

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: P853508

Luminaire Tested: SQ2-BBM-050U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853508
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2104-222-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-050U-100D-940-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

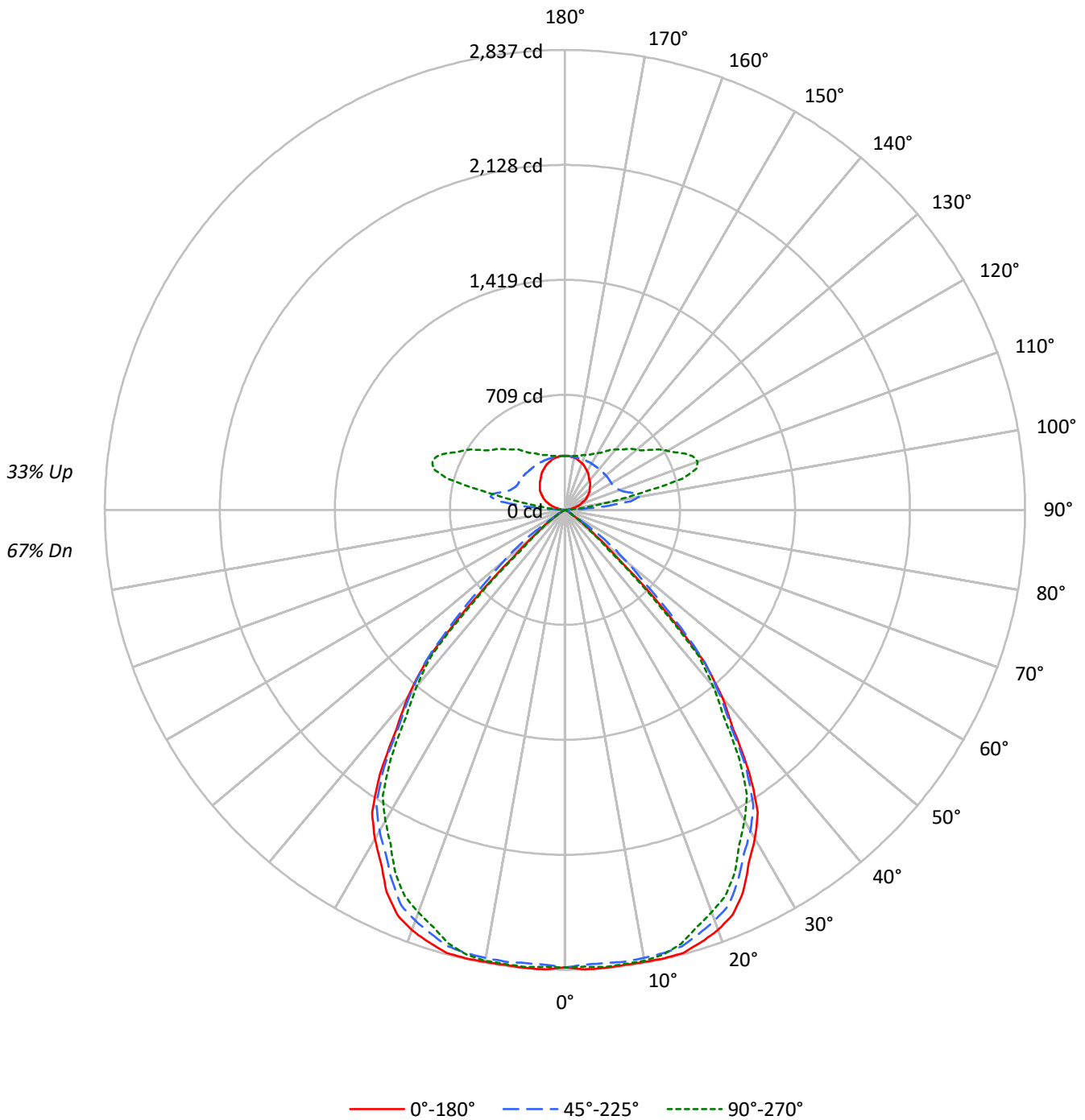
Lumens per Lamp: N/A
Luminaire Lumens: 6293.6 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.9
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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67		
1	104	101	98	95	98	95	93	91	85	83	82	76	75	74	68	67	66	62		
2	97	91	87	82	92	87	83	79	78	75	72	70	68	66	63	61	60	56		
3	91	83	77	72	86	79	74	70	72	68	64	65	62	59	59	56	54	51		
4	85	76	69	64	80	72	66	62	66	61	58	60	56	53	54	52	49	47		
5	79	69	62	57	75	66	60	55	60	56	52	55	51	48	50	47	45	43		
6	74	63	56	51	70	61	54	50	56	51	47	51	47	44	47	44	41	39		
7	69	58	51	46	65	56	49	45	51	46	43	47	43	40	44	40	38	36		
8	65	54	47	42	61	52	45	41	48	42	39	44	40	37	41	37	35	33		
9	61	50	43	38	58	48	42	37	44	39	36	41	37	34	38	34	32	30		
10	57	46	39	35	54	44	38	34	41	36	33	38	34	31	36	32	30	28		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	45580	45580	45580
5°	45977	45480	45858
10°	46422	46006	46301
15°	47276	46588	46303
20°	47397	46343	45398
25°	46335	44960	44074
30°	43678	42634	41273
35°	39131	38443	36902
40°	31746	31211	29984
45°	19322	21904	17340
50°	6164	12381	5632
55°	2145	4495	2204
60°	171	1298	36
65°	0	80	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: 21904 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.8	4.3
10°-20°	788.9	12.5
20°-30°	1162.9	18.5
30°-40°	1190.8	18.9
40°-50°	686.2	10.9
50°-60°	120.2	1.9
60°-70°	4.6	0.1
70°-80°	0.0	0.0
80°-90°	0.5	0.0
90°-100°	132.7	2.1
100°-110°	421.1	6.7
110°-120°	412.9	6.6
120°-130°	336.0	5.3
130°-140°	273.9	4.4
140°-150°	213.6	3.4
150°-160°	153.9	2.4
160°-170°	94.0	1.5
170°-180°	31.7	0.5
0°-30°	2221.6	35.3
0°-40°	3412.4	54.2
0°-60°	4218.8	67.0
0°-90°	4224.0	67.1
90°-120°	966.7	15.4
90°-150°	1790.2	28.4
90°-180°	2070.0	32.9
