

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: P855375

Luminaire Tested: SQ2-PH1-050U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

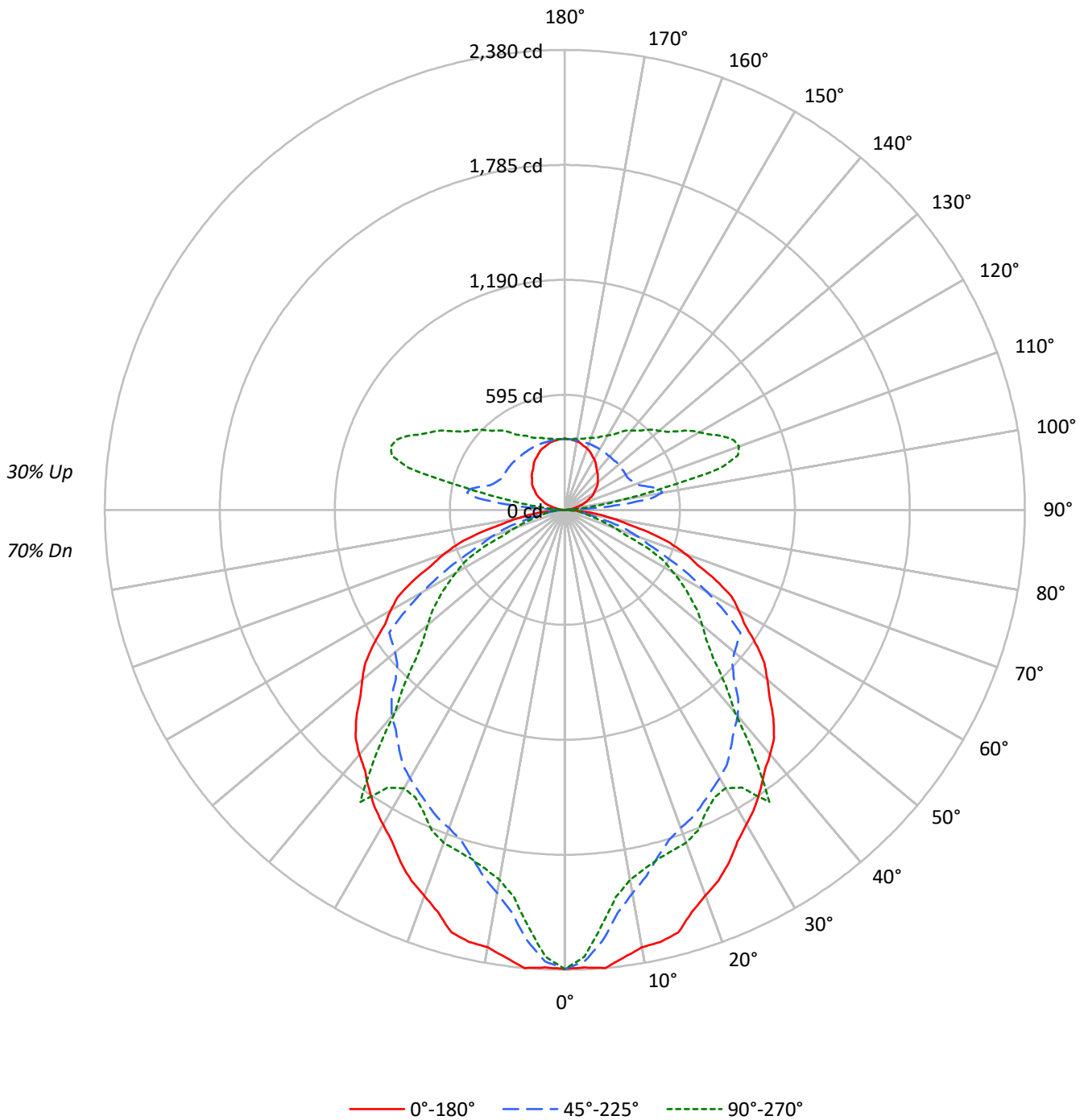
Test Method: LM-79-2019  
Report Number: P855375  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-050U-100D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7535.5 lumens  
Efficiency: N/A  
Efficacy: 143.8 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): 52.4  
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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	74	74	74	70	
1	103	98	94	91	97	93	90	87	83	81	78	74	72	71	66	65	63	63	63	63	59	
2	94	86	80	75	88	82	76	71	73	69	65	66	62	59	59	56	54	54	54	54	50	
3	85	76	68	62	81	72	65	60	65	59	55	58	54	50	52	49	46	46	46	46	43	
4	78	67	59	53	74	64	57	51	58	52	47	52	47	43	47	43	40	40	40	40	37	
5	72	60	52	46	68	57	50	44	52	46	41	47	42	38	42	38	35	35	35	35	32	
6	66	54	46	40	63	52	44	38	47	40	36	42	37	33	38	34	31	31	31	31	28	
7	62	49	41	35	58	47	39	34	42	36	32	39	33	29	35	31	27	27	27	27	25	
8	57	45	37	31	54	43	35	30	39	33	28	35	30	26	32	28	24	24	24	24	22	
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	22	22	22	20	
10	50	38	30	25	47	36	29	24	33	27	23	30	25	22	27	23	20	20	20	20	18	

