

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: P854962

Luminaire Tested: SQ2-PH1-050U-075D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854962
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-050U-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: -

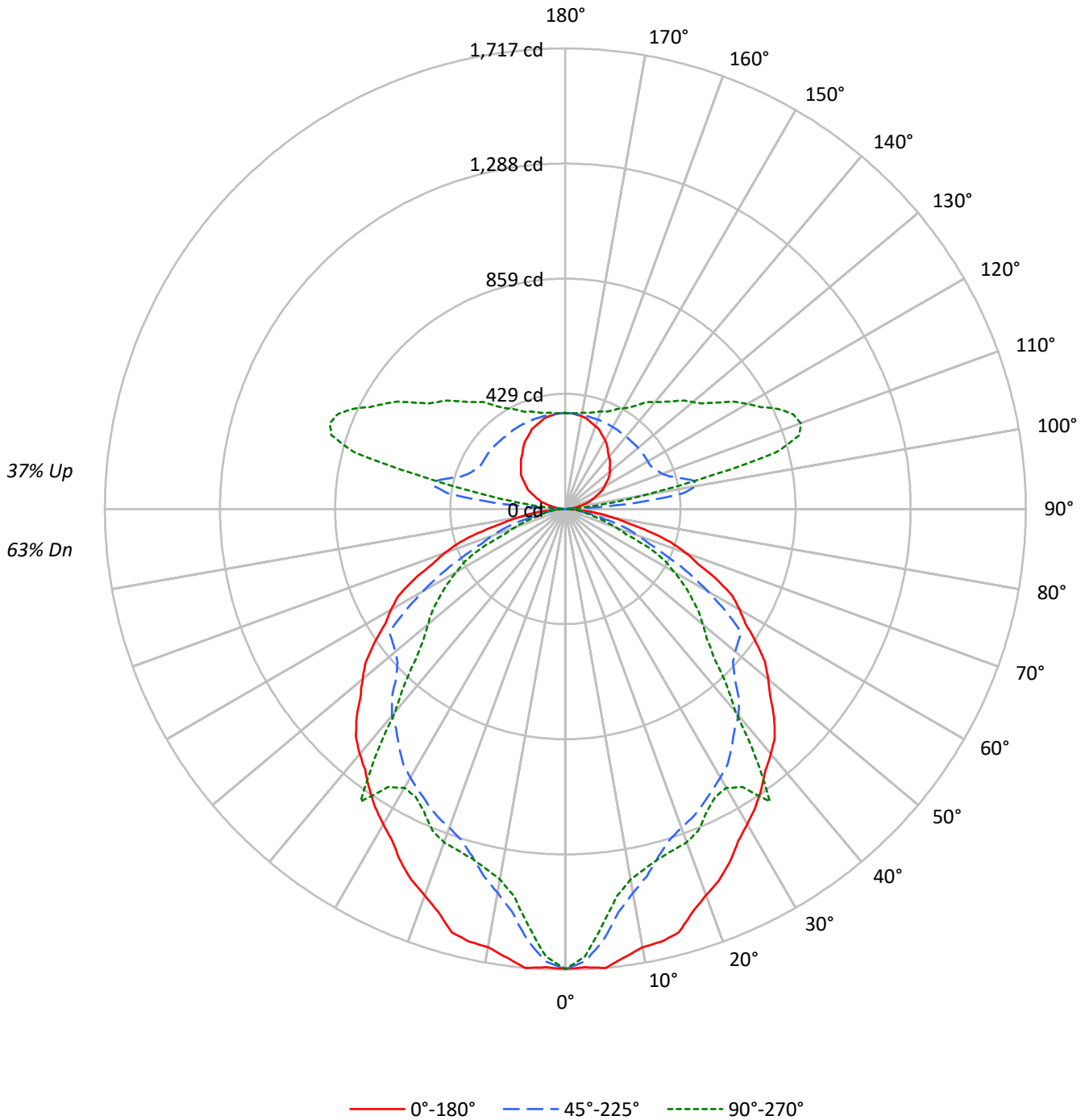
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6014.5 lumens
Efficiency: N/A
Efficacy: 144.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
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

TEST NUMBER: P854962
CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P854962

CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

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	50	30	10
RCR																				
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63		
1	101	97	93	89	95	91	88	84	80	77	75	70	68	66	61	59	58	54		
2	92	85	79	73	86	80	74	70	70	66	63	62	59	56	54	51	49	45		
3	84	75	67	61	79	70	64	58	62	57	53	55	51	47	48	45	42	39		
4	77	66	58	52	72	62	55	50	55	50	45	49	44	41	43	39	36	33		
5	71	59	51	45	66	56	48	43	50	44	39	44	39	35	38	35	32	29		
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28	25		
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	22		
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	29	25	22	20		
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18		
10	49	37	29	24	46	35	28	24	31	26	22	28	23	20	25	21	18	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27679	27679	27679
5°	27835	26172	25298
10°	27196	23825	22997
15°	27318	22410	22547
20°	26344	21720	22727
25°	25860	21618	22199
30°	25299	21559	22380
35°	25109	21313	26233
40°	25130	21176	20799
45°	25138	20372	17915
50°	24787	20773	16799
55°	24473	22542	16113
60°	24228	19753	15116
65°	23805	16011	13150
70°	22480	13629	9394
75°	20044	10274	7124
80°	16383	6676	6676
85°	10263	6058	4520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25138 cd/sqm



