

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: P854174

Luminaire Tested: SQ2-PR1-050U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854174
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-050D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

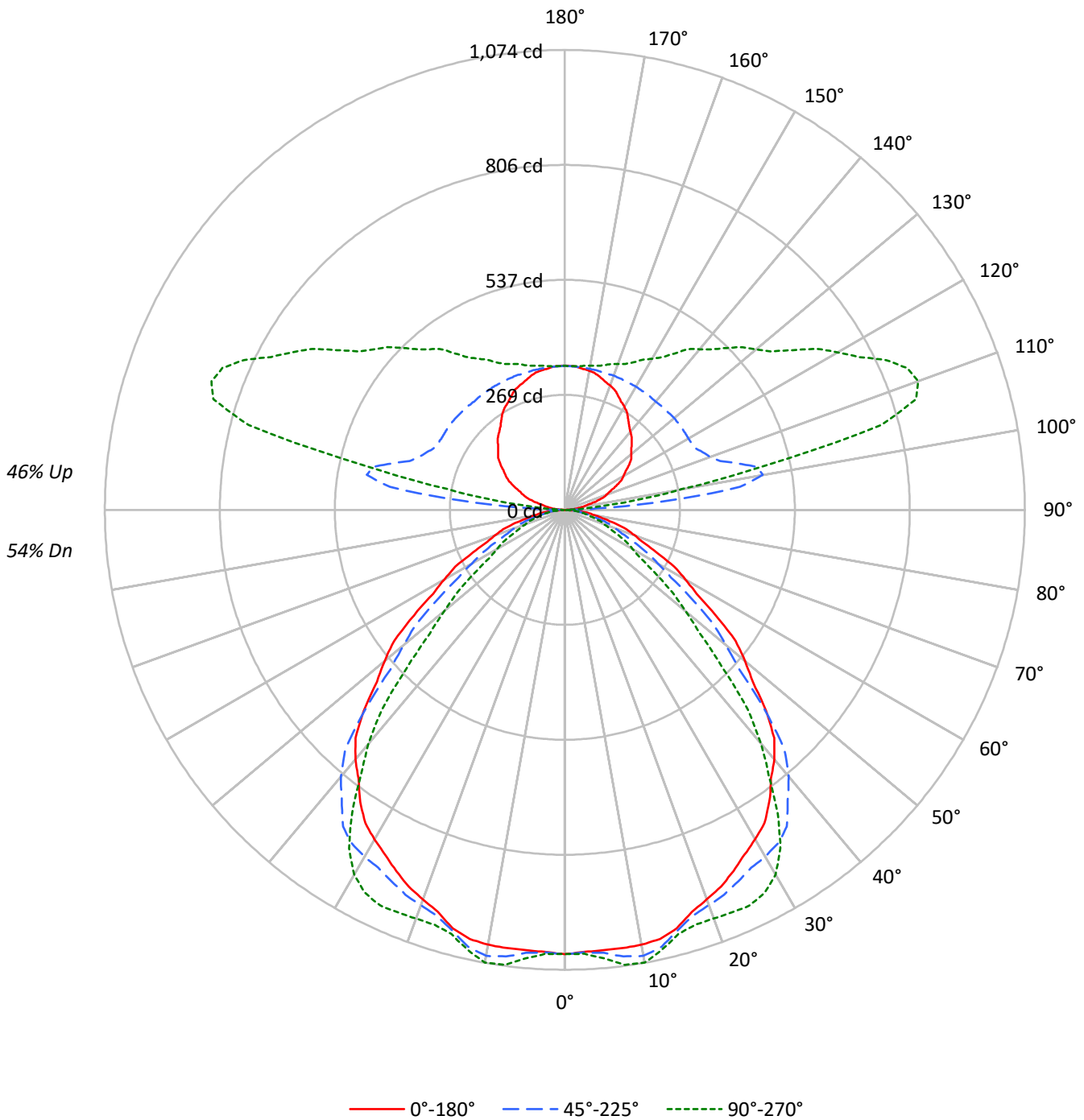
Lumens per Lamp: N/A
Luminaire Lumens: 4585.4 lumens
Efficiency: N/A
Efficacy: 140.7 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.6
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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	95	92	88	92	89	86	83	76	74	72	65	63	62	54	53	52	47
2	91	84	78	73	84	78	73	69	68	64	61	58	55	53	49	47	45	41
3	84	74	67	62	77	70	63	58	60	56	52	52	48	45	44	41	39	35
4	77	66	59	53	71	62	55	50	54	49	45	46	42	39	39	36	34	31
5	71	59	51	46	65	56	49	43	48	43	39	42	38	34	36	33	30	27
6	65	53	46	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24
7	60	48	41	35	56	45	38	34	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	35	30	36	31	27	32	27	24	27	24	21	19
9	52	40	33	28	49	38	31	27	33	28	24	29	25	22	25	22	19	17
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16755	16755	16755
5°	16733	16835	17041
10°	16908	17343	17602
15°	16903	16991	17133
20°	16631	16885	17448
25°	16582	17054	18166
30°	16565	17434	18340
35°	16409	17804	17075
40°	16029	17144	15026
45°	15168	15047	11883
50°	13790	12303	9218
55°	12118	10123	7175
60°	10485	8096	5909
65°	9051	6709	5173
70°	8139	5943	4593
75°	7455	5147	4223
80°	6490	4128	4128
85°	4705	3724	1964