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

	0°	45°	90°
0°	38358	38358	38358
5°	38577	36269	35060
10°	37689	33019	31870
15°	37857	31057	31246
20°	36508	30100	31498
25°	35838	29959	30765
30°	35061	29880	31016
35°	34795	29538	36356
40°	34825	29347	28823
45°	34837	28232	24825
50°	34350	28788	23277
55°	33914	31240	22334
60°	33577	27370	20951
65°	32986	22197	18220
70°	31162	18888	13015
75°	27779	14242	9875
80°	22706	9242	9242
85°	14227	8373	6280

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 34837 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.0	2.8
10°-20°	549.8	7.3
20°-30°	806.2	10.7
30°-40°	976.4	13.0
40°-50°	960.2	12.7
50°-60°	835.8	11.1
60°-70°	581.1	7.7
70°-80°	275.5	3.7
80°-90°	61.2	0.8
90°-100°	146.2	1.9
100°-110°	463.9	6.2
110°-120°	454.9	6.0
120°-130°	370.1	4.9
130°-140°	301.8	4.0
140°-150°	235.3	3.1
150°-160°	169.5	2.2
160°-170°	103.6	1.4
170°-180°	35.0	0.5
0°-30°	1565.1	20.8
0°-40°	2541.5	33.7
0°-60°	4337.4	57.6
0°-90°	5255.2	69.7
90°-120°	1065.0	14.1
90°-150°	1972.3	26.2
90°-180°	2280.0	30.3
0°-180°	7535.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2376	2376	2376	2376	2376	
5°	2380	2378	2238	2168	2163	224
15°	2265	2017	1858	1845	1869	631
25°	2012	1711	1682	1734	1727	925
35°	1765	1427	1499	1628	1844	1106
45°	1526	1130	1236	1280	1087	1173
55°	1205	880	1110	800	793	1076
65°	863	605	581	477	477	848
75°	445	308	228	163	158	472
85°	77	50	45	36	34	103
90°	0	1	4	4	4	3
95°	20	59	266	98	64	23
105°	81	114	457	871	835	85
115°	144	171	370	768	903	142
125°	200	224	364	602	709	178
135°	241	265	361	518	583	186
145°	282	303	361	447	486	176
155°	321	332	363	399	414	148
165°	350	353	364	378	381	99
175°	366	365	366	368	367	35
180°	367	367	367	367	367	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2375.7	2375.7	2375.7	2375.7	2375.7
2.5°	2370.2	2395.0	2339.4	2317.7	2314.1
5°	2380.2	2378.0	2237.8	2167.6	2163.2
7.5°	2336.7	2268.2	2100.8	2023.4	2019.9
10°	2298.8	2194.9	2014.0	1943.9	1943.9
12.5°	2289.8	2125.8	1943.4	1891.7	1902.3
15°	2264.8	2017.3	1858.0	1845.1	1869.3
17.5°	2182.6	1916.0	1791.6	1821.2	1849.5
20°	2124.8	1861.7	1751.8	1806.6	1833.2
22.5°	2075.9	1809.4	1722.8	1782.8	1797.0
25°	2011.7	1711.2	1681.7	1733.5	1726.9
27.5°	1934.9	1621.1	1640.5	1672.4	1676.3
30°	1880.6	1566.8	1602.7	1634.9	1663.6
32.5°	1828.2	1503.7	1561.1	1637.5	1703.5
35°	1765.3	1427.2	1498.6	1627.8	1844.5
37.5°	1699.4	1336.8	1435.8	1544.5	1613.5
40°	1652.3	1272.2	1392.4	1526.7	1367.5
42.5°	1601.7	1221.6	1327.3	1500.7	1231.9
45°	1525.7	1130.1	1236.4	1279.5	1087.2
47.5°	1436.2	1059.2	1175.0	1067.0	991.9
50°	1367.5	1011.7	1146.1	975.3	926.7
52.5°	1300.6	962.5	1126.1	899.8	867.1
55°	1204.8	879.9	1109.8	800.0	793.4
57.5°	1103.1	795.9	981.5	713.2	724.6
60°	1039.8	741.4	847.6	661.9	648.8
62.5°	972.9	688.6	722.9	596.9	583.6
65°	863.4	604.8	581.0	476.9	476.9
67.5°	743.2	517.8	470.6	390.3	337.3
70°	660.1	461.1	400.1	311.2	275.7
72.5°	571.4	400.8	327.7	255.0	214.3
75°	445.3	308.2	228.3	162.7	158.3
77.5°	321.9	222.0	153.7	120.7	121.2
80°	244.2	169.0	99.4	97.2	99.4
82.5°	171.8	116.1	74.1	77.3	77.7
85°	76.8	50.3	45.2	36.1	33.9
87.5°	16.3	14.7	9.8	9.8	9.8
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.4	25.6	82.0	27.3	19.1
95°	19.6	59.2	265.6	98.5	63.5
97.5°	36.5	76.7	449.8	281.1	172.5
100°	48.5	86.9	512.7	467.4	303.7
102.5°	61.4	98.0	501.6	686.4	525.4
105°	80.9	113.6	457.3	871.0	834.9
107.5°	100.2	130.5	415.0	890.2	939.1
110°	113.2	142.5	393.8	868.1	958.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	126.1	153.6	381.8	829.9	944.6
115°	144.4	171.4	369.5	767.5	903.1
117.5°	162.1	187.9	364.7	707.5	844.1
120°	173.2	198.0	363.7	670.5	802.6
122.5°	184.2	208.3	363.7	640.7	763.8
125°	199.7	223.5	363.7	601.8	709.0
127.5°	213.4	236.2	363.7	571.6	663.1
130°	221.7	245.4	363.7	553.8	636.3
132.5°	230.1	253.7	362.8	539.8	614.0
135°	241.4	265.0	361.4	517.7	583.2
137.5°	252.4	277.2	361.2	496.5	555.0
140°	259.8	284.7	360.3	481.5	534.7
142.5°	269.1	293.0	361.2	466.7	516.2
145°	281.8	303.2	361.4	446.6	486.2
147.5°	294.5	312.8	361.6	428.9	461.3
150°	303.7	318.4	362.6	418.6	444.6
152.5°	311.0	324.0	362.6	410.2	431.7
155°	321.1	332.4	362.6	398.8	414.5
157.5°	331.7	339.4	363.7	391.7	402.5
160°	337.2	343.9	363.7	387.0	396.1
162.5°	342.7	347.8	363.7	383.3	389.6
165°	349.9	353.2	363.7	377.7	381.1
167.5°	356.6	357.5	364.9	373.7	376.7
170°	360.3	360.3	364.9	371.9	373.0
172.5°	362.1	363.0	364.9	370.0	370.2
175°	366.1	364.9	366.1	368.4	367.2
177.5°	367.2	366.3	366.3	368.2	366.3
180°	367.2	367.2	367.2	367.2	367.2

