

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: P853610

Luminaire Tested: SQ2-BBN-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

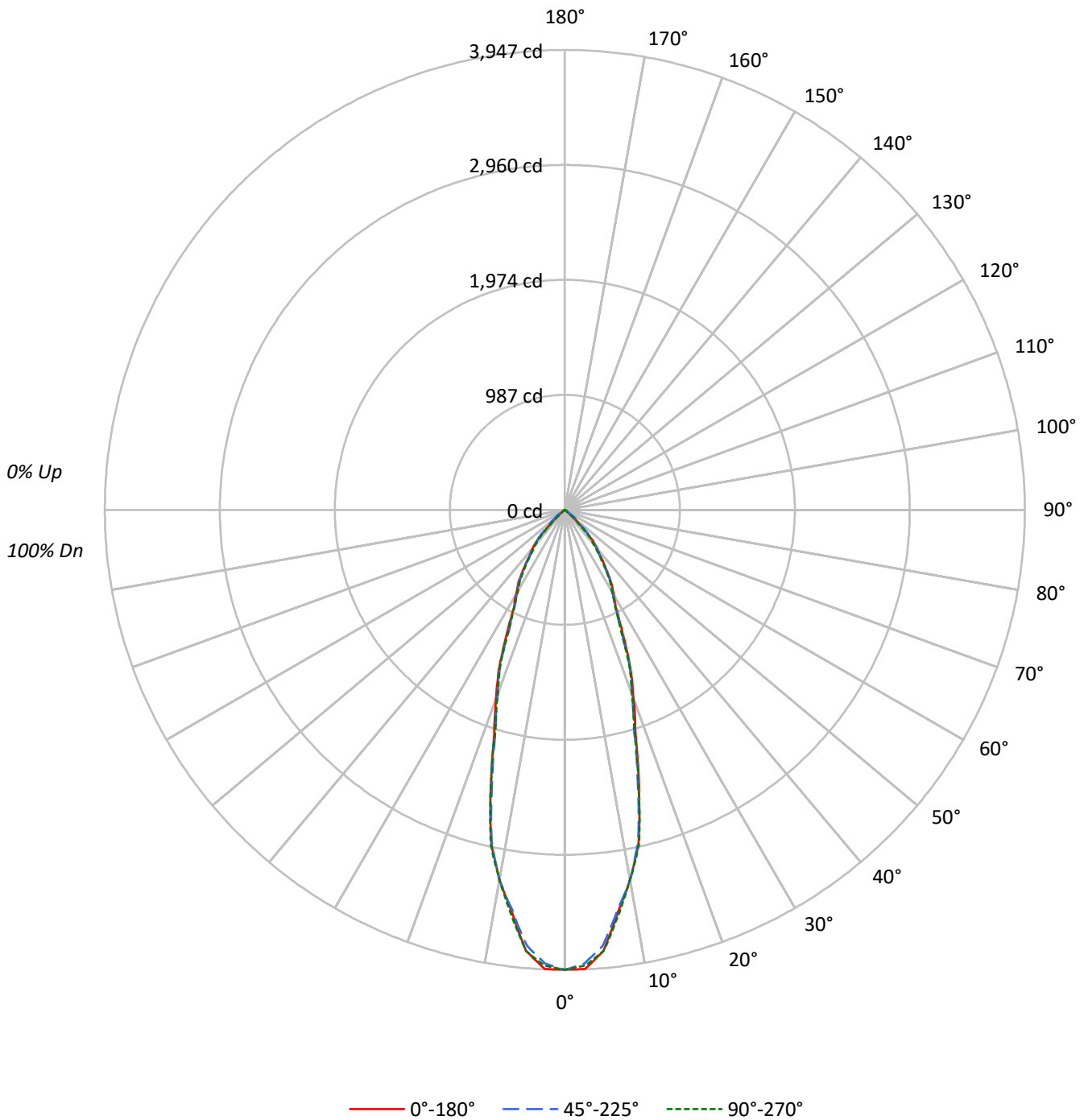
Test Method: LM-79-2019  
Report Number: P853610  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-130-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-BBN-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2133.3 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.1  
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102		101	100	99		98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	94		96	94	92		93	91	90	88
3	103	97	93	89	101	96	92	88	93	90	87		91	88	85		89	86	84	82
4	98	91	86	82	97	90	85	82	88	84	81		86	83	80		84	81	79	77
5	94	86	80	76	92	85	80	76	83	79	75		82	78	75		80	77	74	73
6	90	81	75	71	88	80	75	71	79	74	71		77	73	70		76	73	70	68
7	85	77	71	67	84	76	71	67	75	70	66		74	69	66		72	69	66	64
8	82	73	67	63	80	72	67	63	71	66	63		70	66	62		69	65	62	61
9	78	69	63	60	77	69	63	60	68	63	59		67	62	59		66	62	59	58
10	75	66	60	57	74	65	60	57	64	60	56		64	59	56		63	59	56	55

