

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: P855025

Luminaire Tested: SQ2-FB-050U-075D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855025
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-050U-075D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

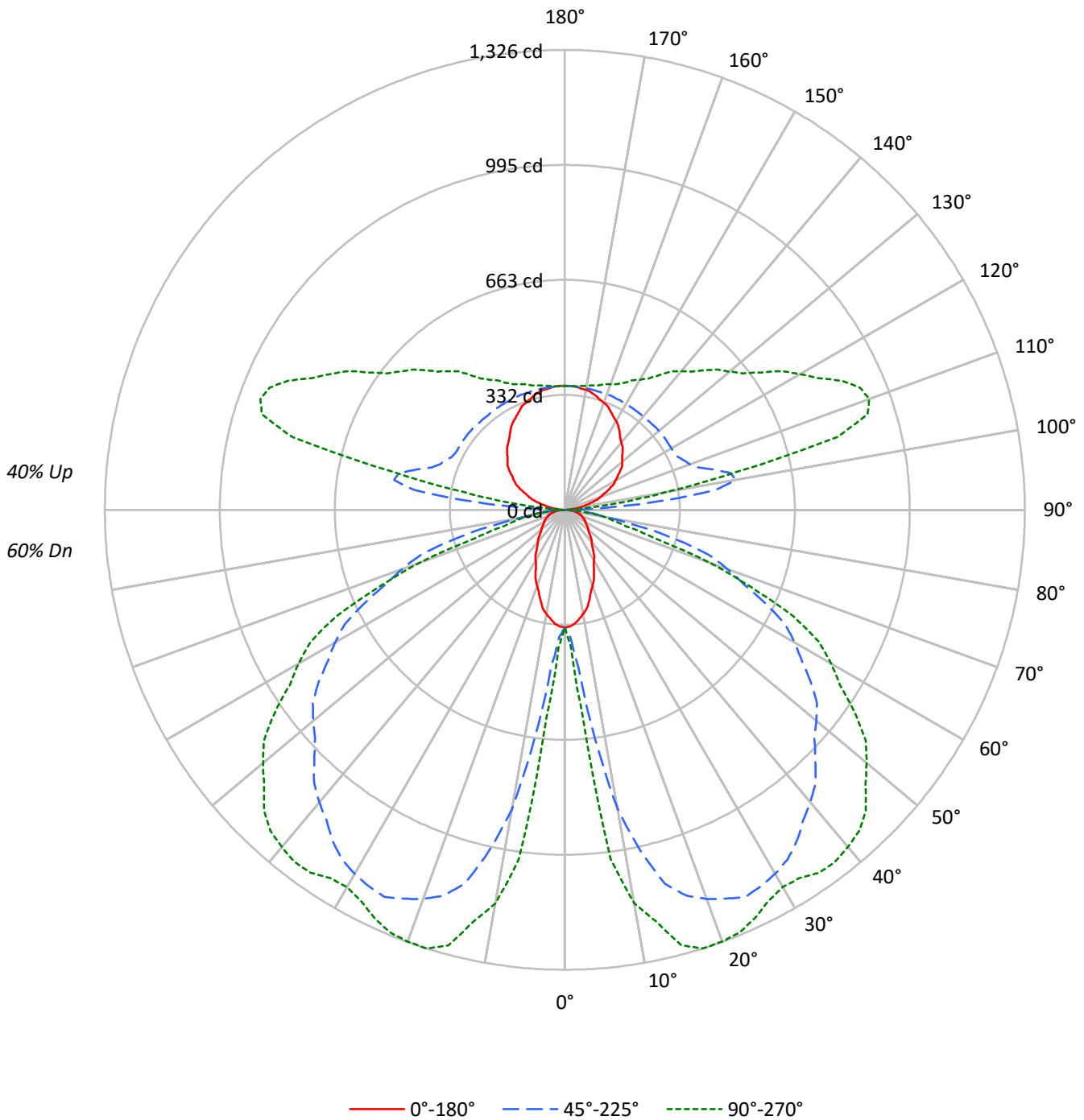
Lumens per Lamp: N/A
Luminaire Lumens: 5575.2 lumens
Efficiency: N/A
Efficacy: 134.3 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.5
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									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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60																												
1	100	95	91	88	93	89	86	83	78	75	73	67	65	64	58	56	55	50																												
2	91	83	76	71	84	78	72	67	68	63	60	59	55	52	50	48	46	41																												
3	82	72	65	58	76	68	61	55	59	54	49	51	47	44	44	41	38	34																												
4	75	64	55	49	70	60	52	46	52	46	42	45	41	37	39	35	32	29																												
5	69	56	48	41	64	53	45	39	46	40	35	40	35	31	34	31	28	25																												
6	63	50	42	36	58	47	39	34	41	35	30	36	31	27	31	27	24	21																												
7	58	45	37	31	54	42	35	29	37	31	27	33	27	24	28	24	21	18																												
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	21	18	16																												
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14																												
10	46	34	26	21	43	32	25	20	28	22	18	25	20	17	22	18	15	13																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5478	5478	5478
5°	5340	7402	9702
10°	5000	14332	18880
15°	4527	18648	21728
20°	4009	20515	22756
25°	3545	21937	23129
30°	3132	22592	23415
35°	2797	22984	25172
40°	2546	23204	26744
45°	2347	23315	28005
50°	2213	23762	28514
55°	2159	24380	28743
60°	2212	24703	28598
65°	2308	24363	27794
70°	2384	23561	21017
75°	2645	21166	11603
80°	2734	10925	10767
85°	2723	7558	4520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 29000 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.8	1.0
10°-20°	259.5	4.7
20°-30°	456.5	8.2
30°-40°	590.9	10.6
40°-50°	651.7	11.7
50°-60°	608.5	10.9
60°-70°	470.3	8.4
70°-80°	216.9	3.9
80°-90°	41.9	0.8
90°-100°	142.5	2.6
100°-110°	452.1	8.1
110°-120°	443.3	8.0
120°-130°	360.7	6.5
130°-140°	294.1	5.3
140°-150°	229.3	4.1
150°-160°	165.2	3.0
160°-170°	100.9	1.8
170°-180°	34.1	0.6
0°-30°	772.8	13.9
