

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: P855169

Luminaire Tested: SQ2-PH1-050U-075D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855169
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-835-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

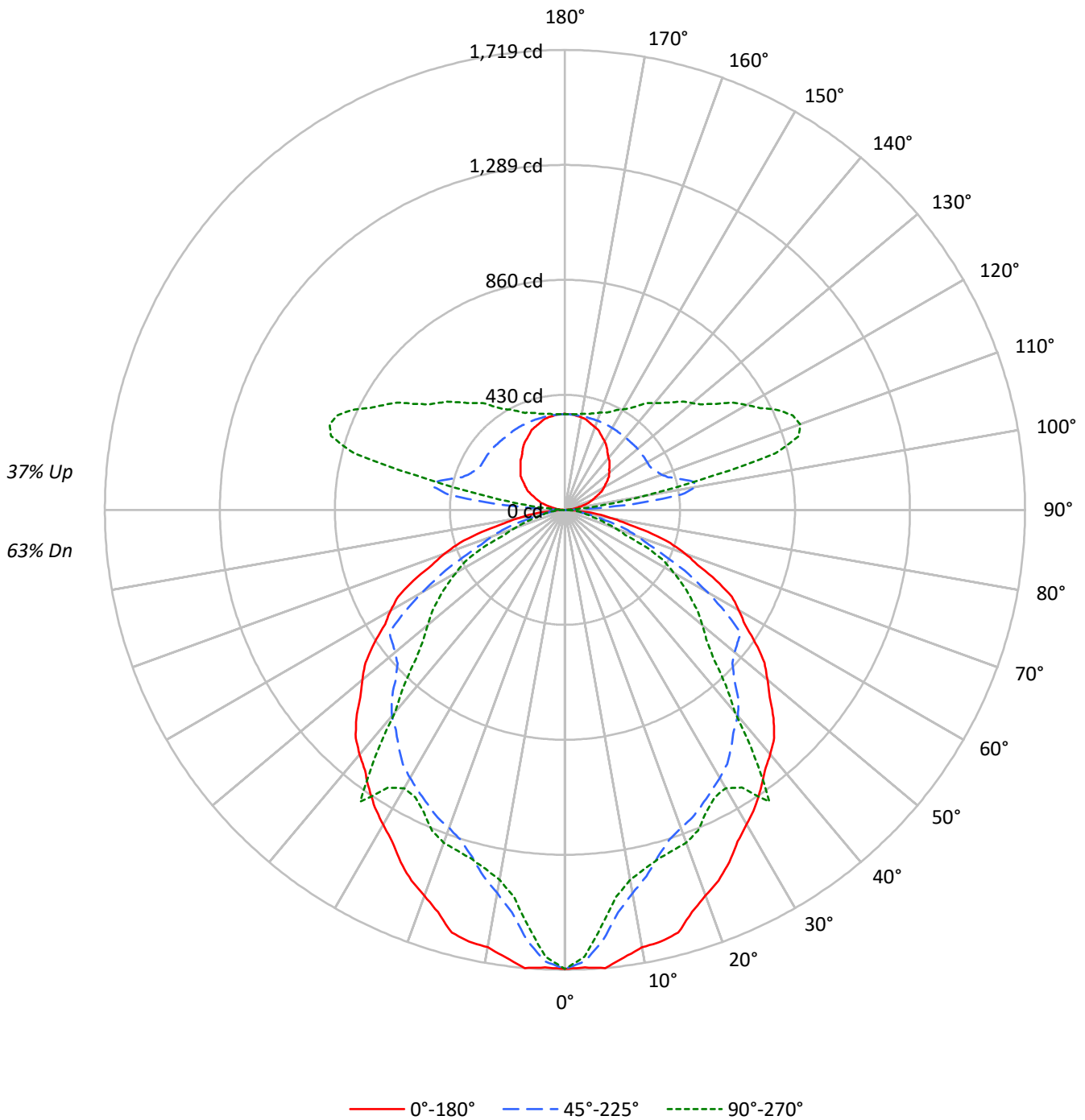
Lumens per Lamp: N/A
Luminaire Lumens: 6019.9 lumens
Efficiency: N/A
Efficacy: 145.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27703	27703	27703
5°	27861	26195	25321
10°	27220	23846	23017
15°	27343	22430	22567
20°	26366	21739	22747
25°	25883	21638	22219
30°	25322	21580	22400
35°	25131	21333	26256
40°	25151	21195	20818
45°	25160	20390	17931
50°	24810	20791	16814
55°	24493	22565	16130
60°	24251	19769	15129
65°	23828	16027	13161
70°	22504	13638	9404
75°	20062	10287	7130
80°	16392	6685	6685
85°	10282	6058	4520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25160 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.0	2.5
10°-20°	397.1	6.6
20°-30°	582.3	9.7
30°-40°	705.1	11.7
40°-50°	693.5	11.5
50°-60°	603.7	10.0
60°-70°	419.7	7.0
70°-80°	199.0	3.3
80°-90°	44.3	0.7
90°-100°	142.7	2.4
100°-110°	452.5	7.5
110°-120°	443.7	7.4
120°-130°	361.1	6.0
130°-140°	294.4	4.9
140°-150°	229.5	3.8
150°-160°	165.4	2.7
160°-170°	101.0	1.7
170°-180°	34.1	0.6
0°-30°	1130.4	18.8
0°-40°	1835.5	30.5
0°-60°	3132.6	52.0
0°-90°	3795.6	63.1
90°-120°	1038.9	17.3
90°-150°	1923.8	32.0
90°-180°	2224.0	36.9
0°-180°	6019.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1716	1716	1716	1716	1716	
5°	1719	1717	1616	1566	1562	162
15°	1636	1457	1342	1332	1350	456
25°	1453	1236	1215	1252	1247	668
35°	1275	1031	1082	1176	1332	799
45°	1102	816	893	924	785	847
55°	870	635	802	578	573	777
65°	624	437	420	344	344	613
75°	322	223	165	118	114	341
85°	56	36	33	26	24	74
90°	0	1	3	3	3	2
95°	19	58	259	96	62	22
105°	79	111	446	850	814	83
115°	141	167	360	749	881	139
125°	195	218	355	587	692	173
135°	235	259	352	505	569	182
145°	275	296	352	436	474	172
155°	313	324	354	389	404	144
165°	341	345	355	368	372	96
175°	357	356	357	359	358	34
