

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: P855319

Luminaire Tested: SQ2-PR1-050U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855319
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-050U-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

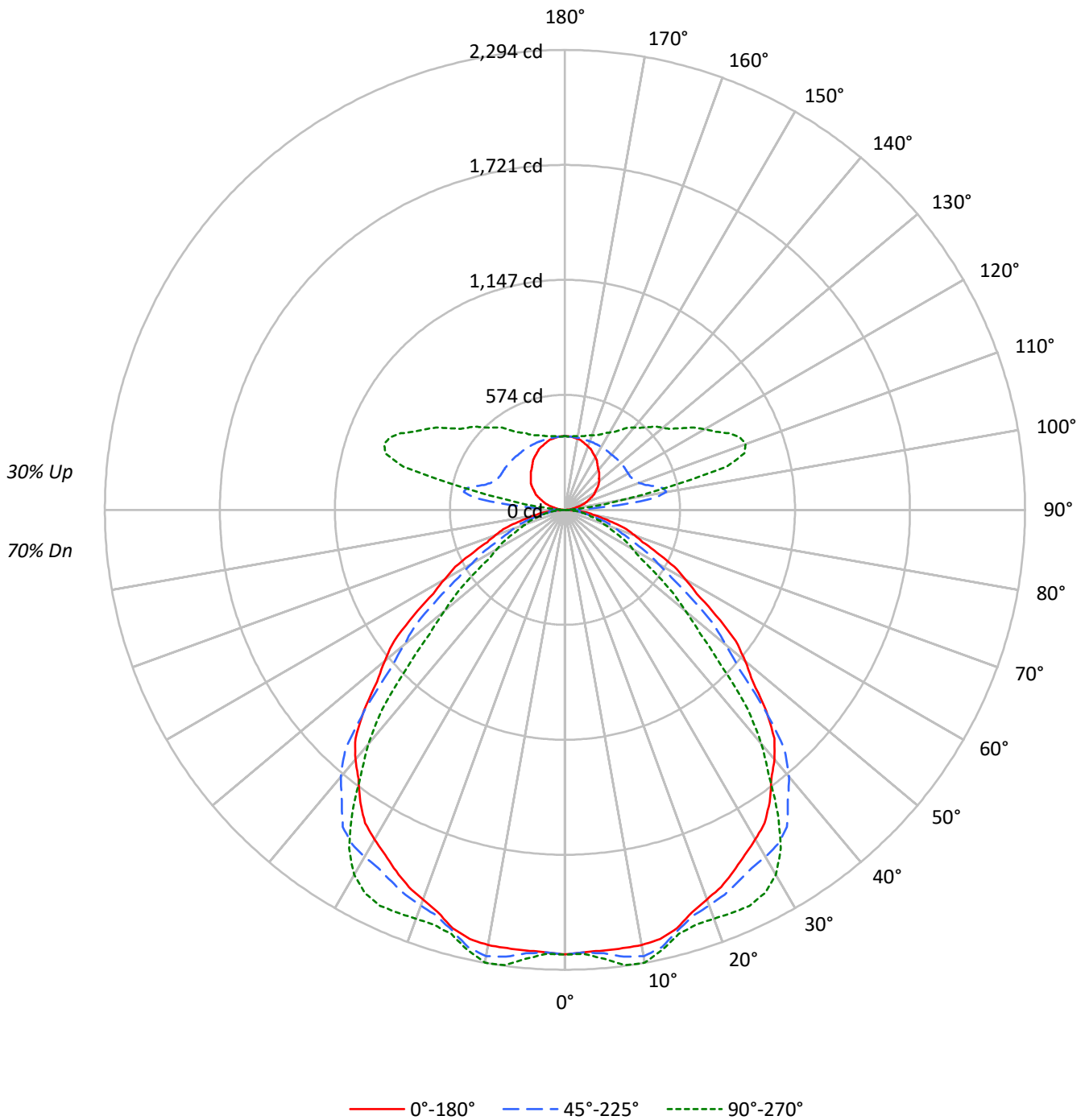
Lumens per Lamp: N/A
Luminaire Lumens: 7615.1 lumens
Efficiency: N/A
Efficacy: 145.3 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	
RCR																					
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	75	75	75	75	75	70	
1	103	99	95	92	97	94	91	88	84	82	80	75	74	72	67	66	65	65	65	61	
2	95	88	82	77	89	83	78	73	75	71	67	67	64	61	60	58	56	56	56	52	
3	87	78	71	65	82	74	68	62	67	62	58	60	56	53	54	51	48	48	48	45	
4	80	69	62	56	75	66	59	54	60	54	50	54	50	46	49	45	42	42	42	39	
5	74	62	54	48	70	59	52	47	54	48	44	49	44	40	44	41	37	37	37	35	
6	68	56	48	42	64	54	46	41	49	43	38	45	40	36	40	36	33	33	33	31	
7	63	51	43	38	60	49	42	36	45	39	34	41	36	32	37	33	30	30	30	27	
8	59	47	39	33	56	45	37	33	41	35	31	37	32	29	34	30	27	27	27	25	
9	55	43	35	30	52	41	34	29	38	32	28	35	30	26	32	27	24	24	24	22	
10	51	39	32	27	49	38	31	26	35	29	25	32	27	24	29	25	22	22	22	20	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35802	35802	35802
5°	35755	35976	36415
10°	36133	37059	37615
15°	36120	36309	36612
20°	35536	36081	37285
25°	35436	36442	38819
30°	35399	37254	39193
35°	35063	38049	36488
40°	34254	36636	32111
45°	32412	32154	25393
50°	29466	26286	19700
55°	25897	21636	15333
60°	22407	17299	12626
65°	19347	14338	11056
70°	17391	12699	9814
75°	15939	10998	9021
80°	13873	8833	8833
85°	10041	7966	4187

