

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: P855435

Luminaire Tested: SQ2-FB-025U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855435
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-025U-100D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

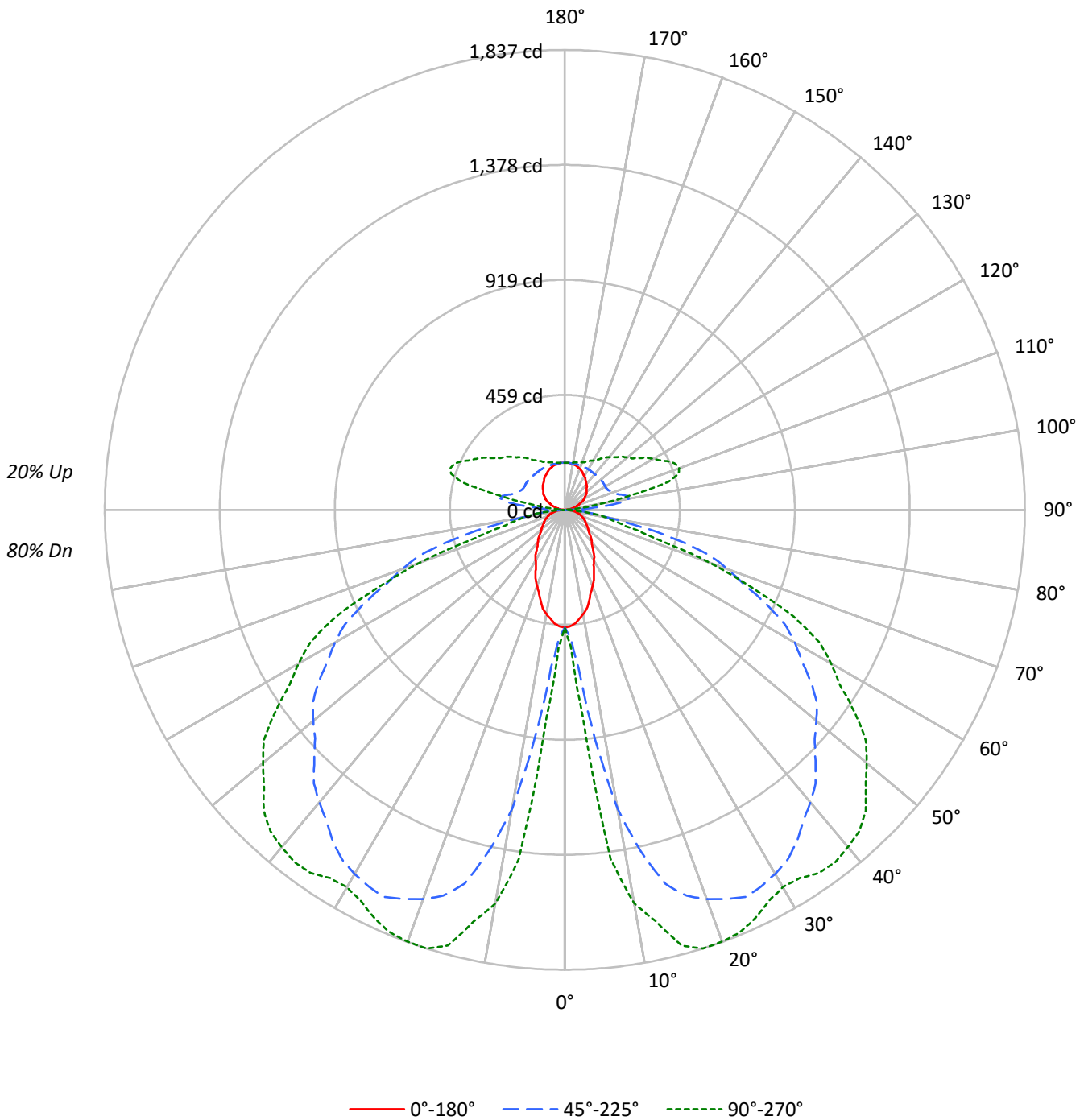
Lumens per Lamp: N/A
Luminaire Lumens: 5815.2 lumens
Efficiency: N/A
Efficacy: 129.2 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 45
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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	84	84	84	84	80	
1	104	100	95	92	99	95	92	88	87	85	82	80	78	76	74	72	70	70	67	
2	94	86	80	74	90	83	77	72	76	71	67	70	66	62	64	61	58	55	55	
3	86	75	67	61	82	72	65	59	66	60	55	61	56	52	56	52	49	46	46	
4	78	66	57	51	74	63	56	49	58	52	47	54	48	44	49	45	41	38	38	
5	71	59	50	43	68	56	48	42	52	45	40	48	42	37	44	39	35	33	33	
6	66	52	43	37	62	50	42	36	46	39	34	43	37	32	40	34	31	28	28	
7	60	47	38	32	58	45	37	31	42	35	30	39	33	28	36	31	27	24	24	
8	56	43	34	28	53	41	33	28	38	31	26	35	29	25	33	27	24	21	21	
9	52	39	31	25	50	37	30	24	35	28	23	32	26	22	30	25	21	19	19	
10	49	35	28	22	46	34	27	22	32	25	21	30	24	20	28	23	19	17	17	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7590	7590	7590
5°	7400	10258	13444
10°	6930	19864	26163
15°	6273	25844	30113
20°	5555	28429	31536
25°	4912	30403	32054
30°	4340	31312	32449
35°	3875	31856	34885
40°	3524	32157	37066
45°	3252	32310	38815
50°	3064	32930	39516
55°	2992	33785	39831
60°	3068	34236	39635
65°	3198	33765	38514
70°	3305	32653	29132
75°	3662	29326	16076
80°	3784	15128	14923
85°	3779	10467	6280

