

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: P854009

Luminaire Tested: SQ2-PH1-050U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854009
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-050U-075D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

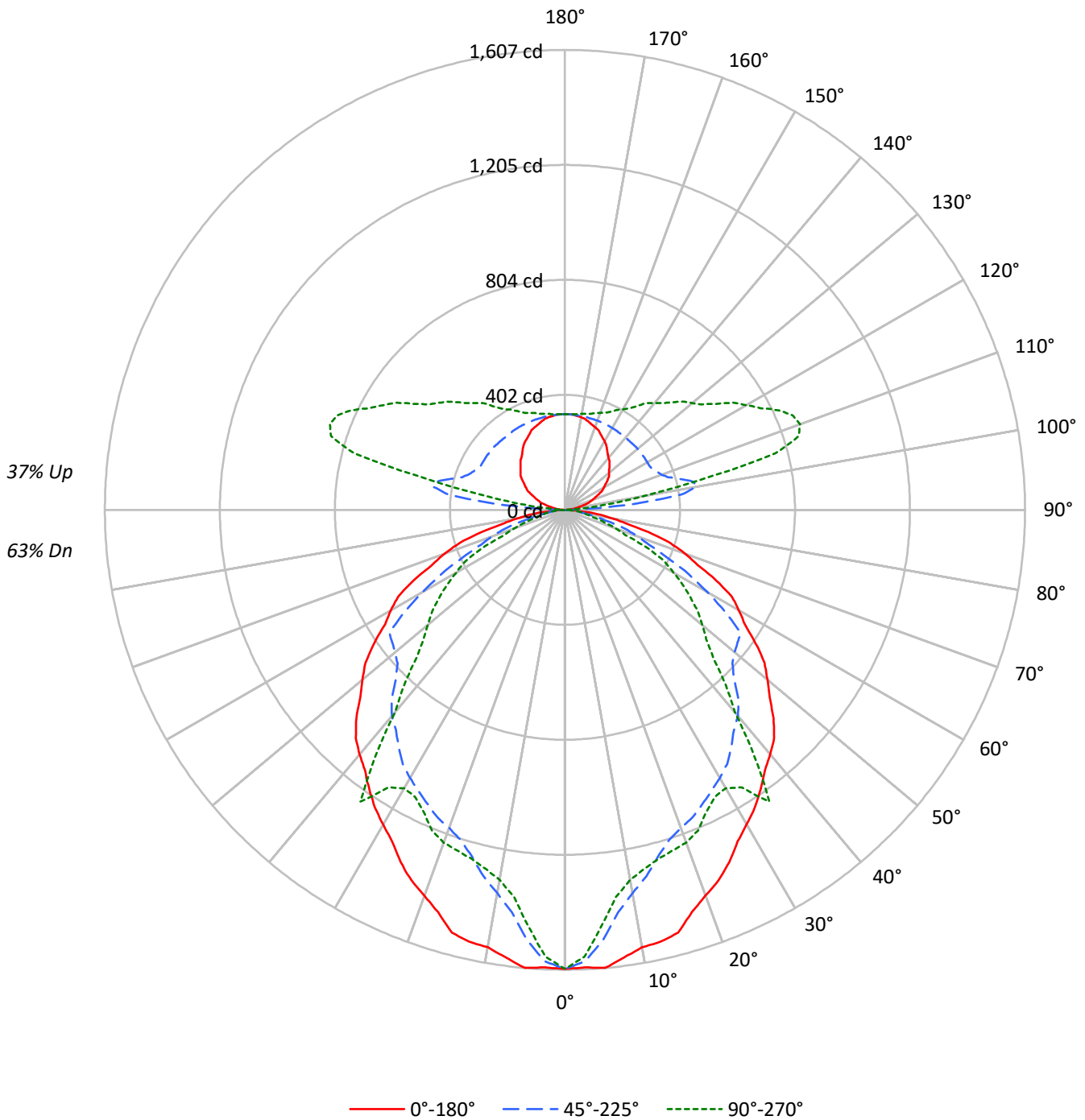
Lumens per Lamp: N/A
Luminaire Lumens: 5626.9 lumens
Efficiency: N/A
Efficacy: 135.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.5
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					10				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0				
RCR																									
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63							
1	101	97	93	89	95	91	88	84	80	77	75	70	68	66	61	59	58	54							
2	92	85	79	73	86	80	74	70	70	66	63	62	59	56	54	51	49	45							
3	84	75	67	61	79	70	64	58	62	57	53	55	51	47	48	45	42	39							
4	77	66	58	52	72	62	55	50	55	50	45	49	44	41	43	39	36	33							
5	71	59	51	45	66	56	48	43	50	44	39	44	39	35	38	35	32	29							
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28	25							
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	22							
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	29	25	22	20							
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18							
10	49	37	29	24	46	35	28	24	31	26	22	28	23	20	25	21	18	16							

