

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: P855501

Luminaire Tested: SQ2-PR1-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

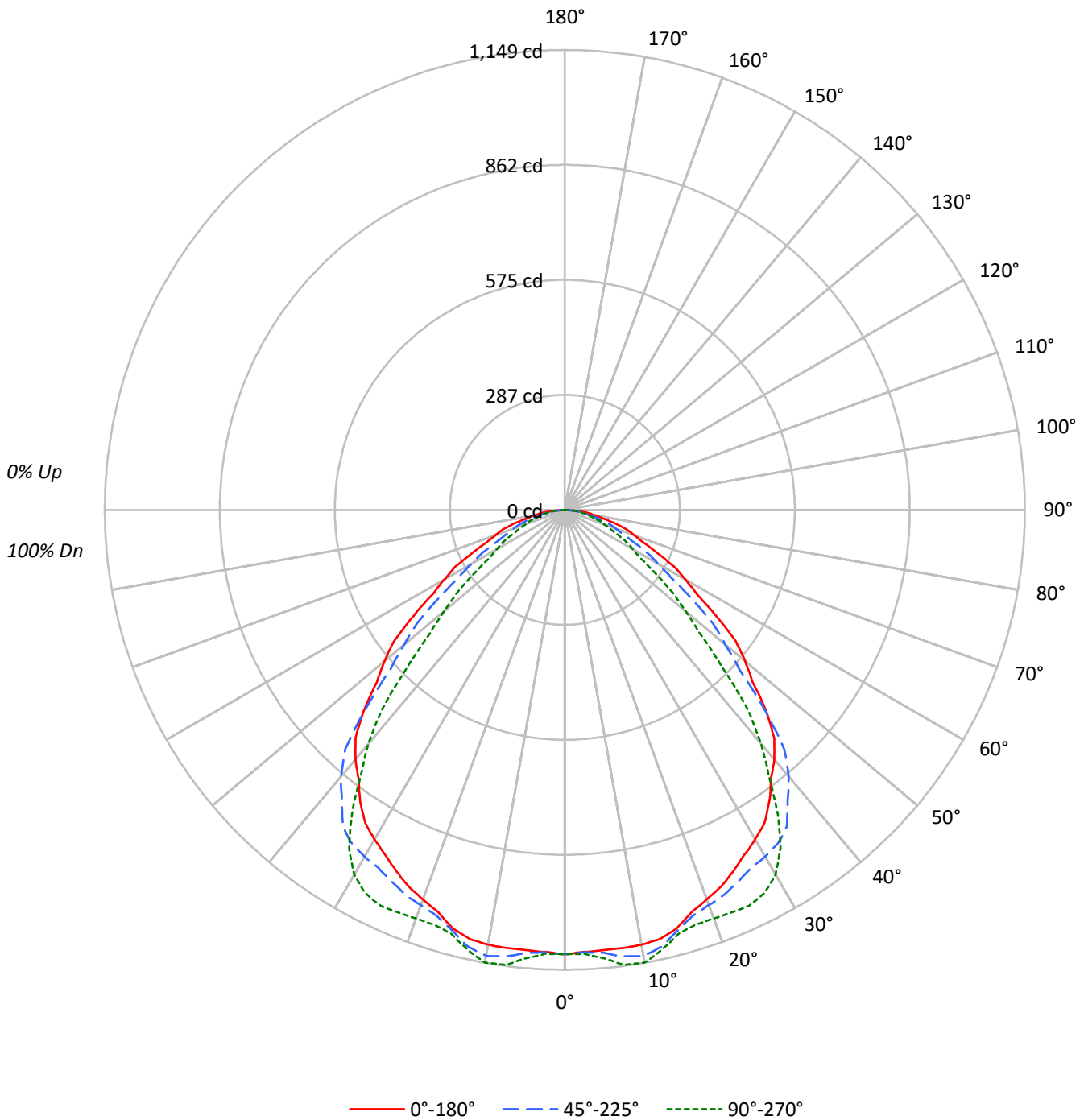
Test Method: LM-79-2019  
Report Number: P855501  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PR1-050D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2670.7 lumens  
Efficiency: N/A  
Efficacy: 150.0 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: Direct  
  
Input Watts (W): 17.8  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100	
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	90	89	87			87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75			75	
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65			65	
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56	
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50	
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44			44	
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39			39	
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35			35	
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32			32	
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29			29	

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

	0°	45°	90°
0°	17925	17925	17925
5°	17901	18011	18232
10°	18090	18554	18831
15°	18084	18178	18330
20°	17792	18063	18667
25°	17742	18246	19434
30°	17723	18651	19621
35°	17554	19048	18268
40°	17150	18341	16075
45°	16228	16098	12714
50°	14752	13162	9864
55°	12966	10832	7676
60°	11218	8661	6323
65°	9685	7179	5536
70°	8710	6359	4914
75°	7979	5508	4517
80°	6946	4417	4417
85°	5039	3983	2093

