

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: P853672

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

Issue Date: 7/12/2024

**Test Information**

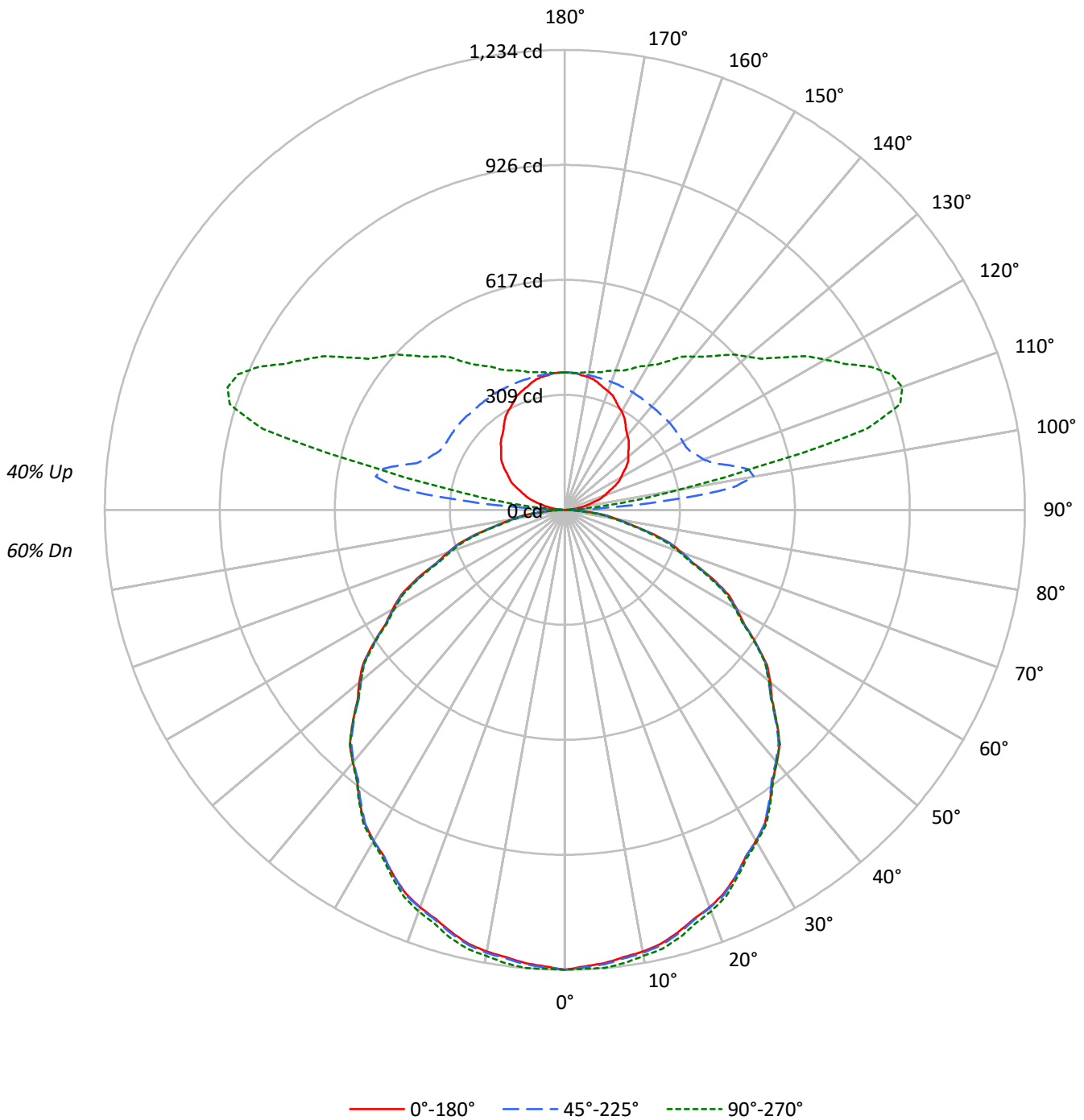
Test Method: LM-79-2019  
Report Number: P853672  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-F-050U-075D-840-UNV-STD-W-4  
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: 5755.1 lumens  
Efficiency: N/A  
Efficacy: 138.7 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): 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				
RC	80					70					50					30				
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	77	71	85	78	72	68	68	64	60	59	56	53	50	48	46	42		
3	83	73	65	59	77	68	62	56	60	55	50	52	48	44	45	42	39	35		
4	76	64	56	50	70	61	53	48	53	47	43	46	42	38	40	36	33	30		
5	69	57	49	43	65	54	46	41	47	41	37	41	37	33	36	32	29	26		
6	64	51	43	37	59	48	41	35	43	37	32	37	32	29	32	28	25	23		
7	59	46	38	33	55	44	36	31	39	33	28	34	29	25	29	26	23	20		
8	55	42	34	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18		
9	51	39	31	26	48	36	29	25	32	27	22	29	24	20	25	21	18	16		
10	48	35	28	23	45	33	27	22	30	24	20	26	22	18	23	19	17	15		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	19922	19922	19922
5°	19781	19836	19998
10°	19735	19790	19928
15°	19614	19671	19868
20°	19498	19527	19699
25°	19319	19319	19436
30°	19121	19121	19182
35°	18889	18821	18954
40°	18638	18567	18638
45°	18347	18274	18347
50°	18073	17904	17947
55°	17652	17605	17512
60°	17208	17102	16992
65°	16699	16504	16313
70°	15711	15635	15314
75°	14785	14473	14055
80°	13129	12822	12357
85°	10578	9652	9022

