

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: P855023

Luminaire Tested: SQ2-FB-050U-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855023
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-050U-125D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

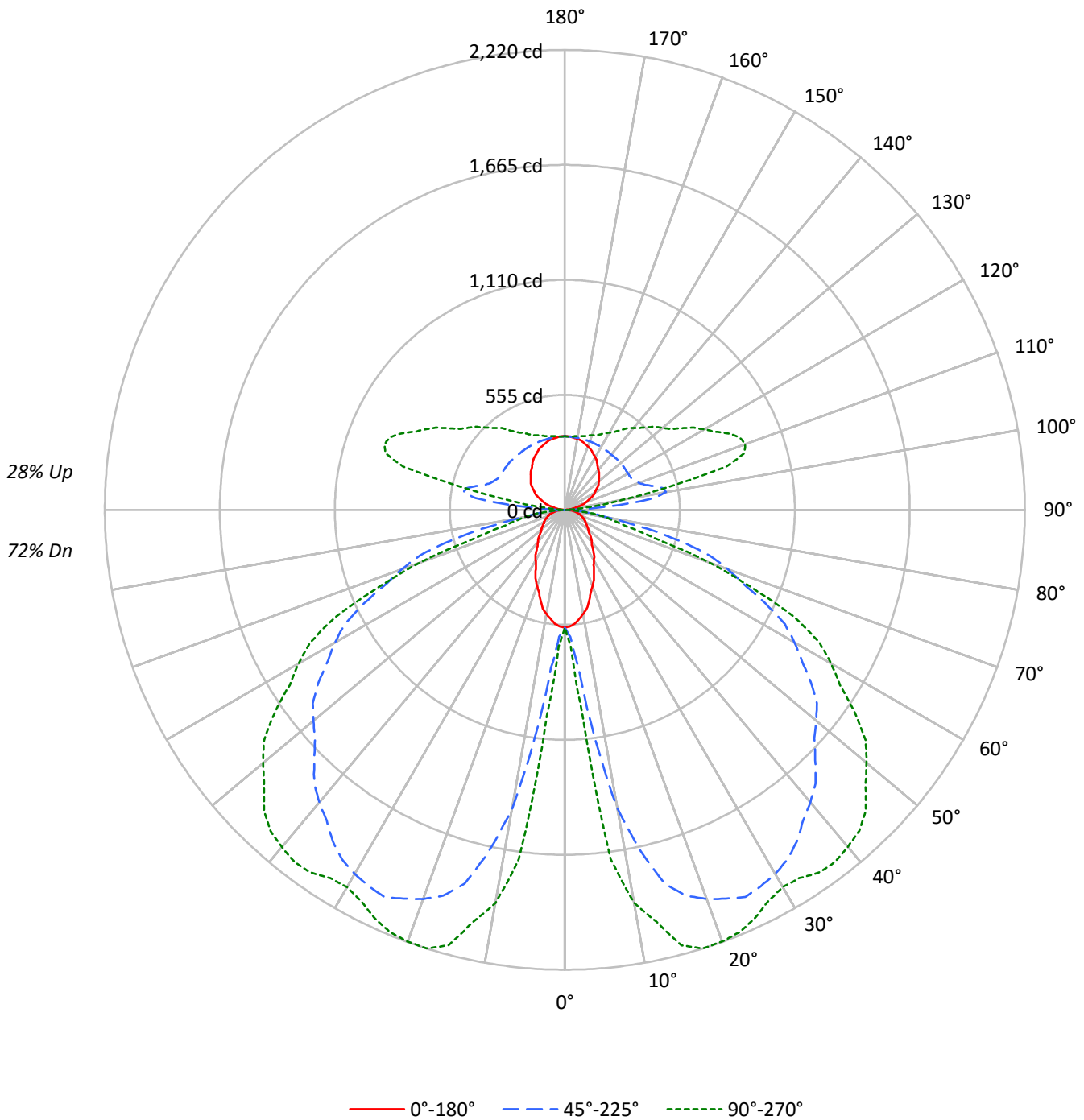
Lumens per Lamp: N/A
Luminaire Lumens: 7817.4 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 64
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72		
1	102	98	94	90	97	93	89	86	83	81	78	75	73	71	67	65	64	60		
2	93	85	78	73	88	81	75	70	73	68	64	65	61	58	58	55	53	49		
3	84	74	66	60	79	70	63	57	63	58	53	57	52	49	51	47	44	41		
4	77	65	57	50	72	62	54	48	56	50	44	50	45	41	45	41	37	34		
5	70	58	49	42	66	55	47	41	50	43	38	45	39	35	40	36	32	29		
6	64	51	43	36	61	49	41	35	44	38	33	40	34	30	36	31	28	25		
7	59	46	38	32	56	44	36	31	40	33	28	36	31	26	33	28	24	22		
8	55	42	33	28	52	40	32	27	36	30	25	33	27	23	30	25	21	19		
9	51	38	30	25	48	36	29	24	33	27	22	30	25	21	27	23	19	17		
10	48	35	27	22	45	33	26	21	30	24	20	28	22	19	25	20	17	15		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9169	9169	9169
5°	8938	12391	16242
10°	8371	23996	31604
15°	7577	31219	36378
20°	6710	34343	38096
25°	5934	36727	38721
30°	5244	37824	39198
35°	4681	38483	42141
40°	4258	38849	44776
45°	3927	39030	46887
50°	3702	39780	47738
55°	3612	40814	48116
60°	3701	41356	47879
65°	3862	40791	46525
70°	3998	39442	35188
75°	4429	35427	19420
80°	4575	18280	18029
85°	4539	12653	7577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 48552 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	1.2
10°-20°	434.4	5.6
20°-30°	764.2	9.8
30°-40°	989.2	12.7
40°-50°	1091.0	14.0
50°-60°	1018.6	13.0
60°-70°	787.3	10.1
70°-80°	363.2	4.6
80°-90°	69.8	0.9
90°-100°	141.4	1.8
100°-110°	448.5	5.7
110°-120°	439.8	5.6
120°-130°	357.9	4.6
130°-140°	291.8	3.7
140°-150°	227.5	2.9
150°-160°	163.9	2.1
160°-170°	100.1	1.3
170°-180°	33.8	0.4
0°-30°	1293.7	16.5
0°-40°	2282.9	29.2
0°-60°	4392.5	56.2
0°-90°	5612.7	71.8
90°-120°	1029.7	13.2
90°-150°	1906.8	24.4
90°-180°	2205.0	28.2
0°-180°	7817.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	568	568	568	568	568	
5°	552	632	764	933	1002	51
15°	453	894	1868	2091	2176	126
25°	333	1201	2062	2152	2174	153