0°-180°	6293.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2823	2823	2823	2823	2823	
5°	2837	2831	2806	2840	2829	270
15°	2828	2851	2787	2787	2770	796
25°	2601	2621	2524	2501	2474	1187
35°	1985	1974	1950	1903	1872	1218
45°	846	946	959	912	759	648
55°	76	92	160	86	78	85
65°	0	1	2	1	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	1	3	3	3	1
95°	18	54	241	89	58	21
105°	73	103	415	791	758	77
115°	131	156	335	697	820	129
125°	181	203	330	546	644	161
135°	219	241	328	470	529	169
145°	256	275	328	405	441	160
155°	291	302	329	362	376	134
165°	318	321	330	343	346	90
175°	332	331	332	334	333	31
180°	333	333	333	333	333	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2823.0	2823.0	2823.0	2823.0	2823.0
2.5°	2837.4	2830.0	2807.8	2830.4	2820.5
5°	2836.8	2830.6	2806.1	2839.7	2829.4
7.5°	2831.5	2830.0	2811.2	2837.6	2825.8
10°	2831.5	2836.7	2806.1	2833.4	2824.1
12.5°	2833.2	2845.0	2801.0	2822.3	2808.9
15°	2828.3	2851.1	2787.1	2786.7	2770.1
17.5°	2796.6	2823.5	2742.9	2721.0	2698.9
20°	2758.5	2789.5	2697.2	2666.0	2642.2
22.5°	2703.5	2733.7	2639.6	2604.2	2580.4
25°	2600.9	2620.6	2523.7	2500.9	2474.0
27.5°	2455.4	2467.0	2391.7	2352.2	2328.0
30°	2342.8	2351.1	2286.8	2243.8	2213.8
32.5°	2212.5	2209.2	2162.4	2118.6	2090.3
35°	1985.3	1974.0	1950.4	1903.2	1872.2
37.5°	1705.9	1703.8	1680.5	1639.6	1607.1
40°	1506.2	1504.1	1480.8	1444.3	1422.6
42.5°	1264.2	1303.5	1276.0	1231.3	1217.9
45°	846.2	946.5	959.3	911.5	759.4
47.5°	436.6	570.7	668.1	520.4	360.5
50°	245.4	344.7	492.9	279.0	224.2
52.5°	159.9	207.9	344.0	178.1	150.6
55°	76.2	91.7	159.7	86.5	78.3
57.5°	27.3	42.2	69.8	42.8	26.4
60°	5.3	17.7	40.2	12.4	1.1
62.5°	1.9	5.2	23.3	3.3	1.1
65°	0.0	1.0	2.1	1.0	0.0
67.5°	0.0	0.8	0.8	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	3.1	3.1	3.1
92.5°	5.9	23.3	74.4	24.8	17.4
95°	17.8	53.7	241.1	89.4	57.6
97.5°	33.1	69.6	408.3	255.2	156.6
100°	44.0	78.9	465.4	424.3	275.7
102.5°	55.8	89.0	455.3	623.0	476.9
105°	73.4	103.1	415.1	790.6	757.8
107.5°	91.0	118.4	376.7	808.0	852.3
110°	102.7	129.4	357.4	787.9	869.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	114.5	139.5	346.5	753.2	857.4