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

	0°	45°	90°
0°	63721	63721	63721
5°	61589	60828	61624
10°	52857	52892	52857
15°	41026	40373	40931
20°	29610	28998	28974
25°	20995	20158	20197
30°	15620	15223	15077
35°	12153	11846	11594
40°	8994	8770	8214
45°	4596	5635	3704
50°	1000	3110	733
55°	281	1261	220
60°	45	252	23
65°	0	27	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 5635 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	341.3	16.0
10°-20°	672.8	31.5
20°-30°	542.7	25.4
30°-40°	377.0	17.7
40°-50°	174.2	8.2
50°-60°	24.5	1.1
60°-70°	0.8	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1556.8	73.0
0°-40°	1933.8	90.7
0°-60°	2132.5	100.0
0°-90°	2133.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2133.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3947	3947	3947	3947	3947	
5°	3800	3780	3753	3799	3802	341
15°	2454	2486	2415	2449	2449	676
25°	1178	1152	1132	1148	1134	552
35°	617	617	601	590	588	386
45°	201	240	247	224	162	163
55°	10	16	45	13	8	13
65°	0	0	1	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3946.6	3946.6	3946.6	3946.6	3946.6
2.5°	3944.3	3929.8	3895.3	3926.4	3917.0
5°	3800.0	3779.9	3753.1	3799.4	3802.2
7.5°	3481.7	3488.2	3463.4	3514.4	3509.0
10°	3224.0	3228.8	3226.1	3242.7	3224.0
12.5°	2925.2	2944.6	2908.0	2933.8	2941.7
15°	2454.4	2485.7	2415.3	2449.4	2448.7
17.5°	2012.9	2009.7	1973.3	1979.7	1977.6
20°	1723.3	1718.4	1687.7	1682.8	1686.3
22.5°	1475.2	1467.0	1456.1	1443.9	1448.5
25°	1178.5	1152.1	1131.5	1148.3	1133.7
27.5°	945.9	945.5	928.6	930.5	933.3
30°	837.8	832.9	816.5	817.0	808.7
32.5°	741.7	745.1	724.9	720.8	712.5
35°	616.6	616.6	601.0	590.3	588.2
37.5°	500.7	499.4	488.3	473.1	467.7
40°	426.7	423.3	416.1	397.4	389.7
42.5°	342.5	351.8	344.9	326.2	314.6
45°	201.3	240.2	246.8	224.0	162.2
47.5°	86.5	129.3	164.7	107.4	55.9
50°	39.8	73.2	123.8	52.8	29.2
52.5°	23.3	40.0	91.9	30.9	18.3
55°	10.0	15.5	44.8	12.7	7.8
57.5°	3.7	6.8	16.9	5.5	3.0
60°	1.4	2.8	7.8	2.1	0.7
62.5°	0.3	1.1	3.8	1.0	0.1
65°	0.0	0.0	0.7	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

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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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4H	2H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00