180°	358	358	358	358	358	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1715.8	1715.8	1715.8	1715.8	1715.8
2.5°	1711.9	1729.7	1689.7	1674.0	1671.4
5°	1719.0	1717.4	1616.2	1565.5	1562.3
7.5°	1687.7	1638.2	1517.2	1461.3	1458.8
10°	1660.3	1585.2	1454.5	1403.9	1403.9
12.5°	1653.7	1535.3	1403.6	1366.3	1374.0
15°	1635.8	1457.0	1341.9	1332.5	1350.1
17.5°	1576.4	1383.8	1293.9	1315.3	1335.7
20°	1534.5	1344.6	1265.2	1304.8	1323.9
22.5°	1499.3	1306.8	1244.3	1287.6	1297.9
25°	1452.9	1235.9	1214.6	1252.1	1247.2
27.5°	1397.4	1170.8	1184.9	1207.8	1210.7
30°	1358.2	1131.6	1157.5	1180.8	1201.5
32.5°	1320.4	1086.1	1127.4	1182.7	1230.2
35°	1275.0	1030.7	1082.3	1175.7	1332.1
37.5°	1227.3	965.5	1036.9	1115.5	1165.3
40°	1193.3	918.8	1005.6	1102.6	987.7
42.5°	1156.8	882.2	958.6	1083.8	889.7
45°	1101.9	816.3	893.0	924.1	785.3
47.5°	1037.3	765.0	848.6	770.7	716.3
50°	987.7	730.7	827.7	704.5	669.4
52.5°	939.4	695.2	813.3	649.8	626.3
55°	870.1	635.4	801.6	577.8	573.0
57.5°	796.7	574.8	708.9	515.1	523.4
60°	751.0	535.5	612.2	478.1	468.5
62.5°	702.7	497.4	522.0	431.1	421.5
65°	623.7	436.8	419.5	344.5	344.5
67.5°	536.7	373.9	339.8	281.9	243.5
70°	476.7	333.0	288.9	224.7	199.2
72.5°	412.7	289.5	236.7	184.1	154.8
75°	321.6	222.6	164.9	117.5	114.3
77.5°	232.4	160.4	111.0	87.1	87.5
80°	176.3	122.0	71.9	70.3	71.9
82.5°	124.0	83.9	53.5	55.8	56.1
85°	55.5	36.3	32.7	26.0	24.4
87.5°	11.8	10.8	7.2	7.2	7.2
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.3	25.0	80.0	26.6	18.7
95°	19.1	57.7	259.0	96.1	61.9
97.5°	35.6	74.8	438.9	274.2	168.3
100°	47.3	84.8	500.1	455.9	296.3
102.5°	60.0	95.6	489.3	669.6	512.5
105°	78.9	110.8	446.1	849.7	814.3
107.5°	97.8	127.3	404.8	868.4	916.0
110°	110.3	139.0	384.1	846.8	934.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	123.0	149.8	372.4	809.5	921.4
115°	140.8	167.3	360.4	748.7	880.9
117.5°	158.1	183.2	355.7	690.1	823.4
120°	169.0	193.2	354.8	654.0	782.9
122.5°	179.8	203.1	354.8	624.9	745.0
125°	194.9	218.0	354.8	587.0	691.6
127.5°	208.1	230.4	354.8	557.6	646.7
130°	216.3	239.3	354.8	540.3	620.6
