

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: P854963

Luminaire Tested: SQ2-PH1-050U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

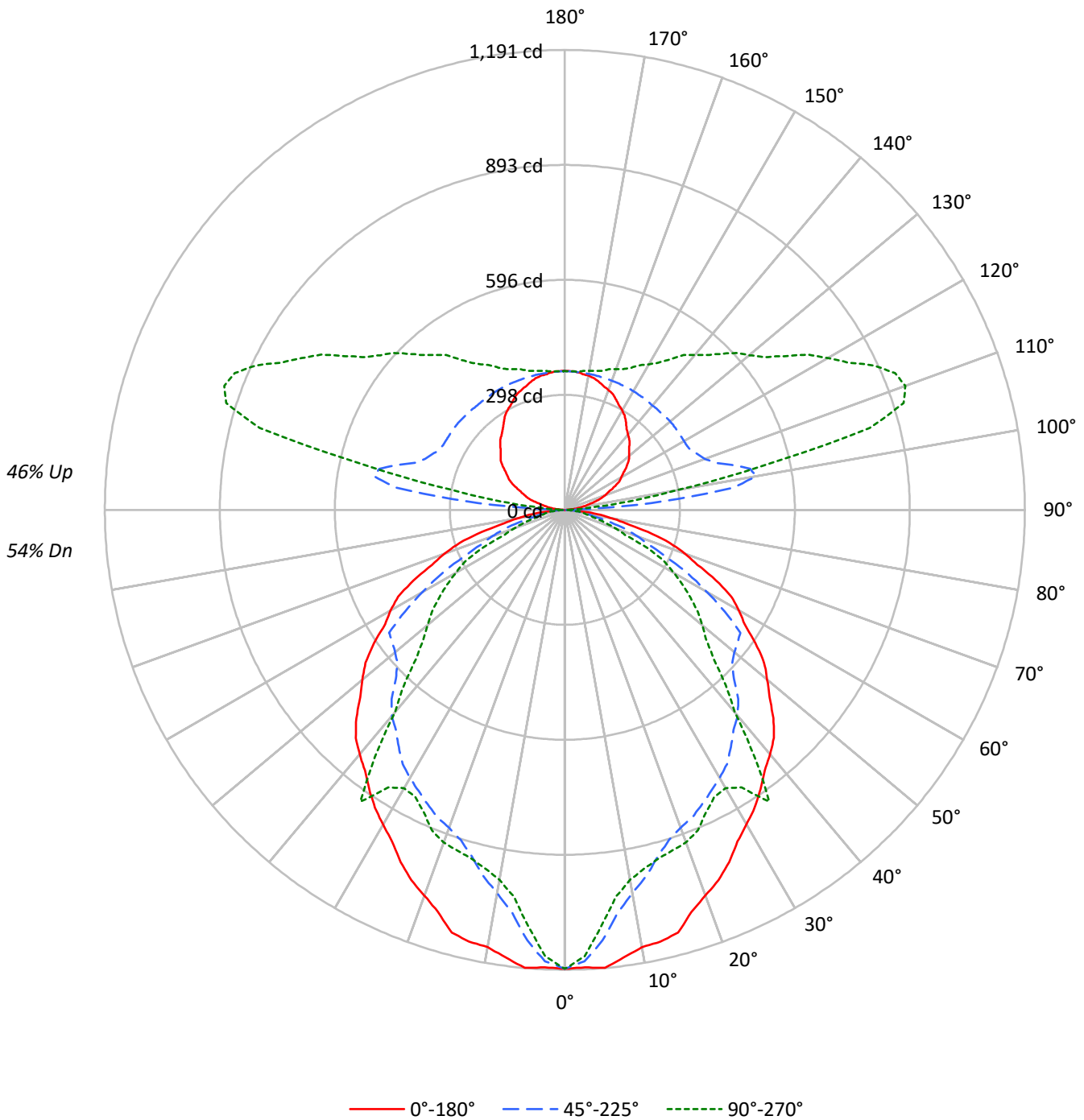
Test Method: LM-79-2019  
Report Number: P854963  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-050U-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4861.5 lumens  
Efficiency: N/A  
Efficacy: 149.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 32.6  
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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				
1	99	95	91	87	92	88	85	82	75	73	71	64	62	61	53	52	51	46				
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39				
3	82	73	66	60	76	68	62	56	59	54	50	50	46	43	42	39	37	33				
4	75	65	57	51	70	60	53	48	52	47	42	45	40	37	37	34	32	28				
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	34	30	28	25				
6	64	52	44	38	59	48	41	36	42	36	32	36	32	28	31	27	25	22				
7	59	47	39	33	55	44	37	32	38	32	28	33	28	25	28	24	22	19				
8	55	42	35	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17				
9	51	39	31	26	47	36	30	25	32	26	23	28	23	20	24	20	18	16				
10	48	36	28	24	44	34	27	22	29	24	20	26	21	18	22	19	16	14				

