

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: P855377

Luminaire Tested: SQ2-PH1-050U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855377
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-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: -

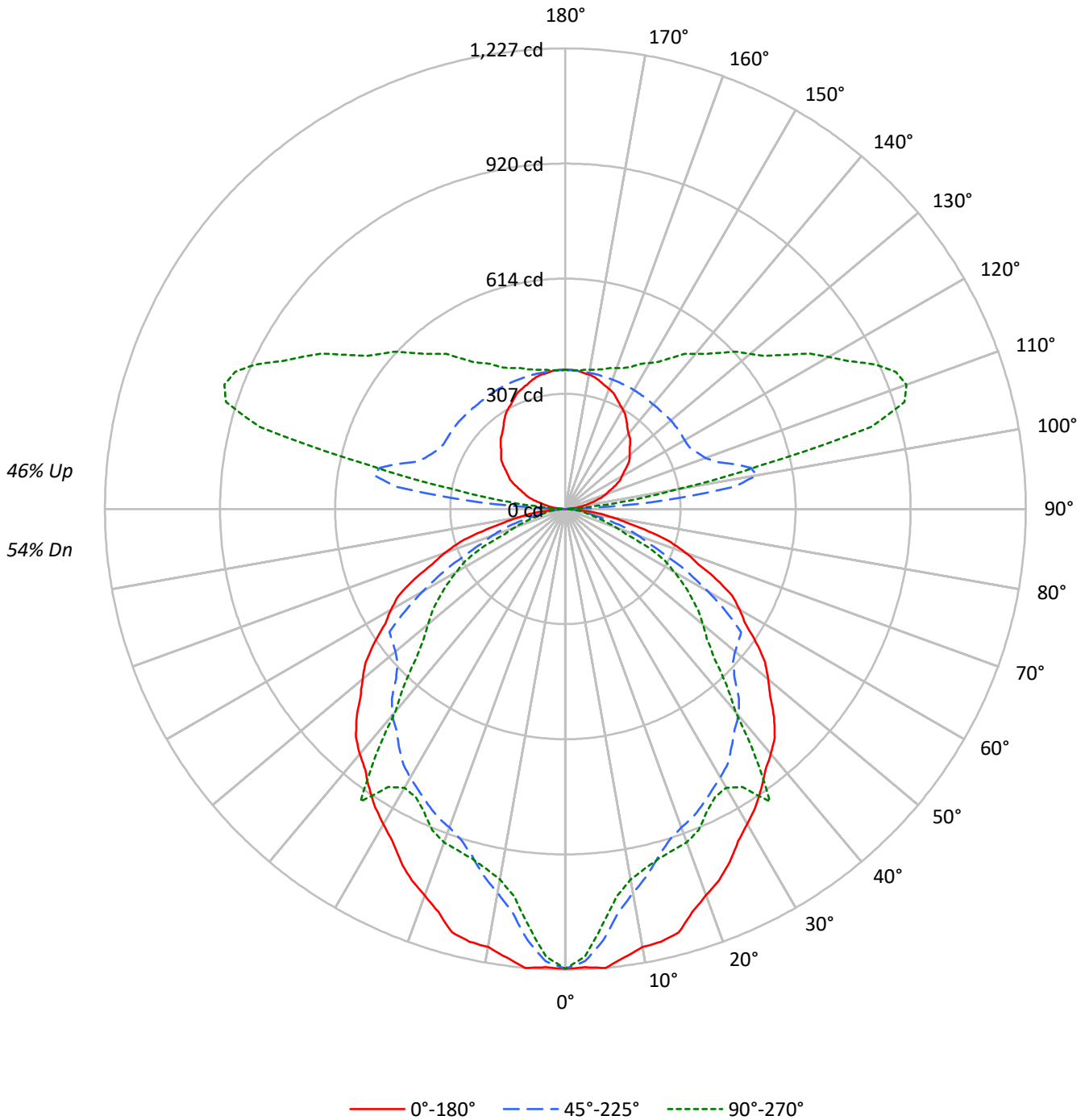
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5010.9 lumens
Efficiency: N/A
Efficacy: 153.7 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

TEST NUMBER: P855377
CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855377

CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

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	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°	19775	19775	19775
5°	19890	18699	18076
10°	19431	17024	16431
15°	19519	16013	16110
20°	18823	15519	16239
25°	18478	15447	15862
30°	18077	15405	15991
35°	17940	15230	18745
40°	17955	15131	14861
45°	17961	14556	12801
50°	17711	14843	12002
55°	17486	16107	11516
60°	17312	14111	10802
65°	17009	11442	9394
70°	16065	9739	6713
75°	14323	7342	5090
80°	11706	4770	4770
85°	7336	4316	3242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17961 cd/sqm



