

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: P853589

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853589
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2308-130-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBN-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

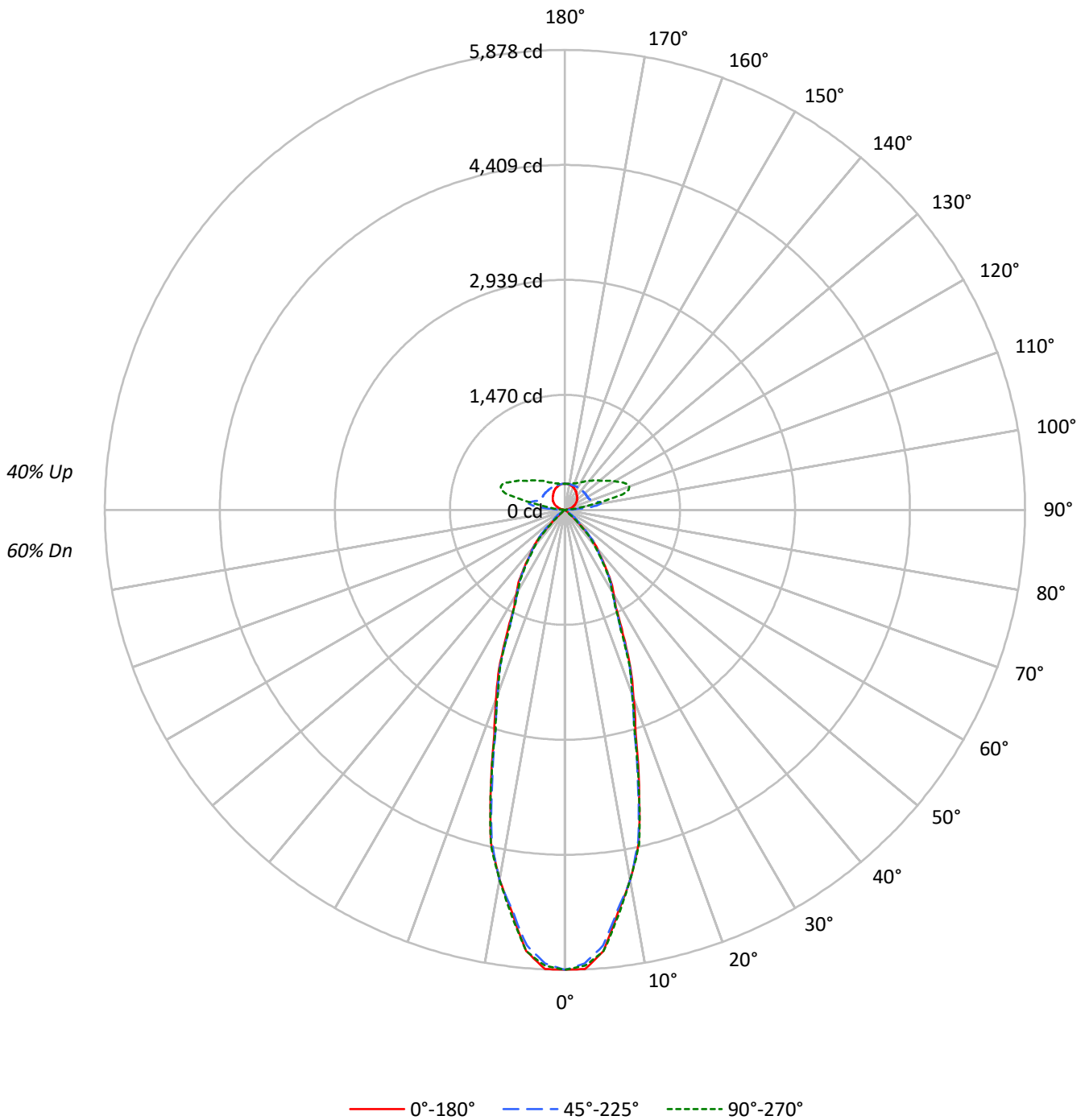
Lumens per Lamp: N/A
Luminaire Lumens: 5256.7 lumens
Efficiency: N/A
Efficacy: 124.0 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 42.4
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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	66	60	
1	103	100	97	94	97	94	91	89	83	81	79	72	71	70	63	62	61	61	57	
2	97	91	87	83	91	86	82	79	77	74	71	68	66	64	59	58	57	57	53	
3	91	84	78	74	85	79	75	71	71	68	65	63	61	59	56	55	53	53	50	
4	85	77	71	67	80	73	68	64	66	62	59	60	57	54	53	51	50	50	47	
5	80	71	65	60	76	68	63	58	62	58	54	56	53	50	51	48	46	46	44	
6	76	66	60	55	72	63	58	54	58	54	50	53	49	47	48	46	44	44	41	
7	72	62	56	51	68	59	54	50	54	50	47	50	46	44	46	43	41	41	39	
8	68	58	52	47	64	56	50	46	51	47	44	47	44	41	43	41	39	39	37	
9	64	54	48	44	61	52	47	43	48	44	41	45	41	39	41	39	37	37	35	
10	61	51	45	41	58	49	44	40	46	41	38	43	39	37	39	37	35	35	33	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	94899	94899	94899
5°	91725	90592	91777
10°	78719	78771	78719
15°	61101	60127	60959
20°	44098	43187	43151
25°	31267	30022	30079
30°	23263	22671	22453
35°	18100	17641	17266
40°	13394	13059	12235
45°	6846	8391	5514
50°	1490	4629	1090
55°	417	1878	329
60°	68	378	36
65°	0	42	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8391 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	508.2	9.7
10°-20°	1002.0	19.1
20°-30°	808.3	15.4
30°-40°	561.5	10.7
40°-50°	259.4	4.9
50°-60°	36.4	0.7
60°-70°	1.2	0.0
70°-80°	0.0	0.0
80°-90°	0.5	0.0
90°-100°	133.3	2.5
