

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: P854432

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

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854432  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2308-130-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-WBN-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: -

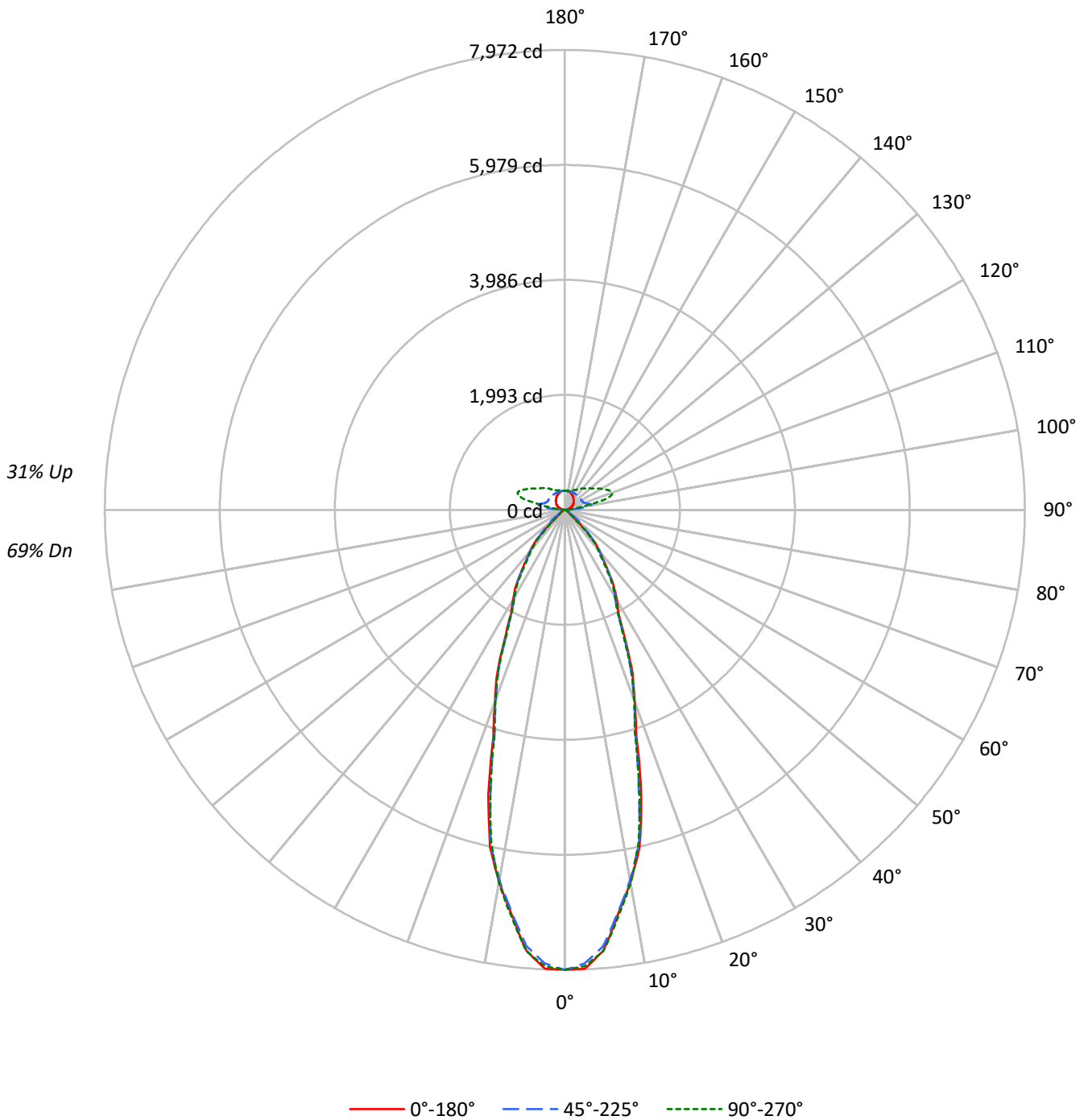
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6699.4 lumens  
Efficiency: N/A  
Efficacy: 126.6 lumens/watt  
Spacing Criteria (0/90/45): 0.59 / 0.58 / 0.63  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 52.9  
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	83	83	83	74	74	74	69				
1	105	102	99	96	99	97	94	92	87	85	84	78	77	76	70	69	68	64				
2	99	93	89	85	94	89	85	82	81	78	75	73	71	69	66	65	63	60				
3	93	86	80	76	88	82	77	73	75	71	68	68	66	63	62	60	59	56				
4	87	79	73	68	83	76	71	66	70	66	62	64	61	58	59	56	55	52				
5	82	73	67	62	78	70	65	61	65	61	57	60	57	54	56	53	51	49				
6	78	68	62	57	74	66	60	56	61	56	53	57	53	50	53	50	48	45				
7	73	64	57	53	70	62	56	52	57	53	49	54	50	47	50	47	45	43				
8	70	60	53	49	67	58	52	48	54	49	46	51	47	44	47	44	42	40				
9	66	56	50	46	63	54	49	45	51	46	43	48	44	42	45	42	40	38				
10	63	53	47	43	60	51	46	42	48	44	41	46	42	39	43	40	38	36				

