

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: P853841

Luminaire Tested: SQ2-FB-050U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853841
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-940-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

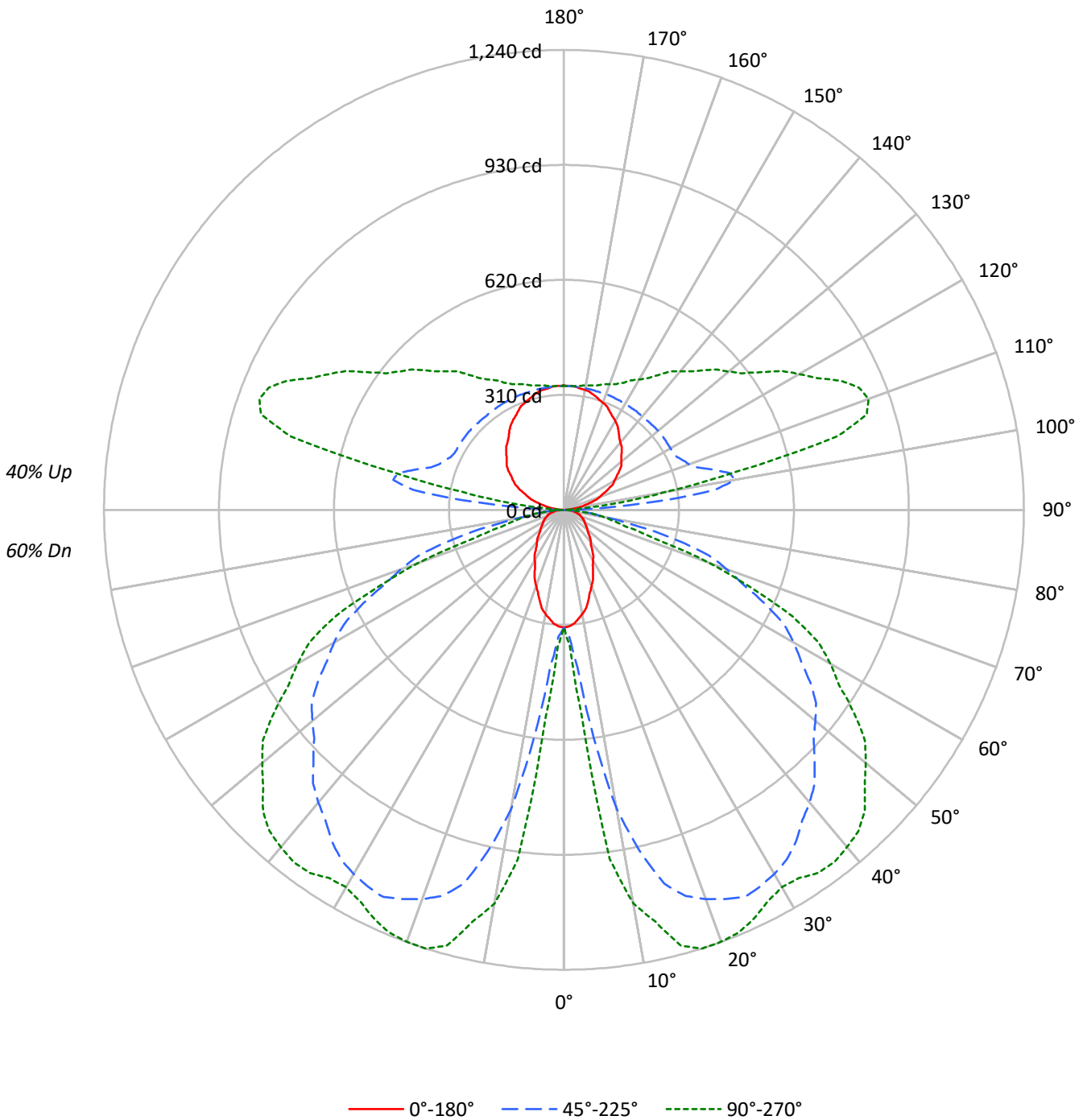
Lumens per Lamp: N/A
Luminaire Lumens: 5215.8 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	5125	5125	5125
5°	4995	6925	9076
10°	4677	13409	17662
15°	4234	17446	20329
20°	3749	19192	21289
25°	3317	20525	21638
30°	2931	21138	21906
35°	2618	21504	23550
40°	2380	21709	25022
45°	2194	21811	26202
50°	2070	22230	26676
55°	2018	22809	26888
60°	2070	23111	26757
65°	2159	22793	26002
70°	2233	22041	19667
75°	2477	19800	10855
80°	2557	10219	10070
85°	2538	7058	4242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 27132 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	1.0
10°-20°	242.7	4.7
20°-30°	427.1	8.2
30°-40°	552.8	10.6
40°-50°	609.7	11.7
50°-60°	569.2	10.9
60°-70°	440.0	8.4
70°-80°	202.9	3.9
80°-90°	39.2	0.8
90°-100°	133.3	2.6
100°-110°	423.0	8.1
110°-120°	414.7	8.0
120°-130°	337.5	6.5
130°-140°	275.2	5.3
140°-150°	214.5	4.1
150°-160°	154.6	3.0
160°-170°	94.4	1.8
170°-180°	31.9	0.6
0°-30°	723.0	13.9
0°-40°	1275.7	24.5
0°-60°	2454.6	47.1
0°-90°	3136.7	60.1
90°-120°	971.1	18.6
90°-150°	1798.2	34.5
90°-180°	2079.0	39.9
0°-180°	5215.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	317	317	317	317	317	
5°	308	353	427	521	560	29
15°	253	500	1044	1168	1216	71
25°	186	671	1152	1203	1215	86
35°	133	648	1091	1129	1195	84
45°	96	496	955	1097	1148	75
55°	72	296	810	931	955	65
65°	56	167	597	669	681	55
75°	40	102	317	171	174	41
85°	14	30	38	26	23	14
90°	0	1	3	3	3	1
95°	18	54	242	90	58	21
105°	74	104	417	794	761	78
115°	132	156	337	700	823	130
125°	182	204	332	549	646	162
135°	220	242	330	472	532	170
145°	257	276	330	407	443	161
155°	293	303	331	364	378	135
165°	319	322	332	344	347	90
175°	334	333	334	336	335	32
