

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: P853874

Luminaire Tested: SQ2-FB-100U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853874
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-100U-050D-940-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

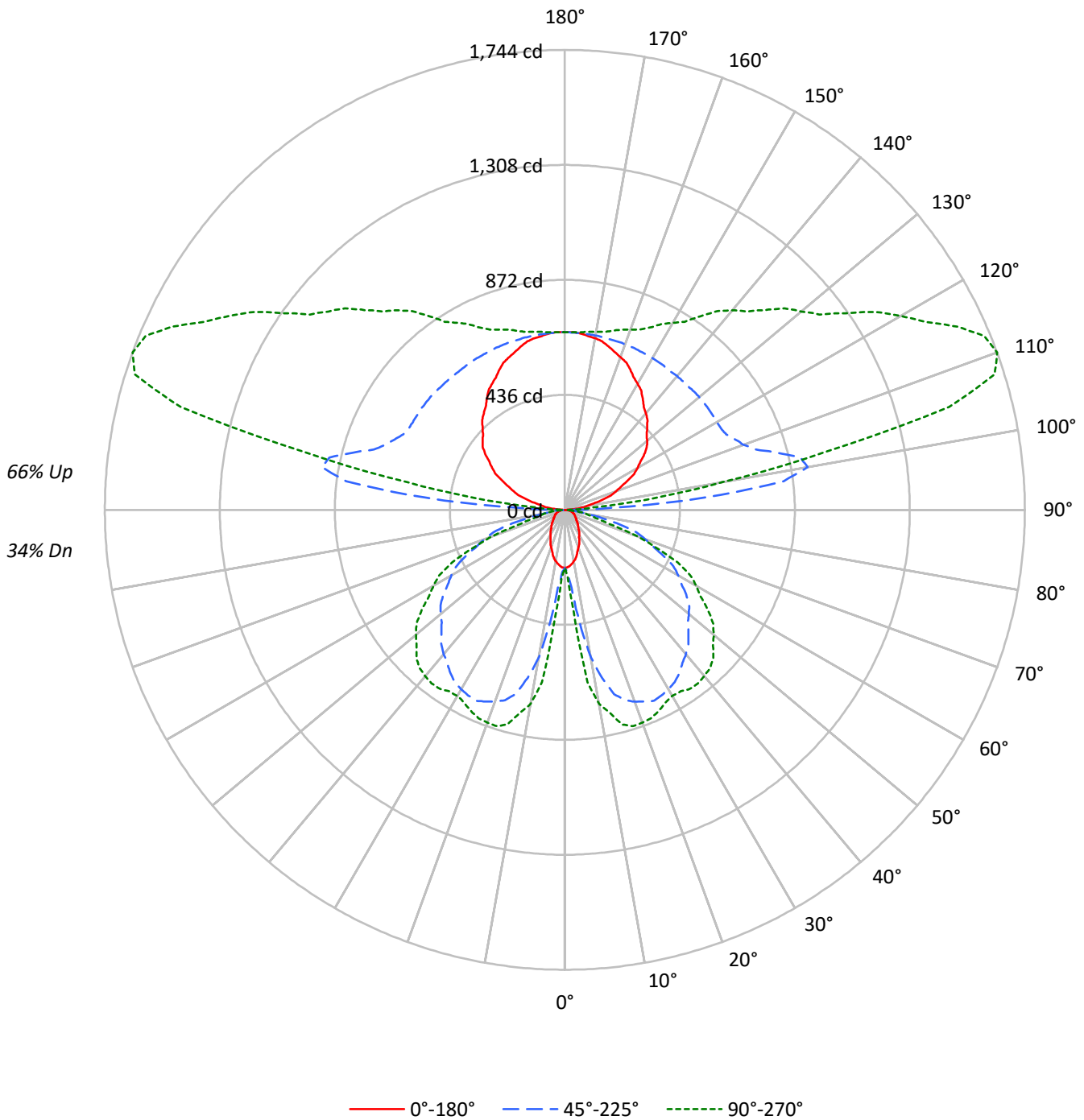
Lumens per Lamp: N/A
Luminaire Lumens: 6367.7 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42	34
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	37	36	35	29
2	85	78	72	67	77	71	65	61	57	53	50	44	41	39	32	30	29	23
3	78	68	61	55	70	62	56	51	50	45	41	38	35	33	28	26	24	19
4	71	60	52	46	64	54	48	42	44	39	35	34	30	28	25	22	21	16
5	65	53	45	39	58	48	41	36	39	34	30	30	26	24	22	20	18	14
6	59	47	39	34	53	43	36	31	35	29	26	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	16	16	14	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3552	3552	3552
5°	3464	4801	6292
10°	3243	9296	12244
15°	2935	12094	14091
20°	2600	13304	14758
25°	2298	14227	15000
30°	2032	14652	15185
35°	1813	14907	16324
40°	1650	15049	17344
45°	1521	15120	18162
50°	1434	15410	18492
55°	1399	15812	18641
60°	1434	16020	18548
65°	1494	15801	18025
70°	1548	15281	13633
75°	1716	13724	7523
80°	1767	7085	6983
85°	1760	4891	2946