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

	0°	45°	90°
0°	128715	128715	128715
5°	124278	123039	124415
10°	107421	106911	107675
15°	85479	82785	83116
20°	60723	59922	60359
25°	43688	42831	42528
30°	33380	32483	32404
35°	26203	25756	25087
40°	19852	19583	18630
45°	11109	13271	9914
50°	3908	8171	3446
55°	2390	4459	2269
60°	1828	2328	1689
65°	1673	1731	1566
70°	1600	1600	1468
75°	1497	1497	1410
80°	1311	1311	1311
85°	1315	1056	1056

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 13271 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	692.0	10.3
10°-20°	1375.3	20.5
20°-30°	1138.9	17.0
30°-40°	819.4	12.2
40°-50°	417.4	6.2
50°-60°	108.7	1.6
60°-70°	45.1	0.7
70°-80°	25.0	0.4
80°-90°	7.8	0.1
90°-100°	132.7	2.0
100°-110°	421.1	6.3
110°-120°	412.9	6.2
120°-130°	336.0	5.0
130°-140°	273.9	4.1
140°-150°	213.6	3.2
150°-160°	153.9	2.3
160°-170°	94.0	1.4
170°-180°	31.7	0.5
0°-30°	3206.2	47.9
0°-40°	4025.6	60.1
0°-60°	4551.7	67.9
0°-90°	4629.6	69.1
90°-120°	966.7	14.4
90°-150°	1790.2	26.7
90°-180°	2070.0	30.9
0°-180°	6699.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7972	7972	7972	7972	7972	
5°	7668	7657	7592	7701	7676	692
15°	5114	5056	4953	4988	4972	1388
25°	2452	2448	2404	2383	2387	1153
35°	1329	1338	1307	1285	1273	834
45°	486	560	581	541	434	389
55°	85	99	158	92	81	83
65°	44	45	45	42	41	44
75°	24	24	24	23	23	25
85°	7	7	6	7	6	7
90°	0	1	3	3	3	1
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°	7972.0	7972.0	7972.0	7972.0	7972.0
2.5°	7959.5	7946.2	7870.1	7933.1	7917.7
5°	7667.9	7656.8	7591.5	7701.3	7676.4
7.5°	7065.7	7075.1	7036.9	7133.9	7107.3
10°	6552.1	6577.0	6521.0	6661.7	6567.6
12.5°	5985.3	5969.2	5930.4	5952.1	5900.1
15°	5113.8	5055.7	4952.6	4987.6	4972.4
17.5°	4119.1	4141.5	4052.0	4048.2	4031.1
20°	3534.1	3541.0	3487.5	3515.7	3512.9
22.5°	3063.5	3064.9	2996.4	3037.7	3012.9
25°	2452.3	2448.1	2404.2	2383.1	2387.2
27.5°	2011.0	1993.9	1960.7	1974.6	1964.4