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

	0°	45°	90°
0°	19186	19186	19186
5°	19297	18141	17537
10°	18853	16516	15942
15°	18937	15535	15629
20°	18261	15055	15756
25°	17927	14986	15389
30°	17538	14945	15515
35°	17404	14775	18185
40°	17420	14680	14417
45°	17427	14123	12417
50°	17181	14398	11645
55°	16963	15626	11173
60°	16795	13692	10479
65°	16500	11102	9116
70°	15583	9446	6510
75°	13893	7124	4934
80°	11353	4621	4621
85°	7114	4187	3149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17427 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.6	2.2
10°-20°	275.0	5.7
20°-30°	403.3	8.3
30°-40°	488.4	10.0
40°-50°	480.3	9.9
50°-60°	418.1	8.6
60°-70°	290.7	6.0
70°-80°	137.8	2.8
80°-90°	30.8	0.6
90°-100°	143.2	2.9
100°-110°	454.2	9.3
110°-120°	445.4	9.2
120°-130°	362.4	7.5
130°-140°	295.5	6.1
140°-150°	230.4	4.7
150°-160°	166.0	3.4
160°-170°	101.4	2.1
170°-180°	34.2	0.7
0°-30°	782.9	16.1
0°-40°	1271.3	26.1
0°-60°	2169.6	44.6
0°-90°	2628.9	54.1
90°-120°	1042.7	21.4
90°-150°	1931.0	39.7
90°-180°	2233.0	45.9
0°-180°	4861.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1191	1189	1119	1084	1082	112
15°	1133	1009	929	923	935	316
25°	1006	856	841	867	864	463
35°	883	714	750	814	923	553
45°	763	565	618	640	544	587
55°	603	440	555	400	397	538
65°	432	303	291	239	239	424
75°	223	154	114	81	79	236
85°	38	25	23	18	17	51
90°	0	1	3	3	3	2
95°	19	58	260	96	62	22
105°	79	111	448	853	817	83
115°	141	168	362	751	884	139
125°	196	219	356	589	694	174
135°	236	260	354	507	571	182
145°	276	297	354	437	476	173
155°	314	325	355	390	406	145
165°	343	346	356	370	373	97
175°	358	357	358	361	360	34
180°	360	360	360	360	360	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1185.6	1198.0	1170.2	1159.4	1157.6
5°	1190.6	1189.4	1119.3	1084.3	1082.0
7.5°	1168.9	1134.6	1050.8	1012.2	1010.3
10°	1149.9	1098.0	1007.4	972.4	972.4
12.5°	1145.3	1063.4	972.1	946.2	951.5
15°	1132.9	1009.1	929.4	922.9	935.0
17.5°	1091.7	958.4	896.1	911.0	925.1
20°	1062.8	931.3	876.2	903.7	917.0
22.5°	1038.4	905.1	861.8	891.7	898.9
25°	1006.3	855.9	841.2	867.1	863.8
27.5°	967.8	810.9	820.6	836.4	838.5
30°	940.7	783.8	801.6	817.8	832.2
32.5°	914.5	752.2	780.8	819.2	852.1
35°	883.0	713.9	749.6	814.3	922.6
37.5°	850.0	668.7	718.2	772.6	807.1
40°	826.5	636.3	696.5	763.6	684.0
42.5°	801.2	611.0	663.9	750.6	616.2
45°	763.2	565.3	618.5	640.1	543.8
47.5°	718.4	529.8	587.7	533.7	496.1
50°	684.0	506.1	573.2	487.9	463.6
52.5°	650.6	481.4	563.3	450.1	433.7
55°	602.6	440.2	555.1	400.1	396.9
57.5°	551.8	398.1	490.9	356.7	362.5
60°	520.1	370.9	424.0	331.2	324.5
62.5°	486.6	344.5	361.6	298.6	291.9
65°	431.9	302.6	290.6	238.6	238.6
67.5°	371.8	259.0	235.4	195.3	168.7
70°	330.1	230.7	200.1	155.6	137.9
72.5°	285.8	200.5	163.9	127.5	107.2
75°	222.7	154.2	114.2	81.4	79.1
77.5°	161.0	111.0	76.9	60.4	60.6
80°	122.1	84.6	49.7	48.6	49.7
82.5°	85.9	58.1	37.1	38.7	38.9
85°	38.4	25.2	22.6	18.1	17.0
87.5°	8.1	7.5	5.2	5.2	5.2
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.3	25.1	80.3	26.7	18.8
95°	19.2	57.9	260.0	96.4	62.2
97.5°	35.7	75.1	440.5	275.2	168.9
100°	47.5	85.0	502.0	457.6	297.4
102.5°	60.2	96.0	491.2	672.1	514.4
105°	79.1	111.1	447.7	852.7	817.3
107.5°	98.1	127.8	406.4	871.6	919.3
110°	110.8	139.5	385.5	849.9	938.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	123.5	150.4	373.8	812.5	924.8
115°	141.3	167.9	361.8	751.4	884.0
117.5°	158.7	184.0	357.1	692.6	826.4
120°	169.6	193.9	356.2	656.3	785.7
122.5°	180.5	203.9	356.2	627.3	747.7
125°	195.6	218.8	356.2	589.2	694.1
127.5°	208.9	231.2	356.2	559.7	649.1
130°	217.1	240.3	356.2	542.3	622.9
132.5°	225.2	248.4	355.2	528.5	601.3
135°	236.3	259.5	353.9	506.8	571.0
137.5°	247.2	271.5	353.7	486.1	543.4
140°	254.4	278.7	352.8	471.5	523.5
142.5°	263.4	286.8	353.7	456.9	505.4
145°	275.9	296.9	353.9	437.2	476.0
147.5°	288.3	306.2	354.1	419.9	451.6
150°	297.4	311.7	355.0	409.9	435.3
152.5°	304.6	317.1	355.0	401.6	422.6
155°	314.3	325.4	355.0	390.4	405.9
157.5°	324.7	332.2	356.2	383.5	394.1
160°	330.1	336.7	356.2	378.9	387.8
162.5°	335.6	340.4	356.2	375.3	381.5
165°	342.6	345.9	356.2	369.7	373.1
167.5°	349.1	350.0	357.3	365.9	368.8
170°	352.8	352.8	357.3	364.1	365.2
172.5°	354.6	355.5	357.3	362.3	362.5
175°	358.4	357.3	358.4	360.6	359.5
177.5°	359.5	358.6	358.6	360.3	358.6
180°	359.5	359.5	359.5	359.5	359.5