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 40192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.8	1.4
10°-20°	359.6	6.2
20°-30°	632.6	10.9
30°-40°	818.8	14.1
40°-50°	903.1	15.5
50°-60°	843.2	14.5
60°-70°	651.7	11.2
70°-80°	300.6	5.2
80°-90°	57.9	1.0
90°-100°	76.2	1.3
100°-110°	237.1	4.1
110°-120°	231.9	4.0
120°-130°	189.3	3.3
130°-140°	154.9	2.7
140°-150°	120.9	2.1
150°-160°	87.2	1.5
160°-170°	53.3	0.9
170°-180°	18.0	0.3
0°-30°	1070.9	18.4
0°-40°	1889.8	32.5
0°-60°	3636.1	62.5
0°-90°	4646.3	79.9
90°-120°	545.2	9.4
90°-150°	1010.4	17.4
90°-180°	1169.0	20.1
0°-180°	5815.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	457	523	633	772	830	42
15°	375	740	1546	1731	1802	105
25°	276	994	1707	1782	1799	127
35°	197	959	1616	1673	1770	124
45°	142	735	1415	1625	1700	110
55°	106	438	1200	1380	1415	96
65°	84	247	884	990	1008	82
75°	59	152	470	253	258	60
85°	20	45	56	38	34	21
90°	0	1	4	4	4	1
95°	10	31	140	52	34	12
105°	42	58	233	446	425	44
115°	74	88	190	391	458	73
125°	103	114	187	307	360	91
135°	124	137	186	265	298	96
145°	144	156	186	229	250	91
155°	165	171	187	206	213	76
165°	182	182	188	194	196	51
175°	188	188	188	190	188	18
180°	188	188	188	188	188	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	470.1	470.1	470.1	470.1	470.1
2.5°	466.5	486.0	508.1	533.6	544.2
5°	456.6	522.9	632.9	772.1	829.5
7.5°	439.0	573.7	920.4	1292.8	1407.8
10°	422.7	610.6	1211.6	1533.9	1595.8
12.5°	404.6	659.6	1394.2	1620.7	1684.5
15°	375.3	739.9	1546.1	1730.7	1801.5
17.5°	345.0	830.2	1616.6	1798.8	1837.3
20°	323.3	893.4	1654.6	1811.2	1835.4
22.5°	303.4	940.7	1681.7	1800.3	1826.4
25°	275.7	994.1	1706.6	1781.5	1799.3
27.5°	249.0	1008.1	1695.8	1745.0	1762.2
30°	232.8	1004.1	1679.5	1716.2	1740.5
32.5°	218.4	993.3	1655.9	1691.5	1744.1
35°	196.6	959.1	1616.2	1672.6	1769.9
37.5°	178.1	904.4	1563.7	1679.3	1773.0
40°	167.2	863.4	1525.7	1679.0	1758.6
42.5°	156.4	815.4	1482.4	1660.9	1740.5
45°	142.4	734.7	1415.0	1624.7	1699.9
47.5°	129.2	643.8	1352.6	1574.5	1629.2
50°	122.0	581.8	1311.0	1529.0	1573.2
52.5°	114.8	521.5	1269.5	1474.7	1515.4
55°	106.3	437.7	1200.2	1379.6	1415.0
57.5°	98.6	365.9	1121.6	1274.6	1303.4
60°	95.0	327.0	1060.2	1198.6	1227.4
62.5°	89.5	291.5	991.4	1119.0	1146.1
65°	83.7	247.2	883.8	990.5	1008.1
67.5°	75.5	214.3	769.4	834.7	801.6
70°	70.0	198.2	691.7	712.1	617.1
72.5°	66.4	180.5	606.7	552.9	372.9
75°	58.7	151.6	470.1	253.2	257.7
77.5°	47.9	117.4	309.2	194.5	198.5
80°	40.7	95.9	162.7	158.3	160.5
82.5°	33.4	74.6	112.1	116.5	113.5
85°	20.4	44.6	56.5	38.3	33.9
87.5°	7.2	16.3	9.8	9.8	9.8
90°	0.0	1.2	3.5	3.5	3.5
92.5°	3.7	12.9	44.2	14.5	11.8
95°	10.4	30.8	139.8	51.6	33.6
97.5°	19.0	40.0	231.6	144.2	90.8
100°	25.4	44.6	261.2	244.3	162.9
102.5°	31.9	50.2	255.6	348.8	273.9
105°	41.6	58.5	233.4	445.5	425.3
107.5°	51.3	67.1	212.1	453.0	475.4
110°	57.8	73.5	201.0	442.4	486.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	64.2	79.1	195.6	423.3	479.1
115°	74.0	87.5	189.5	390.9	457.5
117.5°	83.4	95.8	186.9	360.0	428.2
120°	88.9	101.4	186.0	342.4	407.9
122.5°	94.5	107.0	186.9	327.5	387.5
125°	102.8	114.1	187.2	307.4	360.5
127.5°	109.5	121.1	187.2	292.4	337.6
130°	113.3	125.6	187.2	284.0	324.7
132.5°	117.8	130.3	186.2	276.5	314.5
135°	123.6	137.2	186.0	265.4	298.1
137.5°	130.3	142.8	186.0	254.2	284.0
140°	134.0	146.5	186.0	246.7	273.9
142.5°	138.7	150.2	186.0	239.3	263.6
145°	144.4	155.7	186.0	229.2	249.6
147.5°	151.4	161.1	187.2	219.9	236.0
150°	155.9	163.9	187.2	215.2	227.6
152.5°	159.7	166.7	187.2	210.6	221.2
155°	165.3	170.8	187.2	205.8	212.6
157.5°	170.7	175.0	187.2	201.6	205.9
160°	174.5	177.8	187.2	198.8	202.2
162.5°	177.3	179.7	187.2	197.0	199.4
165°	181.5	182.5	188.3	194.2	196.4
167.5°	183.9	184.1	187.2	192.5	193.7
170°	184.8	186.0	187.2	190.7	191.8
172.5°	186.7	186.9	188.1	189.7	190.0
175°	188.3	188.3	188.3	189.5	188.3
177.5°	188.3	188.3	188.3	188.3	188.3
180°	188.3	188.3	188.3	188.3	188.3

