

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: P854012

Luminaire Tested: SQ2-PH1-050U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854012
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-940-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

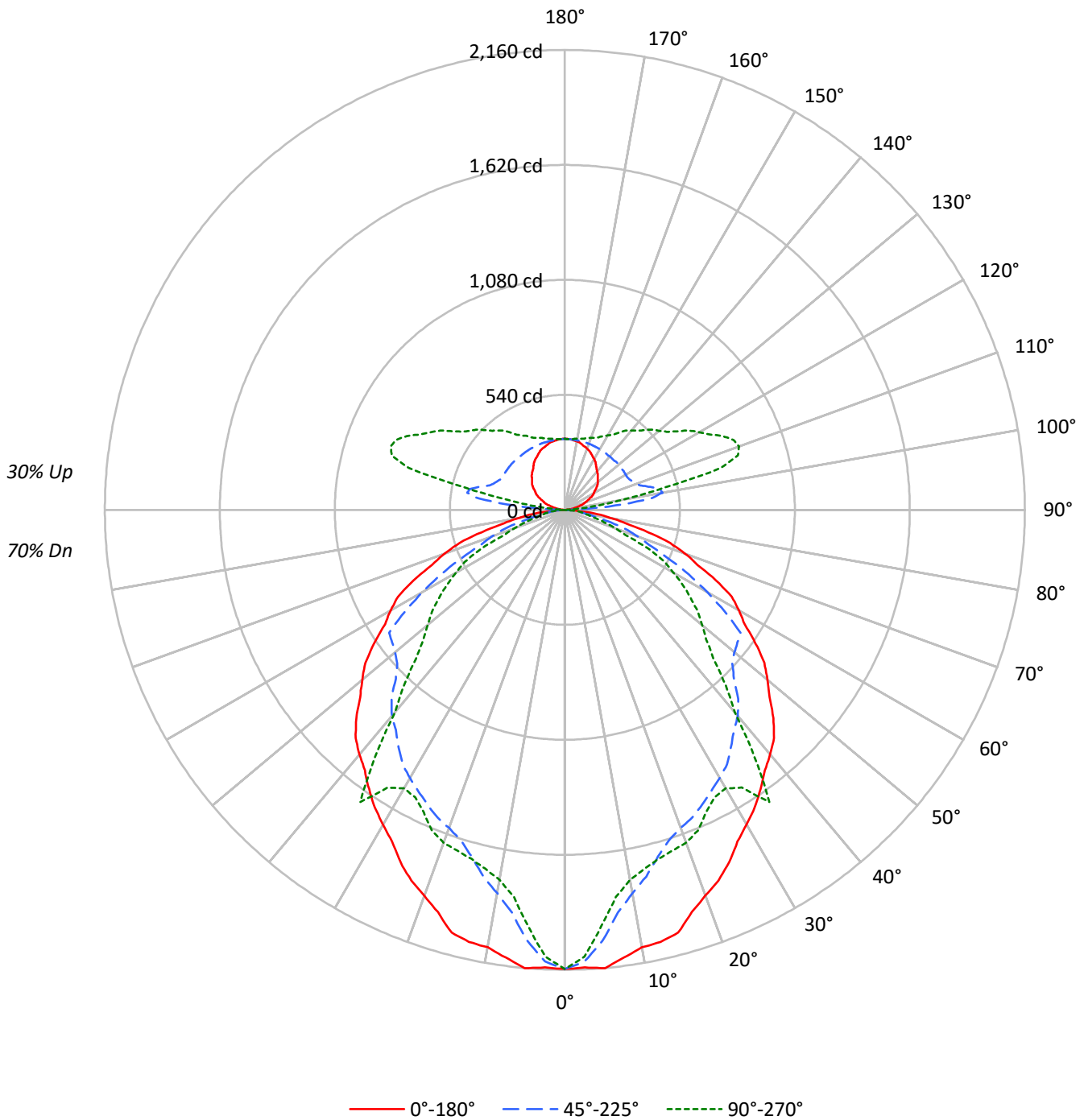
Lumens per Lamp: N/A
Luminaire Lumens: 6839.6 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34814	34814	34814
5°	35013	32919	31822
10°	34208	29970	28927
15°	34362	28189	28361
20°	33136	27319	28589
25°	32528	27193	27923
30°	31823	27119	28152
35°	31582	26810	32997
40°	31609	26637	26161
45°	31620	25624	22532
50°	31177	26128	21130
55°	30781	28355	20270
60°	30474	24845	19013
65°	29941	20145	16539
70°	28282	17141	11816
75°	25215	12926	8958
80°	20604	8396	8396
85°	12931	7595	5706