132.5°	224.4	247.5	353.9	526.6	599.0
135°	235.4	258.6	352.5	504.9	568.9
137.5°	246.3	270.5	352.3	484.4	541.4
140°	253.5	277.7	351.4	469.8	521.5
142.5°	262.4	285.7	352.3	455.3	503.5
145°	274.9	295.8	352.5	435.7	474.2
147.5°	287.2	305.1	352.7	418.4	449.8
150°	296.3	310.5	353.6	408.3	433.7
152.5°	303.4	316.0	353.6	400.2	421.1
155°	313.1	324.1	353.6	389.0	404.3
157.5°	323.5	331.0	354.8	382.0	392.7
160°	328.9	335.5	354.8	377.5	386.4
162.5°	334.3	339.2	354.8	373.9	380.0
165°	341.3	344.6	354.8	368.4	371.8
167.5°	347.9	348.7	355.9	364.6	367.5
170°	351.4	351.4	355.9	362.7	363.8
172.5°	353.2	354.1	355.9	360.9	361.1
175°	357.0	356.0	357.0	359.3	358.2
177.5°	358.2	357.3	357.3	359.1	357.3
180°	358.2	358.2	358.2	358.2	358.2



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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	20.00	20.98	20.83	21.84	22.91	18.67	19.65	19.51	20.51	21.58
	3H	22.03	22.91	22.88	23.78	24.88	19.71	20.59	20.56	21.46	22.56
	4H	22.77	23.60	23.63	24.47	25.58	19.93	20.76	20.80	21.64	22.75
	6H	23.26	24.02	24.14	24.91	26.03	20.08	20.85	20.96	21.73	22.85
	8H	23.39	24.11	24.27	25.01	26.14	20.12	20.85	21.01	21.75	22.87
	12H	23.43	24.13	24.33	25.02	26.17	20.12	20.81	21.01	21.71	22.86
4H	2H	20.39	21.22	21.26	22.09	23.20	19.32	20.15	20.20	21.03	22.14
	3H	22.50	23.19	23.39	24.10	25.23	20.52	21.21	21.40	22.11	23.24
	4H	23.32	23.95	24.22	24.86	26.01	20.80	21.42	21.69	22.33	23.48
	6H	23.91	24.46	24.83	25.38	26.54	21.01	21.55	21.92	22.48	23.64
	8H	24.09	24.59	25.00	25.52	26.68	21.07	21.58	21.98	22.50	23.67
	12H	24.16	24.62	25.09	25.56	26.73	21.08	21.54	22.02	22.48	23.65
8H	4H	23.35	23.86	24.26	24.78	25.95	21.02	21.53	21.94	22.45	23.62
	6H	24.01	24.42	24.95	25.39	26.56	21.30	21.72	22.24	22.68	23.85
	8H	24.23	24.60	25.18	25.56	26.74	21.40	21.77	22.35	22.73	23.91
	12H	24.35	24.68	25.31	25.63	26.86	21.45	21.78	22.41	22.73	23.96
12H	4H	23.31	23.76	24.24	24.70	25.88	21.02	21.48	21.96	22.42	23.59
	6H	23.98	24.35	24.93	25.31	26.49	21.33	21.70	22.28	22.66	23.84
	8H	24.22	24.54	25.17	25.49	26.73	21.45	21.78	22.40	22.72	23.96