

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: P854877

Luminaire Tested: SQ2-PW1-050U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854877  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PW1-050U-100D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

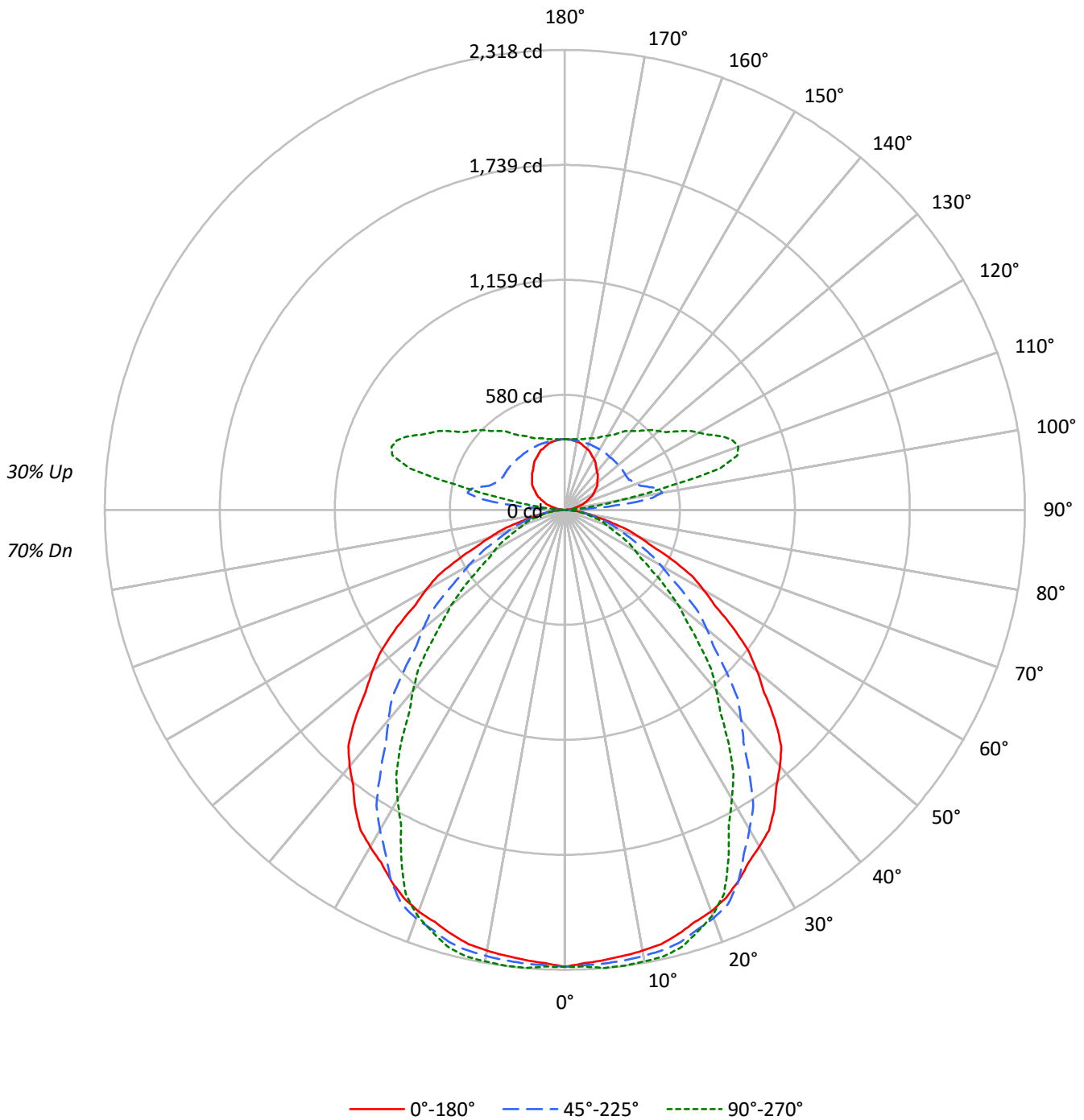
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7321.9 lumens  
Efficiency: N/A  
Efficacy: 139.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.11 / 1.22  
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	0
RCR																		
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	103	99	95	92	97	94	91	88	84	82	79	75	73	72	67	66	64	60
2	95	87	81	76	89	83	78	73	75	71	67	67	64	61	60	58	55	52
3	87	78	70	65	82	74	67	62	67	61	57	60	56	53	54	51	48	45
4	80	69	61	55	75	66	59	53	60	54	50	54	49	46	49	45	42	39
5	74	62	54	48	70	59	52	47	54	48	43	49	44	40	44	40	37	34
6	68	56	48	42	64	54	46	41	49	43	38	44	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	34	56	45	38	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	52	39	32	27	49	38	31	27	35	29	25	32	27	24	29	25	22	21