TEST NUMBER: P855377

CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	2.2
10°-20°	283.5	5.7
20°-30°	415.7	8.3
30°-40°	503.4	10.0
40°-50°	495.0	9.9
50°-60°	430.9	8.6
60°-70°	299.6	6.0
70°-80°	142.0	2.8
80°-90°	31.8	0.6
90°-100°	147.6	2.9
100°-110°	468.1	9.3
110°-120°	459.0	9.2
120°-130°	373.5	7.5
130°-140°	304.6	6.1
140°-150°	237.5	4.7
150°-160°	171.1	3.4
160°-170°	104.5	2.1
170°-180°	35.3	0.7
0°-30°	806.9	16.1
0°-40°	1310.3	26.1
0°-60°	2236.3	44.6
0°-90°	2709.7	54.1
90°-120°	1074.7	21.4
90°-150°	1990.3	39.7
90°-180°	2301.0	45.9
0°-180°	5010.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1225	1225	1225	1225	1225	
5°	1227	1226	1154	1118	1115	115
15°	1168	1040	958	951	964	326
25°	1037	882	867	894	890	477
35°	910	736	773	839	951	570
45°	787	583	638	660	561	605
55°	621	454	572	412	409	555
65°	445	312	300	246	246	437
75°	230	159	118	84	82	243
85°	40	26	23	19	18	53
90°	0	1	4	4	4	2
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	



TEST NUMBER: P855377

CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1224.8	1224.8	1224.8	1224.8	1224.8
2.5°	1222.0	1234.9	1206.2	1195.0	1193.1
5°	1227.2	1226.0	1153.7	1117.6	1115.3
7.5°	1204.8	1169.5	1083.1	1043.3	1041.4
10°	1185.2	1131.7	1038.4	1002.2	1002.2
12.5°	1180.6	1096.1	1002.0	975.3	980.8
15°	1167.7	1040.1	958.0	951.3	963.8
17.5°	1125.3	987.9	923.7	939.0	953.5
20°	1095.5	959.9	903.2	931.5	945.1
22.5°	1070.3	932.9	888.3	919.2	926.5
25°	1037.2	882.2	867.1	893.7	890.4
27.5°	997.6	835.8	845.8	862.2	864.3
30°	969.6	807.9	826.3	842.9	857.7
32.5°	942.6	775.3	804.8	844.3	878.2
35°	910.2	735.8	772.7	839.3	951.0
37.5°	876.1	689.2	740.3	796.3	831.9
40°	851.9	655.9	717.9	787.1	705.1
42.5°	825.8	629.8	684.3	773.7	635.1
45°	786.6	582.7	637.5	659.7	560.6
47.5°	740.5	546.1	605.8	550.1	511.4
50°	705.1	521.6	590.9	502.9	477.8
52.5°	670.6	496.2	580.6	463.9	447.0
55°	621.2	453.7	572.2	412.4	409.1
57.5°	568.7	410.3	506.0	367.7	373.6
60°	536.1	382.3	437.0	341.3	334.5
62.5°	501.6	355.1	372.7	307.8	300.9
65°	445.2	311.9	299.5	245.9	245.9
67.5°	383.2	267.0	242.6	201.3	173.9
70°	340.3	237.7	206.3	160.4	142.2
72.5°	294.6	206.6	169.0	131.5	110.5
75°	229.6	159.0	117.7	83.9	81.6
77.5°	166.0	114.4	79.2	62.2	62.5
80°	125.9	87.2	51.3	50.1	51.3
82.5°	88.6	59.9	38.2	39.9	40.1
85°	39.6	26.0	23.3	18.6	17.5
87.5°	8.4	7.7	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



TEST NUMBER: P855377

CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

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



TEST NUMBER: P855377

CATALOG NUMBER: SQ2-PH1-050U-050D-840-UNV-STD-W-4

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	18.07	18.96	18.99	19.90	21.11	16.74	17.63	17.66	18.57	19.78
	3H	20.09	20.89	21.03	21.84	23.08	17.78	18.57	18.71	19.52	20.76
	4H	20.83	21.58	21.78	22.54	23.78	17.99	18.75	18.94	19.70	20.94
	6H	21.31	22.01	22.28	22.97	24.23	18.14	18.83	19.10	19.79	21.05
	8H	21.44	22.10	22.41	23.08	24.33	18.17	18.83	19.14	19.81	21.06
	12H	21.49	22.11	22.46	23.08	24.37	18.17	18.80	19.14	19.77	21.05
4H	2H	18.45	19.20	19.40	20.15	21.40	17.38	18.14	18.34	19.09	20.34
	3H	20.56	21.18	21.52	22.17	23.43	18.57	19.19	19.53	20.18	21.44
	4H	21.37	21.94	22.35	22.92	24.21	18.84	19.42	19.82	20.39	21.68
	6H	21.96	22.45	22.95	23.45	24.74	19.05	19.55	20.04	20.55	21.83
	8H	22.13	22.59	23.12	23.58	24.88	19.11	19.57	20.10	20.57	21.86
	12H	22.20	22.61	23.21	23.62	24.93	19.12	19.53	20.13	20.55	21.85
8H	4H	21.39	21.85	22.38	22.85	24.14	19.06	19.52	20.05	20.52	21.81
	6H	22.05	22.42	23.06	23.46	24.76	19.34	19.71	20.35	20.75	22.05
	8H	22.27	22.60	23.29	23.63	24.94	19.44	19.77	20.46	20.80	22.11
	12H	22.39	22.68	23.41	23.70	25.06	19.48	19.78	20.51	20.80	22.15
12H	4H	21.34	21.76	22.35	22.77	24.07	19.06	19.48	20.07	20.49	21.79
	6H	22.02	22.35	23.04	23.38	24.69	19.37	19.70	20.39	20.72	22.04
	8H	22.25	22.55	23.28	23.56	24.92	19.48	19.78	20.51	20.80	22.15