0°-40°	1363.6	24.5
0°-60°	2623.8	47.1
0°-90°	3352.9	60.1
90°-120°	1037.9	18.6
90°-150°	1922.1	34.5
90°-180°	2222.0	39.9
0°-180°	5575.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	330	377	457	557	599	31
15°	271	534	1116	1249	1300	75
25°	199	717	1231	1286	1298	91
35°	142	692	1166	1207	1277	89
45°	103	530	1021	1172	1226	80
55°	77	316	866	996	1021	69
65°	60	178	638	715	728	59
75°	42	109	339	183	186	44
85°	15	32	41	28	24	15
90°	0	1	3	3	3	2
95°	19	58	259	96	62	22
105°	79	111	446	849	814	83
115°	141	167	360	748	880	139
125°	195	218	354	586	691	173
135°	235	258	352	504	568	182
145°	275	296	352	435	474	172
155°	313	324	353	389	404	144
165°	341	344	354	368	371	96
175°	357	356	357	359	358	34
180°	358	358	358	358	358	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	339.3	339.3	339.3	339.3	339.3
2.5°	336.6	350.7	366.7	385.1	392.8
5°	329.5	377.3	456.7	557.2	598.6
7.5°	316.7	414.0	664.1	932.9	1015.8
10°	305.0	440.6	874.2	1106.9	1151.6
12.5°	291.9	476.0	1006.0	1169.5	1215.4
15°	270.8	533.9	1115.6	1248.9	1299.9
17.5°	248.9	599.1	1166.5	1298.0	1325.7
20°	233.3	644.7	1194.0	1306.9	1324.4
22.5°	218.9	678.8	1213.5	1299.1	1317.9
25°	199.0	717.3	1231.4	1285.5	1298.3
27.5°	179.8	727.3	1223.6	1259.1	1271.5
30°	168.0	724.6	1211.8	1238.4	1255.9
32.5°	157.6	716.7	1194.9	1220.5	1258.5
35°	141.9	692.1	1166.1	1207.0	1277.1
37.5°	128.6	652.6	1128.4	1211.8	1279.4
40°	120.8	623.1	1100.9	1211.5	1268.9
42.5°	112.8	588.4	1069.6	1198.5	1255.9
45°	102.8	530.2	1021.1	1172.4	1226.5
47.5°	93.3	464.6	976.0	1136.1	1175.6
50°	88.1	419.8	946.0	1103.3	1135.2
52.5°	82.9	376.3	916.0	1064.2	1093.4
55°	76.7	315.9	866.1	995.5	1021.1
57.5°	71.1	264.1	809.3	919.8	940.5
60°	68.5	236.0	765.0	864.9	885.6
62.5°	64.6	210.3	715.4	807.5	827.0
65°	60.4	178.4	637.7	714.7	727.5
67.5°	54.5	154.7	555.3	602.3	578.3
70°	50.5	143.0	499.1	513.9	445.2
72.5°	47.9	130.3	437.8	398.9	269.1
75°	42.4	109.3	339.3	182.7	186.0
77.5°	34.6	84.7	223.1	140.3	143.3
80°	29.4	69.2	117.5	114.2	115.8
82.5°	24.2	53.8	81.0	84.1	81.9
85°	14.7	32.2	40.8	27.7	24.4
87.5°	5.2	11.9	7.2	7.2	7.2
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.3	25.0	79.9	26.6	18.7
95°	19.1	57.7	258.8	96.0	61.8
97.5°	35.6	74.7	438.5	274.0	168.1
100°	47.3	84.7	499.6	455.5	296.0
102.5°	59.9	95.5	488.9	669.0	512.1
105°	78.8	110.7	445.7	848.9	813.6
107.5°	97.7	127.2	404.4	867.7	915.1
