

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: P855291

Luminaire Tested: SQ2-PW1-050U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855291
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PW1-050U-100D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

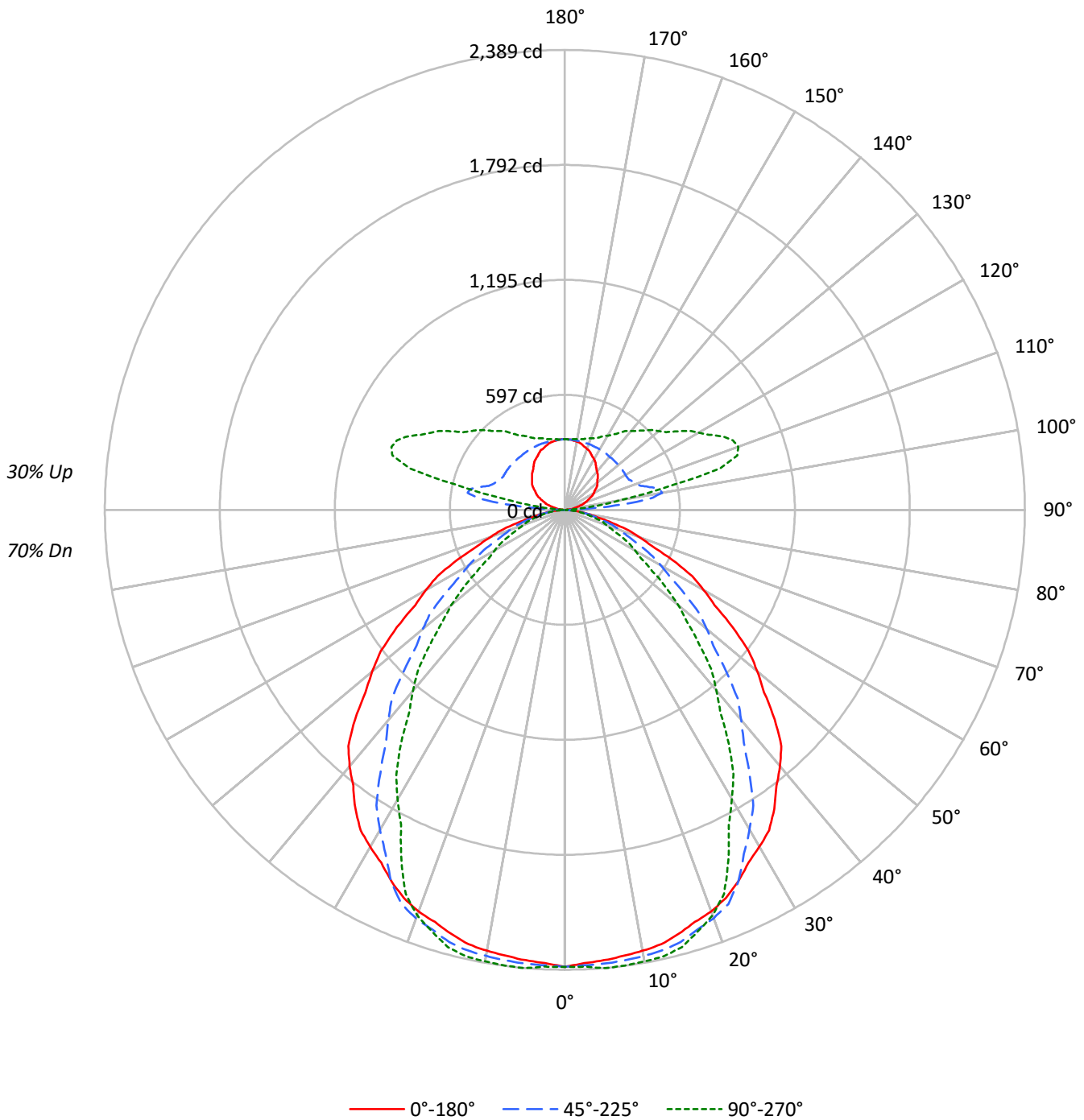
Lumens per Lamp: N/A
Luminaire Lumens: 7547.0 lumens
Efficiency: N/A
Efficacy: 144.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.11 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.4
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	103	99	95	92	97	94	91	88	84	82	79	75	73	72	67	66	64	60
2	95	87	81	76	89	83	78	73	75	71	67	67	64	61	60	58	55	52
3	87	78	70	65	82	74	67	62	67	61	57	60	56	53	54	51	48	45
4	80	69	61	55	75	66	59	53	60	54	50	54	49	46	49	45	42	39
5	74	62	54	48	70	59	52	47	54	48	43	49	44	40	44	40	37	34
6	68	56	48	42	64	54	46	41	49	43	38	44	40	36	40	36	33	31
7	63	51	43	38	60	49	42	36	45	39	34	41	36	32	37	33	30	27
8	59	47	39	34	56	45	38	33	41	35	31	37	32	29	34	30	27	25
9	55	43	35	30	52	41	34	29	38	32	28	35	30	26	32	27	24	22
10	52	39	32	27	49	38	31	27	35	29	25	32	27	24	29	25	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	38319	38319	38319
5°	38063	38357	38723
10°	38133	38579	39059
15°	38123	38842	39295
20°	38139	38799	38527
25°	37933	37973	35799
30°	37675	35779	32365
35°	37381	32924	29229
40°	36636	30014	25821
45°	35200	26994	22555
50°	32760	24129	19306
55°	29968	21318	15651
60°	26863	18542	13501
65°	23492	15973	12004
70°	19204	14195	10881
75°	14947	12264	10012
80°	11139	10507	8833
85°	7540	7966	5039

