

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: P855500

Luminaire Tested: SQ2-PR1-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855500
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-050D-840-UNV-STD-W-4
Description: CORELITE SQ2 SURFACE LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

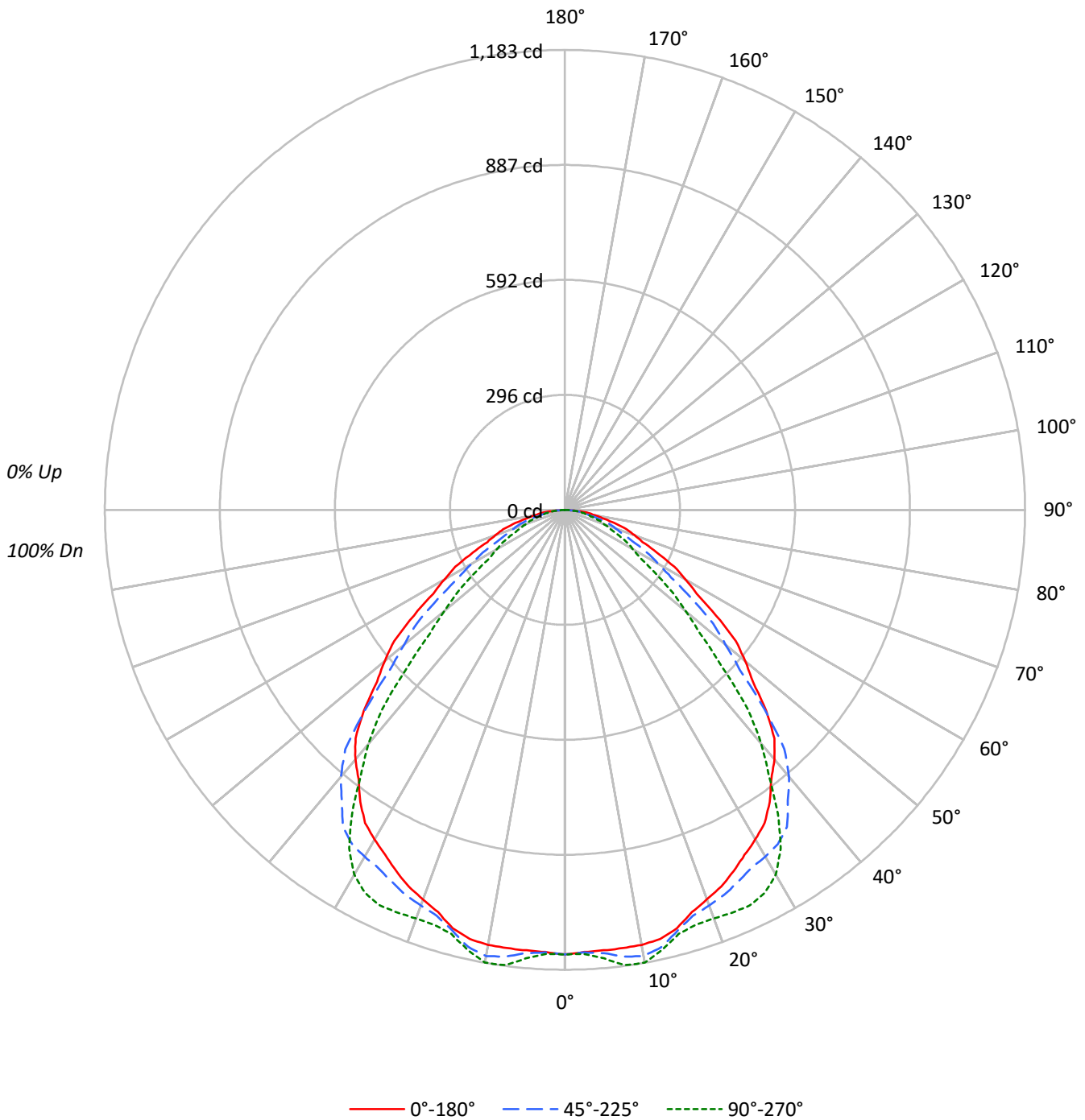
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2750.3 lumens
Efficiency: N/A
Efficacy: 154.5 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: Direct

Input Watts (W): 17.8
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100	
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	90	89	87			87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75			75	
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65			65	
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56	
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50	
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44			44	
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39			39	
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35			35	
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32			32	
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29			29	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18460	18460	18460
5°	18434	18548	18775
10°	18630	19107	19394
15°	18623	18721	18877
20°	18321	18603	19223
25°	18271	18789	20013
30°	18250	19207	20206
35°	18078	19618	18814
40°	17660	18889	16556
45°	16712	16577	13093
50°	15192	13554	10158
55°	13351	11153	7907
60°	11554	8919	6510
65°	9971	7393	5700
70°	8969	6548	5061
75°	8216	5671	4654
80°	7150	4547	4547
85°	5187	4094	2167

