

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: P853675

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853675
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-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: -

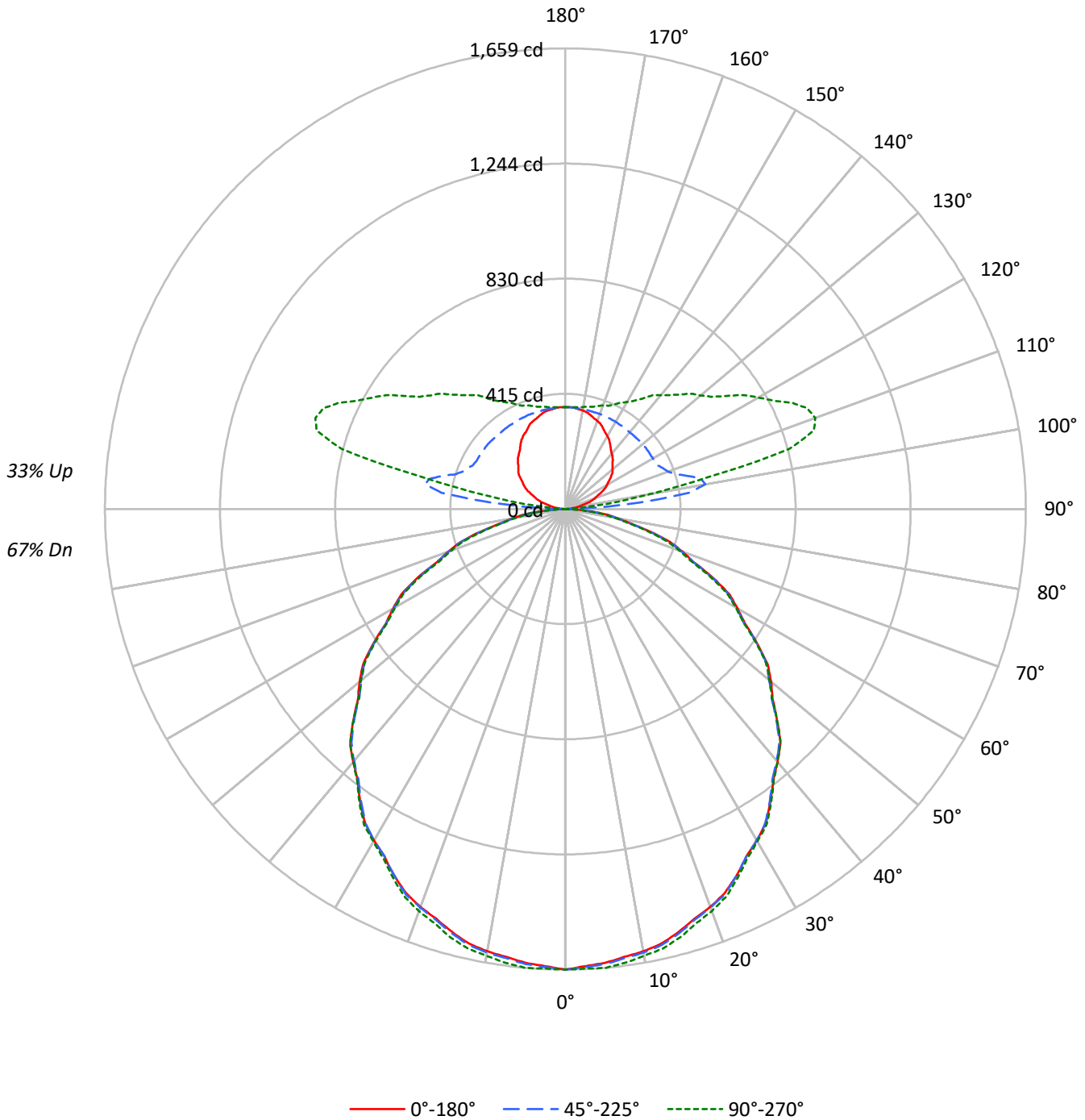
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6938.2 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
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	50	30	10
RCR																				
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67		
1	101	97	93	89	95	91	88	85	81	79	76	72	70	68	63	62	60	56		
2	92	84	78	73	87	80	74	69	71	67	63	63	59	56	55	53	50	47		
3	84	74	66	60	79	70	63	58	62	57	52	55	51	48	49	46	43	39		
4	77	65	57	51	72	62	55	49	55	49	45	49	44	41	44	40	37	34		
5	70	58	50	44	66	55	48	42	50	43	38	44	39	35	39	35	32	29		
6	65	52	44	38	61	50	42	36	45	38	34	40	35	31	35	31	28	25		
7	60	47	39	33	56	45	37	32	40	34	30	36	31	27	32	28	25	22		
8	56	43	35	29	52	41	33	28	37	31	26	33	28	24	30	25	22	20		
9	52	39	32	26	49	37	30	25	34	28	24	31	25	22	27	23	20	18		
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26788	26788	26788
5°	26597	26669	26890
10°	26534	26607	26793
15°	26372	26449	26713
20°	26215	26254	26488
25°	25972	25972	26135
30°	25706	25706	25790
35°	25395	25306	25484
40°	25058	24963	25058
45°	24669	24567	24669
50°	24300	24074	24129
55°	23736	23668	23541
60°	23137	22995	22846
65°	22453	22197	21933
70°	21125	21021	20592
75°	19881	19463	18896
80°	17648	17229	16597
85°	14227	12968	12134