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 17543 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.2	4.0
10°-20°	310.3	11.6
20°-30°	479.7	18.0
30°-40°	577.0	21.6
40°-50°	518.1	19.4
50°-60°	347.1	13.0
60°-70°	201.9	7.6
70°-80°	103.7	3.9
80°-90°	25.6	1.0
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°	897.3	33.6
0°-40°	1474.3	55.2
0°-60°	2339.5	87.6
0°-90°	2670.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2670.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1104	1123	1111	1114	1125	105
15°	1082	1126	1088	1091	1097	304
25°	996	1036	1024	1062	1091	459
35°	891	898	966	948	927	555
45°	711	768	705	594	557	544
55°	461	478	385	297	273	414
65°	254	259	188	152	145	256
75°	128	125	88	75	72	136
85°	27	22	22	15	11	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1110.2	1110.2	1110.2	1110.2	1110.2
2.5°	1105.6	1118.9	1106.5	1107.6	1110.2
5°	1104.5	1123.3	1111.3	1113.8	1124.9
7.5°	1104.3	1131.1	1125.3	1132.2	1146.8
10°	1103.4	1135.5	1131.7	1133.1	1148.6
12.5°	1097.9	1135.4	1118.1	1116.7	1125.1
15°	1081.9	1126.1	1087.5	1091.0	1096.6
17.5°	1053.6	1099.9	1063.1	1075.5	1086.4
20°	1035.5	1080.9	1051.3	1067.6	1086.4
22.5°	1019.2	1064.6	1040.5	1063.2	1089.1
25°	995.9	1035.7	1024.2	1062.2	1090.9
27.5°	971.4	994.8	1008.5	1059.5	1079.6
30°	950.6	966.1	1000.4	1044.8	1052.4
32.5°	928.0	937.2	989.5	1012.6	1002.7
35°	890.6	898.4	966.4	947.9	926.8
37.5°	846.3	862.2	914.6	861.1	837.0
40°	813.7	840.3	870.2	790.5	762.7
42.5°	773.8	816.4	811.4	709.7	675.8
45°	710.7	768.3	705.0	594.3	556.8
47.5°	636.2	695.3	591.9	493.1	457.9
50°	587.3	634.9	524.0	431.4	392.7
52.5°	537.5	571.8	466.0	373.6	338.4
55°	460.6	478.2	384.8	297.1	272.7
57.5°	390.0	401.3	314.4	239.9	222.0
60°	347.4	355.1	268.2	210.1	195.8
62.5°	308.5	314.5	231.1	184.9	174.0
65°	253.5	259.0	187.9	152.5	144.9
67.5°	209.8	212.6	154.6	126.9	119.5
70°	184.5	185.6	134.7	109.7	104.1
72.5°	161.8	160.2	115.7	95.2	91.4
75°	127.9	124.6	88.3	74.7	72.4
77.5°	95.5	92.0	62.0	57.5	57.5
80°	74.7	70.3	47.5	47.5	47.5
82.5°	55.7	49.5	36.7	36.7	35.8
85°	27.2	21.6	21.5	14.6	11.3
87.5°	7.2	7.2	2.7	2.7	2.7
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	20.73	22.23	21.09	22.54	22.85	17.45	18.95	17.82	19.26	19.58
	3H	22.01	23.35	22.39	23.68	24.04	18.57	19.91	18.95	20.23	20.60
	4H	22.49	23.74	22.89	24.09	24.47	19.00	20.25	19.40	20.60	20.98
	6H	22.84	23.99	23.25	24.36	24.75	19.36	20.51	19.77	20.88	21.27
	8H	22.94	24.04	23.36	24.43	24.83	19.46	20.56	19.89	20.95	21.35
	12H	22.99	24.04	23.42	24.42	24.85	19.49	20.54	19.92	20.92	21.35
4H	2H	20.88	22.14	21.28	22.48	22.86	18.10	19.35	18.50	19.70	20.08
	3H	22.41	23.45	22.82	23.85	24.25	19.42	20.46	19.83	20.86	21.26
	4H	23.03	23.96	23.46	24.37	24.81	19.95	20.88	20.38	21.30	21.74
	6H	23.51	24.32	23.97	24.76	25.22	20.42	21.22	20.88	21.67	22.13
	8H	23.66	24.41	24.12	24.86	25.32	20.55	21.30	21.02	21.75	22.22
	12H	23.74	24.41	24.22	24.89	25.36	20.60	21.27	21.08	21.75	22.22
8H	4H	23.10	23.85	23.56	24.30	24.76	20.30	21.05	20.76	21.50	21.97
	6H	23.67	24.29	24.17	24.78	25.26	20.85	21.48	21.35	21.97	22.45
	8H	23.87	24.43	24.38	24.94	25.42	21.04	21.60	21.55	22.11	22.60
	12H	24.00	24.49	24.51	24.98	25.55	21.13	21.62	21.64	22.12	22.68
12H	4H	23.08	23.76	23.57	24.24	24.71	20.34	21.02	20.83	21.49	21.97
	6H	23.65	24.21	24.17	24.72	25.21	20.91	21.47	21.43	21.98	22.47
	8H	23.89	24.39	24.40	24.88	25.45	21.15	21.64	21.66	22.14	22.70