

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: P854979

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854979
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-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

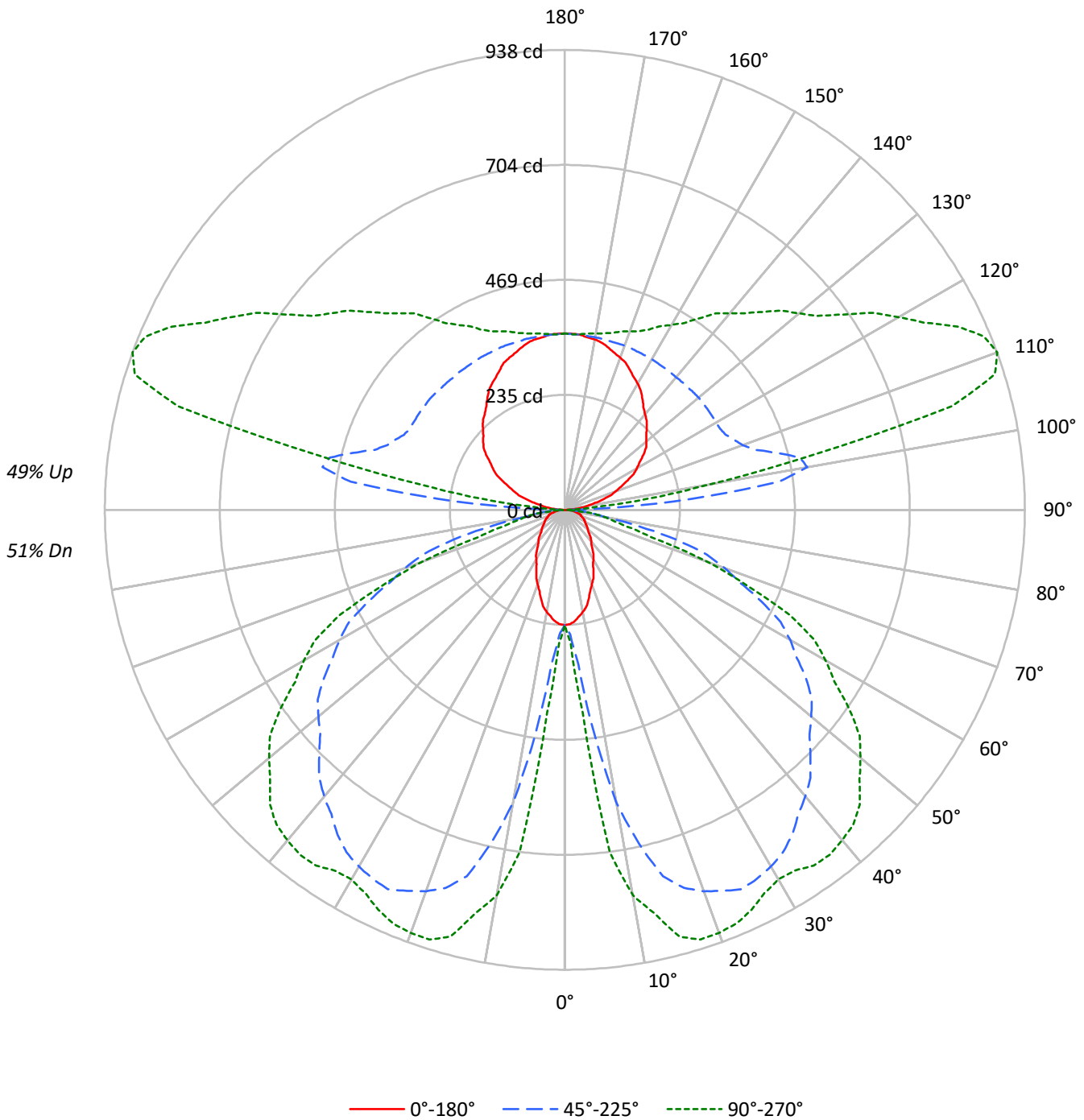
Lumens per Lamp: N/A
Luminaire Lumens: 4557.0 lumens
Efficiency: N/A
Efficacy: 139.8 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	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°	3798	3798	3798
5°	3702	5131	6724
10°	3466	9935	13086
15°	3137	12928	15062
20°	2778	14220	15775
25°	2457	15207	16033
30°	2172	15662	16231
35°	1940	15934	17450
40°	1764	16086	18539
45°	1626	16162	19413
50°	1535	16473	19766
55°	1495	16901	19924
60°	1534	17124	19824
65°	1597	16890	19266
70°	1652	16334	14573
75°	1834	14672	8041
80°	1897	7569	7466
85°	1890	5243	3149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 20104 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.4	0.9
10°-20°	179.9	3.9
20°-30°	316.4	6.9
30°-40°	409.6	9.0
40°-50°	451.7	9.9
50°-60°	421.8	9.3
60°-70°	326.0	7.2
70°-80°	150.4	3.3
80°-90°	29.2	0.6
90°-100°	143.2	3.1
100°-110°	454.2	10.0
110°-120°	445.4	9.8
120°-130°	362.4	8.0
130°-140°	295.5	6.5
140°-150°	230.4	5.1
150°-160°	166.0	3.6
160°-170°	101.4	2.2
170°-180°	34.2	0.8
0°-30°	535.7	11.8
0°-40°	945.3	20.7
0°-60°	1818.8	39.9
0°-90°	2324.4	51.0
90°-120°	1042.7	22.9
90°-150°	1931.0	42.4
90°-180°	2233.0	49.0
0°-180°	4557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	235	235	235	235	235	
5°	228	262	317	386	415	21
15°	188	370	773	866	901	52
25°	138	497	854	891	900	63
35°	98	480	808	837	885	62
45°	71	368	708	813	850	55
55°	53	219	600	690	708	48
65°	42	124	442	495	504	41
75°	29	76	235	127	129	30
85°	10	22	28	19	17	11
90°	0	1	3	3	3	1
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°	235.2	235.2	235.2	235.2	235.2
2.5°	233.4	243.1	254.2	266.9	272.3
5°	228.4	261.5	316.6	386.2	414.9
7.5°	219.6	287.0	460.4	646.7	704.2
10°	211.4	305.4	606.0	767.3	798.2
12.5°	202.4	329.9	697.4	810.7	842.6
15°	187.7	370.1	773.4	865.7	901.1
17.5°	172.5	415.3	808.6	899.8	919.0
20°	161.7	446.9	827.6	906.0	918.1
22.5°	151.7	470.6	841.2	900.6	913.6