115°	131.0	155.6	335.4	696.6	819.6
117.5°	147.2	170.5	331.0	642.2	766.2
120°	157.2	179.8	330.2	608.5	728.4
122.5°	167.3	189.0	330.2	581.5	693.2
125°	181.3	202.8	330.2	546.2	643.5
127.5°	193.7	214.4	330.2	518.8	601.8
130°	201.2	222.8	330.2	502.7	577.5
132.5°	208.8	230.3	329.3	490.0	557.4
135°	219.1	240.6	328.1	469.9	529.3
137.5°	229.1	251.7	327.8	450.6	503.7
140°	235.8	258.4	327.0	437.1	485.3
142.5°	244.2	265.9	327.8	423.6	468.5
145°	255.7	275.2	328.1	405.4	441.3
147.5°	267.3	283.9	328.3	389.3	418.6
150°	275.7	289.0	329.1	380.0	403.5
152.5°	282.4	294.0	329.1	372.3	391.8
155°	291.4	301.6	329.1	361.9	376.3
157.5°	301.0	308.0	330.2	355.5	365.4
160°	306.0	312.2	330.2	351.3	359.5
162.5°	311.1	315.6	330.2	347.9	353.6
165°	317.6	320.7	330.2	342.8	345.9
167.5°	323.7	324.5	331.2	339.2	341.9
170°	327.0	327.0	331.2	337.5	338.5
172.5°	328.7	329.5	331.2	335.8	336.0
175°	332.3	331.2	332.3	334.3	333.3
177.5°	333.3	332.5	332.5	334.1	332.5
180°	333.3	333.3	333.3	333.3	333.3



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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	2.65	3.45	3.48	4.27	5.29	2.11	2.91	2.95	3.74	4.76
	3H	2.46	3.17	3.31	4.00	5.05	1.92	2.63	2.77	3.47	4.51
	4H	2.36	3.02	3.22	3.86	4.92	1.82	2.48	2.69	3.33	4.39
	6H	2.25	2.85	3.12	3.71	4.78	1.71	2.32	2.59	3.17	4.24
	8H	2.19	2.76	3.07	3.63	4.70	1.66	2.23	2.54	3.09	4.17
	12H	2.13	2.68	3.02	3.54	4.63	1.60	2.14	2.48	3.00	4.09
4H	2H	2.37	3.03	3.24	3.87	4.93	1.83	2.49	2.70	3.34	4.40
	3H	2.17	2.71	3.05	3.59	4.66	1.64	2.18	2.51	3.05	4.13
	4H	2.06	2.55	2.94	3.42	4.52	1.52	2.01	2.41	2.89	3.99
	6H	1.95	2.37	2.85	3.27	4.37	1.42	1.83	2.32	2.73	3.84
	8H	1.89	2.27	2.79	3.17	4.28	1.35	1.74	2.25	2.63	3.75
	12H	1.82	2.16	2.74	3.07	4.19	1.28	1.63	2.20	2.54	3.66
8H	4H	1.89	2.27	2.79	3.17	4.28	1.35	1.74	2.25	2.63	3.75
	6H	1.77	2.08	2.69	3.02	4.13	1.23	1.55	2.16	2.48	3.60
	8H	1.70	1.98	2.64	2.91	4.04	1.17	1.45	2.11	2.38	3.51
	12H	1.64	1.88	2.57	2.80	3.99	1.10	1.35	2.04	2.27	3.45
12H	4H	1.82	2.16	2.74	3.07	4.19	1.28	1.63	2.20	2.54	3.66
	6H	1.70	1.98	2.64	2.91	4.04	1.17	1.45	2.11	2.38	3.51
	8H	1.64	1.88	2.57	2.80	3.99	1.10	1.35	2.04	2.27	3.45