

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: P855231

Luminaire Tested: SQ2-FB-100U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855231
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-835-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

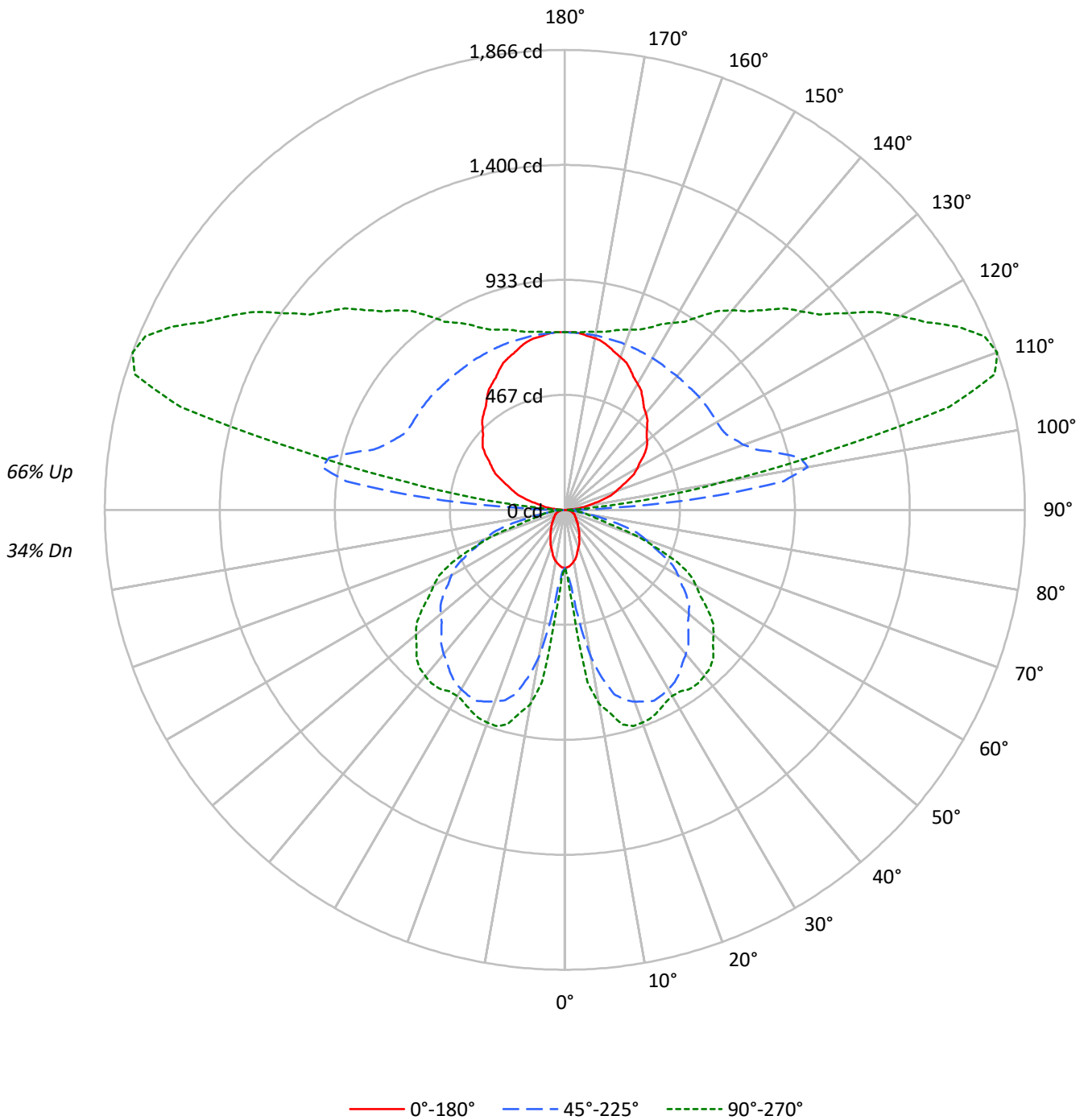
Lumens per Lamp: N/A
Luminaire Lumens: 6812.5 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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°	3801	3801	3801
5°	3705	5136	6731
10°	3469	9945	13100
15°	3141	12939	15076
20°	2780	14234	15789
25°	2460	15221	16048
30°	2174	15676	16246
35°	1941	15948	17465
40°	1764	16101	18556
45°	1628	16175	19431
50°	1535	16488	19783
55°	1498	16915	19941
60°	1534	17140	19843
65°	1601	16905	19282
70°	1657	16348	14582
75°	1834	14685	8047
80°	1897	7578	7466
85°	1890	5243	3149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 20123 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.4	0.6
10°-20°	180.0	2.6
20°-30°	316.7	4.6
30°-40°	410.0	6.0
40°-50°	452.1	6.6
50°-60°	422.2	6.2
60°-70°	326.3	4.8
70°-80°	150.5	2.2
80°-90°	30.0	0.4
90°-100°	301.0	4.4
100°-110°	910.3	13.4
110°-120°	888.6	13.0
120°-130°	726.1	10.7
130°-140°	592.7	8.7
140°-150°	461.4	6.8
150°-160°	332.6	4.9
160°-170°	203.6	3.0
170°-180°	68.8	1.0
0°-30°	536.2	7.9
0°-40°	946.1	13.9
0°-60°	1820.4	26.7
0°-90°	2327.3	34.2
90°-120°	2099.9	30.8
90°-150°	3880.2	57.0
90°-180°	4485.0	65.8
0°-180°	6812.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	235	235	235	235	235	
5°	229	262	317	387	415	21
15°	188	370	774	866	902	52
25°	138	498	854	892	901	63
35°	98	480	809	837	886	62
45°	71	368	708	813	851	55
55°	53	219	601	691	708	48
65°	42	124	442	496	505	41
75°	29	76	235	127	129	30
85°	10	22	28	19	17	11
90°	0	2	14	8	7	2
95°	37	118	568	210	132	44
105°	158	223	894	1697	1613	166
115°	282	336	723	1496	1757	279
125°	394	437	713	1181	1390	350
135°	472	522	708	1019	1146	365
145°	551	592	708	876	958	345
155°	628	649	713	786	816	289
165°	687	694	716	744	752	194
175°	718	718	720	725	723	68