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

	0°	45°	90°
0°	37177	37177	37177
5°	36929	37212	37567
10°	36995	37428	37895
15°	36986	37683	38123
20°	37002	37641	37380
25°	36802	36840	34732
30°	36551	34711	31400
35°	36265	31943	28355
40°	35544	29118	25050
45°	34150	26188	21882
50°	31782	23410	18731
55°	29073	20681	15184
60°	26063	17990	13101
65°	22789	15499	11645
70°	18633	13770	10556
75°	14504	11896	9713
80°	10804	10200	8563
85°	7317	7725	4872

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 34150 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.3	3.0
10°-20°	635.3	8.7
20°-30°	934.9	12.8
30°-40°	1022.2	14.0
40°-50°	916.9	12.5
50°-60°	684.0	9.3
60°-70°	432.3	5.9
70°-80°	214.1	2.9
80°-90°	50.6	0.7
90°-100°	141.9	1.9
100°-110°	450.1	6.1
110°-120°	441.3	6.0
120°-130°	359.1	4.9
130°-140°	292.8	4.0
140°-150°	228.3	3.1
150°-160°	164.5	2.2
160°-170°	100.5	1.4
170°-180°	33.9	0.5
0°-30°	1789.4	24.4
0°-40°	2811.6	38.4
0°-60°	4412.6	60.3
0°-90°	5109.5	69.8
90°-120°	1033.2	14.1
90°-150°	1913.4	26.1
90°-180°	2212.0	30.2
0°-180°	7321.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2303	2303	2303	2303	2303	
5°	2278	2315	2296	2299	2318	217
15°	2213	2256	2254	2270	2281	625
25°	2066	2111	2068	1982	1950	951
35°	1840	1821	1621	1479	1439	1147
45°	1496	1376	1147	1003	958	1147
55°	1033	934	735	576	539	922
65°	596	547	406	326	305	591
75°	232	250	191	160	156	256
85°	40	50	42	28	26	50
90°	0	1	3	3	3	2
95°	19	57	258	96	62	22
105°	78	110	444	845	810	83
115°	140	166	358	745	876	138
125°	194	217	353	584	688	173
135°	234	257	351	502	566	181
145°	273	294	351	433	472	171
155°	312	322	352	387	402	144
165°	339	343	353	366	370	96
175°	355	354	355	357	356	34
180°	356	356	356	356	356	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2302.6	2302.6	2302.6	2302.6	2302.6
2.5°	2286.8	2316.0	2297.4	2299.3	2304.4
5°	2278.5	2315.0	2296.0	2298.7	2317.9
7.5°	2267.1	2303.9	2289.9	2297.8	2316.7
10°	2256.5	2295.2	2282.9	2294.2	2311.4
12.5°	2242.5	2282.9	2274.1	2287.2	2304.4
15°	2212.7	2255.6	2254.4	2270.0	2280.7
17.5°	2178.1	2220.9	2218.9	2223.0	2228.0
20°	2153.5	2196.4	2190.7	2175.5	2175.5
22.5°	2118.4	2164.7	2150.4	2108.4	2094.7
25°	2065.8	2110.8	2067.9	1981.7	1949.6
27.5°	2004.4	2040.8	1954.8	1832.3	1787.7
30°	1960.5	1988.3	1861.8	1727.1	1684.2
32.5°	1914.9	1925.6	1767.1	1627.0	1580.6
35°	1839.9	1820.6	1620.6	1479.3	1438.6
37.5°	1751.3	1693.8	1479.8	1331.9	1286.8
40°	1686.4	1604.9	1381.5	1233.6	1188.5
42.5°	1614.4	1512.3	1288.6	1140.6	1093.9
45°	1495.6	1375.5	1146.9	1003.3	958.3
47.5°	1361.9	1242.6	1014.4	875.5	836.8
50°	1265.3	1149.5	932.0	792.8	745.7
52.5°	1167.0	1063.4	851.3	708.2	643.9
55°	1032.8	934.3	734.7	575.9	539.4
57.5°	894.7	809.4	629.0	484.8	454.9
60°	807.1	732.0	557.1	435.7	405.7
62.5°	722.8	656.3	486.9	390.2	365.3
65°	596.5	547.1	405.7	326.3	304.8
67.5°	473.6	446.3	337.3	267.6	253.5
70°	394.7	386.1	291.7	234.4	223.6
72.5°	326.3	329.7	247.8	203.0	195.6
75°	232.5	249.6	190.7	160.0	155.7
77.5°	158.3	184.1	141.2	118.4	114.9
80°	116.2	142.0	109.7	92.1	92.1
82.5°	81.2	101.8	78.0	69.3	69.3
85°	39.5	50.2	41.7	28.5	26.3
87.5°	10.5	15.9	7.7	5.9	5.9
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.9	79.6	26.5	18.5
95°	19.0	57.4	257.7	95.5	61.6
97.5°	35.4	74.4	436.4	272.7	167.3
100°	47.0	84.3	497.4	453.5	294.6
102.5°	59.6	95.1	486.6	665.9	509.7
105°	78.5	110.2	443.7	845.0	810.0
107.5°	97.2	126.6	402.6	863.7	911.1
110°	109.8	138.3	382.0	842.2	929.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	122.3	149.0	370.4	805.1	916.4
115°	140.1	166.3	358.5	744.6	876.1
117.5°	157.3	182.3	353.8	686.4	818.9
120°	168.0	192.1	352.9	650.5	778.7
122.5°	178.8	202.0	352.9	621.6	741.0
125°	193.8	216.9	352.9	583.9	687.9
127.5°	207.0	229.2	352.9	554.6	643.3
130°	215.0	238.1	352.9	537.3	617.3
132.5°	223.2	246.1	352.0	523.7	595.7
135°	234.2	257.1	350.6	502.2	565.8
137.5°	244.9	269.0	350.4	481.7	538.4
140°	252.0	276.2	349.6	467.2	518.7
142.5°	261.1	284.2	350.4	452.8	500.8
145°	273.4	294.2	350.6	433.3	471.7
147.5°	285.7	303.5	350.8	416.1	447.5
150°	294.6	308.9	351.7	406.1	431.3
152.5°	301.8	314.3	351.7	398.0	418.8
155°	311.5	322.5	351.7	386.9	402.2
157.5°	321.8	329.2	352.9	380.0	390.5
160°	327.1	333.7	352.9	375.5	384.3
162.5°	332.5	337.4	352.9	371.9	378.0
165°	339.4	342.7	352.9	366.4	369.7
167.5°	346.0	346.9	354.0	362.6	365.4
170°	349.6	349.6	354.0	360.8	361.9
172.5°	351.3	352.2	354.0	359.0	359.2
175°	355.1	354.0	355.1	357.4	356.3
177.5°	356.3	355.4	355.4	357.2	355.4
180°	356.3	356.3	356.3	356.3	356.3



