

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: P854985

Luminaire Tested: SQ2-F-050U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854985
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-100D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

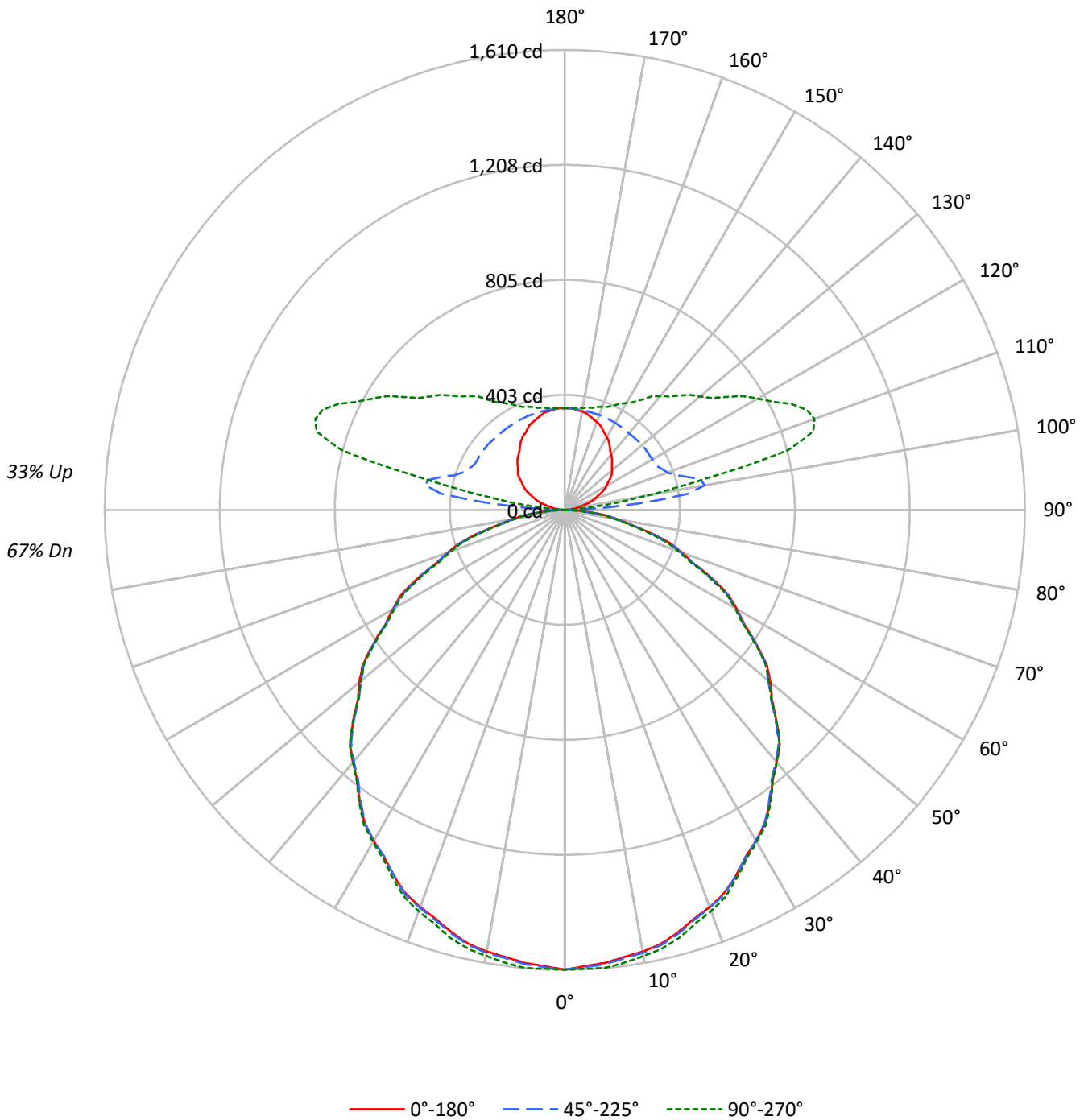
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6731.2 lumens
Efficiency: N/A
Efficacy: 128.5 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): 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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67				
1	101	97	93	89	95	91	88	85	81	79	76	72	70	68	63	62	60	56				
2	92	84	78	73	87	80	74	69	71	67	63	63	59	56	55	53	50	47				
3	84	74	66	60	79	70	63	58	62	57	52	55	51	48	49	46	43	39				
4	77	65	57	51	72	62	55	49	55	49	45	49	44	41	44	40	37	34				
5	70	58	50	44	66	55	48	42	50	43	38	44	39	35	39	35	32	29				
6	65	52	44	38	61	50	42	36	45	38	34	40	35	31	35	31	28	25				
7	60	47	39	33	56	45	37	32	40	34	30	36	31	27	32	28	25	22				
8	56	43	35	29	52	41	33	28	37	31	26	33	28	24	30	25	22	20				
9	52	39	32	26	49	37	30	25	34	28	24	31	25	22	27	23	20	18				
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25988	25988	25988
5°	25804	25875	26088
10°	25742	25814	25994
15°	25586	25660	25917
20°	25433	25471	25697
25°	25197	25197	25356
30°	24940	24940	25022
35°	24636	24551	24723
40°	24312	24219	24312
45°	23934	23834	23934
50°	23574	23355	23410
55°	23026	22964	22838
60°	22446	22307	22165
65°	21784	21532	21280
70°	20497	20394	19978
75°	19289	18883	18334
80°	17127	16718	16104
85°	13801	12597	11764

