

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: P855166

Luminaire Tested: SQ2-PH1-075U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855166  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-075U-050D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 750 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

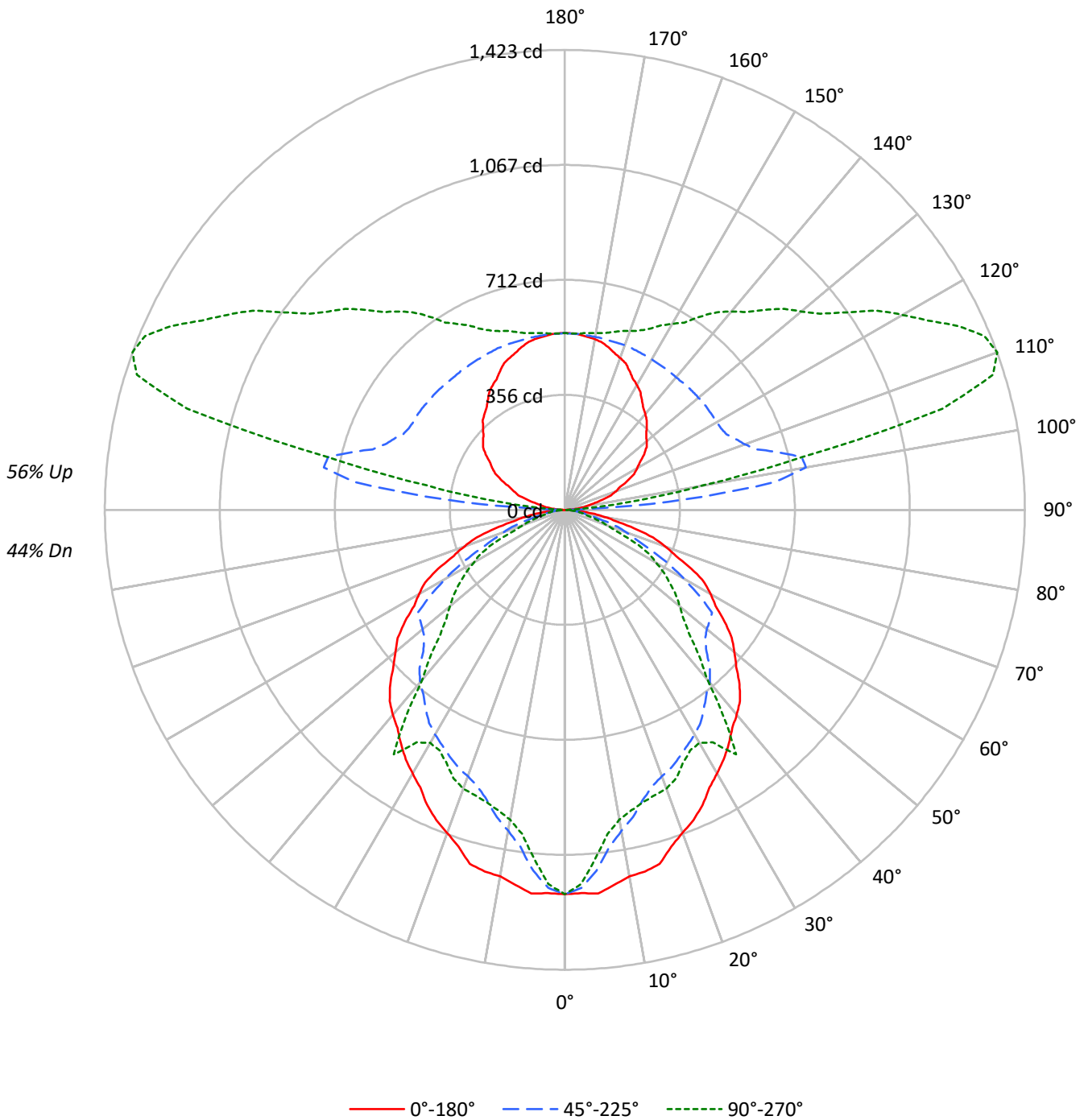
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6015.2 lumens  
Efficiency: N/A  
Efficacy: 146.4 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: General Diffuse  
  
Input Watts (W): 41.1  
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: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-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	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	97	92	89	85	88	85	81	79	70	68	66	57	56	54	45	44	43	37				
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36	31				
3	80	71	64	58	73	65	59	54	55	50	46	44	41	38	35	33	31	27				
4	74	63	55	49	67	58	51	46	48	43	39	40	36	33	31	29	27	23				
5	67	56	48	42	61	52	45	39	43	38	34	36	32	29	28	26	23	20				
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	26	23	21	18				
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	21	18	16				
8	53	41	33	28	49	38	31	27	32	27	23	27	23	20	22	19	16	14				
9	50	37	30	25	45	35	28	24	29	24	21	25	21	18	20	17	15	13				
10	46	34	27	22	42	32	25	21	27	22	19	23	19	16	18	16	13	11				

