

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: P855430

Luminaire Tested: SQ2-FB-050U-125D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855430
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-840-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

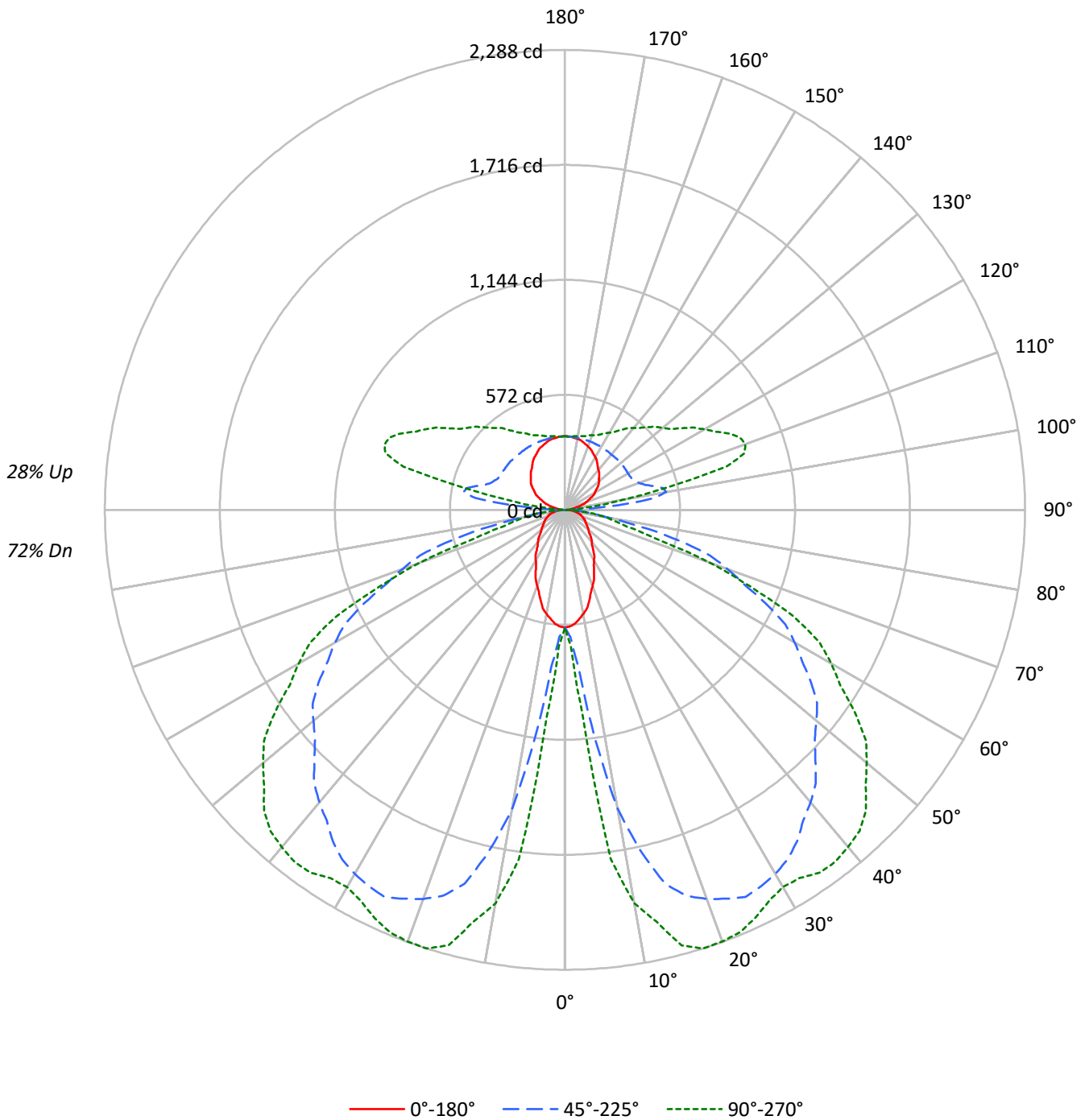
Lumens per Lamp: N/A
Luminaire Lumens: 8057.7 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9452	9452	9452
5°	9214	12772	16741
10°	8629	24733	32577
15°	7809	32179	37496
20°	6916	35398	39268
25°	6116	37857	39913
30°	5407	38988	40404
35°	4827	39665	43438
40°	4390	40042	46152
45°	4048	40231	48327
50°	3818	41003	49205
55°	3724	42069	49596
60°	3817	42625	49351
65°	3981	42044	47958
70°	4121	40655	36269
75°	4566	36519	20012
80°	4714	18847	18587
85°	4687	13042	7818