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 35038 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.1	2.8
10°-20°	619.9	8.1
20°-30°	958.2	12.6
30°-40°	1152.5	15.1
40°-50°	1034.9	13.6
50°-60°	693.3	9.1
60°-70°	403.2	5.3
70°-80°	207.1	2.7
80°-90°	51.6	0.7
90°-100°	146.2	1.9
100°-110°	463.9	6.1
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°	1792.2	23.5
0°-40°	2944.7	38.7
0°-60°	4672.9	61.4
0°-90°	5334.8	70.1
90°-120°	1065.0	14.0
90°-150°	1972.3	25.9
90°-180°	2280.0	29.9
0°-180°	7615.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2217	2217	2217	2217	2217	
5°	2206	2244	2220	2225	2247	211
15°	2161	2249	2172	2179	2190	607
25°	1989	2069	2046	2122	2179	917
35°	1779	1794	1930	1893	1851	1109
45°	1420	1534	1408	1187	1112	1086
55°	920	955	769	593	545	827
65°	506	517	375	305	289	512
75°	256	249	176	149	145	271
85°	54	43	43	29	23	67
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°	2217.4	2217.4	2217.4	2217.4	2217.4
2.5°	2208.4	2234.9	2210.2	2212.2	2217.4
5°	2206.1	2243.7	2219.7	2224.8	2246.8
7.5°	2205.6	2259.1	2247.7	2261.5	2290.7
10°	2203.9	2268.0	2260.4	2263.3	2294.3
12.5°	2193.1	2267.8	2233.3	2230.5	2247.2
15°	2160.9	2249.3	2172.2	2179.3	2190.3
17.5°	2104.4	2196.8	2123.4	2148.3	2170.0
20°	2068.2	2158.9	2099.9	2132.3	2170.0
22.5°	2035.7	2126.3	2078.1	2123.7	2175.3
25°	1989.1	2068.7	2045.6	2121.5	2179.0
27.5°	1940.3	1987.1	2014.4	2116.1	2156.3
30°	1898.7	1929.7	1998.2	2086.7	2102.2
32.5°	1853.5	1872.1	1976.5	2022.6	2002.7
35°	1778.9	1794.4	1930.4	1893.2	1851.2
37.5°	1690.3	1722.1	1826.9	1719.9	1671.8
40°	1625.2	1678.3	1738.2	1578.8	1523.5
42.5°	1545.7	1630.5	1620.7	1417.5	1349.9
45°	1419.5	1534.5	1408.2	1187.2	1112.1
47.5°	1270.8	1388.8	1182.2	984.9	914.5
50°	1173.1	1268.2	1046.5	861.7	784.3
52.5°	1073.7	1142.2	930.8	746.1	675.8
55°	920.0	955.3	768.6	593.4	544.7
57.5°	779.0	801.4	627.9	479.3	443.4
60°	693.9	709.4	535.7	419.8	391.0
62.5°	616.1	628.2	461.6	369.3	347.6
65°	506.4	517.3	375.3	304.8	289.4
67.5°	419.1	424.8	308.7	253.2	238.7
70°	368.4	370.6	269.0	219.0	207.9
72.5°	323.3	320.1	231.0	190.2	182.6
75°	255.5	248.8	176.3	149.1	144.6
77.5°	190.8	183.7	123.9	114.8	114.8
80°	149.2	140.3	95.0	95.0	95.0
82.5°	111.2	98.8	73.2	73.2	71.4
85°	54.2	43.2	43.0	29.3	22.6
87.5°	14.5	14.7	6.1	6.1	6.1
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	20.91	21.93	21.69	22.71	23.67	17.64	18.65	18.41	19.44	20.40
	3H	22.16	23.06	22.95	23.86	24.85	18.72	19.62	19.50	20.42	21.41
	4H	22.62	23.47	23.42	24.28	25.27	19.12	19.97	19.93	20.78	21.78
	6H	22.94	23.73	23.76	24.54	25.55	19.46	20.24	20.28	21.06	22.07
	8H	23.03	23.77	23.86	24.61	25.62	19.55	20.30	20.38	21.13	22.14
	12H	23.06	23.77	23.90	24.60	25.64	19.57	20.27	20.40	21.10	22.14
4H	2H	21.01	21.86	21.82	22.67	23.67	18.23	19.08	19.04	19.88	20.88
	3H	22.50	23.20	23.32	24.04	25.06	19.51	20.21	20.33	21.05	22.07
	4H	23.10	23.74	23.93	24.57	25.62	20.02	20.66	20.85	21.50	22.54
	6H	23.56	24.11	24.41	24.97	26.02	20.46	21.01	21.31	21.88	22.92
	8H	23.69	24.21	24.55	25.07	26.12	20.59	21.10	21.44	21.96	23.02
	12H	23.75	24.21	24.63	25.09	26.16	20.62	21.08	21.49	21.96	23.02
8H	4H	23.13	23.65	23.99	24.51	25.57	20.34	20.85	21.19	21.71	22.77
	6H	23.69	24.11	24.57	25.01	26.07	20.88	21.30	21.76	22.20	23.26
	8H	23.89	24.26	24.78	25.16	26.24	21.06	21.44	21.95	22.33	23.41
	12H	24.00	24.33	24.89	25.22	26.35	21.13	21.46	22.02	22.35	23.48
12H	4H	23.10	23.56	23.97	24.44	25.50	20.36	20.82	21.23	21.70	22.76
	6H	23.67	24.05	24.57	24.95	26.02	20.94	21.31	21.83	22.21	23.29
	8H	23.89	24.23	24.79	25.11	26.24	21.15	21.48	22.04	22.37	23.50