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 18807 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	0.6
10°-20°	168.3	2.6
20°-30°	296.0	4.6
30°-40°	383.2	6.0
40°-50°	422.6	6.6
50°-60°	394.6	6.2
60°-70°	305.0	4.8
70°-80°	140.7	2.2
80°-90°	28.1	0.4
90°-100°	281.3	4.4
100°-110°	850.9	13.4
110°-120°	830.6	13.0
120°-130°	678.7	10.7
130°-140°	554.0	8.7
140°-150°	431.3	6.8
150°-160°	310.9	4.9
160°-170°	190.3	3.0
170°-180°	64.3	1.0
0°-30°	501.2	7.9
0°-40°	884.3	13.9
0°-60°	1701.6	26.7
0°-90°	2175.3	34.2
90°-120°	1962.8	30.8
90°-150°	3626.9	57.0
90°-180°	4192.0	65.8
0°-180°	6367.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	220	220	220	220	220	
5°	214	245	296	361	388	20
15°	176	346	724	810	843	49
25°	129	465	799	834	842	59
35°	92	449	756	783	828	58
45°	67	344	662	760	795	52
55°	50	205	562	646	662	45
65°	39	116	414	464	472	38
75°	28	71	220	118	121	28
85°	10	21	26	18	16	10
90°	0	2	13	7	6	2
95°	35	110	531	196	124	41
105°	148	208	835	1587	1508	155
115°	263	314	676	1398	1642	260
125°	368	408	666	1104	1300	327
135°	441	488	662	952	1071	341
145°	515	553	662	819	896	323
155°	587	606	666	734	762	270
165°	642	649	669	695	703	181
175°	672	672	673	678	676	64
180°	674	674	674	674	674	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	220.0	220.0	220.0	220.0	220.0
2.5°	218.3	227.4	237.8	249.7	254.7
5°	213.7	244.7	296.2	361.3	388.2
7.5°	205.4	268.5	430.7	605.0	658.8
10°	197.8	285.7	567.0	717.8	746.8
12.5°	189.3	308.7	652.4	758.5	788.3
15°	175.6	346.2	723.5	809.9	843.0
17.5°	161.4	388.5	756.5	841.8	859.8
20°	151.3	418.1	774.3	847.5	858.9
22.5°	142.0	440.2	787.0	842.5	854.7
25°	129.0	465.2	798.6	833.7	842.0
27.5°	116.6	471.7	793.5	816.6	824.6
30°	109.0	469.9	785.9	803.1	814.5
32.5°	102.2	464.8	774.9	791.6	816.2
35°	92.0	448.8	756.3	782.7	828.2
37.5°	83.4	423.2	731.8	785.9	829.7
40°	78.3	404.1	714.0	785.7	822.9
42.5°	73.2	381.6	693.7	777.3	814.5
45°	66.6	343.8	662.2	760.3	795.4
47.5°	60.5	301.3	633.0	736.8	762.4
50°	57.1	272.2	613.5	715.5	736.2
52.5°	53.7	244.0	594.0	690.1	709.1
55°	49.7	204.9	561.7	645.6	662.2
57.5°	46.1	171.3	524.9	596.5	609.9
60°	44.4	153.0	496.1	560.9	574.4
62.5°	41.9	136.4	463.9	523.7	536.3
65°	39.1	115.7	413.6	463.5	471.8
67.5°	35.3	100.3	360.1	390.6	375.1
70°	32.8	92.8	323.7	333.2	288.8
72.5°	31.1	84.5	283.9	258.7	174.5
75°	27.5	70.9	220.0	118.5	120.6
77.5°	22.4	54.9	144.7	91.0	92.9
80°	19.0	44.9	76.2	74.1	75.1
82.5°	15.7	34.9	52.5	54.5	53.1
85°	9.5	20.9	26.4	17.9	15.9
87.5°	3.4	7.9	6.8	5.7	5.5
90°	0.0	2.1	12.7	7.4	6.3
92.5°	11.8	47.8	171.7	57.0	41.0
95°	34.9	110.4	530.9	196.1	123.7
97.5°	67.5	140.5	836.7	553.6	337.1
100°	87.8	159.1	934.8	903.8	607.0
102.5°	110.6	179.5	914.5	1267.6	1010.5
105°	148.0	208.0	835.4	1586.6	1508.0
107.5°	183.6	240.9	759.3	1618.1	1709.1
110°	207.3	262.1	721.2	1578.4	1743.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	230.1	283.3	698.4	1511.7	1721.0
115°	263.3	314.0	675.7	1398.3	1642.3
117.5°	296.3	344.3	667.7	1292.0	1541.8
120°	318.3	363.8	665.2	1230.0	1469.9
122.5°	338.6	381.6	665.2	1175.5	1397.1
125°	368.0	408.3	666.2	1104.2	1299.6
127.5°	391.9	433.7	665.2	1050.5	1217.2
130°	407.1	450.6	665.2	1019.7	1170.6
132.5°	420.7	464.9	664.3	991.5	1130.9
135°	441.0	487.5	662.0	952.3	1071.2
137.5°	463.6	507.9	662.0	910.5	1020.7
140°	478.0	521.4	662.0	883.3	987.7
142.5°	492.4	534.1	661.1	858.4	949.6
145°	515.0	553.3	662.0	819.2	895.7
147.5°	537.6	570.1	663.3	786.8	845.6
150°	552.0	582.0	664.1	768.9	818.5
152.5°	565.5	592.2	664.9	753.4	794.0
155°	586.9	606.5	666.2	734.5	762.4
157.5°	605.5	621.4	667.5	720.6	740.0
160°	616.5	630.0	668.3	712.0	726.5
162.5°	627.5	637.6	669.2	704.3	716.3
165°	641.9	649.1	669.4	695.0	703.2
167.5°	654.2	657.9	670.7	687.7	691.2
170°	660.9	663.0	671.5	684.2	685.3
172.5°	665.2	666.4	671.5	680.8	681.0
175°	671.5	671.5	672.6	677.8	675.7
177.5°	674.5	673.6	672.8	675.3	673.6
180°	673.6	673.6	673.6	673.6	673.6



