

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: P853646

Luminaire Tested: SQ2-BBN-150U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853646
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G3-2308-130-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBN-150U-050D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

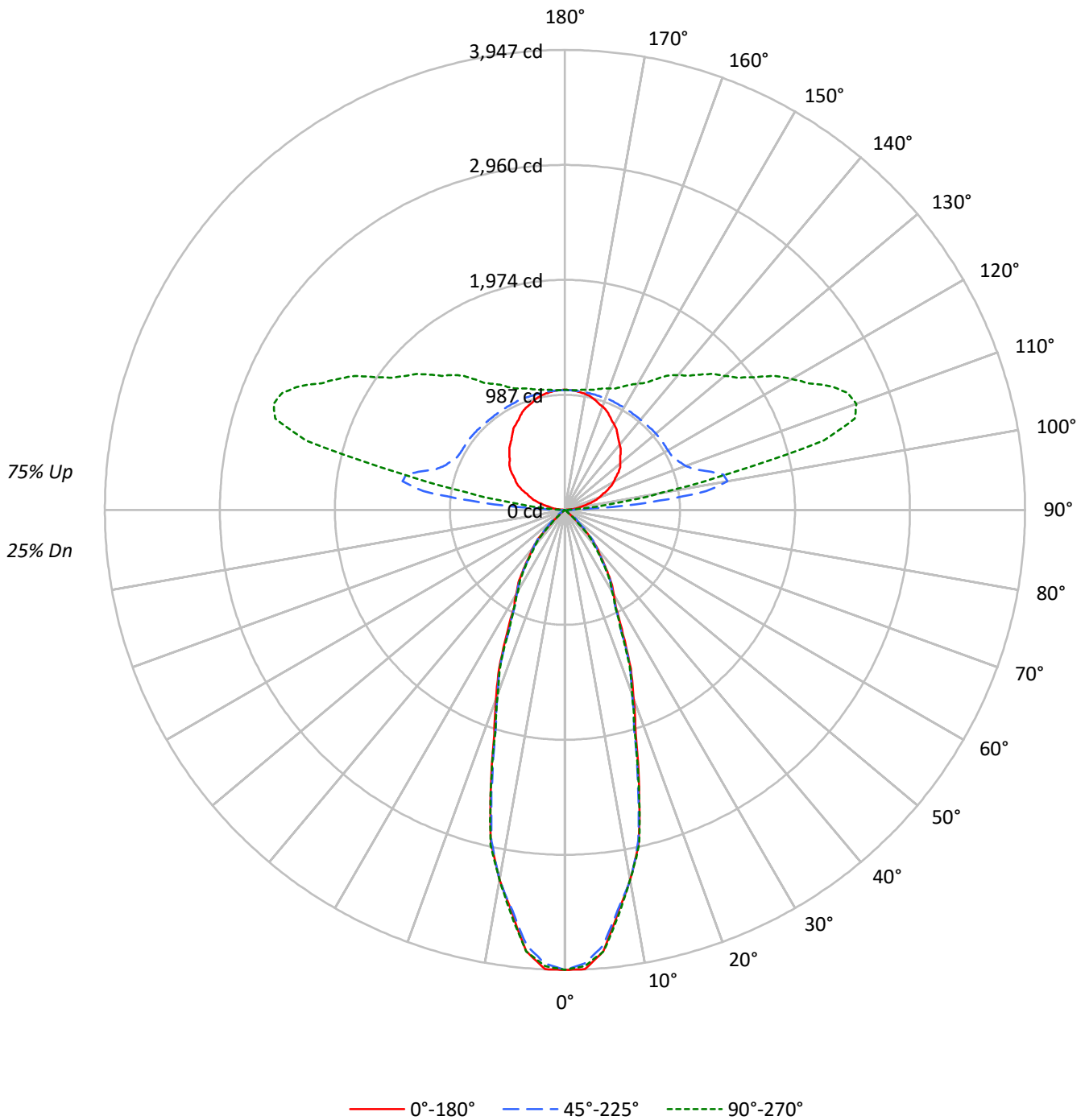
Lumens per Lamp: N/A
Luminaire Lumens: 8486.9 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 74.7
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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25
1	93	90	86	84	83	80	78	75	63	61	59	46	45	44	31	31	30	24
2	86	80	75	71	77	72	68	64	57	54	51	42	41	39	29	29	28	22
3	80	72	66	61	71	65	59	55	51	48	45	39	37	35	27	26	26	21
4	74	65	58	53	66	58	53	48	47	43	40	36	34	32	26	25	24	19
5	68	58	52	46	61	53	47	43	43	39	36	33	31	29	24	23	22	18
6	64	53	46	41	57	48	42	38	39	35	32	31	28	26	23	21	20	17
7	59	49	42	37	53	44	38	34	36	32	29	29	26	24	22	20	19	16
8	55	45	38	33	50	41	35	31	34	29	27	27	24	22	20	19	18	15
9	52	41	35	30	47	38	32	28	31	27	24	25	22	21	19	18	17	15
10	49	38	32	28	44	35	30	26	29	25	23	24	21	19	18	17	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	63734	63734	63734
5°	61603	60841	61637
10°	52869	52903	52869
15°	41036	40381	40941
20°	29617	29005	28981
25°	20998	20163	20200
30°	15623	15226	15079
35°	12157	11848	11596
40°	8996	8772	8216
45°	4596	5635	3704
50°	1000	3110	733
55°	281	1261	220
60°	45	252	23
65°	0	27	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: 5635 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.3	4.0
10°-20°	673.0	7.9
20°-30°	542.9	6.4
30°-40°	377.1	4.4
40°-50°	174.2	2.1
50°-60°	24.5	0.3
60°-70°	0.8	0.0
70°-80°	0.0	0.0
80°-90°	1.5	0.0
90°-100°	392.1	4.6
100°-110°	1284.0	15.1
110°-120°	1269.4	15.0
120°-130°	1037.7	12.2
130°-140°	846.8	10.0
140°-150°	659.0	7.8
150°-160°	474.5	5.6
160°-170°	290.3	3.4
170°-180°	98.1	1.2
0°-30°	1557.1	18.3
0°-40°	1934.3	22.8
0°-60°	2132.9	25.1
0°-90°	2135.2	25.2
90°-120°	2945.6	34.7
90°-150°	5489.1	64.7
90°-180°	6352.0	74.8
0°-180°	8486.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3947	3947	3947	3947	3947	
5°	3801	3781	3754	3800	3803	342
15°	2455	2486	2416	2450	2449	676
25°	1179	1152	1132	1148	1134	552
35°	617	617	601	590	588	386
45°	201	240	247	224	162	163
55°	10	16	45	13	8	13
65°	0	0	1	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	3	8	7	8	3
95°	55	160	713	254	165	62
105°	223	318	1274	2422	2300	235
115°	402	480	1036	2140	2512	397
125°	560	624	1021	1687	1982	498
135°	674	745	1012	1455	1640	521
145°	788	846	1010	1252	1372	494
155°	898	928	1016	1120	1164	413
165°	980	990	1021	1060	1071	276
175°	1025	1025	1026	1033	1031	97
