

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: P855433

Luminaire Tested: SQ2-FB-050U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855433
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-050U-050D-840-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

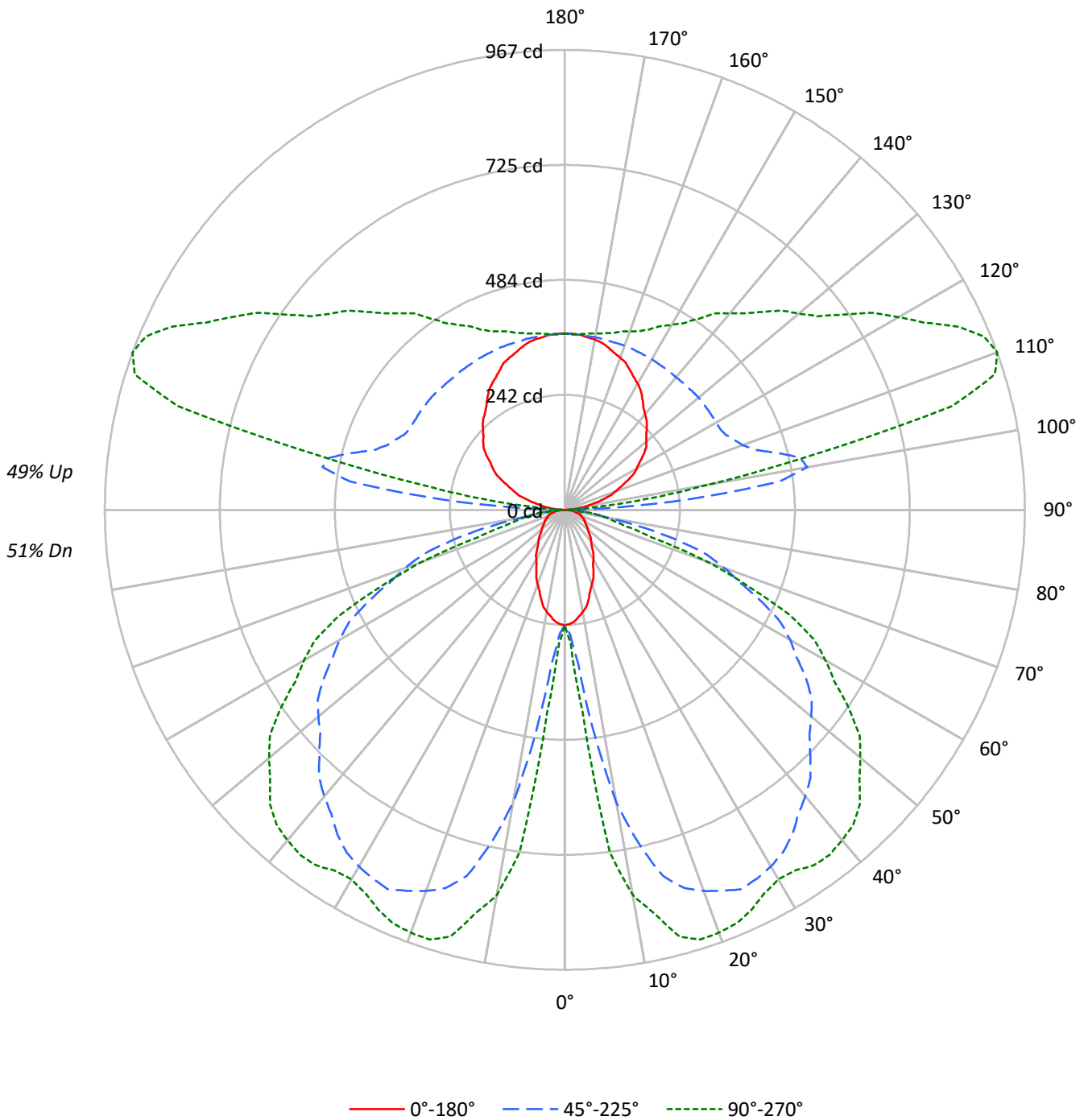
Lumens per Lamp: N/A
Luminaire Lumens: 4697.0 lumens
Efficiency: N/A
Efficacy: 144.1 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51				
1	98	93	89	86	90	86	83	80	73	71	69	61	60	58	50	49	48	43				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	44	42	40	35				
3	81	71	63	57	74	66	59	54	56	51	47	47	43	40	38	36	33	29				
4	73	62	54	48	67	58	51	45	49	44	39	41	37	34	34	31	28	24				
5	67	55	47	41	62	51	44	38	44	38	33	37	32	29	30	27	24	21				
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18				
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	24	21	18	16				
8	53	40	32	26	48	37	30	25	32	26	22	27	22	19	22	19	16	14				
9	49	36	29	23	45	34	27	22	29	23	19	25	20	17	20	17	14	12				
10	45	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3914	3914	3914
5°	3815	5289	6932
10°	3572	10242	13490
15°	3234	13324	15525
20°	2864	14658	16259
25°	2533	15675	16527
30°	2237	16144	16731
35°	1999	16425	17986
40°	1817	16579	19110
45°	1676	16657	20011
50°	1580	16978	20374
55°	1543	17419	20535
60°	1579	17651	20434
65°	1647	17410	19859
70°	1704	16834	15021
75°	1890	15122	8291
80°	1953	7801	7689
85°	1945	5391	3242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 20722 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.6	0.9
10°-20°	185.4	3.9
20°-30°	326.2	6.9
30°-40°	422.2	9.0
40°-50°	465.6	9.9
50°-60°	434.8	9.3
60°-70°	336.0	7.2
70°-80°	155.0	3.3
80°-90°	30.1	0.6
90°-100°	147.6	3.1
100°-110°	468.1	10.0
110°-120°	459.0	9.8
120°-130°	373.5	8.0
130°-140°	304.6	6.5
140°-150°	237.5	5.1
150°-160°	171.1	3.6
160°-170°	104.5	2.2
170°-180°	35.3	0.8
0°-30°	552.2	11.8
0°-40°	974.3	20.7
0°-60°	1874.7	39.9
0°-90°	2395.8	51.0
90°-120°	1074.7	22.9
90°-150°	1990.3	42.4
90°-180°	2301.0	49.0
0°-180°	4697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	242	242	242	242	242	
5°	235	270	326	398	428	22
15°	194	381	797	892	929	54
25°	142	512	880	919	928	65