35°	238	1159	1952	2021	2138	149
45°	172	888	1709	1963	2053	133
55°	128	529	1450	1667	1709	116
65°	101	299	1068	1196	1218	99
75°	71	183	568	306	311	73
85°	24	54	68	46	41	26
90°	0	1	3	3	3	2
95°	19	57	257	95	61	22
105°	78	110	442	842	807	82
115°	140	166	357	742	873	138
125°	193	216	352	582	686	172
135°	233	256	350	500	564	180
145°	272	293	350	432	470	171
155°	310	321	351	386	401	143
165°	338	342	352	365	368	95
175°	354	353	354	356	355	34
180°	355	355	355	355	355	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	567.9	567.9	567.9	567.9	567.9
2.5°	563.6	587.0	613.8	644.7	657.5
5°	551.5	631.7	764.5	932.7	1002.1
7.5°	530.3	693.1	1111.9	1561.8	1700.6
10°	510.6	737.5	1463.6	1853.0	1927.7
12.5°	488.8	796.9	1684.2	1957.9	2034.8
15°	453.3	893.8	1867.7	2090.8	2176.3
17.5°	416.6	1003.0	1952.8	2173.0	2219.5
20°	390.5	1079.3	1998.8	2187.8	2217.2
22.5°	366.4	1136.4	2031.5	2174.8	2206.3
25°	333.1	1200.9	2061.6	2152.2	2173.5
27.5°	300.9	1217.7	2048.5	2108.0	2128.8
30°	281.3	1213.1	2028.8	2073.1	2102.5
32.5°	263.8	1199.8	2000.4	2043.4	2107.0
35°	237.5	1158.7	1952.4	2020.6	2138.0
37.5°	215.2	1092.5	1889.0	2028.6	2141.9
40°	202.0	1043.1	1843.2	2028.3	2124.4
42.5°	188.9	985.1	1790.7	2006.4	2102.5
45°	172.0	887.6	1709.3	1962.6	2053.4
47.5°	156.1	777.8	1634.0	1902.0	1968.2
50°	147.4	702.8	1583.7	1847.1	1900.5
52.5°	138.7	630.0	1533.5	1781.4	1830.6
55°	128.3	528.8	1449.9	1666.6	1709.3
57.5°	119.1	442.1	1355.0	1539.7	1574.4
60°	114.6	395.0	1280.7	1448.0	1482.7
62.5°	108.1	352.2	1197.6	1351.8	1384.4
65°	101.1	298.6	1067.7	1196.4	1217.8
67.5°	91.2	258.9	929.5	1008.3	968.3
70°	84.7	239.5	835.5	860.2	745.4
72.5°	80.3	218.1	732.9	667.9	450.6
75°	71.0	183.2	567.9	306.0	311.3
77.5°	57.9	141.7	373.6	234.9	239.7
80°	49.2	115.9	196.6	191.2	193.9
82.5°	40.4	90.1	135.5	140.8	137.0
85°	24.5	53.9	68.3	46.2	40.9
87.5°	8.7	19.7	11.6	11.6	11.6
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.8	79.3	26.3	18.5
95°	19.0	57.2	256.8	95.2	61.4
97.5°	35.3	74.2	435.0	271.8	166.8
100°	46.9	84.0	495.7	451.9	293.6
102.5°	59.4	94.7	484.9	663.7	508.0
105°	78.1	109.8	442.1	842.1	807.2
107.5°	96.9	126.2	401.3	860.8	907.9
110°	109.4	137.8	380.7	839.3	926.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	121.9	148.6	369.0	802.3	913.2
115°	139.5	165.8	357.3	742.0	873.1