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 24083 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.2	2.3
10°-20°	434.7	6.5
20°-30°	654.1	9.7
30°-40°	782.6	11.6
40°-50°	807.5	12.0
50°-60°	728.5	10.8
60°-70°	555.9	8.3
70°-80°	319.6	4.7
80°-90°	83.8	1.2
90°-100°	141.9	2.1
100°-110°	450.1	6.7
110°-120°	441.3	6.6
120°-130°	359.1	5.3
130°-140°	292.8	4.3
140°-150°	228.3	3.4
150°-160°	164.5	2.4
160°-170°	100.5	1.5
170°-180°	33.9	0.5
0°-30°	1241.0	18.4
0°-40°	2023.6	30.1
0°-60°	3559.6	52.9
0°-90°	4518.9	67.1
90°-120°	1033.2	15.3
90°-150°	1913.4	28.4
90°-180°	2212.0	32.9
0°-180°	6731.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1610	1610	1610	1610	1610	
5°	1592	1614	1596	1599	1610	151
15°	1531	1550	1535	1542	1550	432
25°	1414	1430	1414	1417	1423	651
35°	1250	1258	1246	1250	1254	782
45°	1048	1055	1044	1046	1048	809
55°	818	822	816	811	811	731
65°	570	568	564	559	557	560
75°	309	307	303	296	294	326
85°	74	70	68	62	64	86
90°	0	1	3	3	3	4
95°	19	57	258	96	62	22
105°	78	110	444	845	810	83
115°	140	166	358	745	876	138
125°	194	217	353	584	688	173
135°	234	257	351	502	566	181
145°	273	294	351	433	472	171
155°	312	322	352	387	402	144
165°	339	343	353	366	370	96
175°	355	354	355	357	356	34
180°	356	356	356	356	356	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1599.1	1618.0	1602.6	1606.2	1607.9
5°	1592.1	1613.5	1596.5	1598.8	1609.6
7.5°	1578.9	1602.1	1583.4	1587.5	1599.5
10°	1570.1	1591.6	1574.5	1576.9	1585.5
12.5°	1556.1	1577.6	1560.5	1564.6	1573.2
15°	1530.7	1550.0	1535.1	1541.9	1550.5
17.5°	1501.3	1521.8	1505.2	1511.1	1518.3
20°	1480.2	1497.4	1482.4	1484.9	1495.6
22.5°	1453.9	1471.1	1457.9	1458.5	1467.5
25°	1414.4	1429.5	1414.4	1416.8	1423.3
27.5°	1369.3	1382.1	1369.3	1371.6	1377.1
30°	1337.7	1350.6	1337.7	1339.9	1342.1
32.5°	1302.6	1313.8	1300.8	1303.2	1308.7
35°	1249.9	1258.5	1245.6	1250.0	1254.3
37.5°	1193.8	1200.3	1189.4	1191.7	1195.5
40°	1153.5	1159.9	1149.1	1151.3	1153.5
42.5°	1113.1	1117.9	1107.0	1109.3	1113.1
45°	1048.2	1054.7	1043.8	1046.1	1048.2
47.5°	982.4	986.3	977.2	975.5	979.4
50°	938.5	940.7	929.8	929.8	932.0
52.5°	891.2	893.3	886.0	882.5	884.6
55°	818.0	822.2	815.8	811.3	811.3
57.5°	744.3	748.1	739.9	737.7	737.3
60°	695.1	697.3	690.8	688.6	686.4
62.5°	646.0	646.5	639.9	637.7	635.5
65°	570.2	568.0	563.6	559.1	557.0
67.5°	485.0	487.2	482.9	475.9	475.9
70°	434.2	436.3	432.0	423.2	423.2
72.5°	385.1	383.7	381.1	374.0	370.6
75°	309.2	307.1	302.7	296.0	293.9
77.5°	233.4	231.2	229.0	220.7	222.4
80°	184.2	182.0	179.8	173.2	173.2
82.5°	140.3	136.5	134.2	127.6	127.6
85°	74.5	70.3	68.0	61.5	63.5
87.5°	21.0	19.6	18.2	14.7	14.7
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.9	79.6	26.5	18.5
95°	19.0	57.4	257.7	95.5	61.6
97.5°	35.4	74.4	436.4	272.7	167.3
100°	47.0	84.3	497.4	453.5	294.6
102.5°	59.6	95.1	486.6	665.9	509.7
105°	78.5	110.2	443.7	845.0	810.0
107.5°	97.2	126.6	402.6	863.7	911.1
110°	109.8	138.3	382.0	842.2	929.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	122.3	149.0	370.4	805.1	916.4
115°	140.1	166.3	358.5	744.6	876.1
117.5°	157.3	182.3	353.8	686.4	818.9
120°	168.0	192.1	352.9	650.5	778.7
122.5°	178.8	202.0	352.9	621.6	741.0
125°	193.8	216.9	352.9	583.9	687.9
127.5°	207.0	229.2	352.9	554.6	643.3
130°	215.0	238.1	352.9	537.3	617.3
132.5°	223.2	246.1	352.0	523.7	595.7
135°	234.2	257.1	350.6	502.2	565.8
137.5°	244.9	269.0	350.4	481.7	538.4
140°	252.0	276.2	349.6	467.2	518.7
142.5°	261.1	284.2	350.4	452.8	500.8
145°	273.4	294.2	350.6	433.3	471.7
147.5°	285.7	303.5	350.8	416.1	447.5
150°	294.6	308.9	351.7	406.1	431.3
152.5°	301.8	314.3	351.7	398.0	418.8
155°	311.5	322.5	351.7	386.9	402.2
157.5°	321.8	329.2	352.9	380.0	390.5
160°	327.1	333.7	352.9	375.5	384.3
162.5°	332.5	337.4	352.9	371.9	378.0
165°	339.4	342.7	352.9	366.4	369.7
167.5°	346.0	346.9	354.0	362.6	365.4
170°	349.6	349.6	354.0	360.8	361.9
172.5°	351.3	352.2	354.0	359.0	359.2
175°	355.1	354.0	355.1	357.4	356.3
177.5°	356.3	355.4	355.4	357.2	355.4
180°	356.3	356.3	356.3	356.3	356.3