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 16397 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	2.2
10°-20°	290.1	6.3
20°-30°	448.4	9.8
30°-40°	539.3	11.8
40°-50°	484.3	10.6
50°-60°	324.4	7.1
60°-70°	188.7	4.1
70°-80°	96.9	2.1
80°-90°	24.4	0.5
90°-100°	134.0	2.9
100°-110°	424.9	9.3
110°-120°	416.6	9.1
120°-130°	339.0	7.4
130°-140°	276.4	6.0
140°-150°	215.5	4.7
150°-160°	155.3	3.4
160°-170°	94.9	2.1
170°-180°	32.0	0.7
0°-30°	838.7	18.3
0°-40°	1378.0	30.1
0°-60°	2186.7	47.7
0°-90°	2496.7	54.4
90°-120°	975.5	21.3
90°-150°	1806.5	39.4
90°-180°	2089.0	45.6
0°-180°	4585.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1032	1050	1039	1041	1051	99
15°	1011	1053	1016	1020	1025	284
25°	931	968	957	993	1020	429
35°	832	840	903	886	866	519
45°	664	718	659	556	520	508
55°	430	447	360	278	255	387
65°	237	242	176	143	135	240
75°	120	116	82	70	68	127
85°	25	20	20	14	11	31
90°	0	1	3	3	3	2
95°	18	54	243	90	58	21
105°	74	104	419	798	765	78
115°	132	157	338	703	827	131
125°	183	205	333	551	649	163
135°	221	243	331	474	534	171
145°	258	278	331	409	445	162
155°	294	304	332	365	380	136
165°	320	324	333	346	349	90
175°	335	334	335	337	336	32
180°	336	336	336	336	336	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1037.7	1037.7	1037.7	1037.7	1037.7
2.5°	1033.4	1045.9	1034.3	1035.2	1037.7
5°	1032.4	1050.0	1038.7	1041.1	1051.4
7.5°	1032.2	1057.2	1051.9	1058.3	1071.9
10°	1031.3	1061.3	1057.8	1059.2	1073.6
12.5°	1026.3	1061.2	1045.1	1043.8	1051.6
15°	1011.2	1052.6	1016.5	1019.8	1025.0
17.5°	984.8	1028.0	993.7	1005.3	1015.5
20°	967.9	1010.3	982.7	997.9	1015.5
22.5°	952.6	995.0	972.5	993.8	1018.0
25°	930.8	968.1	957.3	992.8	1019.7
27.5°	908.0	929.9	942.7	990.3	1009.1
30°	888.5	903.0	935.1	976.5	983.7
32.5°	867.4	876.1	924.9	946.5	937.2
35°	832.5	839.7	903.3	886.0	866.3
37.5°	791.0	805.9	854.9	804.9	782.3
40°	760.5	785.4	813.4	738.8	712.9
42.5°	723.3	763.0	758.4	663.4	631.7
45°	664.3	718.1	659.0	555.6	520.4
47.5°	594.7	649.9	553.2	460.9	428.0
50°	549.0	593.5	489.8	403.2	367.0
52.5°	502.4	534.5	435.6	349.2	316.3
55°	430.5	447.1	359.6	277.7	254.9
57.5°	364.5	375.1	293.9	224.3	207.5
60°	324.7	332.0	250.7	196.4	183.0
62.5°	288.3	293.9	216.0	172.8	162.7
65°	236.9	242.1	175.6	142.6	135.4
67.5°	196.1	198.8	144.5	118.5	111.7
70°	172.4	173.5	125.9	102.5	97.3
72.5°	151.3	149.8	108.1	89.0	85.5
75°	119.5	116.4	82.5	69.8	67.7
77.5°	89.3	86.0	58.0	53.7	53.7
80°	69.8	65.7	44.4	44.4	44.4
82.5°	52.0	46.3	34.3	34.3	33.4
85°	25.4	20.2	20.1	13.7	10.6
87.5°	6.8	7.0	3.2	3.2	3.2
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.5	75.1	25.0	17.6
95°	18.0	54.2	243.3	90.2	58.2
97.5°	33.4	70.2	412.1	257.5	158.0
100°	44.4	79.6	469.6	428.1	278.2
102.5°	56.3	89.8	459.5	628.7	481.2
105°	74.0	104.0	418.8	797.8	764.7
107.5°	91.8	119.5	380.1	815.4	860.1
110°	103.7	130.5	360.7	795.1	877.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.5	140.7	349.7	760.1	865.2
115°	132.2	157.0	338.5	703.0	827.1
117.5°	148.5	172.1	334.0	648.0	773.2
120°	158.7	181.4	333.2	614.1	735.1
122.5°	168.8	190.7	333.2	586.8	699.5
125°	183.0	204.7	333.2	551.2	649.4
127.5°	195.5	216.3	333.2	523.5	607.3
130°	203.1	224.8	333.2	507.3	582.8
132.5°	210.7	232.4	332.3	494.4	562.5
135°	221.1	242.8	331.1	474.1	534.1
137.5°	231.2	254.0	330.8	454.7	508.3
140°	238.0	260.7	330.0	441.1	489.7
142.5°	246.4	268.4	330.8	427.5	472.8
145°	258.1	277.7	331.1	409.1	445.3
147.5°	269.7	286.5	331.3	392.9	422.4
150°	278.2	291.6	332.1	383.4	407.2
152.5°	284.9	296.7	332.1	375.7	395.4
155°	294.0	304.4	332.1	365.2	379.7
157.5°	303.8	310.8	333.2	358.8	368.7
160°	308.8	315.0	333.2	354.5	362.8
162.5°	313.9	318.5	333.2	351.1	356.9
165°	320.5	323.6	333.2	345.9	349.0
167.5°	326.6	327.4	334.2	342.3	345.0
170°	330.0	330.0	334.2	340.6	341.6
172.5°	331.7	332.5	334.2	338.9	339.1
175°	335.3	334.2	335.3	337.4	336.3
177.5°	336.3	335.5	335.5	337.1	335.5
180°	336.3	336.3	336.3	336.3	336.3