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

	0°	45°	90°
0°	19204	19204	19204
5°	19313	18157	17553
10°	18869	16531	15956
15°	18954	15549	15644
20°	18278	15069	15770
25°	17943	15000	15403
30°	17553	14958	15528
35°	17420	14789	18201
40°	17435	14693	14431
45°	17443	14134	12428
50°	17199	14413	11655
55°	16980	15640	11181
60°	16811	13705	10488
65°	16516	11110	9123
70°	15597	9456	6519
75°	13905	7130	4941
80°	11362	4630	4630
85°	7132	4187	3149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17443 cd/sqm



TEST NUMBER: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.7	1.7
10°-20°	275.3	4.6
20°-30°	403.6	6.7
30°-40°	488.8	8.1
40°-50°	480.7	8.0
50°-60°	418.5	7.0
60°-70°	290.9	4.8
70°-80°	137.9	2.3
80°-90°	30.9	0.5
90°-100°	206.7	3.4
100°-110°	685.2	11.4
110°-120°	680.0	11.3
120°-130°	553.9	9.2
130°-140°	450.2	7.5
140°-150°	349.6	5.8
150°-160°	251.9	4.2
160°-170°	154.3	2.6
170°-180°	52.1	0.9
0°-30°	783.6	13.0
0°-40°	1272.4	21.2
0°-60°	2171.6	36.1
0°-90°	2631.4	43.7
90°-120°	1571.9	26.1
90°-150°	2925.6	48.6
90°-180°	3384.0	56.3
0°-180°	6015.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1189	1189	1189	1189	1189	
5°	1192	1190	1120	1085	1083	112
15°	1134	1010	930	924	936	316
25°	1007	857	842	868	865	463
35°	884	714	750	815	923	554
45°	764	566	619	641	544	587
55°	603	441	556	400	397	539
65°	432	303	291	239	239	425
75°	223	154	114	82	79	236
85°	38	25	23	18	17	52
90°	0	1	3	4	4	2
95°	29	87	375	134	89	34
105°	120	171	686	1294	1210	127
115°	214	256	552	1150	1344	211
125°	299	332	542	903	1065	266
135°	358	394	537	775	875	277
145°	415	446	536	667	730	261
155°	474	491	540	596	618	218
165°	520	526	542	564	569	147
175°	544	544	545	549	548	52
180°	546	546	546	546	546	



TEST NUMBER: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1189.4	1189.4	1189.4	1189.4	1189.4
2.5°	1186.7	1199.1	1171.3	1160.4	1158.6
5°	1191.6	1190.5	1120.3	1085.3	1083.0
7.5°	1169.9	1135.6	1051.8	1013.1	1011.3
10°	1150.9	1099.0	1008.3	973.2	973.2
12.5°	1146.4	1064.3	973.0	947.1	952.4
15°	1133.9	1010.0	930.2	923.8	935.9
17.5°	1092.7	959.3	897.0	911.8	925.9
20°	1063.8	932.2	877.0	904.5	917.8
22.5°	1039.3	905.9	862.6	892.5	899.7
25°	1007.2	856.7	842.0	867.9	864.6
27.5°	968.7	811.6	821.4	837.2	839.2
30°	941.5	784.5	802.3	818.5	832.9
32.5°	915.3	752.9	781.5	819.9	852.8
35°	883.8	714.5	750.3	815.0	923.4
37.5°	850.8	669.3	718.8	773.3	807.8
40°	827.2	636.9	697.1	764.3	684.7
42.5°	801.9	611.6	664.5	751.3	616.8
45°	763.9	565.8	619.0	640.6	544.3
47.5°	719.1	530.3	588.2	534.1	496.6
50°	684.7	506.5	573.8	488.3	464.0
52.5°	651.2	481.9	563.8	450.5	434.1
55°	603.2	440.6	555.6	400.5	397.2
57.5°	552.3	398.5	491.4	357.0	362.8
60°	520.6	371.2	424.4	331.5	324.8
62.5°	487.1	344.8	361.9	298.9	292.2
65°	432.3	302.8	290.8	238.8	238.8
67.5°	372.1	259.3	235.6	195.4	168.8
70°	330.4	230.9	200.3	155.7	138.1
72.5°	286.1	200.6	164.1	127.7	107.3
75°	222.9	154.4	114.3	81.5	79.2
77.5°	161.1	111.1	77.0	60.4	60.7
80°	122.2	84.6	49.8	48.7	49.8
82.5°	86.0	58.2	37.1	38.7	38.9
85°	38.5	25.2	22.6	18.1	17.0
87.5°	8.1	7.5	5.2	5.4	5.4
90°	0.0	1.1	3.4	4.5	4.5
92.5°	9.1	35.0	103.0	33.4	28.1
95°	29.4	86.9	374.6	133.6	89.4
97.5°	54.1	114.3	653.8	381.3	241.0
100°	71.3	128.8	757.0	650.1	431.2
102.5°	90.3	146.1	750.6	993.6	750.6
105°	120.0	170.9	685.7	1293.7	1209.6
107.5°	150.3	195.7	623.4	1324.2	1388.1
110°	167.5	212.9	591.7	1294.1	1423.4