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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	20.73	21.78	21.52	22.60	23.60	20.65	21.70	21.44	22.52	23.52
	3H	22.52	23.47	23.33	24.30	25.33	22.40	23.35	23.21	24.18	25.21
	4H	23.19	24.09	24.01	24.92	25.96	23.04	23.93	23.86	24.77	25.81
	6H	23.67	24.50	24.50	25.34	26.39	23.48	24.31	24.32	25.15	26.21
	8H	23.81	24.60	24.66	25.46	26.52	23.61	24.40	24.45	25.26	26.32
	12H	23.89	24.65	24.74	25.50	26.58	23.67	24.42	24.52	25.28	26.36
4H	2H	21.30	22.20	22.13	23.03	24.07	21.24	22.14	22.07	22.97	24.01
	3H	23.31	24.06	24.14	24.92	25.98	23.20	23.95	24.04	24.81	25.87
	4H	24.10	24.79	24.96	25.65	26.74	23.96	24.64	24.81	25.51	26.59
	6H	24.70	25.30	25.57	26.19	27.27	24.52	25.12	25.39	26.01	27.09
	8H	24.90	25.45	25.77	26.33	27.44	24.69	25.25	25.57	26.13	27.23
	12H	25.01	25.51	25.90	26.41	27.52	24.78	25.28	25.67	26.18	27.29
8H	4H	24.37	24.92	25.24	25.80	26.91	24.24	24.79	25.11	25.68	26.78
	6H	25.09	25.55	25.99	26.48	27.58	24.93	25.39	25.83	26.31	27.41
	8H	25.36	25.77	26.27	26.69	27.81	25.17	25.58	26.08	26.50	27.61
	12H	25.54	25.90	26.45	26.81	27.98	25.31	25.67	26.22	26.58	27.75
12H	4H	24.37	24.87	25.26	25.77	26.88	24.25	24.75	25.14	25.65	26.76
	6H	25.14	25.55	26.05	26.46	27.58	24.98	25.39	25.89	26.31	27.42
	8H	25.44	25.80	26.35	26.71	27.88	25.25	25.61	26.17	26.52	27.69