

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: P854951

Luminaire Tested: SQ2-PH1-100U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854951
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-100U-050D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

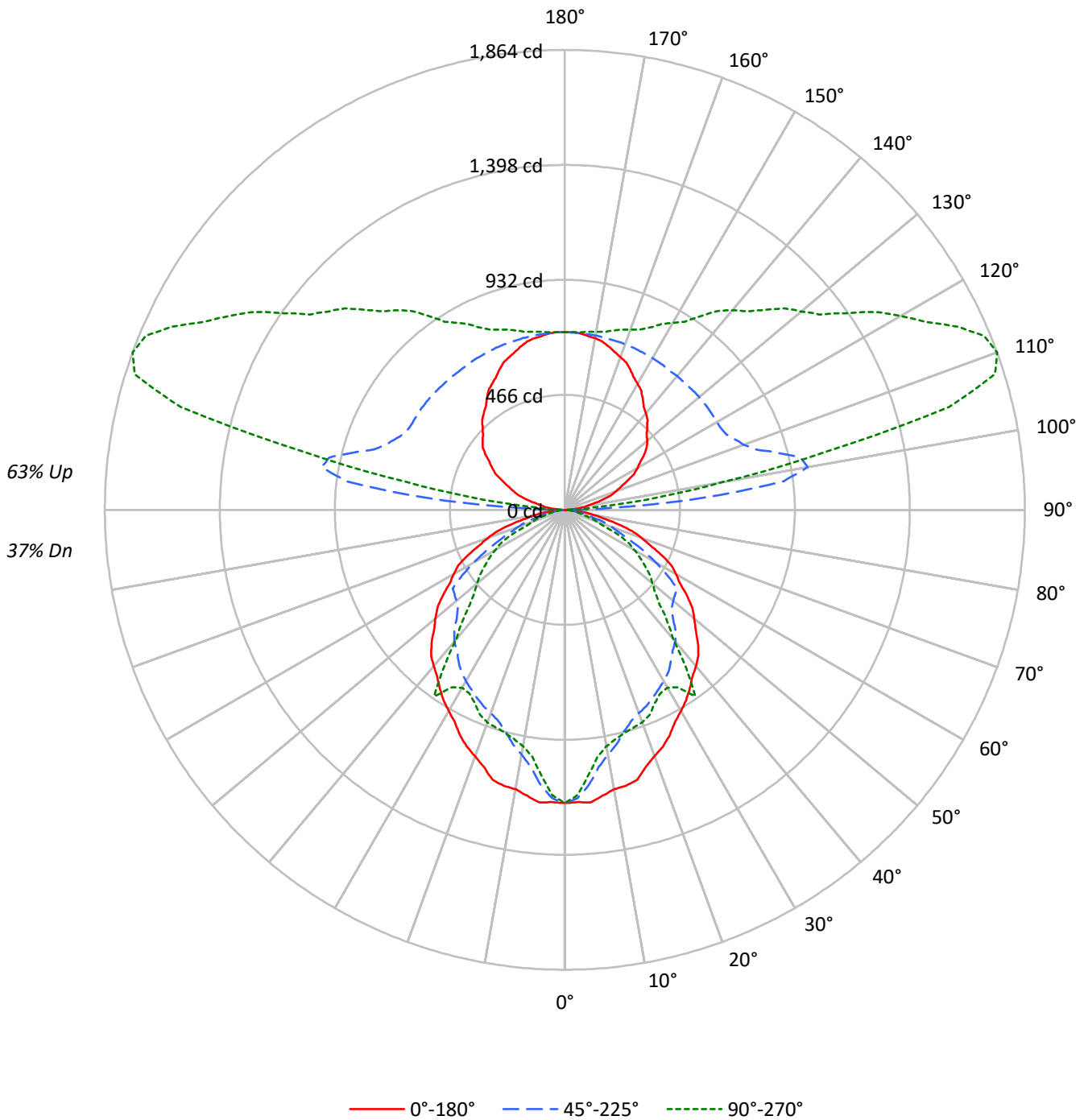
Lumens per Lamp: N/A
Luminaire Lumens: 7110.9 lumens
Efficiency: N/A
Efficacy: 141.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 50.4
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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	95	91	87	84	86	83	79	77	67	65	63	53	51	50	39	38	38	32
2	87	79	74	69	78	72	67	63	59	55	52	46	44	42	35	33	32	27
3	79	70	63	57	71	64	58	53	52	47	44	41	38	35	31	29	27	23
4	72	62	54	48	65	56	50	45	46	41	37	36	33	30	28	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	22	20	17
6	61	49	41	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	44	37	31	51	41	34	29	33	28	25	27	23	20	21	18	16	13
8	52	40	33	27	47	37	30	26	30	25	22	24	21	18	19	16	14	12
9	49	37	29	24	44	34	27	23	28	23	19	22	19	16	17	15	13	11
10	45	34	26	22	41	31	25	20	26	21	17	21	17	15	16	14	12	10