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35200 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.0	3.0
10°-20°	654.8	8.7
20°-30°	963.6	12.8
30°-40°	1053.6	14.0
40°-50°	945.1	12.5
50°-60°	705.0	9.3
60°-70°	445.5	5.9
70°-80°	220.7	2.9
80°-90°	52.1	0.7
90°-100°	146.2	1.9
100°-110°	463.9	6.1
110°-120°	454.9	6.0
120°-130°	370.1	4.9
130°-140°	301.8	4.0
140°-150°	235.3	3.1
150°-160°	169.5	2.2
160°-170°	103.6	1.4
170°-180°	35.0	0.5
0°-30°	1844.4	24.4
0°-40°	2898.0	38.4
0°-60°	4548.2	60.3
0°-90°	5266.6	69.8
90°-120°	1065.0	14.1
90°-150°	1972.3	26.1
90°-180°	2280.0	30.2
0°-180°	7547.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2373	2373	2373	2373	2373	
5°	2348	2386	2367	2369	2389	223
15°	2281	2325	2324	2340	2351	644
25°	2129	2176	2132	2043	2010	981
35°	1896	1876	1670	1525	1483	1183
45°	1542	1418	1182	1034	988	1182
55°	1065	963	757	594	556	951
65°	615	564	418	336	314	609
75°	240	257	197	165	160	264
85°	41	52	43	29	27	52
90°	0	1	4	4	4	2
95°	20	59	266	98	64	23
105°	81	114	457	871	835	85
115°	144	171	370	768	903	142
125°	200	224	364	602	709	178
135°	241	265	361	518	583	186
145°	282	303	361	447	486	176
155°	321	332	363	399	414	148
165°	350	353	364	378	381	99
175°	366	365	366	368	367	35
180°	367	367	367	367	367	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2373.3	2373.3	2373.3	2373.3	2373.3
2.5°	2357.1	2387.2	2368.0	2370.0	2375.2
5°	2348.5	2386.2	2366.6	2369.4	2389.2
7.5°	2336.7	2374.7	2360.3	2368.4	2387.9
10°	2325.9	2365.8	2353.1	2364.7	2382.4
12.5°	2311.5	2353.1	2344.0	2357.5	2375.2
15°	2280.7	2325.0	2323.7	2339.8	2350.8
17.5°	2245.0	2289.2	2287.1	2291.3	2296.5
20°	2219.7	2263.9	2258.1	2242.3	2242.3
22.5°	2183.5	2231.3	2216.5	2173.2	2159.1
25°	2129.3	2175.7	2131.5	2042.6	2009.5
27.5°	2066.0	2103.5	2014.9	1888.6	1842.6
30°	2020.8	2049.5	1919.1	1780.2	1736.0
32.5°	1973.7	1984.8	1821.4	1677.0	1629.2
35°	1896.5	1876.5	1670.4	1524.8	1482.9
37.5°	1805.1	1745.9	1525.3	1372.8	1326.3
40°	1738.2	1654.3	1424.0	1271.6	1225.1
42.5°	1664.1	1558.8	1328.2	1175.7	1127.5
45°	1541.6	1417.8	1182.2	1034.2	987.8
47.5°	1403.7	1280.8	1045.6	902.4	862.5
50°	1304.2	1184.9	960.6	817.2	768.6
52.5°	1202.9	1096.1	877.4	730.0	663.7
55°	1064.6	963.0	757.3	593.7	556.0
57.5°	922.2	834.3	648.3	499.7	468.8
60°	831.9	754.5	574.2	449.1	418.1
62.5°	745.0	676.5	501.8	402.2	376.5
65°	614.9	563.9	418.1	336.3	314.2
67.5°	488.2	460.0	347.6	275.9	261.3
70°	406.8	398.0	300.7	241.6	230.5
72.5°	336.3	339.8	255.5	209.2	201.6
75°	239.6	257.3	196.6	164.9	160.5
77.5°	163.2	189.7	145.6	122.0	118.4
80°	119.8	146.4	113.0	95.0	95.0
82.5°	83.7	104.9	80.4	71.4	71.4
85°	40.7	51.7	43.0	29.4	27.2
87.5°	10.8	16.4	7.9	6.1	6.1
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.4	25.6	82.0	27.3	19.1
95°	19.6	59.2	265.6	98.5	63.5
97.5°	36.5	76.7	449.8	281.1	172.5
100°	48.5	86.9	512.7	467.4	303.7
102.5°	61.4	98.0	501.6	686.4	525.4
105°	80.9	113.6	457.3	871.0	834.9
107.5°	100.2	130.5	415.0	890.2	939.1
110°	113.2	142.5	393.8	868.1	958.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.1	153.6	381.8	829.9	944.6
115°	144.4	171.4	369.5	767.5	903.1
117.5°	162.1	187.9	364.7	707.5	844.1
120°	173.2	198.0	363.7	670.5	802.6
122.5°	184.2	208.3	363.7	640.7	763.8
125°	199.7	223.5	363.7	601.8	709.0
127.5°	213.4	236.2	363.7	571.6	663.1
130°	221.7	245.4	363.7	553.8	636.3
132.5°	230.1	253.7	362.8	539.8	614.0
135°	241.4	265.0	361.4	517.7	583.2
137.5°	252.4	277.2	361.2	496.5	555.0
140°	259.8	284.7	360.3	481.5	534.7
142.5°	269.1	293.0	361.2	466.7	516.2
145°	281.8	303.2	361.4	446.6	486.2
147.5°	294.5	312.8	361.6	428.9	461.3
150°	303.7	318.4	362.6	418.6	444.6
152.5°	311.0	324.0	362.6	410.2	431.7
155°	321.1	332.4	362.6	398.8	414.5
157.5°	331.7	339.4	363.7	391.7	402.5
160°	337.2	343.9	363.7	387.0	396.1
162.5°	342.7	347.8	363.7	383.3	389.6
165°	349.9	353.2	363.7	377.7	381.1
167.5°	356.6	357.5	364.9	373.7	376.7
170°	360.3	360.3	364.9	371.9	373.0
172.5°	362.1	363.0	364.9	370.0	370.2
175°	366.1	364.9	366.1	368.4	367.2
177.5°	367.2	366.3	366.3	368.2	366.3
180°	367.2	367.2	367.2	367.2	367.2