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 24822 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	2.3
10°-20°	448.1	6.5
20°-30°	674.2	9.7
30°-40°	806.7	11.6
40°-50°	832.3	12.0
50°-60°	750.9	10.8
60°-70°	573.0	8.3
70°-80°	329.4	4.7
80°-90°	86.4	1.2
90°-100°	146.2	2.1
100°-110°	463.9	6.7
110°-120°	454.9	6.6
120°-130°	370.1	5.3
130°-140°	301.8	4.3
140°-150°	235.3	3.4
150°-160°	169.5	2.4
160°-170°	103.6	1.5
170°-180°	35.0	0.5
0°-30°	1279.1	18.4
0°-40°	2085.8	30.1
0°-60°	3669.0	52.9
0°-90°	4657.9	67.1
90°-120°	1065.0	15.4
90°-150°	1972.3	28.4
90°-180°	2280.0	32.9
0°-180°	6938.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1659	1659	1659	1659	1659	
5°	1641	1663	1646	1648	1659	156
15°	1578	1598	1582	1589	1598	445
25°	1458	1473	1458	1460	1467	671
35°	1288	1297	1284	1288	1293	806
45°	1080	1087	1076	1078	1080	834
55°	843	848	841	836	836	754
65°	588	586	581	576	574	578
75°	319	316	312	305	303	336
85°	77	72	70	63	66	89
90°	0	1	4	4	4	4
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°	1659.1	1659.1	1659.1	1659.1	1659.1
2.5°	1648.2	1667.7	1651.8	1655.6	1657.3
5°	1641.0	1663.1	1645.5	1648.0	1659.1
7.5°	1627.5	1651.4	1632.0	1636.3	1648.7
10°	1618.4	1640.5	1622.9	1625.4	1634.2
12.5°	1603.9	1626.1	1608.5	1612.7	1621.5
15°	1577.7	1597.6	1582.3	1589.3	1598.1
17.5°	1547.4	1568.6	1551.5	1557.6	1565.0
20°	1525.7	1543.5	1528.0	1530.5	1541.6
22.5°	1498.6	1516.3	1502.7	1503.4	1512.6
25°	1457.9	1473.4	1457.9	1460.4	1467.0
27.5°	1411.4	1424.6	1411.4	1413.7	1419.5
30°	1378.8	1392.1	1378.8	1381.1	1383.3
32.5°	1342.7	1354.2	1340.8	1343.2	1349.0
35°	1288.4	1297.2	1283.9	1288.5	1292.9
37.5°	1230.5	1237.2	1226.0	1228.3	1232.3
40°	1188.9	1195.6	1184.4	1186.7	1188.9
42.5°	1147.3	1152.2	1141.0	1143.4	1147.3
45°	1080.4	1087.1	1075.9	1078.2	1080.4
47.5°	1012.6	1016.6	1007.3	1005.5	1009.5
50°	967.4	969.6	958.4	958.4	960.6
52.5°	918.6	920.8	913.2	909.6	911.8
55°	843.2	847.5	840.8	836.3	836.3
57.5°	767.2	771.1	762.6	760.4	760.0
60°	716.5	718.7	712.1	709.7	707.5
62.5°	665.9	666.4	659.6	657.3	655.1
65°	587.7	585.5	581.0	576.3	574.1
67.5°	500.0	502.2	497.7	490.5	490.5
70°	447.5	449.7	445.3	436.2	436.2
72.5°	396.9	395.5	392.9	385.5	382.0
75°	318.7	316.5	312.0	305.1	302.9
77.5°	240.5	238.3	236.0	227.5	229.2
80°	189.8	187.6	185.3	178.5	178.5
82.5°	144.6	140.7	138.3	131.6	131.6
85°	76.8	72.5	70.0	63.4	65.5
87.5°	21.7	20.2	18.8	15.2	15.2
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	20.83	21.89	21.62	22.70	23.71	20.75	21.81	21.55	22.63	23.63
	3H	22.63	23.58	23.43	24.40	25.43	22.51	23.46	23.31	24.28	25.31
	4H	23.29	24.19	24.12	25.03	26.07	23.14	24.04	23.96	24.87	25.91
	6H	23.77	24.60	24.61	25.44	26.50	23.59	24.42	24.42	25.26	26.31
	8H	23.92	24.71	24.76	25.57	26.62	23.71	24.50	24.56	25.36	26.42
	12H	24.00	24.75	24.85	25.60	26.69	23.77	24.53	24.62	25.38	26.46
4H	2H	21.41	22.30	22.23	23.14	24.18	21.34	22.24	22.17	23.08	24.12
	3H	23.41	24.16	24.25	25.03	26.09	23.30	24.05	24.14	24.92	25.98
	4H	24.21	24.89	25.06	25.76	26.84	24.07	24.75	24.92	25.61	26.70
	6H	24.81	25.40	25.68	26.29	27.38	24.63	25.22	25.50	26.11	27.20
	8H	25.00	25.55	25.87	26.44	27.54	24.80	25.35	25.67	26.24	27.34
	12H	25.11	25.61	26.00	26.52	27.62	24.89	25.38	25.78	26.29	27.40
8H	4H	24.47	25.03	25.34	25.91	27.01	24.35	24.90	25.22	25.78	26.89
	6H	25.20	25.66	26.10	26.58	27.68	25.03	25.49	25.93	26.42	27.52
	8H	25.47	25.87	26.38	26.79	27.91	25.27	25.68	26.18	26.60	27.72
	12H	25.64	26.00	26.56	26.91	28.09	25.42	25.77	26.33	26.69	27.86
12H	4H	24.47	24.97	25.37	25.88	26.99	24.35	24.85	25.25	25.76	26.86
	6H	25.24	25.65	26.15	26.57	27.69	25.08	25.49	25.99	26.41	27.53
	8H	25.55	25.90	26.46	26.81	27.99	25.36	25.72	26.27	26.63	27.80