TEST NUMBER: P854962

CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.8	2.5
10°-20°	396.8	6.6
20°-30°	581.8	9.7
30°-40°	704.5	11.7
40°-50°	692.8	11.5
50°-60°	603.1	10.0
60°-70°	419.3	7.0
70°-80°	198.8	3.3
80°-90°	44.3	0.7
90°-100°	142.5	2.4
100°-110°	452.1	7.5
110°-120°	443.3	7.4
120°-130°	360.7	6.0
130°-140°	294.1	4.9
140°-150°	229.3	3.8
150°-160°	165.2	2.7
160°-170°	100.9	1.7
170°-180°	34.1	0.6
0°-30°	1129.3	18.8
0°-40°	1833.9	30.5
0°-60°	3129.8	52.0
0°-90°	3792.1	63.1
90°-120°	1037.9	17.3
90°-150°	1922.1	32.0
90°-180°	2222.0	36.9
0°-180°	6014.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1714	1714	1714	1714	1714	
5°	1717	1716	1615	1564	1561	161
15°	1634	1456	1341	1331	1349	456
25°	1452	1235	1214	1251	1246	668
35°	1274	1030	1081	1175	1331	798
45°	1101	816	892	923	785	846
55°	869	635	801	577	572	777
65°	623	436	419	344	344	612
75°	321	222	165	117	114	340
85°	55	36	33	26	24	74
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	

TEST NUMBER: P854962

CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1714.3	1714.3	1714.3	1714.3	1714.3
2.5°	1710.3	1728.2	1688.2	1672.4	1669.8
5°	1717.4	1715.9	1614.8	1564.1	1560.9
7.5°	1686.1	1636.7	1515.9	1460.0	1457.5
10°	1658.8	1583.8	1453.2	1402.7	1402.7
12.5°	1652.2	1533.9	1402.3	1365.0	1372.7
15°	1634.3	1455.7	1340.7	1331.3	1348.9
17.5°	1575.0	1382.6	1292.8	1314.1	1334.5
20°	1533.2	1343.4	1264.1	1303.6	1322.7
22.5°	1498.0	1305.7	1243.1	1286.4	1296.7
25°	1451.6	1234.8	1213.5	1250.9	1246.1
27.5°	1396.1	1169.8	1183.8	1206.7	1209.6
30°	1357.0	1130.5	1156.4	1179.7	1200.4
32.5°	1319.2	1085.1	1126.3	1181.6	1229.1
35°	1273.9	1029.8	1081.3	1174.6	1330.9
37.5°	1226.2	964.7	1036.0	1114.5	1164.2
40°	1192.3	918.0	1004.7	1101.6	986.8
42.5°	1155.7	881.4	957.8	1082.8	888.9
45°	1100.9	815.5	892.2	923.3	784.6
47.5°	1036.3	764.3	847.9	770.0	715.7
50°	986.8	730.1	827.0	703.8	668.8
52.5°	938.5	694.6	812.6	649.2	625.7
55°	869.4	634.9	800.8	577.3	572.4
57.5°	796.0	574.3	708.2	514.7	522.9
60°	750.3	535.0	611.7	477.7	468.1
62.5°	702.0	496.9	521.6	430.7	421.2
65°	623.1	436.4	419.1	344.2	344.2
67.5°	536.3	373.6	339.5	281.6	243.3
70°	476.2	332.7	288.7	224.5	199.0
72.5°	412.3	289.2	236.5	184.0	154.7
75°	321.3	222.4	164.7	117.4	114.2
77.5°	232.2	160.2	110.9	87.1	87.4
80°	176.2	121.9	71.8	70.2	71.8
82.5°	123.9	83.8	53.5	55.7	56.1
85°	55.4	36.3	32.7	26.0	24.4
87.5°	11.8	10.7	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



TEST NUMBER: P854962

CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

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



TEST NUMBER: P854962

CATALOG NUMBER: SQ2-PH1-050U-075D-830-UNV-STD-W-4

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	19.99	20.97	20.83	21.83	22.91	18.67	19.65	19.50	20.51	21.58
	3H	22.03	22.91	22.88	23.77	24.87	19.71	20.59	20.56	21.46	22.56
	4H	22.76	23.59	23.63	24.47	25.58	19.93	20.76	20.80	21.63	22.74
	6H	23.25	24.02	24.13	24.90	26.03	20.08	20.84	20.96	21.73	22.85
	8H	23.38	24.11	24.27	25.01	26.13	20.11	20.84	21.00	21.74	22.87
	12H	23.43	24.13	24.33	25.02	26.17	20.12	20.81	21.01	21.70	22.85
4H	2H	20.38	21.21	21.25	22.09	23.20	19.32	20.15	20.19	21.03	22.14
	3H	22.50	23.19	23.38	24.10	25.22	20.51	21.20	21.40	22.11	23.24
	4H	23.32	23.95	24.22	24.85	26.00	20.79	21.42	21.69	22.33	23.48
	6H	23.91	24.45	24.82	25.38	26.54	21.01	21.55	21.92	22.48	23.63
	8H	24.08	24.59	25.00	25.51	26.68	21.07	21.57	21.98	22.50	23.66
	12H	24.16	24.61	25.09	25.55	26.73	21.08	21.54	22.01	22.48	23.65
8H	4H	23.35	23.85	24.26	24.77	25.94	21.02	21.52	21.93	22.45	23.61
	6H	24.00	24.42	24.94	25.39	26.55	21.30	21.71	22.24	22.68	23.84
	8H	24.23	24.60	25.18	25.55	26.74	21.40	21.77	22.35	22.72	23.91
	12H	24.35	24.67	25.30	25.62	26.86	21.45	21.77	22.40	22.72	23.96
12H	4H	23.30	23.76	24.24	24.70	25.87	21.02	21.48	21.95	22.42	23.59
	6H	23.98	24.35	24.93	25.30	26.49	21.33	21.70	22.28	22.65	23.84
	8H	24.22	24.54	25.17	25.49	26.72	21.45	21.77	22.40	22.72	23.96