

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: P853678

Luminaire Tested: SQ2-F-050U-125D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853678
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-050U-125D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

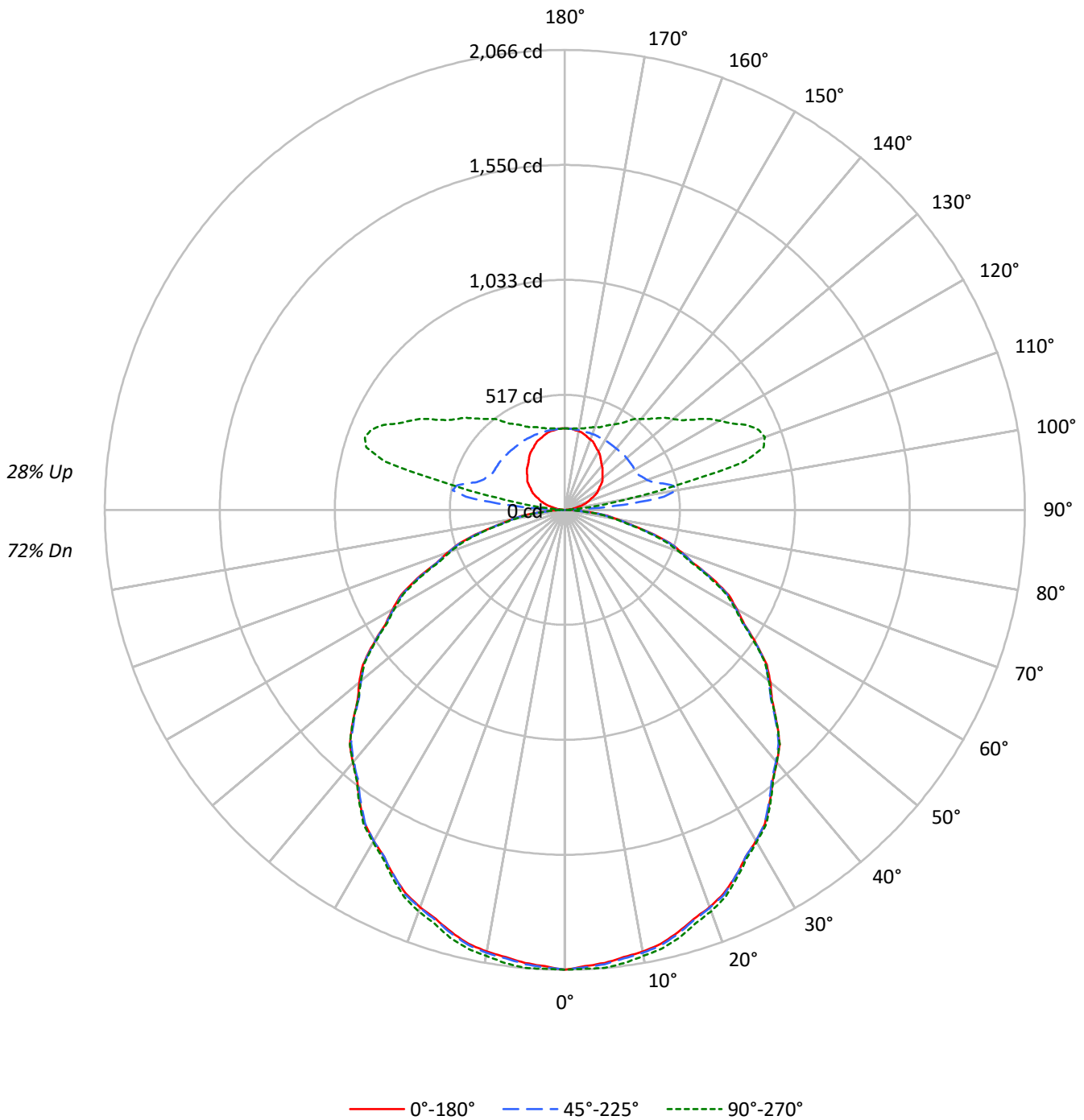
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8072.2 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 64
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	95	95	95	85	85	85	76	76	76	76	76	76	72	
1	102	98	94	90	97	93	89	86	84	81	78	75	73	71	67	65	64	64	64	64	60	
2	93	85	79	73	88	81	75	70	73	68	64	66	62	59	59	56	54	54	54	54	50	
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	52	48	45	45	45	45	42	
4	78	66	58	51	73	63	55	50	57	51	46	51	46	42	46	42	39	39	39	39	36	
5	71	59	50	44	67	56	48	43	51	45	40	46	41	37	42	37	34	34	34	34	31	
6	66	53	44	38	62	51	43	37	46	39	35	42	36	32	38	33	30	30	30	30	27	
7	61	48	39	34	57	46	38	33	42	35	30	38	32	28	34	30	26	26	26	26	24	
8	56	44	35	30	53	42	34	29	38	32	27	35	29	25	32	27	24	24	24	24	21	
9	53	40	32	27	50	38	31	26	35	29	24	32	27	23	29	25	21	21	21	21	19	
10	49	37	29	24	47	35	28	23	32	26	22	30	24	21	27	22	19	19	19	19	17	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33354	33354	33354
5°	33117	33208	33481
10°	33039	33131	33362
15°	32837	32931	33260
20°	32641	32691	32981
25°	32340	32340	32541
30°	32009	32009	32114
35°	31621	31509	31732
40°	31202	31084	31202
45°	30718	30590	30718
50°	30258	29976	30047
55°	29551	29472	29315
60°	28811	28627	28446
65°	27958	27637	27312
70°	26309	26176	25643
75°	24753	24229	23525
80°	21990	21451	20679
85°	17729	16173	15117