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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	21.65	22.71	22.42	23.50	24.46	20.33	21.39	21.09	22.18	23.13
	3H	23.69	24.64	24.48	25.44	26.43	21.37	22.32	22.16	23.12	24.11
	4H	24.43	25.33	25.23	26.14	27.14	21.60	22.49	22.40	23.30	24.30
	6H	24.93	25.76	25.74	26.57	27.59	21.75	22.58	22.57	23.39	24.41
	8H	25.06	25.85	25.88	26.68	27.70	21.79	22.58	22.61	23.41	24.43
	12H	25.11	25.86	25.94	26.69	27.73	21.79	22.54	22.62	23.37	24.41
4H	2H	22.05	22.95	22.86	23.76	24.76	20.99	21.89	21.80	22.70	23.70
	3H	24.18	24.92	24.99	25.76	26.78	22.19	22.93	23.01	23.78	24.79
	4H	25.00	25.68	25.83	26.52	27.56	22.47	23.15	23.30	23.99	25.04
	6H	25.60	26.18	26.44	27.05	28.10	22.69	23.28	23.54	24.14	25.19
	8H	25.77	26.32	26.62	27.18	28.24	22.75	23.30	23.60	24.16	25.22
	12H	25.85	26.34	26.72	27.22	28.29	22.77	23.26	23.64	24.14	25.21
8H	4H	25.03	25.58	25.88	26.44	27.50	22.71	23.25	23.56	24.11	25.17
	6H	25.69	26.14	26.57	27.05	28.11	22.99	23.44	23.86	24.34	25.40
	8H	25.92	26.32	26.81	27.22	28.30	23.09	23.49	23.98	24.39	25.47
	12H	26.04	26.40	26.94	27.28	28.42	23.14	23.49	24.03	24.38	25.52
12H	4H	25.00	25.49	25.87	26.37	27.43	22.71	23.20	23.58	24.08	25.15
	6H	25.67	26.07	26.56	26.97	28.05	23.02	23.42	23.91	24.31	25.39
	8H	25.91	26.26	26.80	27.15	28.28	23.14	23.49	24.03	24.38	25.52