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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	9.81	10.56	10.88	11.64	13.12	18.54	19.29	19.62	20.37	21.85
	3H	10.53	11.20	11.61	12.29	13.79	20.16	20.83	21.24	21.92	23.41
	4H	10.82	11.46	11.92	12.55	14.05	20.33	20.97	21.43	22.06	23.56
	6H	11.03	11.62	12.14	12.71	14.23	20.41	21.00	21.52	22.09	23.61
	8H	11.09	11.65	12.20	12.76	14.26	20.41	20.97	21.52	22.08	23.59
	12H	11.11	11.64	12.23	12.75	14.28	20.38	20.91	21.49	22.01	23.55
4H	2H	14.19	14.83	15.30	15.92	17.42	18.97	19.61	20.08	20.70	22.20
	3H	15.11	15.64	16.22	16.76	18.28	20.79	21.32	21.90	22.44	23.95
	4H	15.39	15.88	16.51	16.99	18.52	21.02	21.51	22.13	22.61	24.15
	6H	15.51	15.93	16.64	17.06	18.59	21.16	21.58	22.28	22.71	24.23
	8H	15.53	15.92	16.66	17.05	18.59	21.18	21.57	22.30	22.69	24.24
	12H	15.52	15.87	16.66	17.01	18.56	21.15	21.50	22.29	22.64	24.19
8H	4H	16.56	16.95	17.68	18.07	19.61	21.13	21.52	22.25	22.64	24.18
	6H	16.79	17.11	17.93	18.27	19.82	21.33	21.65	22.47	22.81	24.36
	8H	16.86	17.14	18.01	18.28	19.84	21.39	21.67	22.54	22.81	24.37
	12H	16.88	17.12	18.03	18.27	19.86	21.37	21.62	22.53	22.76	24.36
12H	4H	16.57	16.92	17.71	18.06	19.61	21.07	21.43	22.21	22.56	24.11
	6H	16.88	17.16	18.03	18.31	19.87	21.31	21.59	22.46	22.73	24.30
	8H	16.98	17.23	18.14	18.37	19.96	21.37	21.62	22.53	22.76	24.36