TEST NUMBER: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	185.6	230.1	572.7	1240.5	1405.3
115°	213.9	255.9	552.1	1149.5	1344.3
117.5°	241.9	279.3	544.7	1062.6	1266.9
120°	259.2	295.6	542.0	1008.2	1206.2
122.5°	274.5	310.2	542.0	963.5	1146.5
125°	298.8	331.9	542.0	903.2	1064.8
127.5°	318.7	351.2	540.6	857.7	995.8
130°	330.4	364.7	539.7	831.1	955.0
132.5°	341.3	376.5	538.8	809.1	920.6
135°	357.6	394.0	537.4	775.1	874.7
137.5°	375.3	410.3	536.1	742.3	830.1
140°	387.0	421.3	535.2	720.3	801.1
142.5°	397.9	431.3	536.1	698.5	770.3
145°	415.3	446.2	536.3	666.8	729.8
147.5°	434.1	459.9	536.5	640.0	686.8
150°	445.9	469.1	537.4	624.3	664.2
152.5°	456.6	479.0	538.3	611.6	643.4
155°	474.1	490.7	539.7	595.7	617.8
157.5°	491.0	503.9	541.0	584.5	600.1
160°	500.1	511.2	542.0	576.2	588.4
162.5°	509.1	517.6	542.0	570.7	580.2
165°	520.5	526.0	542.0	563.6	569.1
167.5°	530.9	533.8	543.1	557.2	560.1
170°	536.3	537.4	543.1	554.5	555.5
172.5°	539.9	541.0	544.0	551.7	551.9
175°	544.2	544.2	545.3	548.7	547.6
177.5°	546.5	546.5	545.6	547.4	545.6
180°	546.5	546.5	546.5	546.5	546.5

-----

TEST NUMBER: P855166

CATALOG NUMBER: SQ2-PH1-075U-050D-835-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	16.99	17.79	18.00	18.81	20.17	15.66	16.46	16.67	17.48	18.84
	3H	19.01	19.72	20.03	20.75	22.13	16.69	17.41	17.71	18.43	19.81
	4H	19.74	20.42	20.77	21.45	22.83	16.90	17.58	17.93	18.61	20.00
	6H	20.22	20.84	21.26	21.88	23.28	17.04	17.67	18.09	18.70	20.10
	8H	20.34	20.94	21.39	21.99	23.38	17.07	17.67	18.12	18.72	20.11
	12H	20.38	20.95	21.44	21.99	23.41	17.07	17.63	18.12	18.68	20.10
4H	2H	17.36	18.03	18.40	19.07	20.45	16.29	16.97	17.33	18.00	19.39
	3H	19.46	20.02	20.50	21.08	22.48	17.47	18.03	18.52	19.09	20.49
	4H	20.27	20.79	21.32	21.84	23.26	17.74	18.26	18.80	19.31	20.73
	6H	20.85	21.29	21.91	22.37	23.78	17.95	18.39	19.01	19.46	20.88
	8H	21.02	21.43	22.08	22.50	23.93	18.00	18.42	19.07	19.48	20.91
	12H	21.08	21.46	22.17	22.54	23.98	18.01	18.38	19.09	19.46	20.90
8H	4H	20.28	20.70	21.35	21.76	23.19	17.95	18.37	19.02	19.43	20.87
	6H	20.93	21.27	22.02	22.38	23.81	18.22	18.56	19.31	19.67	21.10
	8H	21.16	21.45	22.25	22.55	24.00	18.32	18.62	19.42	19.72	21.16
	12H	21.27	21.53	22.37	22.62	24.11	18.37	18.63	19.46	19.72	21.20
12H	4H	20.23	20.60	21.31	21.68	23.12	17.95	18.32	19.03	19.40	20.84
	6H	20.90	21.20	22.00	22.29	23.74	18.25	18.55	19.35	19.64	21.09
	8H	21.13	21.40	22.23	22.48	23.97	18.36	18.63	19.46	19.71	21.20