35°	101	494	833	862	912	64
45°	73	379	730	838	876	57
55°	55	226	619	711	730	49
65°	43	128	456	511	520	42
75°	30	78	242	130	133	31
85°	10	23	29	20	18	11
90°	0	1	4	4	4	1
95°	20	60	268	99	64	23
105°	82	115	462	879	842	86
115°	146	173	373	774	911	144
125°	202	226	367	607	715	179
135°	244	268	365	522	588	188
145°	284	306	365	451	491	178
155°	324	335	366	402	418	149
165°	353	356	367	381	385	100
175°	369	368	369	372	371	35
180°	371	371	371	371	371	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	242.4	242.4	242.4	242.4	242.4
2.5°	240.5	250.6	262.0	275.2	280.6
5°	235.4	269.6	326.3	398.1	427.7
7.5°	226.3	295.8	474.6	666.6	725.8
10°	217.9	314.8	624.7	790.8	822.8
12.5°	208.6	340.1	718.8	835.6	868.5
15°	193.5	381.4	797.1	892.3	928.8
17.5°	177.8	428.1	833.5	927.4	947.2
20°	166.7	460.7	853.1	933.8	946.3
22.5°	156.4	485.0	867.1	928.2	941.6
25°	142.2	512.5	879.9	918.6	927.7
27.5°	128.4	519.8	874.3	899.7	908.5
30°	120.0	517.7	865.9	884.9	897.4
32.5°	112.6	512.1	853.8	872.1	899.2
35°	101.4	494.5	833.3	862.4	912.5
37.5°	91.8	466.3	806.2	865.8	914.1
40°	86.2	445.2	786.6	865.7	906.7
42.5°	80.6	420.5	764.3	856.3	897.4
45°	73.4	378.8	729.5	837.7	876.4
47.5°	66.7	331.9	697.4	811.8	840.0
50°	62.9	300.0	675.9	788.3	811.1
52.5°	59.2	268.9	654.5	760.3	781.3
55°	54.8	225.7	618.8	711.4	729.5
57.5°	50.8	188.7	578.3	657.2	672.0
60°	48.9	168.6	546.6	618.0	632.8
62.5°	46.1	150.3	511.1	577.0	590.9
65°	43.1	127.5	455.7	510.7	519.8
67.5°	38.9	110.5	396.7	430.4	413.3
70°	36.1	102.2	356.6	367.1	318.2
72.5°	34.3	93.1	312.8	285.1	192.3
75°	30.3	78.2	242.4	130.5	132.9
77.5°	24.7	60.5	159.4	100.2	102.3
80°	21.0	49.4	83.9	81.6	82.7
82.5°	17.2	38.5	57.8	60.1	58.5
85°	10.5	23.1	29.1	19.8	17.5
87.5°	3.7	8.5	5.4	5.4	5.4
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.5	25.9	82.7	27.5	19.3
95°	19.8	59.7	268.0	99.4	64.1
97.5°	36.8	77.4	454.0	283.7	174.1
100°	48.9	87.6	517.4	471.6	306.5
102.5°	62.0	98.9	506.3	692.7	530.3
105°	81.6	114.6	461.5	878.9	842.5
107.5°	101.2	131.7	418.8	898.4	947.6
110°	114.2	143.8	397.4	876.0	967.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	127.3	155.0	385.3	837.5	953.2
115°	145.7	173.1	372.9	774.5	911.2
117.5°	163.6	189.6	368.0	713.9	851.8
120°	174.8	199.9	367.1	676.5	809.8