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	1.5
10°-20°	275.0	3.9
20°-30°	403.3	5.7
30°-40°	488.4	6.9
40°-50°	480.3	6.8
50°-60°	418.1	5.9
60°-70°	290.7	4.1
70°-80°	137.8	1.9
80°-90°	31.7	0.4
90°-100°	300.7	4.2
100°-110°	909.5	12.8
110°-120°	887.8	12.5
120°-130°	725.5	10.2
130°-140°	592.2	8.3
140°-150°	461.0	6.5
150°-160°	332.3	4.7
160°-170°	203.4	2.9
170°-180°	68.7	1.0
0°-30°	782.9	11.0
0°-40°	1271.3	17.9
0°-60°	2169.6	30.5
0°-90°	2629.7	37.0
90°-120°	2098.0	29.5
90°-150°	3876.7	54.5
90°-180°	4481.0	63.0
0°-180°	7110.9	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	2	14	8	7	3
95°	37	118	568	210	132	44
105°	158	222	893	1696	1612	166
115°	281	336	722	1495	1755	278
125°	393	436	712	1180	1389	349
135°	471	521	708	1018	1145	365
145°	550	591	708	876	957	345
155°	627	648	712	785	815	289
165°	686	694	716	743	752	193
175°	718	718	719	724	722	68
180°	720	720	720	720	720	



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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	7.7	7.2	6.1	5.9
90°	0.0	2.3	13.6	7.9	6.8
92.5°	12.7	51.1	183.6	60.8	43.9
95°	37.3	117.9	567.5	209.6	132.3
97.5°	72.1	150.1	894.3	591.8	360.3
100°	93.8	170.0	999.3	966.0	648.8
102.5°	118.3	191.9	977.6	1355.0	1080.1
105°	158.3	222.4	893.0	1695.9	1611.8
107.5°	196.3	257.4	811.6	1729.5	1826.9
110°	221.5	280.2	770.9	1687.1	1864.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	245.9	302.8	746.5	1615.8	1839.6
115°	281.4	335.6	722.3	1494.6	1755.4
117.5°	316.7	368.0	713.7	1381.0	1648.0
120°	340.2	388.8	710.9	1314.7	1571.1
122.5°	361.9	407.9	710.9	1256.5	1493.4
125°	393.4	436.4	712.1	1180.3	1389.2
127.5°	418.9	463.6	710.9	1122.8	1301.0
130°	435.2	481.7	710.9	1089.9	1251.3
132.5°	449.7	496.9	710.0	1059.8	1208.8
135°	471.4	521.1	707.6	1017.9	1145.0
137.5°	495.6	542.8	707.6	973.1	1091.0
140°	510.9	557.3	707.6	944.1	1055.8
142.5°	526.3	571.0	706.7	917.5	1015.1
145°	550.5	591.3	707.6	875.6	957.4
147.5°	574.7	609.4	708.9	841.1	903.8
150°	590.1	622.1	709.8	821.9	874.9
152.5°	604.6	633.0	710.7	805.4	848.7
155°	627.4	648.3	712.1	785.1	815.0
157.5°	647.2	664.3	713.4	770.2	791.0
160°	658.9	673.4	714.3	761.0	776.5
162.5°	670.7	681.6	715.2	752.9	765.7
165°	686.1	693.9	715.5	742.8	751.7
167.5°	699.2	703.3	716.8	735.0	738.8
170°	706.4	708.7	717.7	731.3	732.4
172.5°	710.9	712.3	717.7	727.7	727.9
175°	717.7	717.7	718.9	724.5	722.3
177.5°	720.9	720.0	719.1	721.8	720.0
180°	720.0	720.0	720.0	720.0	720.0



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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	16.25	17.00	17.31	18.07	19.51	14.92	15.67	15.99	16.74	18.18
	3H	18.27	18.94	19.34	20.01	21.48	15.95	16.62	17.02	17.69	19.16
	4H	18.99	19.63	20.08	20.70	22.18	16.16	16.79	17.24	17.87	19.34
	6H	19.47	20.06	20.56	21.14	22.62	16.29	16.88	17.39	17.96	19.44
	8H	19.59	20.15	20.69	21.24	22.72	16.32	16.88	17.42	17.97	19.45
	12H	19.63	20.16	20.74	21.25	22.75	16.32	16.85	17.42	17.93	19.44
4H	2H	16.61	17.25	17.70	18.32	19.79	15.55	16.19	16.64	17.26	18.73
	3H	18.71	19.24	19.81	20.34	21.82	16.72	17.25	17.82	18.35	19.84
	4H	19.52	20.00	20.62	21.10	22.60	16.99	17.48	18.09	18.57	20.07
	6H	20.10	20.51	21.21	21.63	23.13	17.19	17.61	18.30	18.72	20.22
	8H	20.26	20.65	21.37	21.76	23.27	17.25	17.63	18.36	18.74	20.26
	12H	20.33	20.68	21.45	21.80	23.32	17.25	17.60	18.38	18.72	20.24
8H	4H	19.53	19.91	20.64	21.02	22.54	17.20	17.59	18.31	18.69	20.21
	6H	20.17	20.49	21.31	21.64	23.15	17.46	17.78	18.60	18.93	20.44
	8H	20.40	20.68	21.54	21.81	23.34	17.57	17.85	18.70	18.98	20.51
	12H	20.51	20.75	21.65	21.88	23.45	17.61	17.85	18.75	18.98	20.55
12H	4H	19.47	19.82	20.60	20.94	22.46	17.19	17.54	18.32	18.66	20.18
	6H	20.15	20.43	21.28	21.56	23.09	17.49	17.77	18.63	18.90	20.44
	8H	20.37	20.62	21.52	21.75	23.31	17.60	17.85	18.75	18.98	20.54