117.5°	156.7	181.6	352.5	684.0	816.1
120°	167.4	191.5	351.6	648.2	776.0
122.5°	178.2	201.4	351.6	619.4	738.4
125°	193.1	216.1	351.6	581.8	685.5
127.5°	206.3	228.4	351.6	552.7	641.1
130°	214.4	237.3	351.6	535.5	615.2
132.5°	222.4	245.3	350.8	521.9	593.7
135°	233.4	256.2	349.5	500.5	563.9
137.5°	244.1	268.1	349.3	480.0	536.6
140°	251.2	275.2	348.4	465.6	516.9
142.5°	260.2	283.2	349.3	451.2	499.1
145°	272.4	293.2	349.5	431.8	470.0
147.5°	284.7	302.3	349.7	414.7	445.9
150°	293.6	307.8	350.6	404.8	429.9
152.5°	300.8	313.2	350.6	396.6	417.3
155°	310.4	321.3	350.6	385.5	400.8
157.5°	320.7	328.1	351.6	378.8	389.2
160°	326.0	332.5	351.6	374.2	382.9
162.5°	331.4	336.1	351.6	370.6	376.7
165°	338.3	341.6	351.6	365.2	368.5
167.5°	344.7	345.6	352.8	361.4	364.2
170°	348.4	348.4	352.8	359.5	360.6
172.5°	350.2	351.0	352.8	357.7	358.0
175°	353.9	352.9	353.9	356.2	355.0
177.5°	355.0	354.1	354.1	355.9	354.1
180°	355.0	355.0	355.0	355.0	355.0



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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	16.54	17.69	17.28	18.45	19.37	25.28	26.42	26.02	27.19	28.11
	3H	17.30	18.32	18.05	19.10	20.05	26.93	27.95	27.68	28.73	29.68
	4H	17.61	18.58	18.38	19.36	20.33	27.12	28.09	27.89	28.87	29.83
	6H	17.84	18.74	18.63	19.53	20.51	27.22	28.12	28.00	28.91	29.88
	8H	17.91	18.76	18.70	19.57	20.55	27.23	28.09	28.03	28.90	29.88
	12H	17.95	18.76	18.75	19.57	20.57	27.21	28.03	28.01	28.83	29.84
4H	2H	20.98	21.95	21.75	22.73	23.69	25.76	26.73	26.53	27.51	28.47
	3H	21.94	22.75	22.73	23.57	24.55	27.61	28.42	28.40	29.24	30.22
	4H	22.24	22.97	23.04	23.79	24.80	27.86	28.60	28.67	29.42	30.42
	6H	22.38	23.02	23.20	23.86	24.87	28.03	28.66	28.85	29.50	30.52
	8H	22.41	23.01	23.24	23.84	24.87	28.06	28.65	28.88	29.49	30.52
	12H	22.42	22.95	23.26	23.81	24.84	28.05	28.58	28.89	29.44	30.47
8H	4H	23.43	24.03	24.26	24.87	25.89	28.01	28.60	28.83	29.44	30.46
	6H	23.69	24.18	24.54	25.06	26.08	28.22	28.72	29.08	29.60	30.62
	8H	23.76	24.20	24.62	25.07	26.11	28.29	28.72	29.15	29.60	30.64
	12H	23.80	24.18	24.67	25.05	26.15	28.30	28.68	29.16	29.55	30.64
12H	4H	23.47	24.00	24.31	24.86	25.89	27.97	28.51	28.82	29.36	30.40
	6H	23.78	24.22	24.65	25.09	26.14	28.21	28.65	29.07	29.52	30.57
	8H	23.90	24.28	24.77	25.15	26.25	28.29	28.67	29.16	29.54	30.64