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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	16.98	17.84	17.91	18.78	19.99	13.70	14.56	14.63	15.50	16.71
	3H	18.21	18.98	19.15	19.93	21.16	14.77	15.54	15.71	16.48	17.72
	4H	18.67	19.39	19.62	20.34	21.58	15.17	15.89	16.12	16.85	18.09
	6H	18.98	19.65	19.95	20.61	21.86	15.50	16.17	16.47	17.12	18.38
	8H	19.06	19.70	20.04	20.67	21.92	15.59	16.22	16.56	17.19	18.45
	12H	19.09	19.69	20.07	20.66	21.94	15.60	16.20	16.57	17.16	18.44
4H	2H	17.06	17.78	18.02	18.73	19.98	14.27	15.00	15.23	15.95	17.19
	3H	18.53	19.13	19.50	20.11	21.37	15.54	16.14	16.51	17.12	18.38
	4H	19.12	19.67	20.10	20.65	21.93	16.05	16.59	17.02	17.57	18.85
	6H	19.58	20.05	20.57	21.05	22.33	16.48	16.95	17.47	17.95	19.23
	8H	19.71	20.15	20.70	21.14	22.43	16.60	17.04	17.60	18.04	19.33
	12H	19.76	20.16	20.77	21.17	22.47	16.63	17.02	17.63	18.03	19.33
8H	4H	19.15	19.59	20.14	20.58	21.88	16.35	16.79	17.34	17.78	19.08
	6H	19.70	20.06	20.72	21.10	22.39	16.89	17.25	17.90	18.28	19.58
	8H	19.90	20.22	20.92	21.24	22.55	17.07	17.39	18.10	18.41	19.72
	12H	20.00	20.28	21.03	21.30	22.66	17.13	17.42	18.16	18.43	19.79
12H	4H	19.11	19.50	20.12	20.51	21.81	16.37	16.76	17.38	17.77	19.07
	6H	19.69	20.00	20.71	21.03	22.34	16.95	17.27	17.97	18.29	19.60
	8H	19.90	20.18	20.92	21.19	22.55	17.15	17.43	18.18	18.45	19.81