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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	21.30	22.31	22.07	23.10	24.06	17.78	18.79	18.56	19.59	20.55
	3H	22.63	23.54	23.42	24.34	25.33	19.00	19.90	19.79	20.71	21.70
	4H	23.01	23.86	23.82	24.67	25.68	19.45	20.31	20.26	21.11	22.12
	6H	23.22	24.01	24.04	24.82	25.84	19.78	20.56	20.60	21.38	22.40
	8H	23.26	24.01	24.09	24.84	25.86	19.86	20.60	20.69	21.44	22.46
	12H	23.26	23.97	24.09	24.80	25.84	19.87	20.58	20.71	21.41	22.46
4H	2H	21.42	22.27	22.23	23.08	24.08	18.48	19.34	19.30	20.15	21.15
	3H	22.98	23.68	23.80	24.53	25.55	19.89	20.59	20.71	21.44	22.45
	4H	23.49	24.13	24.33	24.97	26.02	20.44	21.08	21.27	21.92	22.97
	6H	23.83	24.38	24.68	25.25	26.30	20.85	21.40	21.70	22.27	23.32
	8H	23.91	24.43	24.77	25.29	26.35	20.96	21.47	21.81	22.33	23.40
	12H	23.94	24.40	24.81	25.28	26.35	20.99	21.45	21.86	22.33	23.40
8H	4H	23.54	24.06	24.40	24.92	25.98	20.78	21.29	21.63	22.15	23.22
	6H	23.98	24.41	24.87	25.31	26.38	21.29	21.71	22.17	22.62	23.68
	8H	24.13	24.51	25.02	25.40	26.48	21.45	21.83	22.34	22.73	23.81
	12H	24.20	24.53	25.10	25.42	26.56	21.52	21.85	22.41	22.74	23.87
12H	4H	23.51	23.97	24.38	24.85	25.92	20.80	21.26	21.67	22.14	23.21
	6H	23.97	24.35	24.87	25.25	26.33	21.35	21.73	22.25	22.63	23.71
	8H	24.14	24.48	25.04	25.36	26.50	21.54	21.88	22.44	22.77	23.90