

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: P854177

Luminaire Tested: SQ2-PR1-050U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854177
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-075D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

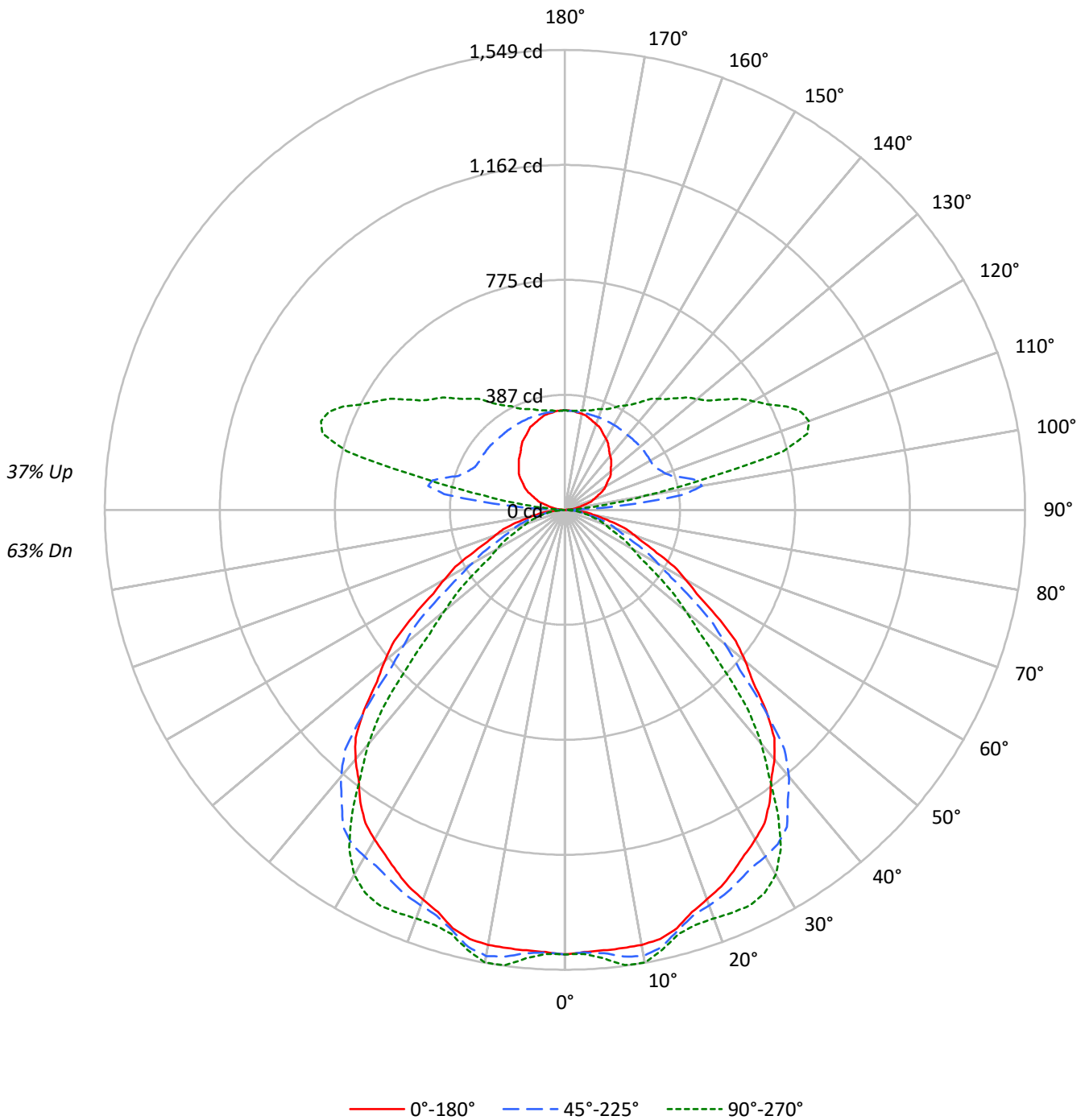
Lumens per Lamp: N/A
Luminaire Lumens: 5680.6 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.5
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	110	110	110	110	104	104	104	104	91	91	91	79	79	79	68	68	68	63
1	102	98	94	91	95	92	89	86	81	79	76	71	69	68	62	61	59	55
2	93	86	80	75	87	81	76	72	72	68	64	63	60	58	55	53	51	47
3	85	76	69	64	80	72	66	61	64	59	55	57	53	50	50	47	44	41
4	79	68	60	54	74	64	57	52	57	52	48	51	47	43	45	42	39	36
5	72	61	53	47	68	58	51	45	52	46	42	46	41	38	41	37	34	31
6	67	55	47	41	63	52	45	40	47	41	37	42	37	33	37	33	30	28
7	62	50	42	37	58	47	40	35	43	37	32	38	33	30	34	30	27	25
8	58	45	38	33	54	43	36	31	39	33	29	35	30	27	31	27	25	22
9	54	42	34	29	51	40	33	28	36	30	26	32	28	24	29	25	22	20
10	50	38	31	26	47	37	30	25	33	28	24	30	25	22	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24169	24169	24169
5°	24138	24285	24584
10°	24392	25017	25392
15°	24384	24511	24715
20°	23990	24357	25170
25°	23922	24602	26206
30°	23897	25148	26457
35°	23670	25685	24632
40°	23123	24732	21678
45°	21882	21706	17141
50°	19891	17746	13300
55°	17481	14604	10351
60°	15129	11677	8525
65°	13058	9677	7461
70°	11740	8573	6628
75°	10755	7424	6095
80°	9363	5960	5960
85°	6780	5372	2834