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25893	25893	25893
5°	26042	24485	23668
10°	25443	22291	21515
15°	25558	20966	21093
20°	24646	20319	21263
25°	24195	20225	20769
30°	23670	20171	20939
35°	23489	19941	24541
40°	23509	19812	19458
45°	23519	19059	16760
50°	23189	19432	15714
55°	22894	21090	15077
60°	22666	18477	14141
65°	22269	14984	12302
70°	21036	12751	8790
75°	18752	9613	6662
80°	15323	6239	6239
85°	9615	5650	4242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23519 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	2.5
10°-20°	371.2	6.6
20°-30°	544.3	9.7
30°-40°	659.1	11.7
40°-50°	648.2	11.5
50°-60°	564.2	10.0
60°-70°	392.3	7.0
70°-80°	186.0	3.3
80°-90°	41.4	0.7
90°-100°	133.3	2.4
100°-110°	423.0	7.5
110°-120°	414.7	7.4
120°-130°	337.5	6.0
130°-140°	275.2	4.9
140°-150°	214.5	3.8
150°-160°	154.6	2.7
160°-170°	94.4	1.7
170°-180°	31.9	0.6
0°-30°	1056.6	18.8
0°-40°	1715.7	30.5
0°-60°	2928.1	52.0
0°-90°	3547.7	63.1
90°-120°	971.1	17.3
90°-150°	1798.2	32.0
90°-180°	2079.0	36.9
0°-180°	5626.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1607	1605	1511	1463	1460	151
15°	1529	1362	1254	1246	1262	426
25°	1358	1155	1135	1170	1166	625
35°	1192	964	1012	1099	1245	746
45°	1030	763	835	864	734	792
55°	813	594	749	540	536	727
65°	583	408	392	322	322	573
75°	301	208	154	110	107	319
85°	52	34	30	24	23	70
90°	0	1	3	3	3	2
95°	18	54	242	90	58	21
105°	74	104	417	794	761	78
115°	132	156	337	700	823	130
125°	182	204	332	549	646	162
135°	220	242	330	472	532	170
145°	257	276	330	407	443	161
155°	293	303	331	364	378	135
165°	319	322	332	344	347	90
175°	334	333	334	336	335	32
180°	335	335	335	335	335	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1603.7	1603.7	1603.7	1603.7	1603.7
2.5°	1600.1	1616.8	1579.3	1564.6	1562.2
5°	1606.8	1605.3	1510.7	1463.3	1460.3
7.5°	1577.5	1531.2	1418.2	1365.9	1363.6
10°	1551.9	1481.7	1359.6	1312.3	1312.3
12.5°	1545.7	1435.0	1312.0	1277.0	1284.2
15°	1529.0	1361.9	1254.3	1245.5	1261.9
17.5°	1473.4	1293.5	1209.4	1229.4	1248.5
20°	1434.4	1256.8	1182.6	1219.6	1237.5
22.5°	1401.4	1221.5	1163.1	1203.6	1213.1
25°	1358.1	1155.1	1135.3	1170.3	1165.8
27.5°	1306.2	1094.3	1107.5	1128.9	1131.6
30°	1269.6	1057.7	1081.9	1103.7	1123.1
32.5°	1234.2	1015.1	1053.8	1105.5	1149.9
35°	1191.7	963.5	1011.7	1098.9	1245.1
37.5°	1147.2	902.5	969.3	1042.6	1089.2
40°	1115.4	858.8	940.0	1030.6	923.2
42.5°	1081.3	824.6	896.0	1013.0	831.6
45°	1030.0	762.9	834.7	863.8	734.0
47.5°	969.6	715.0	793.2	720.3	669.6
50°	923.2	683.0	773.6	658.4	625.6
52.5°	878.0	649.7	760.2	607.4	585.3
55°	813.3	594.0	749.2	540.1	535.6
57.5°	744.6	537.3	662.6	481.4	489.2
60°	701.9	500.5	572.2	446.9	437.9
62.5°	656.8	464.9	488.0	402.9	394.0
65°	582.9	408.3	392.2	322.0	322.0
67.5°	501.7	349.5	317.7	263.5	227.7
70°	445.6	311.3	270.1	210.0	186.2
72.5°	385.8	270.6	221.3	172.1	144.7
75°	300.6	208.1	154.1	109.8	106.8
77.5°	217.3	149.9	103.8	81.5	81.8
80°	164.8	114.1	67.1	65.6	67.1
82.5°	116.0	78.4	50.0	52.2	52.5
85°	51.9	34.0	30.5	24.4	22.9
87.5°	11.0	10.0	6.7	6.7	6.7
90°	0.0	1.0	3.2	3.2	3.2
92.5°	5.9	23.4	74.8	24.9	17.5
95°	17.9	53.9	242.2	89.8	57.9
97.5°	33.3	69.9	410.2	256.3	157.3
100°	44.2	79.2	467.5	426.2	276.9
102.5°	56.0	89.4	457.4	625.8	479.0
105°	73.7	103.6	416.9	794.2	761.2
107.5°	91.4	119.0	378.4	811.7	856.2
110°	103.2	129.9	359.0	791.5	873.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.0	140.1	348.1	756.6	861.2
115°	131.6	156.3	336.9	699.8	823.3
117.5°	147.8	171.3	332.5	645.1	769.6
120°	157.9	180.6	331.6	611.3	731.7
122.5°	168.0	189.9	331.6	584.1	696.4
125°	182.1	203.8	331.6	548.7	646.4
127.5°	194.6	215.4	331.6	521.2	604.5
130°	202.1	223.8	331.6	505.0	580.1
132.5°	209.7	231.3	330.8	492.2	559.9
135°	220.0	241.7	329.5	472.0	531.7
137.5°	230.2	252.8	329.3	452.7	506.0
140°	236.9	259.5	328.5	439.1	487.5
142.5°	245.3	267.1	329.3	425.5	470.6
145°	256.9	276.5	329.5	407.2	443.2
147.5°	268.5	285.2	329.8	391.1	420.5
150°	276.9	290.3	330.6	381.7	405.3
152.5°	283.6	295.4	330.6	374.0	393.6
155°	292.7	303.0	330.6	363.6	378.0
157.5°	302.4	309.4	331.6	357.1	367.0
160°	307.4	313.6	331.6	352.9	361.1
162.5°	312.5	317.0	331.6	349.5	355.2
165°	319.0	322.1	331.6	344.4	347.4
167.5°	325.1	325.9	332.7	340.8	343.4
170°	328.5	328.5	332.7	339.0	340.1
172.5°	330.2	331.0	332.7	337.3	337.5
175°	333.8	332.7	333.8	335.8	334.8
177.5°	334.8	334.0	334.0	335.6	334.0
180°	334.8	334.8	334.8	334.8	334.8