100°-110°	423.0	8.0
110°-120°	414.7	7.9
120°-130°	337.5	6.4
130°-140°	275.2	5.2
140°-150°	214.5	4.1
150°-160°	154.6	2.9
160°-170°	94.4	1.8
170°-180°	31.9	0.6
0°-30°	2318.5	44.1
0°-40°	2880.1	54.8
0°-60°	3175.9	60.4
0°-90°	3177.7	60.5
90°-120°	971.1	18.5
90°-150°	1798.2	34.2
90°-180°	2079.0	39.5
0°-180°	5256.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5878	5878	5878	5878	5878	
5°	5659	5629	5590	5658	5663	509
15°	3655	3702	3597	3648	3647	1006
25°	1755	1716	1685	1710	1688	822
35°	918	918	895	879	876	575
45°	300	358	368	334	242	242
55°	15	23	67	19	12	19
65°	0	0	1	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	1	3	3	3	1
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°	5877.6	5877.6	5877.6	5877.6	5877.6
2.5°	5874.2	5852.7	5801.4	5847.6	5833.6
5°	5659.4	5629.4	5589.5	5658.5	5662.6
7.5°	5185.3	5195.0	5158.0	5234.1	5226.0
10°	4801.4	4808.7	4804.6	4829.4	4801.4
12.5°	4356.6	4385.4	4330.9	4369.3	4381.1
15°	3655.4	3702.0	3597.1	3647.9	3646.9
17.5°	2997.8	2993.0	2938.9	2948.4	2945.3
20°	2566.5	2559.2	2513.5	2506.2	2511.4
22.5°	2197.0	2184.8	2168.6	2150.4	2157.2
25°	1755.1	1715.8	1685.2	1710.1	1688.4
27.5°	1408.8	1408.1	1382.9	1385.8	1389.9
30°	1247.8	1240.5	1216.0	1216.8	1204.3
32.5°	1104.6	1109.7	1079.6	1073.6	1061.1
35°	918.3	918.3	895.0	879.1	876.0
37.5°	745.7	743.8	727.3	704.6	696.5
40°	635.5	630.4	619.6	591.8	580.5
42.5°	510.1	524.0	513.7	485.8	468.6
45°	299.8	357.8	367.5	333.7	241.5
47.5°	128.8	192.6	245.3	159.9	83.3
50°	59.3	109.0	184.3	78.6	43.4
52.5°	34.7	59.6	136.9	46.0	27.3
55°	14.8	23.1	66.7	18.9	11.7
57.5°	5.5	10.1	25.2	8.2	4.4
60°	2.1	4.2	11.7	3.1	1.1
62.5°	0.4	1.7	5.7	1.5	0.2
65°	0.0	0.0	1.1	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.2	0.6	0.6	0.6
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4H	2H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00