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 31620 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.7	2.8
10°-20°	499.1	7.3
20°-30°	731.8	10.7
30°-40°	886.2	13.0
40°-50°	871.5	12.7
50°-60°	758.6	11.1
60°-70°	527.4	7.7
70°-80°	250.1	3.7
80°-90°	55.5	0.8
90°-100°	132.7	1.9
100°-110°	421.1	6.2
110°-120°	412.9	6.0
120°-130°	336.0	4.9
130°-140°	273.9	4.0
140°-150°	213.6	3.1
150°-160°	153.9	2.2
160°-170°	94.0	1.4
170°-180°	31.7	0.5
0°-30°	1420.6	20.8
0°-40°	2306.7	33.7
0°-60°	3936.8	57.6
0°-90°	4769.8	69.7
90°-120°	966.7	14.1
90°-150°	1790.2	26.2
90°-180°	2070.0	30.3
0°-180°	6839.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2156	2156	2156	2156	2156	
5°	2160	2158	2031	1967	1963	203
15°	2056	1831	1686	1675	1697	573
25°	1826	1553	1526	1573	1567	840
35°	1602	1295	1360	1478	1674	1004
45°	1385	1026	1122	1161	987	1064
55°	1094	799	1007	726	720	977
65°	784	549	527	433	433	770
75°	404	280	207	148	144	428
85°	70	46	41	33	31	93
90°	0	1	3	3	3	3
95°	18	54	241	89	58	21
105°	73	103	415	791	758	77
115°	131	156	335	697	820	129
125°	181	203	330	546	644	161
135°	219	241	328	470	529	169
145°	256	275	328	405	441	160
155°	291	302	329	362	376	134
165°	318	321	330	343	346	90
175°	332	331	332	334	333	31
180°	333	333	333	333	333	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2156.2	2156.2	2156.2	2156.2	2156.2
2.5°	2151.3	2173.8	2123.4	2103.6	2100.4
5°	2160.3	2158.3	2031.1	1967.4	1963.4
7.5°	2121.0	2058.8	1906.8	1836.5	1833.3
10°	2086.5	1992.2	1828.0	1764.4	1764.4
12.5°	2078.3	1929.4	1764.0	1717.0	1726.6
15°	2055.7	1831.0	1686.4	1674.6	1696.7
17.5°	1981.0	1739.1	1626.1	1652.9	1678.6
20°	1928.5	1689.8	1590.0	1639.8	1663.9
22.5°	1884.2	1642.3	1563.7	1618.2	1631.0
25°	1825.9	1553.1	1526.4	1573.4	1567.4
27.5°	1756.2	1471.3	1489.1	1517.9	1521.5
30°	1706.9	1422.1	1454.6	1483.9	1510.0
32.5°	1659.3	1364.9	1416.8	1486.3	1546.1
35°	1602.3	1295.4	1360.2	1477.5	1674.1
37.5°	1542.4	1213.4	1303.2	1401.8	1464.4
40°	1499.7	1154.7	1263.8	1385.7	1241.2
42.5°	1453.8	1108.7	1204.7	1362.1	1118.1
45°	1384.8	1025.8	1122.2	1161.3	986.8
47.5°	1303.6	961.4	1066.4	968.4	900.2
50°	1241.2	918.3	1040.2	885.3	841.2
52.5°	1180.5	873.6	1022.1	816.7	787.0
55°	1093.5	798.6	1007.3	726.1	720.1
57.5°	1001.2	722.3	890.8	647.3	657.7
60°	943.7	672.9	769.4	600.8	588.8
62.5°	883.0	625.0	656.1	541.8	529.7
65°	783.7	549.0	527.3	432.9	432.9
67.5°	674.6	470.0	427.1	354.2	306.1
70°	599.1	418.5	363.1	282.4	250.3
72.5°	518.6	363.8	297.5	231.4	194.5
75°	404.2	279.8	207.2	147.6	143.6
77.5°	292.1	201.5	139.5	109.6	110.0
80°	221.6	153.4	90.3	88.3	90.3
82.5°	155.9	105.4	67.3	70.2	70.6
85°	69.8	45.7	41.0	32.8	30.8
87.5°	14.8	13.4	8.8	8.8	8.8
90°	0.0	1.0	3.1	3.1	3.1
92.5°	5.9	23.3	74.4	24.8	17.4
95°	17.8	53.7	241.1	89.4	57.6
97.5°	33.1	69.6	408.3	255.2	156.6
100°	44.0	78.9	465.4	424.3	275.7
102.5°	55.8	89.0	455.3	623.0	476.9
105°	73.4	103.1	415.1	790.6	757.8
107.5°	91.0	118.4	376.7	808.0	852.3
110°	102.7	129.4	357.4	787.9	869.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	114.5	139.5	346.5	753.2	857.4
115°	131.0	155.6	335.4	696.6	819.6
117.5°	147.2	170.5	331.0	642.2	766.2
120°	157.2	179.8	330.2	608.5	728.4
122.5°	167.3	189.0	330.2	581.5	693.2
125°	181.3	202.8	330.2	546.2	643.5
127.5°	193.7	214.4	330.2	518.8	601.8
130°	201.2	222.8	330.2	502.7	577.5
132.5°	208.8	230.3	329.3	490.0	557.4
135°	219.1	240.6	328.1	469.9	529.3
137.5°	229.1	251.7	327.8	450.6	503.7
140°	235.8	258.4	327.0	437.1	485.3
142.5°	244.2	265.9	327.8	423.6	468.5
145°	255.7	275.2	328.1	405.4	441.3
147.5°	267.3	283.9	328.3	389.3	418.6
150°	275.7	289.0	329.1	380.0	403.5
152.5°	282.4	294.0	329.1	372.3	391.8
155°	291.4	301.6	329.1	361.9	376.3
157.5°	301.0	308.0	330.2	355.5	365.4
160°	306.0	312.2	330.2	351.3	359.5
162.5°	311.1	315.6	330.2	347.9	353.6
165°	317.6	320.7	330.2	342.8	345.9
167.5°	323.7	324.5	331.2	339.2	341.9
170°	327.0	327.0	331.2	337.5	338.5
172.5°	328.7	329.5	331.2	335.8	336.0
175°	332.3	331.2	332.3	334.3	333.3
177.5°	333.3	332.5	332.5	334.1	332.5
180°	333.3	333.3	333.3	333.3	333.3



