

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: P853505

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853505
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2104-222-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-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

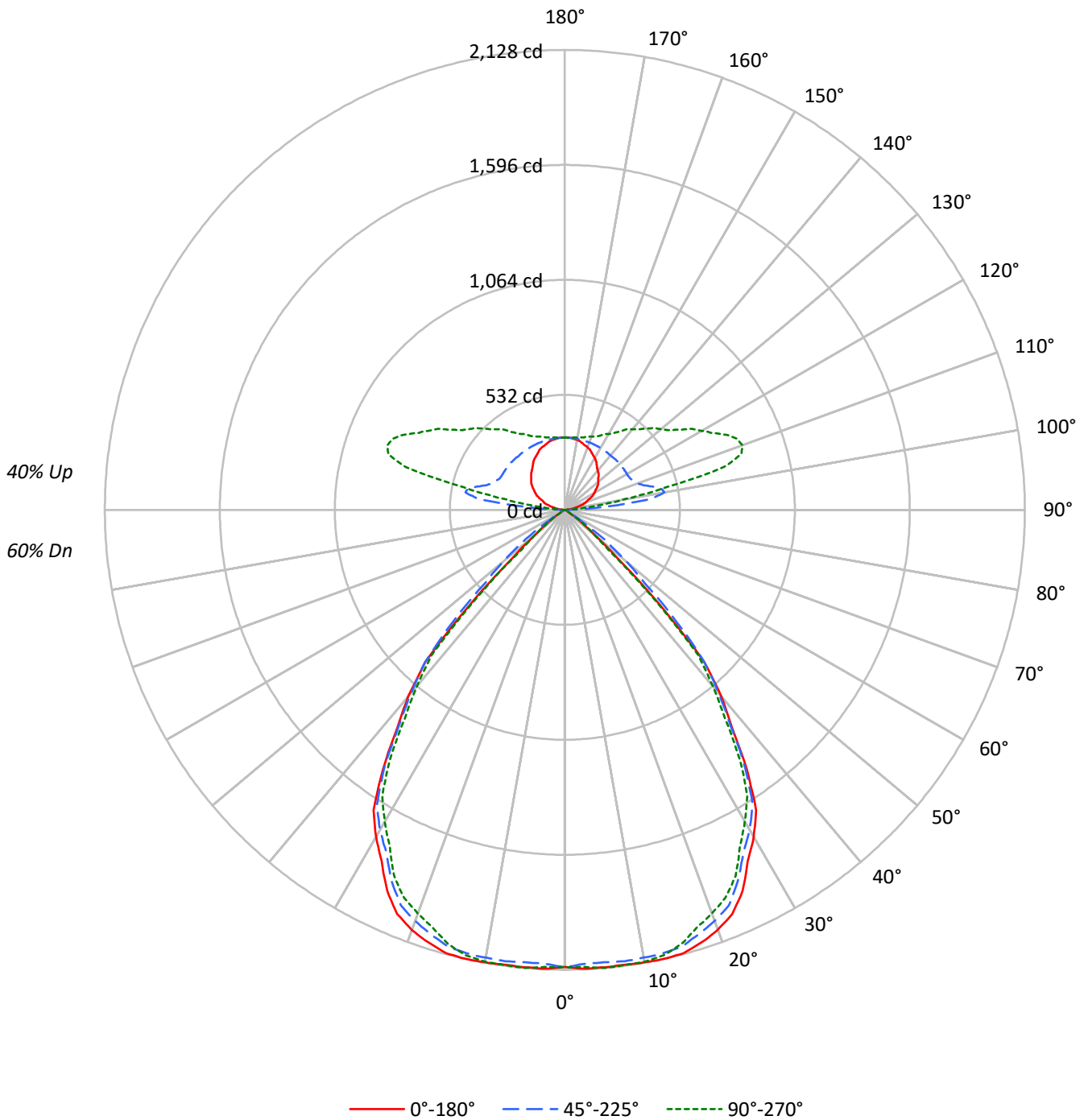
Lumens per Lamp: N/A
Luminaire Lumens: 5242.2 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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	0
RCR																		
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	102	99	96	93	96	93	90	88	82	80	78	71	70	69	62	61	60	56
2	95	89	84	80	89	84	80	76	75	71	69	66	63	61	57	56	55	51
3	89	81	75	70	83	77	71	67	68	64	61	60	58	55	53	51	50	46
4	83	74	67	62	78	70	64	59	62	58	54	56	52	50	49	47	45	42
5	77	67	60	55	72	64	58	53	57	53	49	51	48	45	46	43	41	38
6	72	61	54	49	68	58	52	47	53	48	44	48	44	41	43	40	37	35
7	67	56	49	44	63	54	47	43	49	44	40	44	40	37	40	37	34	32
8	63	52	45	40	59	49	43	39	45	40	36	41	37	34	37	34	31	29
9	59	48	41	36	56	46	40	35	42	37	33	38	34	31	35	31	29	27
10	55	44	38	33	52	42	36	32	39	34	31	36	31	29	32	29	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34161	34161	34161
5°	34428	34050	34480
10°	34861	34497	34810
15°	35490	34959	34781
20°	35534	34788	34153
25°	34657	33770	33298
30°	32578	31868	31058
35°	28915	28685	27829
40°	23714	23311	22443
45°	14139	16627	13269
50°	4413	9226	4175
55°	1669	3277	1669
60°	103	924	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: 16627 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.3	3.9
10°-20°	592.6	11.3
20°-30°	871.8	16.6
30°-40°	891.0	17.0
40°-50°	513.3	9.8
50°-60°	88.5	1.7
60°-70°	3.2	0.1
70°-80°	0.0	0.0
80°-90°	0.5	0.0
90°-100°	133.3	2.5
100°-110°	423.0	8.1
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°	1666.6	31.8
0°-40°	2557.6	48.8
0°-60°	3159.5	60.3
0°-90°	3163.2	60.3
90°-120°	971.1	18.5
90°-150°	1798.2	34.3
90°-180°	2079.0	39.7
0°-180°	5242.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2116	2116	2116	2116	2116	
5°	2124	2119	2101	2130	2127	203
15°	2123	2141	2091	2094	2081	598
25°	1945	1963	1896	1876	1869	888
35°	1467	1478	1455	1427	1412	906
45°	619	711	728	688	581	479