180°	1029	1029	1029	1029	1029	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3947.4	3947.4	3947.4	3947.4	3947.4
2.5°	3945.1	3930.7	3896.2	3927.3	3917.8
5°	3800.9	3780.7	3753.9	3800.2	3803.0
7.5°	3482.5	3489.0	3464.1	3515.2	3509.8
10°	3224.7	3229.5	3226.8	3243.4	3224.7
12.5°	2925.9	2945.2	2908.7	2934.5	2942.4
15°	2455.0	2486.3	2415.8	2450.0	2449.3
17.5°	2013.3	2010.1	1973.8	1980.1	1978.0
20°	1723.7	1718.8	1688.1	1683.2	1686.7
22.5°	1475.5	1467.3	1456.5	1444.2	1448.8
25°	1178.7	1152.3	1131.8	1148.5	1133.9
27.5°	946.1	945.7	928.8	930.7	933.5
30°	838.0	833.1	816.7	817.2	808.8
32.5°	741.8	745.3	725.0	721.0	712.7
35°	616.8	616.8	601.1	590.4	588.3
37.5°	500.8	499.6	488.4	473.2	467.8
40°	426.8	423.3	416.2	397.5	389.8
42.5°	342.6	351.9	345.0	326.3	314.7
45°	201.3	240.3	246.8	224.1	162.2
47.5°	86.5	129.3	164.8	107.4	55.9
50°	39.8	73.2	123.8	52.8	29.2
52.5°	23.3	40.0	91.9	30.9	18.4
55°	10.0	15.5	44.8	12.7	7.8
57.5°	3.7	6.8	16.9	5.5	3.0
60°	1.4	2.8	7.8	2.1	0.7
62.5°	0.3	1.1	3.8	1.0	0.1
65°	0.0	0.0	0.7	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°	0.2	0.6	1.7	1.5	1.7
90°	1.1	3.1	8.5	7.4	8.5
92.5°	18.0	65.6	201.4	65.5	52.5
95°	55.0	159.5	712.9	253.9	165.0
97.5°	99.8	210.3	1223.1	739.9	458.6
100°	131.2	236.6	1415.2	1263.8	837.7
102.5°	166.7	269.7	1394.0	1862.2	1443.5
105°	223.2	318.3	1274.5	2421.5	2300.5
107.5°	278.8	366.1	1158.0	2473.8	2606.8
110°	315.2	400.0	1102.1	2412.9	2660.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	349.9	432.2	1068.3	2307.0	2623.7
115°	401.9	480.5	1035.5	2139.7	2512.0
117.5°	452.5	525.9	1023.0	1975.3	2353.4
120°	485.5	554.8	1019.6	1879.4	2247.6
122.5°	515.1	582.7	1019.6	1796.7	2138.4
125°	559.5	623.6	1020.7	1687.4	1982.1
127.5°	597.2	662.5	1019.4	1606.7	1863.2
130°	620.9	687.1	1018.6	1558.0	1789.6
132.5°	642.0	709.9	1016.0	1516.0	1726.1
135°	673.7	745.1	1012.2	1455.4	1640.5
137.5°	707.2	777.9	1009.9	1392.1	1559.5
140°	730.9	799.1	1009.0	1352.2	1510.4
142.5°	754.6	818.7	1009.0	1309.5	1452.8
145°	788.0	845.9	1010.1	1251.9	1371.8
147.5°	823.1	871.3	1011.6	1201.7	1292.3
150°	845.1	887.5	1013.3	1172.6	1249.1
152.5°	867.1	904.5	1014.1	1148.6	1211.9
155°	898.0	928.0	1016.4	1120.0	1163.5
157.5°	925.7	947.4	1018.8	1097.5	1129.0
160°	943.5	961.0	1019.6	1084.7	1109.5
162.5°	958.7	973.0	1019.6	1074.4	1092.6
165°	980.5	989.8	1020.7	1060.1	1071.4
167.5°	998.9	1003.4	1021.9	1048.9	1055.2
170°	1009.0	1011.1	1022.8	1042.9	1045.0
172.5°	1016.7	1017.9	1025.3	1038.7	1039.1
175°	1024.9	1024.9	1026.0	1033.3	1031.2
177.5°	1029.1	1028.3	1027.4	1032.4	1029.1
180°	1029.1	1029.1	1029.1	1029.1	1029.1



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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