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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	21.32	22.38	22.08	23.17	24.12	19.99	21.05	20.76	21.84	22.80
	3H	23.36	24.31	24.14	25.11	26.10	21.04	21.99	21.82	22.79	23.78
	4H	24.10	24.99	24.90	25.80	26.80	21.26	22.16	22.06	22.97	23.97
	6H	24.59	25.42	25.41	26.23	27.25	21.42	22.24	22.23	23.06	24.07
	8H	24.72	25.51	25.54	26.34	27.36	21.45	22.24	22.28	23.08	24.09
	12H	24.77	25.52	25.60	26.35	27.39	21.46	22.21	22.29	23.04	24.08
4H	2H	21.72	22.61	22.52	23.42	24.42	20.65	21.55	21.46	22.36	23.36
	3H	23.84	24.59	24.66	25.43	26.45	21.85	22.60	22.67	23.44	24.46
	4H	24.66	25.34	25.49	26.18	27.23	22.14	22.81	22.97	23.65	24.70
	6H	25.26	25.84	26.11	26.71	27.76	22.36	22.94	23.20	23.81	24.86
	8H	25.43	25.98	26.28	26.84	27.90	22.42	22.96	23.27	23.82	24.89
	12H	25.51	26.00	26.38	26.88	27.95	22.43	22.93	23.30	23.81	24.87
8H	4H	24.70	25.24	25.55	26.10	27.17	22.37	22.91	23.22	23.77	24.84
	6H	25.36	25.81	26.24	26.71	27.77	22.65	23.10	23.53	24.00	25.06
	8H	25.58	25.98	26.47	26.88	27.96	22.75	23.15	23.64	24.05	25.13
	12H	25.71	26.06	26.60	26.95	28.08	22.81	23.16	23.70	24.05	25.18
12H	4H	24.66	25.15	25.53	26.03	27.10	22.37	22.87	23.24	23.75	24.81
	6H	25.33	25.73	26.22	26.63	27.71	22.68	23.08	23.57	23.98	25.06
	8H	25.57	25.93	26.47	26.81	27.95	22.81	23.16	23.70	24.05	25.18