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 23653 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.6	2.5
10°-20°	418.5	7.4
20°-30°	646.9	11.4
30°-40°	778.0	13.7
40°-50°	698.6	12.3
50°-60°	468.0	8.2
60°-70°	272.2	4.8
70°-80°	139.8	2.5
80°-90°	34.9	0.6
90°-100°	133.3	2.3
100°-110°	423.0	7.4
110°-120°	414.7	7.3
120°-130°	337.5	5.9
130°-140°	275.2	4.8
140°-150°	214.5	3.8
150°-160°	154.6	2.7
160°-170°	94.4	1.7
170°-180°	31.9	0.6
0°-30°	1209.9	21.3
0°-40°	1987.9	35.0
0°-60°	3154.5	55.5
0°-90°	3601.5	63.4
90°-120°	971.1	17.1
90°-150°	1798.2	31.7
90°-180°	2079.0	36.6
0°-180°	5680.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1497	1497	1497	1497	1497	
5°	1489	1515	1498	1502	1517	142
15°	1459	1518	1466	1471	1479	410
25°	1343	1396	1381	1432	1471	619
35°	1201	1211	1303	1278	1250	749
45°	958	1036	951	802	751	733
55°	621	645	519	401	368	558
65°	342	349	253	206	195	346
75°	172	168	119	101	98	183
85°	37	29	29	20	15	45
90°	0	1	3	3	3	2
95°	18	54	242	90	58	21
105°	74	104	417	794	761	78
115°	132	156	337	700	823	130
125°	182	204	332	549	646	162
135°	220	242	330	472	532	170
145°	257	276	330	407	443	161
155°	293	303	331	364	378	135
165°	319	322	332	344	347	90
175°	334	333	334	336	335	32
180°	335	335	335	335	335	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1496.9	1496.9	1496.9	1496.9	1496.9
2.5°	1490.8	1508.7	1492.0	1493.3	1496.9
5°	1489.3	1514.7	1498.4	1501.8	1516.8
7.5°	1489.0	1525.1	1517.4	1526.7	1546.4
10°	1487.8	1531.0	1525.9	1527.9	1548.8
12.5°	1480.4	1530.9	1507.6	1505.7	1517.1
15°	1458.8	1518.5	1466.4	1471.1	1478.6
17.5°	1420.6	1483.0	1433.4	1450.3	1464.9
20°	1396.2	1457.4	1417.6	1439.5	1464.9
22.5°	1374.2	1435.4	1402.9	1433.6	1468.5
25°	1342.8	1396.5	1381.0	1432.2	1471.0
27.5°	1309.8	1341.5	1359.9	1428.6	1455.7
30°	1281.8	1302.7	1348.9	1408.7	1419.1
32.5°	1251.2	1263.8	1334.3	1365.4	1352.0
35°	1200.9	1211.3	1303.1	1278.1	1249.7
37.5°	1141.1	1162.6	1233.2	1161.1	1128.6
40°	1097.1	1132.9	1173.4	1065.8	1028.5
42.5°	1043.4	1100.7	1094.1	956.9	911.3
45°	958.3	1035.9	950.6	801.5	750.7
47.5°	857.9	937.5	798.1	664.8	617.4
50°	791.9	856.1	706.5	581.7	529.5
52.5°	724.8	771.1	628.4	503.7	456.2
55°	621.0	644.9	518.8	400.6	367.7
57.5°	525.8	541.0	423.9	323.6	299.4
60°	468.5	478.9	361.6	283.4	264.0
62.5°	416.0	424.0	311.6	249.3	234.7
65°	341.8	349.3	253.3	205.8	195.3
67.5°	282.9	286.8	208.4	171.0	161.1
70°	248.7	250.2	181.6	147.8	140.4
72.5°	218.2	216.1	155.9	128.4	123.3
75°	172.4	168.0	119.0	100.6	97.7
77.5°	128.8	124.0	83.6	77.5	77.5
80°	100.7	94.7	64.1	64.1	64.1
82.5°	75.1	66.7	49.4	49.4	48.2
85°	36.6	29.2	29.0	19.7	15.3
87.5°	9.8	10.0	4.3	4.3	4.3
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.4	74.8	24.9	17.5
95°	17.9	53.9	242.2	89.8	57.9
97.5°	33.3	69.9	410.2	256.3	157.3
100°	44.2	79.2	467.5	426.2	276.9
102.5°	56.0	89.4	457.4	625.8	479.0
105°	73.7	103.6	416.9	794.2	761.2
107.5°	91.4	119.0	378.4	811.7	856.2
110°	103.2	129.9	359.0	791.5	873.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.0	140.1	348.1	756.6	861.2
115°	131.6	156.3	336.9	699.8	823.3
117.5°	147.8	171.3	332.5	645.1	769.6
120°	157.9	180.6	331.6	611.3	731.7
122.5°	168.0	189.9	331.6	584.1	696.4
125°	182.1	203.8	331.6	548.7	646.4
127.5°	194.6	215.4	331.6	521.2	604.5
130°	202.1	223.8	331.6	505.0	580.1
132.5°	209.7	231.3	330.8	492.2	559.9
135°	220.0	241.7	329.5	472.0	531.7
137.5°	230.2	252.8	329.3	452.7	506.0
140°	236.9	259.5	328.5	439.1	487.5
142.5°	245.3	267.1	329.3	425.5	470.6
145°	256.9	276.5	329.5	407.2	443.2
147.5°	268.5	285.2	329.8	391.1	420.5
150°	276.9	290.3	330.6	381.7	405.3
152.5°	283.6	295.4	330.6	374.0	393.6
155°	292.7	303.0	330.6	363.6	378.0
157.5°	302.4	309.4	331.6	357.1	367.0
160°	307.4	313.6	331.6	352.9	361.1
162.5°	312.5	317.0	331.6	349.5	355.2
165°	319.0	322.1	331.6	344.4	347.4
167.5°	325.1	325.9	332.7	340.8	343.4
170°	328.5	328.5	332.7	339.0	340.1
172.5°	330.2	331.0	332.7	337.3	337.5
175°	333.8	332.7	333.8	335.8	334.8
177.5°	334.8	334.0	334.0	335.6	334.0
180°	334.8	334.8	334.8	334.8	334.8