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 50045 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.1	1.2
10°-20°	447.7	5.6
20°-30°	787.7	9.8
30°-40°	1019.6	12.7
40°-50°	1124.5	14.0
50°-60°	1049.9	13.0
60°-70°	811.5	10.1
70°-80°	374.3	4.6
80°-90°	71.9	0.9
90°-100°	145.8	1.8
100°-110°	462.3	5.7
110°-120°	453.3	5.6
120°-130°	368.9	4.6
130°-140°	300.8	3.7
140°-150°	234.5	2.9
150°-160°	169.0	2.1
160°-170°	103.2	1.3
170°-180°	34.8	0.4
0°-30°	1333.5	16.5
0°-40°	2353.1	29.2
0°-60°	4527.5	56.2
0°-90°	5785.3	71.8
90°-120°	1061.4	13.2
90°-150°	1965.5	24.4
90°-180°	2272.0	28.2
0°-180°	8057.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	585	585	585	585	585	
5°	568	651	788	961	1033	53
15°	467	921	1925	2155	2243	130
25°	343	1238	2125	2218	2240	158
35°	245	1194	2012	2083	2204	154
45°	177	915	1762	2023	2116	137
55°	132	545	1494	1718	1762	119
65°	104	308	1100	1233	1255	102
75°	73	189	585	315	321	75
85°	25	56	70	48	42	26
90°	0	1	4	4	4	2
95°	20	59	265	98	63	23
105°	80	113	456	868	832	85
115°	144	171	368	765	900	142
125°	199	223	362	600	707	177
135°	240	264	360	516	581	186
145°	281	302	360	445	484	176
155°	320	331	361	397	413	148
165°	349	352	362	376	380	98
175°	365	364	365	367	366	35
180°	366	366	366	366	366	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	585.4	585.4	585.4	585.4	585.4
2.5°	581.0	605.1	632.7	664.5	677.7
5°	568.5	651.1	788.0	961.3	1032.9
7.5°	546.6	714.4	1146.1	1609.8	1752.9
10°	526.3	760.2	1508.6	1910.0	1987.0
12.5°	503.8	821.4	1736.0	2018.1	2097.4
15°	467.2	921.2	1925.1	2155.1	2243.2
17.5°	429.5	1033.8	2012.9	2239.8	2287.7
20°	402.5	1112.5	2060.2	2255.1	2285.4
22.5°	377.7	1171.3	2094.0	2241.6	2274.2
25°	343.3	1237.8	2125.0	2218.3	2240.4
27.5°	310.1	1255.1	2111.5	2172.8	2194.2
30°	290.0	1250.4	2091.2	2136.9	2167.2
32.5°	271.9	1236.7	2061.9	2106.2	2171.7
35°	244.9	1194.3	2012.4	2082.7	2203.8
37.5°	221.8	1126.1	1947.0	2091.0	2207.7
40°	208.3	1075.2	1899.8	2090.6	2189.7
42.5°	194.7	1015.4	1845.8	2068.1	2167.2
45°	177.3	914.8	1761.9	2022.9	2116.5
47.5°	160.9	801.7	1684.2	1960.4	2028.7
50°	152.0	724.4	1632.4	1903.9	1958.9
52.5°	143.0	649.4	1580.6	1836.2	1886.9
55°	132.3	545.1	1494.5	1717.8	1761.9
57.5°	122.7	455.7	1396.6	1587.0	1622.8
60°	118.2	407.2	1320.0	1492.5	1528.3
62.5°	111.4	363.0	1234.4	1393.4	1426.9
65°	104.2	307.8	1100.5	1233.2	1255.3
67.5°	94.0	266.9	958.1	1039.3	998.0
70°	87.3	246.8	861.2	886.6	768.3
72.5°	82.7	224.8	755.4	688.4	464.4
75°	73.2	188.8	585.4	315.4	320.8
77.5°	59.7	146.0	385.0	242.2	247.1
80°	50.7	119.5	202.7	197.1	199.9
82.5°	41.6	92.9	139.6	145.1	141.2
85°	25.3	55.6	70.4	47.7	42.2
87.5°	9.0	20.3	12.0	12.0	12.0
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.4	25.5	81.7	27.2	19.1
95°	19.6	59.0	264.7	98.1	63.3
97.5°	36.4	76.5	448.3	280.2	171.9
100°	48.4	86.6	510.9	465.8	302.7
102.5°	61.2	97.7	499.8	684.1	523.6
105°	80.5	113.2	455.7	868.0	832.0
107.5°	99.9	130.1	413.6	887.2	935.8
110°	112.8	142.1	392.4	865.1	955.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	125.6	153.1	380.4	827.0	941.3
115°	143.8	170.8	368.3	764.9	899.9
117.5°	161.5	187.2	363.4	705.1	841.2
120°	172.6	197.4	362.4	668.1	799.8
122.5°	183.7	207.6	362.4	638.4	761.1
125°	199.1	222.7	362.4	599.7	706.6
127.5°	212.7	235.4	362.4	569.6	660.8
130°	221.0	244.6	362.4	551.9	634.1
132.5°	229.2	252.9	361.6	537.9	612.0
135°	240.5	264.1	360.2	515.9	581.2
137.5°	251.6	276.3	360.0	494.7	553.1
140°	259.0	283.7	359.1	479.9	532.8
142.5°	268.2	291.9	360.0	465.1	514.4
145°	280.7	302.2	360.2	445.1	484.5
147.5°	293.4	311.6	360.5	427.5	459.6
150°	302.7	317.2	361.4	417.2	443.1
152.5°	310.0	322.8	361.4	408.8	430.1
155°	319.9	331.2	361.4	397.4	413.1
157.5°	330.5	338.2	362.4	390.4	401.1
160°	336.0	342.7	362.4	385.7	394.7
162.5°	341.6	346.5	362.4	382.0	388.3
165°	348.7	352.1	362.4	376.4	379.8
167.5°	355.3	356.3	363.6	372.5	375.4
170°	359.1	359.1	363.6	370.6	371.6
172.5°	360.9	361.7	363.6	368.7	369.0
175°	364.8	363.7	364.8	367.1	365.9
177.5°	365.9	365.0	365.0	366.9	365.0
180°	365.9	365.9	365.9	365.9	365.9

