

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: P855024

Luminaire Tested: SQ2-FB-050U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855024
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-100D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

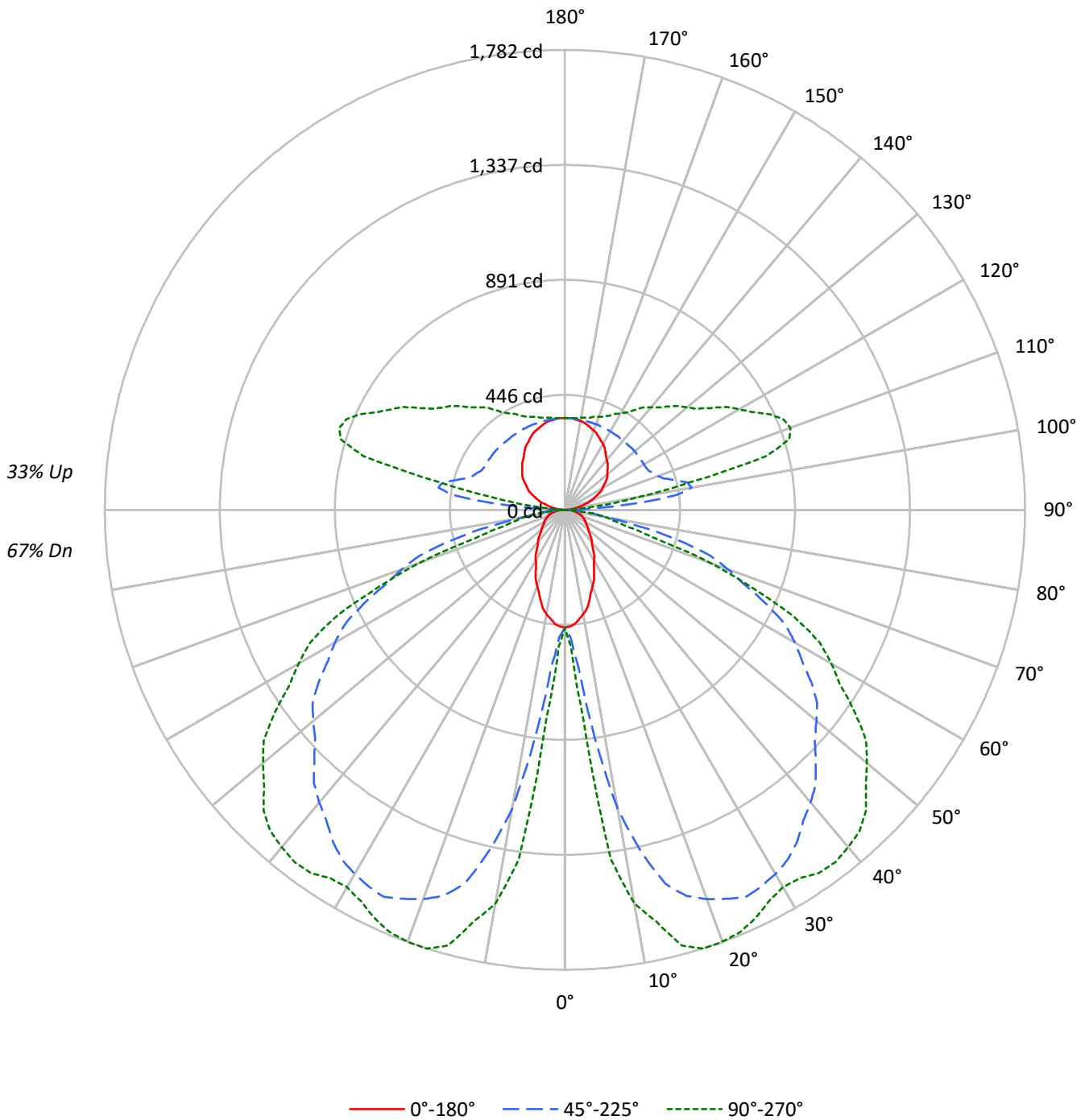
Lumens per Lamp: N/A
Luminaire Lumens: 6720.0 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.4
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	50	30	10	50	30	10	50	30	10	50	30	10	0																								
RCR	0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67																																			
	1	101	97	93	89	95	91	88	85	81	78	76	72	70	68	63	62	60	56																																			
	2	92	84	77	72	86	79	74	69	71	66	62	62	59	56	55	52	50	46																																			
	3	83	73	65	59	78	69	62	57	62	56	51	55	50	47	48	45	42	38																																			
	4	76	64	56	50	71	61	53	47	54	48	43	48	43	39	42	39	35	32																																			
	5	70	57	48	42	65	54	46	40	48	42	37	43	38	34	38	34	30	27																																			
	6	64	51	42	36	60	48	40	35	43	37	32	38	33	29	34	30	26	24																																			
	7	59	46	37	31	55	43	36	30	39	32	28	35	29	25	31	26	23	20																																			
	8	54	41	33	27	51	39	32	26	35	29	24	32	26	22	28	24	20	18																																			
	9	51	38	30	24	48	36	28	23	32	26	22	29	24	20	26	21	18	16																																			
	10	47	34	27	22	44	33	26	21	30	23	19	27	21	18	24	19	16	14																																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7364	7364	7364
5°	7180	9953	13044
10°	6724	19271	25383
15°	6086	25073	29214
20°	5388	27582	30594
25°	4766	29496	31098
30°	4212	30378	31482
35°	3759	30906	33845
40°	3419	31198	35959
45°	3156	31346	37657
50°	2974	31948	38338
55°	2902	32777	38644
60°	2974	33212	38453
65°	3102	32760	37364
70°	3210	31676	28263
75°	3556	28453	15596
80°	3673	14672	14477
85°	3668	10152	6095