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 18066 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.4	4.0
10°-20°	319.6	11.6
20°-30°	494.0	18.0
30°-40°	594.2	21.6
40°-50°	533.5	19.4
50°-60°	357.4	13.0
60°-70°	207.9	7.6
70°-80°	106.8	3.9
80°-90°	26.3	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	924.0	33.6
0°-40°	1518.3	55.2
0°-60°	2409.2	87.6
0°-90°	2750.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2750.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1137	1157	1144	1147	1158	109
15°	1114	1160	1120	1124	1129	313
25°	1026	1067	1055	1094	1123	473
35°	917	925	995	976	954	572
45°	732	791	726	612	573	560
55°	474	492	396	306	281	426
65°	261	267	194	157	149	264
75°	132	128	91	77	75	140
85°	28	22	22	15	12	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1138.6	1152.2	1139.5	1140.6	1143.3
5°	1137.4	1156.8	1144.4	1147.0	1158.4
7.5°	1137.2	1164.8	1158.9	1166.0	1181.0
10°	1136.3	1169.4	1165.4	1166.9	1182.9
12.5°	1130.7	1169.2	1151.4	1150.0	1158.6
15°	1114.1	1159.7	1120.0	1123.6	1129.3
17.5°	1085.0	1132.7	1094.8	1107.6	1118.8
20°	1066.3	1113.1	1082.7	1099.4	1118.8
22.5°	1049.6	1096.3	1071.5	1094.9	1121.6
25°	1025.6	1066.6	1054.7	1093.8	1123.4
27.5°	1000.4	1024.5	1038.6	1091.0	1111.8
30°	978.9	994.9	1030.2	1075.9	1083.8
32.5°	955.6	965.2	1019.0	1042.8	1032.5
35°	917.2	925.2	995.3	976.1	954.5
37.5°	871.5	887.9	941.9	886.8	861.9
40°	837.9	865.3	896.2	814.0	785.5
42.5°	796.9	840.7	835.6	730.8	696.0
45°	731.9	791.2	726.0	612.1	573.4
47.5°	655.2	716.0	609.5	507.8	471.5
50°	604.8	653.8	539.6	444.3	404.4
52.5°	553.6	588.9	479.9	384.7	348.5
55°	474.3	492.5	396.2	305.9	280.9
57.5°	401.6	413.3	323.7	247.1	228.7
60°	357.8	365.7	276.2	216.4	201.6
62.5°	317.7	323.9	238.0	190.4	179.2
65°	261.0	266.8	193.5	157.1	149.2
67.5°	216.1	219.0	159.2	130.6	123.1
70°	190.0	191.1	138.7	112.9	107.2
72.5°	166.7	165.0	119.1	98.0	94.2
75°	131.7	128.3	90.9	76.9	74.6
77.5°	98.4	94.7	63.9	59.2	59.2
80°	76.9	72.4	48.9	48.9	48.9
82.5°	57.3	50.9	37.8	37.8	36.8
85°	28.0	22.3	22.1	15.0	11.7
87.5°	7.5	7.5	2.8	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0



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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	20.83	22.33	21.20	22.64	22.96	17.56	19.05	17.92	19.37	19.68
	3H	22.11	23.45	22.49	23.78	24.14	18.67	20.01	19.05	20.33	20.70
	4H	22.59	23.85	22.99	24.19	24.57	19.10	20.35	19.50	20.70	21.08
	6H	22.94	24.10	23.35	24.46	24.85	19.46	20.61	19.87	20.98	21.37
	8H	23.04	24.14	23.47	24.53	24.93	19.56	20.66	19.99	21.05	21.45
	12H	23.09	24.14	23.52	24.52	24.95	19.59	20.64	20.02	21.02	21.45
4H	2H	20.99	22.24	21.39	22.59	22.97	18.20	19.45	18.60	19.80	20.18
	3H	22.51	23.55	22.92	23.95	24.35	19.52	20.56	19.93	20.96	21.36
	4H	23.13	24.06	23.56	24.48	24.92	20.05	20.98	20.49	21.40	21.84
	6H	23.62	24.42	24.07	24.87	25.33	20.52	21.33	20.98	21.77	22.23
	8H	23.76	24.51	24.22	24.96	25.43	20.65	21.41	21.12	21.85	22.32
	12H	23.84	24.51	24.32	24.99	25.46	20.70	21.37	21.18	21.85	22.32
8H	4H	23.20	23.95	23.66	24.40	24.87	20.40	21.15	20.87	21.60	22.07
	6H	23.77	24.39	24.27	24.88	25.36	20.96	21.58	21.45	22.07	22.55
	8H	23.97	24.53	24.48	25.04	25.53	21.14	21.70	21.66	22.21	22.70
	12H	24.10	24.59	24.61	25.09	25.65	21.23	21.72	21.74	22.22	22.78
12H	4H	23.19	23.86	23.67	24.34	24.81	20.44	21.12	20.93	21.60	22.07
	6H	23.75	24.32	24.27	24.83	25.31	21.01	21.58	21.53	22.09	22.57
	8H	23.99	24.49	24.50	24.98	25.55	21.25	21.74	21.76	22.24	22.80