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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	16.65	17.79	17.39	18.56	19.48	25.39	26.53	26.13	27.29	28.21
	3H	17.40	18.43	18.16	19.20	20.15	27.03	28.06	27.78	28.83	29.78
	4H	17.72	18.69	18.49	19.47	20.43	27.23	28.19	28.00	28.98	29.94
	6H	17.95	18.84	18.73	19.64	20.61	27.33	28.22	28.11	29.01	29.99
	8H	18.02	18.87	18.81	19.68	20.66	27.34	28.19	28.13	29.00	29.98
	12H	18.05	18.87	18.85	19.67	20.68	27.32	28.13	28.12	28.94	29.94
4H	2H	21.08	22.05	21.86	22.84	23.80	25.87	26.83	26.64	27.62	28.58
	3H	22.04	22.85	22.83	23.67	24.65	27.72	28.53	28.50	29.34	30.32
	4H	22.34	23.08	23.14	23.89	24.90	27.97	28.70	28.77	29.52	30.53
	6H	22.49	23.13	23.31	23.97	24.98	28.13	28.77	28.95	29.61	30.62
	8H	22.52	23.11	23.34	23.95	24.98	28.16	28.76	28.99	29.60	30.62
	12H	22.52	23.06	23.37	23.92	24.95	28.15	28.69	28.99	29.54	30.58
8H	4H	23.54	24.13	24.36	24.97	26.00	28.11	28.70	28.93	29.54	30.57
	6H	23.79	24.28	24.64	25.16	26.19	28.33	28.82	29.18	29.70	30.73
	8H	23.87	24.30	24.73	25.18	26.22	28.39	28.83	29.26	29.71	30.75
	12H	23.91	24.29	24.77	25.16	26.25	28.40	28.78	29.27	29.65	30.75
12H	4H	23.57	24.11	24.42	24.97	26.00	28.08	28.61	28.92	29.47	30.50
	6H	23.89	24.32	24.75	25.20	26.24	28.32	28.75	29.18	29.63	30.67
	8H	24.01	24.39	24.87	25.26	26.35	28.40	28.78	29.26	29.65	30.74