122.5°	186.0	210.1	367.1	646.6	770.7
125°	201.6	225.5	367.1	607.3	715.4
127.5°	215.4	238.3	367.1	576.9	669.1
130°	223.8	247.6	367.1	558.9	642.0
132.5°	232.1	256.0	366.2	544.7	619.8
135°	243.6	267.5	364.8	522.3	588.5
137.5°	254.8	279.8	364.5	501.0	560.1
140°	262.2	287.3	363.6	486.0	539.6
142.5°	271.5	295.7	364.5	470.9	520.9
145°	284.4	306.0	364.8	450.7	490.6
147.5°	297.2	315.6	365.0	432.8	465.5
150°	306.5	321.3	365.9	422.5	448.7
152.5°	314.0	326.9	365.9	414.0	435.6
155°	324.0	335.4	365.9	402.4	418.4
157.5°	334.7	342.4	367.1	395.3	406.3
160°	340.3	347.1	367.1	390.5	399.7
162.5°	345.9	350.9	367.1	386.8	393.2
165°	353.1	356.5	367.1	381.1	384.6
167.5°	359.9	360.8	368.3	377.1	380.2
170°	363.6	363.6	368.3	375.3	376.4
172.5°	365.5	366.4	368.3	373.4	373.6
175°	369.4	368.3	369.4	371.6	370.6
177.5°	370.6	369.7	369.7	371.4	369.7
180°	370.6	370.6	370.6	370.6	370.6

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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	11.90	12.79	12.84	13.76	15.01	20.63	21.53	21.57	22.49	23.75
	3H	12.63	13.43	13.58	14.41	15.68	22.26	23.06	23.21	24.04	25.31
	4H	12.93	13.69	13.90	14.67	15.96	22.44	23.20	23.41	24.18	25.47
	6H	13.15	13.85	14.13	14.83	16.13	22.53	23.23	23.51	24.21	25.51
	8H	13.21	13.88	14.20	14.88	16.17	22.53	23.20	23.52	24.20	25.50
	12H	13.24	13.88	14.23	14.87	16.19	22.51	23.14	23.50	24.14	25.46
4H	2H	16.30	17.06	17.27	18.04	19.32	21.08	21.84	22.05	22.82	24.10
	3H	17.24	17.87	18.22	18.88	20.18	22.91	23.54	23.89	24.55	25.85
	4H	17.52	18.10	18.52	19.10	20.42	23.15	23.73	24.14	24.73	26.05
	6H	17.66	18.15	18.66	19.18	20.50	23.30	23.80	24.30	24.82	26.14
	8H	17.68	18.14	18.68	19.16	20.50	23.32	23.79	24.33	24.81	26.14
	12H	17.67	18.09	18.70	19.12	20.47	23.30	23.72	24.32	24.75	26.09
8H	4H	18.70	19.17	19.71	20.18	21.52	23.27	23.74	24.28	24.75	26.09
	6H	18.94	19.32	19.97	20.38	21.72	23.48	23.86	24.51	24.92	26.25
	8H	19.01	19.35	20.05	20.39	21.75	23.54	23.88	24.58	24.92	26.27
	12H	19.04	19.34	20.08	20.37	21.77	23.53	23.83	24.58	24.87	26.27
12H	4H	18.72	19.14	19.75	20.17	21.51	23.22	23.64	24.25	24.68	26.02
	6H	19.03	19.37	20.07	20.42	21.77	23.46	23.80	24.50	24.84	26.20
	8H	19.14	19.44	20.18	20.47	21.87	23.53	23.83	24.57	24.87	26.26