25°	137.9	497.3	853.6	891.2	900.0
27.5°	124.6	504.3	848.2	872.9	881.4
30°	116.5	502.2	840.1	858.5	870.6
32.5°	109.2	496.8	828.3	846.1	872.4
35°	98.4	479.7	808.4	836.7	885.3
37.5°	89.1	452.4	782.2	840.0	886.9
40°	83.7	431.9	763.2	839.8	879.6
42.5°	78.2	407.9	741.5	830.8	870.6
45°	71.2	367.5	707.8	812.7	850.2
47.5°	64.7	322.0	676.6	787.6	815.0
50°	61.1	291.0	655.8	764.8	786.9
52.5°	57.4	260.8	635.0	737.6	758.0
55°	53.1	219.0	600.4	690.1	707.8
57.5°	49.3	183.1	561.0	637.6	651.9
60°	47.5	163.6	530.3	599.6	613.9
62.5°	44.8	145.9	495.9	559.8	573.2
65°	41.8	123.7	442.1	495.4	504.3
67.5°	37.8	107.2	384.9	417.5	400.9
70°	35.0	99.2	346.0	356.2	308.7
72.5°	33.2	90.3	303.5	276.6	186.6
75°	29.4	75.9	235.2	126.6	128.9
77.5°	24.0	58.7	154.7	97.2	99.3
80°	20.4	47.9	81.4	79.1	80.3
82.5°	16.7	37.3	56.1	58.3	56.8
85°	10.2	22.4	28.3	19.2	17.0
87.5°	3.6	8.3	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	11.79	12.69	12.73	13.65	14.91	20.53	21.42	21.47	22.39	23.64
	3H	12.52	13.33	13.48	14.30	15.58	22.15	22.96	23.11	23.93	25.21
	4H	12.83	13.59	13.80	14.57	15.85	22.34	23.10	23.30	24.07	25.36
	6H	13.05	13.75	14.03	14.73	16.03	22.42	23.12	23.40	24.11	25.41
	8H	13.11	13.77	14.09	14.77	16.07	22.43	23.10	23.41	24.10	25.39
	12H	13.14	13.77	14.13	14.76	16.09	22.40	23.04	23.39	24.03	25.35
4H	2H	16.19	16.96	17.17	17.93	19.22	20.98	21.74	21.95	22.71	24.00
	3H	17.13	17.77	18.12	18.77	20.07	22.80	23.44	23.79	24.45	25.75
	4H	17.42	18.00	18.41	19.00	20.32	23.04	23.62	24.04	24.62	25.95
	6H	17.55	18.05	18.56	19.07	20.39	23.19	23.69	24.20	24.71	26.04
	8H	17.57	18.04	18.58	19.05	20.39	23.22	23.68	24.23	24.70	26.04
	12H	17.57	17.99	18.59	19.02	20.36	23.19	23.61	24.22	24.65	25.99
8H	4H	18.59	19.06	19.60	20.08	21.41	23.16	23.63	24.17	24.65	25.98
	6H	18.83	19.22	19.87	20.28	21.61	23.37	23.76	24.40	24.81	26.15
	8H	18.90	19.24	19.95	20.29	21.64	23.43	23.77	24.47	24.82	26.17
	12H	18.93	19.23	19.98	20.27	21.67	23.43	23.73	24.47	24.76	26.16
12H	4H	18.61	19.03	19.64	20.07	21.41	23.12	23.54	24.15	24.57	25.91
	6H	18.93	19.27	19.97	20.31	21.66	23.35	23.69	24.40	24.74	26.09
	8H	19.03	19.33	20.08	20.37	21.77	23.42	23.72	24.47	24.76	26.16