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 30908 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.3	2.4
10°-20°	558.0	6.9
20°-30°	839.5	10.4
30°-40°	1004.5	12.4
40°-50°	1036.4	12.8
50°-60°	935.0	11.6
60°-70°	713.5	8.8
70°-80°	410.2	5.1
80°-90°	107.5	1.3
90°-100°	145.8	1.8
100°-110°	462.3	5.7
110°-120°	453.3	5.6
120°-130°	368.9	4.6
130°-140°	300.8	3.7
140°-150°	234.5	2.9
150°-160°	169.0	2.1
160°-170°	103.2	1.3
170°-180°	34.8	0.4
0°-30°	1592.7	19.7
0°-40°	2597.2	32.2
0°-60°	4568.5	56.6
0°-90°	5799.7	71.8
90°-120°	1061.4	13.1
90°-150°	1965.5	24.3
90°-180°	2272.0	28.1
0°-180°	8072.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2066	2066	2066	2066	2066	
5°	2043	2071	2049	2052	2066	194
15°	1964	1989	1970	1979	1990	554
25°	1815	1835	1815	1818	1827	836
35°	1604	1615	1599	1604	1610	1003
45°	1345	1354	1340	1342	1345	1038
55°	1050	1055	1047	1041	1041	939
65°	732	729	723	718	715	719
75°	397	394	388	380	377	418
85°	96	90	87	79	82	111
90°	0	1	4	4	4	5
95°	20	59	265	98	63	23
105°	80	113	456	868	832	85
115°	144	171	368	765	900	142
125°	199	223	362	600	707	177
135°	240	264	360	516	581	186
145°	281	302	360	445	484	176
155°	320	331	361	397	413	148
165°	349	352	362	376	380	98
175°	365	364	365	367	366	35
180°	366	366	366	366	366	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2065.8	2065.8	2065.8	2065.8	2065.8
2.5°	2052.3	2076.5	2056.8	2061.4	2063.6
5°	2043.3	2070.8	2048.9	2052.0	2065.8
7.5°	2026.4	2056.1	2032.1	2037.5	2052.9
10°	2015.2	2042.7	2020.8	2023.8	2034.9
12.5°	1997.1	2024.7	2002.7	2008.1	2019.1
15°	1964.5	1989.2	1970.1	1978.9	1989.8
17.5°	1926.8	1953.2	1931.9	1939.3	1948.8
20°	1899.7	1921.7	1902.6	1905.7	1919.5
22.5°	1866.0	1888.1	1871.1	1871.9	1883.4
25°	1815.3	1834.6	1815.3	1818.4	1826.6
27.5°	1757.3	1773.9	1757.3	1760.3	1767.4
30°	1716.9	1733.3	1716.9	1719.7	1722.5
32.5°	1671.8	1686.1	1669.6	1672.6	1679.7
35°	1604.3	1615.2	1598.6	1604.4	1609.9
37.5°	1532.2	1540.4	1526.6	1529.5	1534.5
40°	1480.4	1488.7	1474.8	1477.6	1480.4
42.5°	1428.7	1434.7	1420.7	1423.7	1428.7
45°	1345.3	1353.6	1339.7	1342.5	1345.3
47.5°	1260.8	1265.9	1254.1	1252.0	1257.0
50°	1204.6	1207.4	1193.4	1193.4	1196.2
52.5°	1143.8	1146.5	1137.1	1132.7	1135.3
55°	1049.8	1055.3	1047.0	1041.4	1041.4
57.5°	955.3	960.2	949.6	946.8	946.2
60°	892.2	894.9	886.5	883.7	880.9
62.5°	829.2	829.6	821.3	818.3	815.7
65°	731.8	729.0	723.4	717.7	714.9
67.5°	622.6	625.4	619.8	610.8	610.8
70°	557.3	560.0	554.5	543.2	543.2
72.5°	494.2	492.6	489.1	480.0	475.6
75°	396.8	394.1	388.4	379.9	377.1
77.5°	299.5	296.7	293.8	283.2	285.4
80°	236.5	233.7	230.7	222.4	222.4
82.5°	180.2	175.2	172.2	163.9	163.9
85°	95.7	90.2	87.3	78.9	81.6
87.5°	27.0	25.1	23.2	18.6	18.6
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.4	25.5	81.7	27.2	19.1
95°	19.6	59.0	264.7	98.1	63.3
97.5°	36.4	76.5	448.3	280.2	171.9
100°	48.4	86.6	510.9	465.8	302.7
102.5°	61.2	97.7	499.8	684.1	523.6
105°	80.5	113.2	455.7	868.0	832.0
107.5°	99.9	130.1	413.6	887.2	935.8
110°	112.8	142.1	392.4	865.1	955.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	125.6	153.1	380.4	827.0	941.3
115°	143.8	170.8	368.3	764.9	899.9
117.5°	161.5	187.2	363.4	705.1	841.2
120°	172.6	197.4	362.4	668.1	799.8
122.5°	183.7	207.6	362.4	638.4	761.1
125°	199.1	222.7	362.4	599.7	706.6
127.5°	212.7	235.4	362.4	569.6	660.8
130°	221.0	244.6	362.4	551.9	634.1
132.5°	229.2	252.9	361.6	537.9	612.0
135°	240.5	264.1	360.2	515.9	581.2
137.5°	251.6	276.3	360.0	494.7	553.1
140°	259.0	283.7	359.1	479.9	532.8
142.5°	268.2	291.9	360.0	465.1	514.4
145°	280.7	302.2	360.2	445.1	484.5
147.5°	293.4	311.6	360.5	427.5	459.6
150°	302.7	317.2	361.4	417.2	443.1
152.5°	310.0	322.8	361.4	408.8	430.1
155°	319.9	331.2	361.4	397.4	413.1
157.5°	330.5	338.2	362.4	390.4	401.1
160°	336.0	342.7	362.4	385.7	394.7
162.5°	341.6	346.5	362.4	382.0	388.3
165°	348.7	352.1	362.4	376.4	379.8
167.5°	355.3	356.3	363.6	372.5	375.4
170°	359.1	359.1	363.6	370.6	371.6
172.5°	360.9	361.7	363.6	368.7	369.0
175°	364.8	363.7	364.8	367.1	365.9
177.5°	365.9	365.0	365.0	366.9	365.0
180°	365.9	365.9	365.9	365.9	365.9

