.0	3.1	3.1	3.1
92.5°	5.9	23.3	74.4	24.8	17.4
95°	17.8	53.7	241.1	89.4	57.6
97.5°	33.1	69.6	408.3	255.2	156.6
100°	44.0	78.9	465.4	424.3	275.7
102.5°	55.8	89.0	455.3	623.0	476.9
105°	73.4	103.1	415.1	790.6	757.8
107.5°	91.0	118.4	376.7	808.0	852.3
110°	102.7	129.4	357.4	787.9	869.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	114.5	139.5	346.5	753.2	857.4
115°	131.0	155.6	335.4	696.6	819.6
117.5°	147.2	170.5	331.0	642.2	766.2
120°	157.2	179.8	330.2	608.5	728.4
122.5°	167.3	189.0	330.2	581.5	693.2
125°	181.3	202.8	330.2	546.2	643.5
127.5°	193.7	214.4	330.2	518.8	601.8
130°	201.2	222.8	330.2	502.7	577.5
132.5°	208.8	230.3	329.3	490.0	557.4
135°	219.1	240.6	328.1	469.9	529.3
137.5°	229.1	251.7	327.8	450.6	503.7
140°	235.8	258.4	327.0	437.1	485.3
142.5°	244.2	265.9	327.8	423.6	468.5
145°	255.7	275.2	328.1	405.4	441.3
147.5°	267.3	283.9	328.3	389.3	418.6
150°	275.7	289.0	329.1	380.0	403.5
152.5°	282.4	294.0	329.1	372.3	391.8
155°	291.4	301.6	329.1	361.9	376.3
157.5°	301.0	308.0	330.2	355.5	365.4
160°	306.0	312.2	330.2	351.3	359.5
162.5°	311.1	315.6	330.2	347.9	353.6
165°	317.6	320.7	330.2	342.8	345.9
167.5°	323.7	324.5	331.2	339.2	341.9
170°	327.0	327.0	331.2	337.5	338.5
172.5°	328.7	329.5	331.2	335.8	336.0
175°	332.3	331.2	332.3	334.3	333.3
177.5°	333.3	332.5	332.5	334.1	332.5
180°	333.3	333.3	333.3	333.3	333.3



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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	20.58	21.59	21.35	22.38	23.33	17.30	18.31	18.08	19.10	20.06
	3H	21.82	22.73	22.61	23.52	24.51	18.38	19.28	19.17	20.08	21.07
	4H	22.28	23.13	23.09	23.94	24.94	18.79	19.64	19.59	20.44	21.44
	6H	22.61	23.39	23.42	24.20	25.22	19.13	19.91	19.94	20.72	21.73
	8H	22.69	23.44	23.52	24.27	25.28	19.22	19.96	20.04	20.79	21.81
	12H	22.73	23.44	23.56	24.26	25.30	19.23	19.94	20.06	20.76	21.80
4H	2H	20.68	21.52	21.48	22.33	23.33	17.89	18.74	18.70	19.55	20.55
	3H	22.16	22.86	22.98	23.70	24.72	19.17	19.87	19.99	20.71	21.73
	4H	22.76	23.40	23.59	24.24	25.28	19.68	20.32	20.52	21.16	22.20
	6H	23.22	23.77	24.07	24.63	25.68	20.13	20.68	20.98	21.54	22.59
	8H	23.36	23.87	24.21	24.73	25.79	20.25	20.76	21.11	21.62	22.68
	12H	23.42	23.88	24.29	24.76	25.82	20.28	20.74	21.15	21.62	22.68
8H	4H	22.80	23.31	23.65	24.17	25.23	20.00	20.51	20.85	21.37	22.43
	6H	23.35	23.78	24.23	24.68	25.74	20.54	20.96	21.42	21.86	22.92
	8H	23.55	23.93	24.44	24.82	25.90	20.72	21.10	21.62	22.00	23.07
	12H	23.66	23.99	24.55	24.88	26.01	20.79	21.13	21.69	22.01	23.14
12H	4H	22.76	23.22	23.63	24.10	25.17	20.02	20.48	20.89	21.36	22.43
	6H	23.34	23.71	24.23	24.61	25.69	20.60	20.98	21.49	21.87	22.95
	8H	23.56	23.89	24.45	24.77	25.91	20.81	21.15	21.71	22.03	23.16