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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	21.40	22.41	22.18	23.21	24.17	17.89	18.90	18.66	19.69	20.65
	3H	22.74	23.64	23.52	24.44	25.43	19.10	20.01	19.89	20.81	21.80
	4H	23.12	23.97	23.92	24.78	25.78	19.56	20.41	20.37	21.22	22.22
	6H	23.33	24.11	24.15	24.93	25.95	19.88	20.67	20.70	21.49	22.50
	8H	23.36	24.11	24.19	24.95	25.96	19.96	20.71	20.79	21.55	22.56
	12H	23.37	24.08	24.20	24.91	25.95	19.98	20.69	20.81	21.52	22.56
4H	2H	21.52	22.38	22.33	23.19	24.19	18.59	19.44	19.40	20.25	21.25
	3H	23.08	23.79	23.90	24.63	25.65	19.99	20.70	20.81	21.54	22.56
	4H	23.60	24.24	24.43	25.08	26.13	20.54	21.18	21.38	22.03	23.07
	6H	23.94	24.49	24.79	25.36	26.41	20.96	21.51	21.81	22.37	23.43
	8H	24.02	24.53	24.87	25.39	26.46	21.06	21.58	21.92	22.44	23.50
	12H	24.04	24.50	24.91	25.39	26.45	21.09	21.56	21.97	22.44	23.51
8H	4H	23.65	24.16	24.50	25.02	26.09	20.88	21.40	21.74	22.26	23.32
	6H	24.09	24.51	24.97	25.42	26.48	21.39	21.82	22.27	22.72	23.78
	8H	24.23	24.61	25.13	25.51	26.59	21.56	21.93	22.45	22.83	23.91
	12H	24.31	24.64	25.20	25.53	26.66	21.62	21.96	22.52	22.84	23.98
12H	4H	23.61	24.07	24.49	24.96	26.03	20.90	21.37	21.78	22.25	23.32
	6H	24.08	24.46	24.97	25.36	26.44	21.46	21.84	22.35	22.73	23.81
	8H	24.25	24.58	25.14	25.47	26.60	21.65	21.98	22.55	22.87	24.01