180°	721	721	721	721	721	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	235.4	235.4	235.4	235.4	235.4
2.5°	233.6	243.3	254.4	267.2	272.5
5°	228.6	261.8	316.9	386.6	415.3
7.5°	219.8	287.2	460.8	647.3	704.8
10°	211.6	305.7	606.6	767.9	799.0
12.5°	202.6	330.2	698.0	811.4	843.3
15°	187.9	370.4	774.1	866.5	901.9
17.5°	172.7	415.7	809.4	900.6	919.8
20°	161.8	447.3	828.4	906.8	918.9
22.5°	151.9	471.0	842.0	901.4	914.4
25°	138.1	497.7	854.4	892.0	900.8
27.5°	124.7	504.7	849.0	873.6	882.2
30°	116.6	502.7	840.8	859.3	871.4
32.5°	109.3	497.3	829.1	846.8	873.2
35°	98.5	480.2	809.1	837.4	886.1
37.5°	89.2	452.8	782.9	840.7	887.7
40°	83.7	432.3	763.9	840.6	880.4
42.5°	78.3	408.3	742.1	831.5	871.4
45°	71.3	367.8	708.4	813.4	851.0
47.5°	64.7	322.3	677.2	788.3	815.7
50°	61.1	291.3	656.4	765.5	787.6
52.5°	57.5	261.1	635.5	738.3	758.7
55°	53.2	219.2	600.9	690.8	708.4
57.5°	49.3	183.2	561.5	638.1	652.5
60°	47.5	163.8	530.8	600.1	614.5
62.5°	44.8	146.0	496.3	560.3	573.8
65°	41.9	123.8	442.5	495.9	504.7
67.5°	37.8	107.3	385.2	417.9	401.3
70°	35.1	99.2	346.3	356.5	308.9
72.5°	33.3	90.4	303.7	276.8	186.7
75°	29.4	75.9	235.4	126.7	129.0
77.5°	24.0	58.7	154.8	97.3	99.4
80°	20.4	48.0	81.5	79.2	80.3
82.5°	16.7	37.3	56.1	58.4	56.8
85°	10.2	22.4	28.3	19.2	17.0
87.5°	3.6	8.5	7.2	6.1	5.9
90°	0.0	2.3	13.6	7.9	6.8
92.5°	12.7	51.2	183.8	60.9	43.9
95°	37.3	118.0	568.0	209.8	132.4
97.5°	72.2	150.3	895.1	592.3	360.7
100°	93.9	170.2	1000.2	966.9	649.3
102.5°	118.4	192.0	978.4	1356.2	1081.1
105°	158.4	222.6	893.8	1697.4	1613.3
107.5°	196.5	257.7	812.3	1731.1	1828.5
110°	221.7	280.4	771.6	1688.7	1865.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	246.1	303.1	747.1	1617.3	1841.2
115°	281.7	335.9	722.9	1495.9	1757.0
117.5°	317.0	368.4	714.3	1382.2	1649.5
120°	340.5	389.2	711.6	1315.9	1572.6
122.5°	362.2	408.3	711.6	1257.6	1494.7
125°	393.7	436.8	712.7	1181.3	1390.5
127.5°	419.3	464.0	711.6	1123.9	1302.2
130°	435.6	482.1	711.6	1090.9	1252.4
132.5°	450.1	497.4	710.7	1060.7	1209.9
