

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: P855432

Luminaire Tested: SQ2-FB-050U-075D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855432
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-840-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

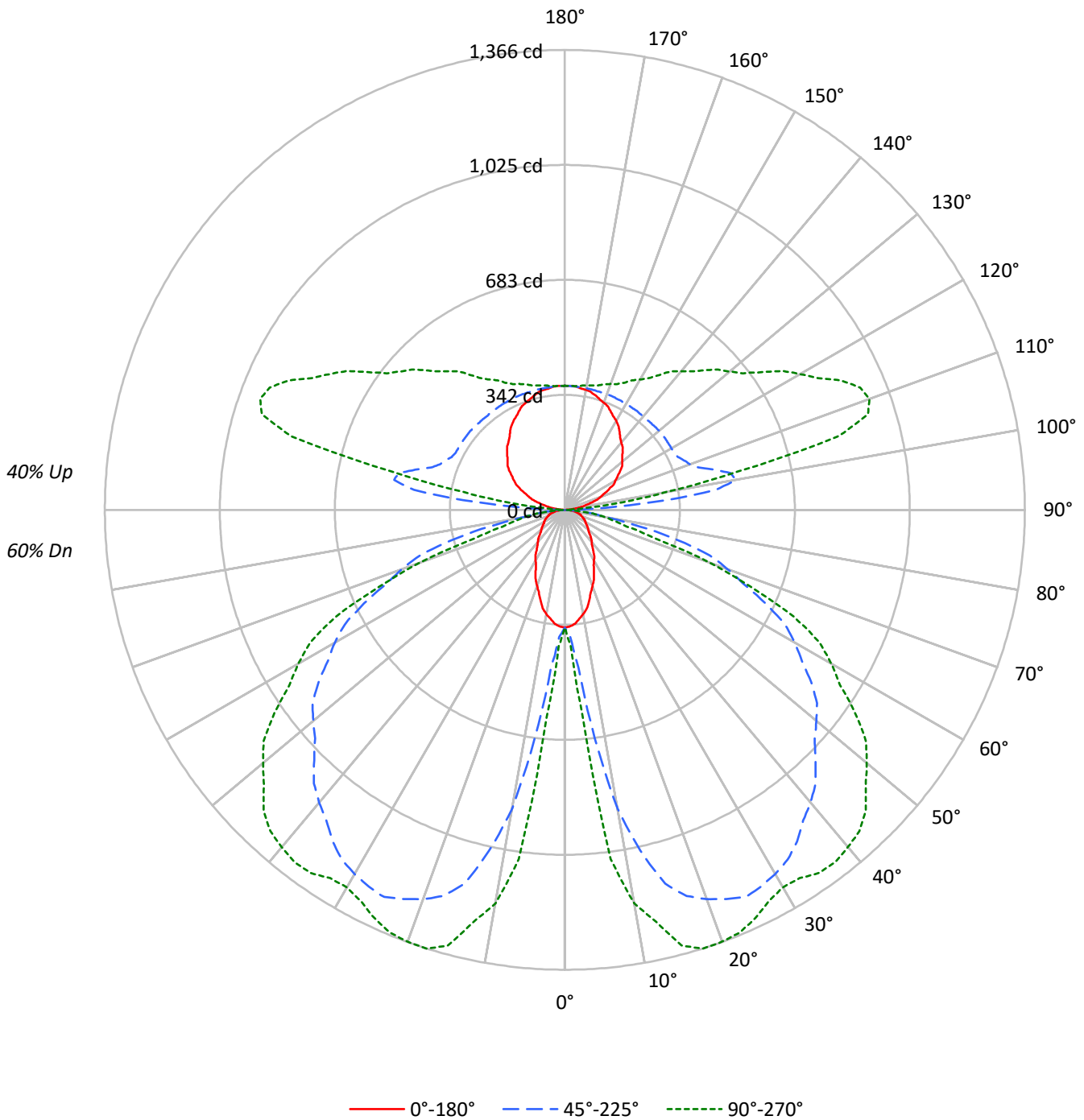
Lumens per Lamp: N/A
Luminaire Lumens: 5746.6 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	
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	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°	5646	5646	5646
5°	5504	7629	10000
10°	5155	14773	19461
15°	4665	19221	22397
20°	4131	21146	23457
25°	3654	22611	23840
30°	3229	23288	24134
35°	2884	23692	25945
40°	2624	23918	27566
45°	2418	24032	28866
50°	2281	24493	29391
55°	2224	25129	29627
60°	2280	25462	29479
65°	2376	25112	28646
70°	2459	24283	21663
75°	2726	21815	11959
80°	2817	11260	11093
85°	2816	7799	4668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 29893 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	1.0
10°-20°	267.4	4.7
20°-30°	470.5	8.2
30°-40°	609.0	10.6
40°-50°	671.7	11.7
50°-60°	627.2	10.9
60°-70°	484.7	8.4
70°-80°	223.6	3.9
80°-90°	43.2	0.8
90°-100°	146.9	2.6
100°-110°	466.0	8.1
110°-120°	456.9	8.0
120°-130°	371.8	6.5
130°-140°	303.2	5.3
140°-150°	236.4	4.1
150°-160°	170.3	3.0
160°-170°	104.0	1.8
170°-180°	35.1	0.6
0°-30°	796.5	13.9
0°-40°	1405.6	24.5
0°-60°	2704.4	47.1
0°-90°	3455.9	60.1
90°-120°	1069.8	18.6
90°-150°	1981.2	34.5
90°-180°	2291.0	39.9
0°-180°	5746.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	350	350	350	350	350	
5°	340	389	471	574	617	32
15°	279	550	1150	1287	1340	78
25°	205	739	1269	1325	1338	94
35°	146	713	1202	1244	1316	92
45°	106	546	1052	1208	1264	82
55°	79	326	893	1026	1052	71
65°	62	184	657	737	750	61
75°	44	113	350	188	192	45
85°	15	33	42	29	25	16
90°	0	1	4	4	4	2
95°	20	59	267	99	64	23
105°	81	114	459	875	839	86
115°	145	172	371	771	907	143
125°	201	224	365	604	712	179
135°	242	266	363	520	586	187
145°	283	305	363	449	488	177
155°	322	334	364	400	416	149
165°	352	355	365	379	383	99