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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	17.96	18.85	18.88	19.79	21.01	16.63	17.53	17.56	18.47	19.68
	3H	19.99	20.79	20.92	21.74	22.97	17.67	18.47	18.61	19.42	20.65
	4H	20.72	21.48	21.67	22.43	23.68	17.89	18.64	18.84	19.59	20.84
	6H	21.21	21.90	22.17	22.86	24.12	18.03	18.73	18.99	19.69	20.94
	8H	21.33	21.99	22.30	22.97	24.23	18.06	18.73	19.03	19.70	20.96
	12H	21.38	22.01	22.35	22.98	24.26	18.06	18.69	19.04	19.66	20.94
4H	2H	18.34	19.10	19.30	20.05	21.29	17.28	18.03	18.24	18.99	20.23
	3H	20.45	21.08	21.42	22.06	23.32	18.46	19.09	19.43	20.07	21.33
	4H	21.27	21.84	22.24	22.82	24.10	18.74	19.31	19.71	20.29	21.57
	6H	21.85	22.35	22.84	23.35	24.63	18.95	19.44	19.94	20.44	21.72
	8H	22.02	22.48	23.01	23.48	24.77	19.01	19.46	19.99	20.46	21.76
	12H	22.09	22.51	23.10	23.52	24.82	19.01	19.43	20.02	20.44	21.74
8H	4H	21.29	21.75	22.27	22.74	24.04	18.96	19.42	19.95	20.41	21.71
	6H	21.94	22.32	22.95	23.36	24.65	19.23	19.61	20.24	20.65	21.94
	8H	22.17	22.50	23.19	23.52	24.84	19.33	19.67	20.36	20.69	22.00
	12H	22.28	22.57	23.31	23.59	24.95	19.38	19.67	20.40	20.69	22.05
12H	4H	21.24	21.65	22.25	22.66	23.97	18.96	19.37	19.96	20.38	21.68
	6H	21.91	22.25	22.94	23.27	24.59	19.26	19.59	20.28	20.62	21.93
	8H	22.15	22.44	23.17	23.46	24.82	19.38	19.67	20.40	20.69	22.05