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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	21.95	23.07	22.69	23.84	24.75	21.87	22.99	22.62	23.76	24.68
	3H	23.75	24.76	24.51	25.53	26.48	23.63	24.64	24.39	25.41	26.36
	4H	24.42	25.37	25.20	26.16	27.12	24.27	25.22	25.04	26.00	26.97
	6H	24.90	25.78	25.69	26.57	27.55	24.72	25.60	25.51	26.39	27.37
	8H	25.05	25.89	25.85	26.70	27.68	24.85	25.68	25.64	26.50	27.47
	12H	25.13	25.93	25.93	26.74	27.74	24.91	25.71	25.71	26.51	27.52
4H	2H	22.53	23.48	23.31	24.27	25.23	22.47	23.42	23.25	24.21	25.17
	3H	24.54	25.34	25.33	26.16	27.14	24.44	25.23	25.23	26.05	27.03
	4H	25.34	26.07	26.15	26.89	27.89	25.20	25.92	26.01	26.74	27.75
	6H	25.95	26.58	26.77	27.42	28.43	25.77	26.40	26.59	27.24	28.25
	8H	26.14	26.73	26.97	27.57	28.59	25.94	26.53	26.77	27.37	28.39
	12H	26.26	26.79	27.10	27.65	28.68	26.03	26.56	26.88	27.42	28.45
8H	4H	25.61	26.20	26.44	27.04	28.06	25.49	26.07	26.31	26.91	27.94
	6H	26.34	26.83	27.19	27.71	28.73	26.18	26.66	27.03	27.54	28.57
	8H	26.61	27.04	27.48	27.92	28.96	26.42	26.85	27.28	27.73	28.77
	12H	26.79	27.17	27.66	28.04	29.14	26.56	26.95	27.43	27.81	28.91
12H	4H	25.62	26.15	26.46	27.01	28.04	25.50	26.03	26.34	26.89	27.92
	6H	26.39	26.82	27.25	27.70	28.74	26.23	26.66	27.09	27.54	28.58
	8H	26.69	27.07	27.56	27.94	29.04	26.51	26.89	27.37	27.75	28.85