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 38993 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	1.1
10°-20°	348.8	5.2
20°-30°	613.7	9.1
30°-40°	794.4	11.8
40°-50°	876.2	13.0
50°-60°	818.1	12.2
60°-70°	632.3	9.4
70°-80°	291.6	4.3
80°-90°	56.1	0.8
90°-100°	141.9	2.1
100°-110°	450.1	6.7
110°-120°	441.3	6.6
120°-130°	359.1	5.3
130°-140°	292.8	4.4
140°-150°	228.3	3.4
150°-160°	164.5	2.4
160°-170°	100.5	1.5
170°-180°	33.9	0.5
0°-30°	1039.0	15.5
0°-40°	1833.4	27.3
0°-60°	3527.7	52.5
0°-90°	4507.7	67.1
90°-120°	1033.2	15.4
90°-150°	1913.4	28.5
90°-180°	2212.0	32.9
0°-180°	6720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	443	507	614	749	805	41
15°	364	718	1500	1679	1748	101
25°	268	964	1656	1728	1746	123
35°	191	930	1568	1623	1717	120
45°	138	713	1373	1576	1649	107
55°	103	425	1164	1338	1373	93
65°	81	240	858	961	978	80
75°	57	147	456	246	250	59
85°	20	43	55	37	33	21
90°	0	1	3	3	3	2
95°	19	57	258	96	62	22
105°	78	110	444	845	810	83
115°	140	166	358	745	876	138
125°	194	217	353	584	688	173
135°	234	257	351	502	566	181
145°	273	294	351	433	472	171
155°	312	322	352	387	402	144
165°	339	343	353	366	370	96
175°	355	354	355	357	356	34
180°	356	356	356	356	356	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	456.1	456.1	456.1	456.1	456.1
2.5°	452.6	471.5	493.0	517.7	528.0
5°	443.0	507.3	614.1	749.1	804.8
7.5°	425.9	556.6	893.0	1254.2	1365.8
10°	410.1	592.3	1175.4	1488.2	1548.2
12.5°	392.6	639.9	1352.6	1572.4	1634.2
15°	364.1	717.8	1500.0	1679.1	1747.7
17.5°	334.7	805.5	1568.4	1745.1	1782.5
20°	313.6	866.8	1605.3	1757.1	1780.6
22.5°	294.3	912.7	1631.5	1746.6	1771.9
25°	267.5	964.4	1655.7	1728.4	1745.6
27.5°	241.6	978.0	1645.2	1692.9	1709.6
30°	225.9	974.2	1629.4	1665.0	1688.6
32.5°	211.9	963.6	1606.5	1641.0	1692.1
35°	190.7	930.5	1568.0	1622.7	1717.1
37.5°	172.8	877.4	1517.1	1629.3	1720.2
40°	162.2	837.7	1480.2	1628.9	1706.1
42.5°	151.7	791.1	1438.2	1611.4	1688.6
45°	138.2	712.8	1372.8	1576.2	1649.2
47.5°	125.4	624.6	1312.2	1527.5	1580.6
50°	118.4	564.4	1271.9	1483.4	1526.3
52.5°	111.4	506.0	1231.6	1430.7	1470.2
55°	103.1	424.7	1164.4	1338.5	1372.8
57.5°	95.7	355.0	1088.1	1236.6	1264.5
60°	92.1	317.3	1028.5	1162.9	1190.8
62.5°	86.8	282.8	961.8	1085.6	1111.9
65°	81.2	239.8	857.5	960.9	978.0
67.5°	73.3	207.9	746.5	809.8	777.7
70°	68.0	192.3	671.0	690.8	598.7
72.5°	64.4	175.1	588.6	536.4	361.8
75°	57.0	147.1	456.1	245.7	250.0
77.5°	46.5	113.9	300.0	188.7	192.5
80°	39.5	93.1	157.8	153.5	155.7
82.5°	32.4	72.4	108.8	113.1	110.1
85°	19.8	43.3	54.8	37.2	32.9
87.5°	7.0	15.8	9.5	9.5	9.5
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.9	79.6	26.5	18.5
95°	19.0	57.4	257.7	95.5	61.6
97.5°	35.4	74.4	436.4	272.7	167.3
100°	47.0	84.3	497.4	453.5	294.6
102.5°	59.6	95.1	486.6	665.9	509.7
105°	78.5	110.2	443.7	845.0	810.0
107.5°	97.2	126.6	402.6	863.7	911.1
110°	109.8	138.3	382.0	842.2	929.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	122.3	149.0	370.4	805.1	916.4
115°	140.1	166.3	358.5	744.6	876.1
117.5°	157.3	182.3	353.8	686.4	818.9
120°	168.0	192.1	352.9	650.5	778.7
122.5°	178.8	202.0	352.9	621.6	741.0
125°	193.8	216.9	352.9	583.9	687.9
127.5°	207.0	229.2	352.9	554.6	643.3
130°	215.0	238.1	352.9	537.3	617.3
132.5°	223.2	246.1	352.0	523.7	595.7
135°	234.2	257.1	350.6	502.2	565.8
137.5°	244.9	269.0	350.4	481.7	538.4
140°	252.0	276.2	349.6	467.2	518.7
142.5°	261.1	284.2	350.4	452.8	500.8
145°	273.4	294.2	350.6	433.3	471.7
147.5°	285.7	303.5	350.8	416.1	447.5
150°	294.6	308.9	351.7	406.1	431.3
152.5°	301.8	314.3	351.7	398.0	418.8
155°	311.5	322.5	351.7	386.9	402.2
157.5°	321.8	329.2	352.9	380.0	390.5
160°	327.1	333.7	352.9	375.5	384.3
162.5°	332.5	337.4	352.9	371.9	378.0
165°	339.4	342.7	352.9	366.4	369.7
167.5°	346.0	346.9	354.0	362.6	365.4
170°	349.6	349.6	354.0	360.8	361.9
172.5°	351.3	352.2	354.0	359.0	359.2
175°	355.1	354.0	355.1	357.4	356.3
177.5°	356.3	355.4	355.4	357.2	355.4
180°	356.3	356.3	356.3	356.3	356.3