175°	368	367	368	370	369	35
180°	369	369	369	369	369	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	349.7	349.7	349.7	349.7	349.7
2.5°	346.9	361.5	377.9	396.9	404.9
5°	339.6	388.9	470.7	574.3	617.0
7.5°	326.4	426.8	684.6	961.6	1047.0
10°	314.4	454.2	901.1	1140.9	1187.0
12.5°	300.9	490.6	1037.0	1205.5	1252.8
15°	279.1	550.3	1149.9	1287.3	1339.9
17.5°	256.5	617.5	1202.3	1337.9	1366.4
20°	240.4	664.5	1230.7	1347.1	1365.2
22.5°	225.6	699.7	1250.8	1339.0	1358.4
25°	205.1	739.3	1269.2	1325.1	1338.2
27.5°	185.3	749.7	1261.2	1297.8	1310.6
30°	173.2	746.9	1249.1	1276.5	1294.5
32.5°	162.5	738.7	1231.6	1258.1	1297.2
35°	146.3	713.3	1202.0	1244.1	1316.3
37.5°	132.5	672.7	1163.1	1249.1	1318.8
40°	124.5	642.3	1134.8	1248.7	1307.9
42.5°	116.3	606.5	1102.5	1235.3	1294.5
45°	105.9	546.5	1052.5	1208.4	1264.2
47.5°	96.1	478.9	1006.0	1171.0	1211.8
50°	90.8	432.7	975.1	1137.2	1170.1
52.5°	85.4	387.8	944.2	1096.9	1127.1
55°	79.0	325.6	892.7	1026.1	1052.5
57.5°	73.3	272.2	834.2	948.1	969.4
60°	70.6	243.2	788.5	891.5	912.9
62.5°	66.5	216.8	737.3	832.3	852.4
65°	62.2	183.9	657.3	736.7	749.8
67.5°	56.2	159.4	572.3	620.8	596.1
70°	52.1	147.4	514.4	529.7	458.9
72.5°	49.4	134.3	451.2	411.2	277.4
75°	43.7	112.7	349.7	188.3	191.7
77.5°	35.7	87.3	229.9	144.6	147.7
80°	30.3	71.3	121.1	117.7	119.3
82.5°	24.9	55.5	83.4	86.7	84.4
85°	15.2	33.2	42.1	28.6	25.2
87.5°	5.4	12.2	7.5	7.5	7.5
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.5	25.8	82.4	27.4	19.2
95°	19.7	59.4	266.8	98.9	63.7
97.5°	36.7	77.0	451.9	282.4	173.3
100°	48.7	87.3	515.0	469.5	305.1
102.5°	61.8	98.5	503.9	689.6	527.8
105°	81.2	114.1	459.4	875.0	838.6
107.5°	100.7	131.1	416.9	894.3	943.3
110°	113.6	143.1	395.5	872.1	962.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.7	154.3	383.5	833.6	948.9
115°	145.0	172.2	371.2	771.0	907.1
117.5°	162.8	188.7	366.3	710.7	847.9
120°	174.0	198.9	365.4	673.5	806.2
122.5°	185.2	209.2	365.4	643.5	767.2
125°	200.7	224.5	365.4	604.5	712.2
127.5°	214.3	237.3	365.4	574.2	666.0
130°	222.7	246.5	365.4	556.4	639.1