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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	19.02	19.96	19.86	20.82	21.89	15.74	16.68	16.58	17.54	18.61
	3H	20.26	21.10	21.11	21.96	23.06	16.81	17.65	17.67	18.52	19.62
	4H	20.71	21.50	21.58	22.38	23.49	17.22	18.01	18.09	18.88	19.99
	6H	21.03	21.76	21.92	22.64	23.76	17.55	18.28	18.44	19.16	20.28
	8H	21.12	21.81	22.01	22.71	23.83	17.64	18.33	18.53	19.23	20.35
	12H	21.15	21.81	22.05	22.70	23.85	17.65	18.31	18.55	19.20	20.35
4H	2H	19.11	19.90	19.98	20.77	21.88	16.32	17.11	17.20	17.99	19.09
	3H	20.58	21.24	21.47	22.15	23.27	17.59	18.25	18.48	19.16	20.28
	4H	21.18	21.78	22.08	22.68	23.83	18.10	18.70	19.00	19.60	20.75
	6H	21.64	22.15	22.55	23.08	24.23	18.54	19.06	19.46	19.98	21.13
	8H	21.77	22.25	22.69	23.17	24.34	18.67	19.15	19.58	20.07	21.23
	12H	21.83	22.26	22.76	23.20	24.37	18.69	19.12	19.63	20.06	21.23
8H	4H	21.21	21.69	22.13	22.61	23.78	18.42	18.89	19.33	19.81	20.98
	6H	21.77	22.16	22.71	23.12	24.29	18.95	19.35	19.90	20.31	21.47
	8H	21.96	22.31	22.92	23.27	24.45	19.14	19.49	20.09	20.44	21.62
	12H	22.07	22.38	23.02	23.33	24.56	19.20	19.51	20.16	20.46	21.69
12H	4H	21.18	21.61	22.11	22.55	23.71	18.44	18.87	19.37	19.80	20.97
	6H	21.75	22.10	22.70	23.06	24.24	19.01	19.36	19.97	20.32	21.50
	8H	21.97	22.28	22.92	23.22	24.45	19.22	19.53	20.18	20.48	21.71