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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	15.43	16.51	16.22	17.32	18.32	24.16	25.24	24.95	26.06	27.06
	3H	16.17	17.14	16.98	17.97	19.00	25.80	26.77	26.60	27.60	28.63
	4H	16.49	17.40	17.30	18.23	19.28	25.99	26.91	26.81	27.74	28.78
	6H	16.71	17.56	17.55	18.40	19.46	26.09	26.94	26.92	27.78	28.83
	8H	16.78	17.58	17.62	18.44	19.50	26.10	26.91	26.94	27.77	28.82
	12H	16.81	17.58	17.66	18.44	19.52	26.08	26.85	26.93	27.70	28.79
4H	2H	19.85	20.77	20.68	21.60	22.64	24.63	25.55	25.46	26.38	27.42
	3H	20.81	21.57	21.64	22.44	23.50	26.48	27.24	27.32	28.11	29.17
	4H	21.10	21.79	21.95	22.66	23.75	26.73	27.42	27.58	28.29	29.37
	6H	21.24	21.85	22.11	22.73	23.82	26.89	27.49	27.75	28.38	29.47
	8H	21.27	21.83	22.14	22.72	23.82	26.92	27.48	27.79	28.36	29.46
	12H	21.27	21.78	22.17	22.68	23.79	26.90	27.41	27.79	28.31	29.42
8H	4H	22.29	22.85	23.16	23.74	24.84	26.86	27.42	27.73	28.31	29.41
	6H	22.54	23.00	23.44	23.93	25.03	27.08	27.54	27.98	28.47	29.57
	8H	22.62	23.03	23.52	23.94	25.06	27.14	27.55	28.05	28.47	29.59
	12H	22.65	23.01	23.56	23.92	25.10	27.15	27.51	28.06	28.42	29.59
12H	4H	22.32	22.83	23.21	23.73	24.84	26.83	27.33	27.72	28.24	29.34
	6H	22.64	23.05	23.55	23.97	25.09	27.07	27.48	27.97	28.40	29.52
	8H	22.75	23.11	23.67	24.03	25.20	27.14	27.50	28.06	28.42	29.59