

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: P855321

Luminaire Tested: SQ2-PR1-050U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855321
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-050U-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

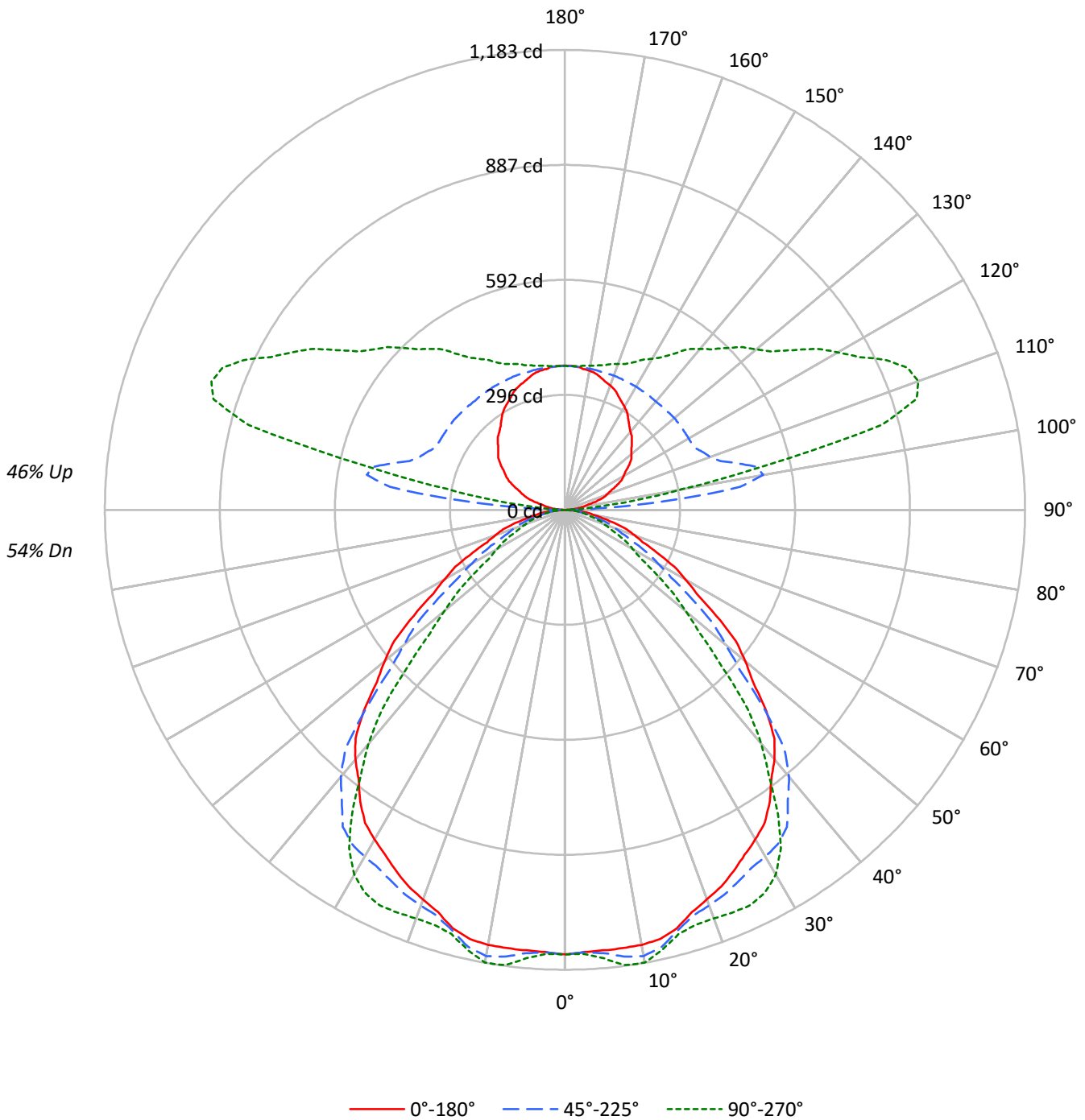
Lumens per Lamp: N/A
Luminaire Lumens: 5052.0 lumens
Efficiency: N/A
Efficacy: 155.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	95	92	88	92	89	86	83	76	74	72	65	63	62	54	53	52	47
2	91	84	78	73	84	78	73	69	68	64	61	58	55	53	49	47	45	41
3	84	74	67	62	77	70	63	58	60	56	52	52	48	45	44	41	39	35
4	77	66	59	53	71	62	55	50	54	49	45	46	42	39	39	36	34	31
5	71	59	51	46	65	56	49	43	48	43	39	42	38	34	36	33	30	27
6	65	53	46	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24
7	60	48	41	35	56	45	38	34	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	35	30	36	31	27	32	27	24	27	24	21	19
9	52	40	33	28	49	38	31	27	33	28	24	29	25	22	25	22	19	17
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18460	18460	18460
5°	18434	18548	18775
10°	18630	19107	19394
15°	18623	18721	18877
20°	18321	18603	19223
25°	18271	18789	20013
30°	18250	19207	20206
35°	18078	19618	18814
40°	17660	18889	16556
45°	16712	16577	13093
50°	15192	13554	10158
55°	13351	11153	7907
60°	11554	8919	6510
65°	9971	7393	5700
70°	8969	6548	5061
75°	8216	5671	4654
80°	7150	4547	4547
85°	5187	4094	2167