180°	335	335	335	335	335	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	317.4	317.4	317.4	317.4	317.4
2.5°	314.9	328.1	343.0	360.3	367.4
5°	308.2	353.0	427.3	521.2	560.0
7.5°	296.3	387.3	621.4	872.8	950.3
10°	285.3	412.2	817.9	1035.5	1077.3
12.5°	273.1	445.3	941.2	1094.1	1137.1
15°	253.3	499.5	1043.7	1168.4	1216.2
17.5°	232.9	560.5	1091.3	1214.3	1240.3
20°	218.2	603.1	1117.0	1222.6	1239.0
22.5°	204.8	635.1	1135.3	1215.3	1232.9
25°	186.2	671.1	1152.1	1202.7	1214.6
27.5°	168.2	680.5	1144.7	1178.0	1189.6
30°	157.2	677.9	1133.8	1158.5	1175.0
32.5°	147.4	670.5	1117.9	1141.9	1177.4
35°	132.8	647.5	1091.0	1129.1	1194.8
37.5°	120.2	610.5	1055.6	1133.7	1196.9
40°	112.9	582.9	1030.0	1133.4	1187.2
42.5°	105.6	550.5	1000.7	1121.2	1175.0
45°	96.1	496.0	955.2	1096.8	1147.5
47.5°	87.3	434.6	913.1	1062.9	1099.9
50°	82.4	392.7	885.0	1032.2	1062.0
52.5°	77.5	352.0	857.0	995.5	1023.0
55°	71.7	295.5	810.3	931.3	955.2
57.5°	66.5	247.1	757.2	860.4	879.8
60°	64.1	220.7	715.7	809.2	828.6
62.5°	60.4	196.8	669.3	755.4	773.6
65°	56.5	166.9	596.6	668.6	680.6
67.5°	51.0	144.7	519.4	563.5	541.1
70°	47.3	133.8	466.9	480.7	416.6
72.5°	44.9	121.8	409.6	373.2	251.8
75°	39.7	102.3	317.4	171.0	174.0
77.5°	32.3	79.2	208.7	131.3	134.0
80°	27.5	64.8	109.9	106.8	108.3
82.5°	22.6	50.3	75.7	78.7	76.6
85°	13.7	30.1	38.1	25.9	22.9
87.5°	4.9	11.1	6.7	6.7	6.7
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.4	74.8	24.9	17.5
95°	17.9	53.9	242.2	89.8	57.9
97.5°	33.3	69.9	410.2	256.3	157.3
100°	44.2	79.2	467.5	426.2	276.9
102.5°	56.0	89.4	457.4	625.8	479.0
105°	73.7	103.6	416.9	794.2	761.2
107.5°	91.4	119.0	378.4	811.7	856.2
110°	103.2	129.9	359.0	791.5	873.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.0	140.1	348.1	756.6	861.2
115°	131.6	156.3	336.9	699.8	823.3
117.5°	147.8	171.3	332.5	645.1	769.6
120°	157.9	180.6	331.6	611.3	731.7
122.5°	168.0	189.9	331.6	584.1	696.4
125°	182.1	203.8	331.6	548.7	646.4
127.5°	194.6	215.4	331.6	521.2	604.5
130°	202.1	223.8	331.6	505.0	580.1
132.5°	209.7	231.3	330.8	492.2	559.9
135°	220.0	241.7	329.5	472.0	531.7