110°	110.2	138.8	383.7	846.1	934.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	122.9	149.7	372.1	808.7	920.6
115°	140.7	167.1	360.1	748.0	880.1
117.5°	158.0	183.1	355.4	689.5	822.7
120°	168.8	193.0	354.5	653.4	782.2
122.5°	179.7	203.0	354.5	624.3	744.3
125°	194.7	217.8	354.5	586.5	690.9
127.5°	207.9	230.2	354.5	557.1	646.2
130°	216.1	239.1	354.5	539.8	620.0
132.5°	224.2	247.3	353.6	526.1	598.4
135°	235.2	258.4	352.2	504.5	568.4
137.5°	246.0	270.2	352.0	483.9	540.9
140°	253.3	277.5	351.1	469.3	521.0
142.5°	262.2	285.5	352.0	454.9	503.0
145°	274.6	295.6	352.2	435.3	473.7
147.5°	287.0	304.8	352.4	418.0	449.4
150°	296.0	310.2	353.3	407.9	433.3
152.5°	303.1	315.7	353.3	399.8	420.7
155°	312.8	323.8	353.3	388.6	404.0
157.5°	323.3	330.7	354.5	381.7	392.3
160°	328.6	335.2	354.5	377.2	386.0
162.5°	334.0	338.9	354.5	373.6	379.7
165°	341.0	344.3	354.5	368.0	371.4
167.5°	347.6	348.4	355.6	364.3	367.1
170°	351.1	351.1	355.6	362.4	363.5
172.5°	352.9	353.8	355.6	360.6	360.8
175°	356.7	355.7	356.7	359.0	357.8
177.5°	357.8	356.9	356.9	358.8	356.9
180°	357.8	357.8	357.8	357.8	357.8

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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	13.85	14.84	14.71	15.73	16.84	22.58	23.58	23.44	24.46	25.58
	3H	14.59	15.48	15.46	16.38	17.52	24.22	25.11	25.09	26.00	27.15
	4H	14.90	15.74	15.78	16.64	17.79	24.40	25.25	25.29	26.15	27.30
	6H	15.12	15.90	16.02	16.80	17.97	24.50	25.28	25.40	26.18	27.35
	8H	15.18	15.92	16.09	16.85	18.01	24.51	25.25	25.41	26.17	27.34
	12H	15.21	15.92	16.13	16.84	18.03	24.48	25.19	25.40	26.11	27.30
4H	2H	18.26	19.11	19.16	20.01	21.16	23.04	23.89	23.94	24.79	25.94
	3H	19.21	19.91	20.11	20.85	22.01	24.88	25.59	25.79	26.52	27.69
	4H	19.50	20.14	20.41	21.07	22.26	25.13	25.77	26.04	26.70	27.89
	6H	19.64	20.19	20.57	21.14	22.34	25.28	25.83	26.21	26.79	27.98
	8H	19.66	20.18	20.60	21.13	22.33	25.31	25.83	26.24	26.77	27.98
	12H	19.66	20.13	20.61	21.09	22.30	25.29	25.75	26.24	26.72	27.93
8H	4H	20.69	21.20	21.62	22.15	23.36	25.26	25.77	26.19	26.72	27.93
	6H	20.93	21.36	21.89	22.34	23.55	25.47	25.90	26.43	26.88	28.09
	8H	21.00	21.38	21.97	22.36	23.58	25.53	25.91	26.50	26.89	28.11
	12H	21.04	21.37	22.01	22.34	23.61	25.53	25.86	26.50	26.83	28.11
12H	4H	20.71	21.18	21.66	22.14	23.35	25.22	25.68	26.17	26.64	27.86
	6H	21.03	21.40	21.99	22.38	23.60	25.45	25.83	26.42	26.81	28.03
	8H	21.14	21.47	22.11	22.44	23.71	25.53	25.86	26.50	26.83	28.10