132.5°	231.1	254.9	364.4	542.3	616.8
135°	242.4	266.3	363.0	520.0	585.8
137.5°	253.6	278.5	362.8	498.8	557.5
140°	261.0	286.0	361.9	483.8	537.0
142.5°	270.3	294.3	362.8	468.8	518.5
145°	283.1	304.6	363.0	448.7	488.3
147.5°	295.8	314.2	363.3	430.8	463.2
150°	305.1	319.8	364.2	420.5	446.6
152.5°	312.4	325.4	364.2	412.1	433.6
155°	322.5	333.8	364.2	400.5	416.4
157.5°	333.2	340.9	365.4	393.4	404.4
160°	338.7	345.5	365.4	388.8	397.9
162.5°	344.3	349.3	365.4	385.0	391.3
165°	351.5	354.9	365.4	379.3	382.8
167.5°	358.2	359.1	366.5	375.5	378.4
170°	361.9	361.9	366.5	373.5	374.7
172.5°	363.7	364.7	366.5	371.6	371.9
175°	367.7	366.6	367.7	370.0	368.8
177.5°	368.8	367.9	367.9	369.8	367.9
180°	368.8	368.8	368.8	368.8	368.8



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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	13.95	14.95	14.81	15.83	16.95	22.69	23.68	23.55	24.57	25.69
	3H	14.69	15.59	15.57	16.48	17.62	24.32	25.22	25.19	26.11	27.25
	4H	15.00	15.84	15.89	16.75	17.90	24.51	25.35	25.40	26.25	27.41
	6H	15.22	16.00	16.12	16.91	18.08	24.60	25.38	25.50	26.29	27.45
	8H	15.29	16.03	16.19	16.95	18.12	24.61	25.35	25.52	26.28	27.44
	12H	15.32	16.03	16.23	16.95	18.14	24.59	25.29	25.50	26.21	27.40
4H	2H	18.37	19.21	19.26	20.11	21.27	23.15	23.99	24.04	24.89	26.05
	3H	19.31	20.02	20.22	20.95	22.12	24.99	25.69	25.89	26.62	27.79
	4H	19.60	20.25	20.52	21.17	22.37	25.23	25.87	26.15	26.80	27.99
	6H	19.74	20.30	20.67	21.25	22.44	25.39	25.94	26.32	26.89	28.09
	8H	19.77	20.28	20.70	21.23	22.44	25.41	25.93	26.35	26.88	28.09
	12H	19.77	20.23	20.72	21.20	22.41	25.39	25.86	26.35	26.82	28.04
8H	4H	20.79	21.31	21.72	22.25	23.46	25.36	25.88	26.30	26.82	28.03
	6H	21.03	21.46	21.99	22.45	23.66	25.57	26.00	26.53	26.99	28.20
	8H	21.11	21.48	22.08	22.46	23.69	25.64	26.01	26.61	26.99	28.22
	12H	21.14	21.47	22.11	22.44	23.72	25.64	25.97	26.61	26.94	28.21
12H	4H	20.82	21.28	21.77	22.24	23.46	25.32	25.79	26.27	26.75	27.96
	6H	21.13	21.51	22.10	22.48	23.71	25.56	25.94	26.53	26.91	28.14
	8H	21.24	21.57	22.21	22.54	23.82	25.63	25.96	26.61	26.93	28.21