137.5°	230.2	252.8	329.3	452.7	506.0
140°	236.9	259.5	328.5	439.1	487.5
142.5°	245.3	267.1	329.3	425.5	470.6
145°	256.9	276.5	329.5	407.2	443.2
147.5°	268.5	285.2	329.8	391.1	420.5
150°	276.9	290.3	330.6	381.7	405.3
152.5°	283.6	295.4	330.6	374.0	393.6
155°	292.7	303.0	330.6	363.6	378.0
157.5°	302.4	309.4	331.6	357.1	367.0
160°	307.4	313.6	331.6	352.9	361.1
162.5°	312.5	317.0	331.6	349.5	355.2
165°	319.0	322.1	331.6	344.4	347.4
167.5°	325.1	325.9	332.7	340.8	343.4
170°	328.5	328.5	332.7	339.0	340.1
172.5°	330.2	331.0	332.7	337.3	337.5
175°	333.8	332.7	333.8	335.8	334.8
177.5°	334.8	334.0	334.0	335.6	334.0
180°	334.8	334.8	334.8	334.8	334.8



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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	13.62	14.61	14.47	15.50	16.61	22.35	23.35	23.21	24.23	25.35
	3H	14.36	15.25	15.23	16.14	17.29	23.99	24.88	24.86	25.77	26.92
	4H	14.66	15.51	15.55	16.41	17.56	24.17	25.02	25.06	25.92	27.07
	6H	14.89	15.67	15.79	16.57	17.74	24.27	25.04	25.17	25.95	27.12
	8H	14.95	15.69	15.86	16.62	17.78	24.27	25.02	25.18	25.94	27.11
	12H	14.98	15.69	15.90	16.61	17.80	24.25	24.96	25.16	25.88	27.07
4H	2H	18.03	18.88	18.92	19.78	20.93	22.81	23.66	23.71	24.56	25.71
	3H	18.98	19.68	19.88	20.61	21.78	24.65	25.36	25.56	26.29	27.46
	4H	19.27	19.91	20.18	20.84	22.03	24.90	25.54	25.81	26.46	27.66
	6H	19.41	19.96	20.34	20.91	22.11	25.05	25.60	25.98	26.55	27.75
	8H	19.43	19.95	20.37	20.89	22.10	25.08	25.59	26.01	26.54	27.75
	12H	19.43	19.90	20.38	20.86	22.07	25.06	25.52	26.01	26.49	27.70
8H	4H	20.45	20.97	21.39	21.92	23.13	25.03	25.54	25.96	26.49	27.70
	6H	20.70	21.12	21.66	22.11	23.32	25.24	25.66	26.20	26.65	27.86
	8H	20.77	21.15	21.74	22.12	23.35	25.30	25.68	26.27	26.65	27.88
	12H	20.80	21.13	21.78	22.11	23.38	25.30	25.63	26.27	26.60	27.87
12H	4H	20.48	20.94	21.43	21.91	23.12	24.98	25.45	25.94	26.41	27.63
	6H	20.79	21.17	21.76	22.15	23.37	25.22	25.60	26.19	26.58	27.80
	8H	20.90	21.24	21.88	22.21	23.48	25.30	25.63	26.27	26.60	27.87