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 18066 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.4	2.2
10°-20°	319.6	6.3
20°-30°	494.0	9.8
30°-40°	594.2	11.8
40°-50°	533.5	10.6
50°-60°	357.4	7.1
60°-70°	207.9	4.1
70°-80°	106.8	2.1
80°-90°	26.8	0.5
90°-100°	147.6	2.9
100°-110°	468.1	9.3
110°-120°	459.0	9.1
120°-130°	373.5	7.4
130°-140°	304.6	6.0
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°	924.0	18.3
0°-40°	1518.3	30.1
0°-60°	2409.2	47.7
0°-90°	2750.7	54.4
90°-120°	1074.7	21.3
90°-150°	1990.3	39.4
90°-180°	2301.0	45.5
0°-180°	5052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1137	1157	1144	1147	1158	109
15°	1114	1160	1120	1124	1129	313
25°	1026	1067	1055	1094	1123	473
35°	917	925	995	976	954	572
45°	732	791	726	612	573	560
55°	474	492	396	306	281	426
65°	261	267	194	157	149	264
75°	132	128	91	77	75	140
85°	28	22	22	15	12	35
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1138.6	1152.2	1139.5	1140.6	1143.3
5°	1137.4	1156.8	1144.4	1147.0	1158.4
7.5°	1137.2	1164.8	1158.9	1166.0	1181.0
10°	1136.3	1169.4	1165.4	1166.9	1182.9
12.5°	1130.7	1169.2	1151.4	1150.0	1158.6
15°	1114.1	1159.7	1120.0	1123.6	1129.3
17.5°	1085.0	1132.7	1094.8	1107.6	1118.8
20°	1066.3	1113.1	1082.7	1099.4	1118.8
22.5°	1049.6	1096.3	1071.5	1094.9	1121.6
25°	1025.6	1066.6	1054.7	1093.8	1123.4
27.5°	1000.4	1024.5	1038.6	1091.0	1111.8
30°	978.9	994.9	1030.2	1075.9	1083.8
32.5°	955.6	965.2	1019.0	1042.8	1032.5
35°	917.2	925.2	995.3	976.1	954.5
37.5°	871.5	887.9	941.9	886.8	861.9
40°	837.9	865.3	896.2	814.0	785.5
42.5°	796.9	840.7	835.6	730.8	696.0
45°	731.9	791.2	726.0	612.1	573.4
47.5°	655.2	716.0	609.5	507.8	471.5
50°	604.8	653.8	539.6	444.3	404.4
52.5°	553.6	588.9	479.9	384.7	348.5
55°	474.3	492.5	396.2	305.9	280.9
57.5°	401.6	413.3	323.7	247.1	228.7
60°	357.8	365.7	276.2	216.4	201.6
62.5°	317.7	323.9	238.0	190.4	179.2
65°	261.0	266.8	193.5	157.1	149.2
67.5°	216.1	219.0	159.2	130.6	123.1
70°	190.0	191.1	138.7	112.9	107.2
72.5°	166.7	165.0	119.1	98.0	94.2
75°	131.7	128.3	90.9	76.9	74.6
77.5°	98.4	94.7	63.9	59.2	59.2
80°	76.9	72.4	48.9	48.9	48.9
82.5°	57.3	50.9	37.8	37.8	36.8
85°	28.0	22.3	22.1	15.0	11.7
87.5°	7.5	7.7	3.5	3.5	3.5
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	17.32	18.17	18.24	19.11	20.32	14.04	14.90	14.97	15.84	17.05
	3H	18.55	19.32	19.49	20.26	21.50	15.11	15.87	16.05	16.82	18.05
	4H	19.00	19.72	19.96	20.68	21.92	15.51	16.23	16.46	17.18	18.43
	6H	19.32	19.98	20.28	20.94	22.20	15.84	16.50	16.80	17.46	18.72
	8H	19.40	20.03	20.37	21.01	22.26	15.92	16.56	16.89	17.53	18.78
	12H	19.43	20.03	20.41	21.00	22.28	15.93	16.53	16.91	17.50	18.78
4H	2H	17.39	18.12	18.35	19.07	20.31	14.61	15.33	15.57	16.29	17.53
	3H	18.87	19.47	19.84	20.45	21.71	15.88	16.48	16.85	17.46	18.71
	4H	19.46	20.01	20.44	20.98	22.27	16.38	16.93	17.36	17.91	19.19
	6H	19.91	20.38	20.90	21.38	22.66	16.82	17.29	17.81	18.29	19.57
	8H	20.05	20.48	21.04	21.48	22.77	16.94	17.38	17.93	18.37	19.67
	12H	20.10	20.49	21.11	21.50	22.80	16.96	17.36	17.97	18.37	19.66
8H	4H	19.49	19.93	20.48	20.92	22.21	16.69	17.13	17.68	18.12	19.41
	6H	20.04	20.40	21.05	21.43	22.73	17.22	17.58	18.24	18.62	19.91
	8H	20.23	20.55	21.26	21.58	22.89	17.41	17.73	18.43	18.75	20.06
	12H	20.34	20.62	21.37	21.64	22.99	17.47	17.75	18.50	18.77	20.12
12H	4H	19.45	19.84	20.46	20.85	22.15	16.70	17.10	17.71	18.11	19.41
	6H	20.02	20.34	21.05	21.36	22.67	17.28	17.60	18.31	18.62	19.94
	8H	20.23	20.52	21.26	21.53	22.89	17.49	17.77	18.52	18.79	20.14