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18463 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.6	2.0
10°-20°	333.3	5.8
20°-30°	501.4	8.7
30°-40°	600.0	10.4
40°-50°	619.0	10.8
50°-60°	558.5	9.7
60°-70°	426.2	7.4
70°-80°	245.0	4.3
80°-90°	64.4	1.1
90°-100°	146.9	2.6
100°-110°	466.0	8.1
110°-120°	456.9	7.9
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°	951.4	16.5
0°-40°	1551.4	27.0
0°-60°	2728.9	47.4
0°-90°	3464.5	60.2
90°-120°	1069.8	18.6
90°-150°	1981.2	34.4
90°-180°	2291.0	39.8
0°-180°	5755.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1234	1234	1234	1234	1234	
5°	1220	1237	1224	1226	1234	116
15°	1173	1188	1177	1182	1189	331
25°	1084	1096	1084	1086	1091	499
35°	958	965	955	958	962	599
45°	804	809	800	802	804	620
55°	627	630	625	622	622	561
65°	437	436	432	429	427	430
75°	237	235	232	227	225	250
85°	57	54	52	47	49	66
90°	0	1	4	4	4	3
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°	1233.9	1233.9	1233.9	1233.9	1233.9
2.5°	1225.9	1240.3	1228.6	1231.4	1232.6
5°	1220.5	1237.0	1223.9	1225.8	1233.9
7.5°	1210.4	1228.2	1213.8	1217.0	1226.2
10°	1203.7	1220.2	1207.1	1208.9	1215.5
12.5°	1192.9	1209.5	1196.3	1199.5	1206.1
15°	1173.4	1188.2	1176.8	1182.1	1188.6
17.5°	1151.0	1166.7	1154.0	1158.4	1164.0
20°	1134.8	1147.9	1136.5	1138.4	1146.5
22.5°	1114.6	1127.8	1117.6	1118.1	1125.1
25°	1084.4	1095.8	1084.4	1086.2	1091.0
27.5°	1049.7	1059.6	1049.7	1051.5	1055.7
30°	1025.6	1035.3	1025.6	1027.2	1028.9
32.5°	998.6	1007.1	997.2	999.1	1003.3
35°	958.3	964.8	954.9	958.3	961.6
37.5°	915.2	920.2	911.8	913.6	916.6
40°	884.3	889.2	880.9	882.7	884.3
42.5°	853.3	857.0	848.6	850.4	853.3
45°	803.5	808.6	800.3	801.9	803.5
47.5°	753.2	756.1	749.1	747.8	750.9
50°	719.5	721.2	712.8	712.9	714.5
52.5°	683.3	684.9	679.2	676.5	678.1
55°	627.1	630.4	625.4	622.1	622.1
57.5°	570.6	573.5	567.2	565.6	565.2
60°	532.9	534.6	529.6	527.8	526.2
62.5°	495.3	495.6	490.5	488.9	487.3
65°	437.1	435.5	432.0	428.6	427.0
67.5°	371.9	373.5	370.2	364.8	364.8
70°	332.8	334.5	331.2	324.4	324.4
72.5°	295.2	294.3	292.2	286.8	284.1
75°	237.0	235.4	232.0	226.9	225.3
77.5°	178.9	177.3	175.5	169.1	170.5
80°	141.2	139.6	137.9	132.9	132.9
82.5°	107.6	104.7	102.9	97.9	97.9
85°	57.1	53.8	52.1	47.1	48.7
87.5°	16.1	15.0	14.1	11.4	11.4
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	19.25	20.23	20.11	21.11	22.23	19.17	20.15	20.03	21.03	22.15
	3H	21.04	21.91	21.91	22.81	23.95	20.92	21.79	21.79	22.69	23.83
	4H	21.70	22.53	22.59	23.43	24.58	21.55	22.38	22.44	23.28	24.43
	6H	22.18	22.94	23.08	23.85	25.02	21.99	22.76	22.89	23.66	24.83
	8H	22.32	23.05	23.23	23.97	25.14	22.12	22.85	23.03	23.77	24.94
	12H	22.40	23.09	23.31	24.01	25.20	22.17	22.87	23.09	23.79	24.98
4H	2H	19.81	20.64	20.71	21.54	22.70	19.75	20.58	20.65	21.48	22.63
	3H	21.81	22.50	22.72	23.44	24.60	21.70	22.40	22.61	23.33	24.50
	4H	22.61	23.24	23.52	24.17	25.36	22.46	23.10	23.38	24.02	25.22
	6H	23.20	23.75	24.13	24.70	25.89	23.02	23.57	23.95	24.52	25.71
	8H	23.39	23.90	24.33	24.85	26.06	23.19	23.70	24.13	24.65	25.86
	12H	23.50	23.96	24.45	24.92	26.14	23.27	23.73	24.23	24.70	25.91
8H	4H	22.86	23.37	23.80	24.32	25.53	22.74	23.25	23.67	24.19	25.40
	6H	23.59	24.01	24.55	25.00	26.20	23.42	23.84	24.38	24.83	26.04
	8H	23.85	24.23	24.82	25.21	26.43	23.66	24.04	24.63	25.01	26.24
	12H	24.03	24.36	25.00	25.33	26.60	23.80	24.13	24.77	25.10	26.37
12H	4H	22.86	23.32	23.82	24.29	25.50	22.74	23.20	23.69	24.17	25.38
	6H	23.63	24.00	24.60	24.98	26.21	23.47	23.85	24.44	24.82	26.05
	8H	23.93	24.26	24.90	25.23	26.50	23.74	24.07	24.72	25.04	26.32