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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	19.76	20.74	20.60	21.60	22.67	18.43	19.42	19.27	20.28	21.35
	3H	21.79	22.67	22.65	23.54	24.64	19.48	20.36	20.33	21.23	22.33
	4H	22.53	23.36	23.40	24.24	25.35	19.70	20.53	20.56	21.40	22.51
	6H	23.02	23.79	23.90	24.67	25.79	19.85	20.61	20.73	21.49	22.62
	8H	23.15	23.88	24.04	24.78	25.90	19.88	20.61	20.77	21.51	22.63
	12H	23.20	23.89	24.09	24.79	25.94	19.88	20.58	20.78	21.47	22.62
4H	2H	20.15	20.98	21.02	21.86	22.97	19.09	19.92	19.96	20.80	21.91
	3H	22.27	22.96	23.15	23.87	24.99	20.28	20.97	21.16	21.88	23.00
	4H	23.09	23.72	23.98	24.62	25.77	20.56	21.19	21.46	22.09	23.25
	6H	23.68	24.22	24.59	25.15	26.30	20.78	21.32	21.69	22.25	23.40
	8H	23.85	24.36	24.77	25.28	26.45	20.84	21.34	21.75	22.26	23.43
	12H	23.93	24.38	24.86	25.32	26.50	20.85	21.30	21.78	22.25	23.42
8H	4H	23.12	23.62	24.03	24.54	25.71	20.79	21.29	21.70	22.22	23.38
	6H	23.77	24.19	24.71	25.15	26.32	21.06	21.48	22.00	22.45	23.61
	8H	24.00	24.37	24.95	25.32	26.51	21.17	21.54	22.12	22.49	23.68
	12H	24.12	24.44	25.07	25.39	26.63	21.22	21.54	22.17	22.49	23.72
12H	4H	23.07	23.53	24.01	24.47	25.64	20.79	21.24	21.72	22.19	23.36
	6H	23.75	24.12	24.70	25.07	26.26	21.09	21.46	22.04	22.42	23.60
	8H	23.99	24.31	24.94	25.26	26.49	21.22	21.54	22.17	22.49	23.72