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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	16.48	17.74	17.12	18.41	19.17	25.21	26.48	25.86	27.14	27.91
	3H	17.24	18.38	17.90	19.05	19.85	26.87	28.01	27.53	28.68	29.48
	4H	17.56	18.63	18.24	19.32	20.13	27.07	28.14	27.74	28.83	29.64
	6H	17.80	18.79	18.49	19.48	20.31	27.17	28.17	27.87	28.86	29.69
	8H	17.87	18.81	18.57	19.53	20.36	27.19	28.14	27.89	28.85	29.69
	12H	17.91	18.81	18.62	19.52	20.38	27.18	28.08	27.88	28.79	29.65
4H	2H	20.93	22.00	21.61	22.69	23.50	25.71	26.78	26.39	27.47	28.28
	3H	21.90	22.80	22.59	23.52	24.35	27.57	28.47	28.27	29.19	30.02
	4H	22.20	23.01	22.91	23.74	24.60	27.83	28.64	28.54	29.37	30.23
	6H	22.35	23.06	23.09	23.81	24.68	28.00	28.70	28.73	29.45	30.33
	8H	22.39	23.05	23.12	23.79	24.68	28.03	28.69	28.77	29.44	30.32
	12H	22.40	22.99	23.15	23.76	24.65	28.03	28.62	28.78	29.39	30.28
8H	4H	23.41	24.07	24.14	24.82	25.70	27.98	28.64	28.72	29.39	30.27
	6H	23.66	24.21	24.43	25.00	25.89	28.20	28.75	28.97	29.54	30.43
	8H	23.74	24.23	24.52	25.02	25.92	28.27	28.76	29.05	29.55	30.45
	12H	23.79	24.21	24.57	24.99	25.96	28.28	28.71	29.06	29.49	30.45
12H	4H	23.45	24.04	24.20	24.81	25.70	27.95	28.54	28.71	29.32	30.21
	6H	23.76	24.25	24.54	25.04	25.94	28.19	28.68	28.97	29.47	30.37
	8H	23.89	24.31	24.67	25.10	26.06	28.28	28.71	29.06	29.49	30.45