30°	1790.4	1776.6	1742.3	1750.5	1738.1
32.5°	1592.4	1593.0	1557.9	1553.7	1544.6
35°	1329.4	1337.7	1306.7	1285.2	1272.8
37.5°	1094.6	1102.3	1076.2	1044.9	1034.4
40°	941.9	947.4	929.1	892.2	883.9
42.5°	775.6	798.8	780.9	746.0	727.8
45°	486.5	559.8	581.2	540.6	434.2
47.5°	246.1	347.6	414.6	306.2	201.7
50°	155.6	226.1	325.3	184.2	137.2
52.5°	119.4	155.6	259.7	136.0	110.0
55°	84.9	98.7	158.4	91.7	80.6
57.5°	65.6	73.4	94.8	69.4	62.5
60°	56.6	62.1	72.1	59.2	52.3
62.5°	50.9	54.2	58.5	50.3	47.8
65°	43.8	45.2	45.3	42.4	41.0
67.5°	37.3	38.7	38.5	37.0	35.6
70°	33.9	35.3	33.9	32.5	31.1
72.5°	29.4	30.8	29.4	29.1	27.7
75°	24.0	24.0	24.0	22.6	22.6
77.5°	18.7	18.9	17.5	17.5	16.4
80°	14.1	15.5	14.1	14.1	14.1
82.5°	11.9	12.2	10.7	10.7	10.7
85°	7.1	7.1	5.7	7.0	5.7
87.5°	2.3	2.5	2.9	2.9	2.9
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	5.50	6.28	6.32	7.09	8.07	5.11	5.89	5.93	6.70	7.68
	3H	6.55	7.24	7.38	8.06	9.07	6.12	6.81	6.95	7.62	8.64
	4H	6.98	7.62	7.82	8.45	9.48	6.54	7.19	7.39	8.01	9.04
	6H	7.29	7.88	8.15	8.71	9.75	6.87	7.46	7.73	8.30	9.33
	8H	7.39	7.95	8.25	8.80	9.84	6.97	7.53	7.84	8.38	9.42
	12H	7.46	7.99	8.32	8.83	9.89	7.02	7.56	7.89	8.40	9.46
4H	2H	5.73	6.37	6.58	7.20	8.23	5.40	6.04	6.25	6.87	7.90
	3H	7.02	7.55	7.88	8.41	9.45	6.64	7.17	7.50	8.03	9.07
	4H	7.58	8.06	8.45	8.92	9.99	7.20	7.68	8.06	8.53	9.60
	6H	8.03	8.44	8.92	9.32	10.40	7.65	8.07	8.54	8.94	10.02
	8H	8.19	8.57	9.08	9.45	10.53	7.81	8.19	8.70	9.07	10.15
	12H	8.30	8.64	9.20	9.53	10.62	7.90	8.23	8.80	9.13	10.22
8H	4H	7.72	8.11	8.61	8.98	10.06	7.38	7.76	8.26	8.63	9.72
	6H	8.31	8.62	9.22	9.54	10.62	7.96	8.27	8.87	9.19	10.27
	8H	8.55	8.82	9.47	9.73	10.84	8.20	8.47	9.12	9.38	10.48
	12H	8.74	8.98	9.66	9.88	11.04	8.37	8.61	9.29	9.51	10.67
12H	4H	7.70	8.04	8.60	8.93	10.02	7.36	7.70	8.26	8.60	9.68
	6H	8.33	8.60	9.25	9.51	10.61	7.99	8.26	8.91	9.18	10.28
	8H	8.60	8.84	9.52	9.74	10.90	8.26	8.50	9.18	9.40	10.56