55°	59	68	116	66	59	63
65°	0	0	1	0	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	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°	2115.8	2115.8	2115.8	2115.8	2115.8
2.5°	2125.1	2119.3	2102.2	2121.6	2117.5
5°	2124.2	2119.0	2100.9	2129.5	2127.4
7.5°	2123.0	2119.4	2106.7	2130.0	2124.9
10°	2126.3	2125.3	2104.1	2128.3	2123.2
12.5°	2128.0	2134.5	2101.6	2120.6	2111.3
15°	2123.2	2140.8	2091.4	2094.3	2080.8
17.5°	2099.5	2124.3	2058.6	2046.5	2027.5
20°	2068.1	2097.1	2024.7	2004.2	1987.7
22.5°	2024.1	2050.6	1981.6	1956.1	1942.8
25°	1945.4	1962.9	1895.6	1876.4	1869.1
27.5°	1833.8	1838.8	1788.1	1764.2	1754.8
30°	1747.4	1747.4	1709.3	1683.5	1665.9
32.5°	1646.7	1644.2	1617.0	1588.7	1571.1
35°	1467.0	1478.3	1455.3	1427.4	1411.9
37.5°	1272.4	1276.8	1259.3	1229.4	1216.3
40°	1125.1	1126.1	1106.0	1084.4	1064.8
42.5°	953.2	974.1	955.3	921.3	913.2
45°	619.2	711.3	728.2	687.7	581.1
47.5°	311.2	425.8	497.7	386.5	273.7
50°	175.7	244.0	367.3	204.5	166.2
52.5°	117.3	147.5	254.7	133.7	112.0
55°	59.3	67.5	116.4	65.5	59.3
57.5°	20.1	31.3	50.6	32.4	22.2
60°	3.2	13.5	28.6	10.4	1.1
62.5°	0.6	3.5	17.6	2.9	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	1.00	1.76	1.91	2.65	3.78	0.63	1.39	1.53	2.28	3.41
	3H	0.81	1.48	1.73	2.39	3.54	0.44	1.11	1.35	2.01	3.17
	4H	0.71	1.34	1.64	2.25	3.41	0.33	0.96	1.26	1.87	3.04
	6H	0.60	1.18	1.54	2.09	3.27	0.23	0.80	1.16	1.72	2.89
	8H	0.54	1.09	1.49	2.02	3.19	0.17	0.71	1.11	1.64	2.82
	12H	0.48	1.00	1.43	1.92	3.12	0.11	0.62	1.05	1.55	2.74
4H	2H	0.72	1.34	1.65	2.25	3.42	0.34	0.97	1.28	1.88	3.05
	3H	0.52	1.03	1.46	1.97	3.15	0.14	0.66	1.08	1.60	2.78
	4H	0.40	0.87	1.35	1.81	3.01	0.03	0.50	0.98	1.43	2.64
	6H	0.30	0.69	1.26	1.65	2.86	0.00	0.32	0.88	1.28	2.49
	8H	0.23	0.60	1.19	1.55	2.77	0.00	0.23	0.82	1.18	2.40
	12H	0.16	0.49	1.14	1.46	2.68	0.00	0.12	0.76	1.09	2.31
8H	4H	0.23	0.60	1.19	1.55	2.77	0.00	0.23	0.82	1.18	2.40
	6H	0.11	0.41	1.10	1.41	2.63	0.00	0.04	0.72	1.04	2.25
	8H	0.05	0.32	1.05	1.30	2.54	0.00	0.00	0.67	0.93	2.16
	12H	0.00	0.22	0.98	1.19	2.48	0.00	0.00	0.60	0.82	2.10
12H	4H	0.16	0.49	1.14	1.46	2.68	0.00	0.12	0.76	1.09	2.31
	6H	0.05	0.32	1.05	1.30	2.54	0.00	0.00	0.67	0.93	2.16
	8H	0.00	0.22	0.98	1.19	2.48	0.00	0.00	0.60	0.82	2.10