135°	471.8	521.6	708.2	1018.8	1146.0
137.5°	496.0	543.3	708.2	974.0	1091.9
140°	511.4	557.8	708.2	944.9	1056.7
142.5°	526.8	571.5	707.3	918.3	1016.0
145°	551.0	591.9	708.2	876.4	958.3
147.5°	575.2	610.0	709.6	841.8	904.7
150°	590.6	622.6	710.5	822.6	875.7
152.5°	605.1	633.6	711.4	806.1	849.4
155°	628.0	648.9	712.7	785.8	815.7
157.5°	647.8	664.9	714.1	770.9	791.7
160°	659.5	674.0	715.0	761.7	777.2
162.5°	671.3	682.2	715.9	753.6	766.4
165°	686.7	694.5	716.1	743.5	752.3
167.5°	699.8	703.9	717.5	735.7	739.4
170°	707.1	709.3	718.4	732.0	733.1
172.5°	711.6	712.9	718.4	728.3	728.6
175°	718.4	718.4	719.5	725.2	722.9
177.5°	721.5	720.6	719.7	722.5	720.6
180°	720.6	720.6	720.6	720.6	720.6

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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	10.04	10.79	11.12	11.87	13.35	18.78	19.53	19.85	20.61	22.09
	3H	10.76	11.44	11.85	12.53	14.02	20.39	21.06	21.48	22.15	23.65
	4H	11.06	11.70	12.16	12.79	14.29	20.57	21.20	21.66	22.30	23.80
	6H	11.27	11.86	12.38	12.95	14.46	20.64	21.23	21.75	22.33	23.84
	8H	11.32	11.88	12.43	12.99	14.50	20.65	21.20	21.76	22.32	23.82
	12H	11.35	11.88	12.46	12.98	14.51	20.61	21.14	21.73	22.25	23.78
4H	2H	14.43	15.06	15.53	16.15	17.66	19.21	19.84	20.31	20.94	22.44
	3H	15.35	15.88	16.46	17.00	18.51	21.02	21.55	22.13	22.67	24.19
	4H	15.62	16.11	16.74	17.22	18.76	21.25	21.74	22.37	22.85	24.38
	6H	15.75	16.17	16.87	17.30	18.83	21.39	21.81	22.52	22.94	24.47
	8H	15.77	16.16	16.89	17.28	18.83	21.41	21.80	22.54	22.93	24.47
	12H	15.75	16.11	16.90	17.24	18.79	21.38	21.73	22.52	22.87	24.42
8H	4H	16.79	17.18	17.91	18.30	19.85	21.36	21.75	22.48	22.87	24.42
	6H	17.02	17.34	18.17	18.51	20.05	21.56	21.88	22.71	23.05	24.59
	8H	17.09	17.37	18.24	18.52	20.08	21.62	21.90	22.77	23.05	24.61
	12H	17.11	17.36	18.27	18.50	20.10	21.61	21.86	22.76	23.00	24.59
12H	4H	16.80	17.16	17.94	18.29	19.84	21.31	21.66	22.45	22.80	24.35
	6H	17.11	17.40	18.27	18.54	20.10	21.54	21.82	22.69	22.97	24.53
	8H	17.21	17.46	18.37	18.60	20.20	21.60	21.85	22.76	22.99	24.59