

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: P855376

Luminaire Tested: SQ2-PH1-050U-075D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855376
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-840-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

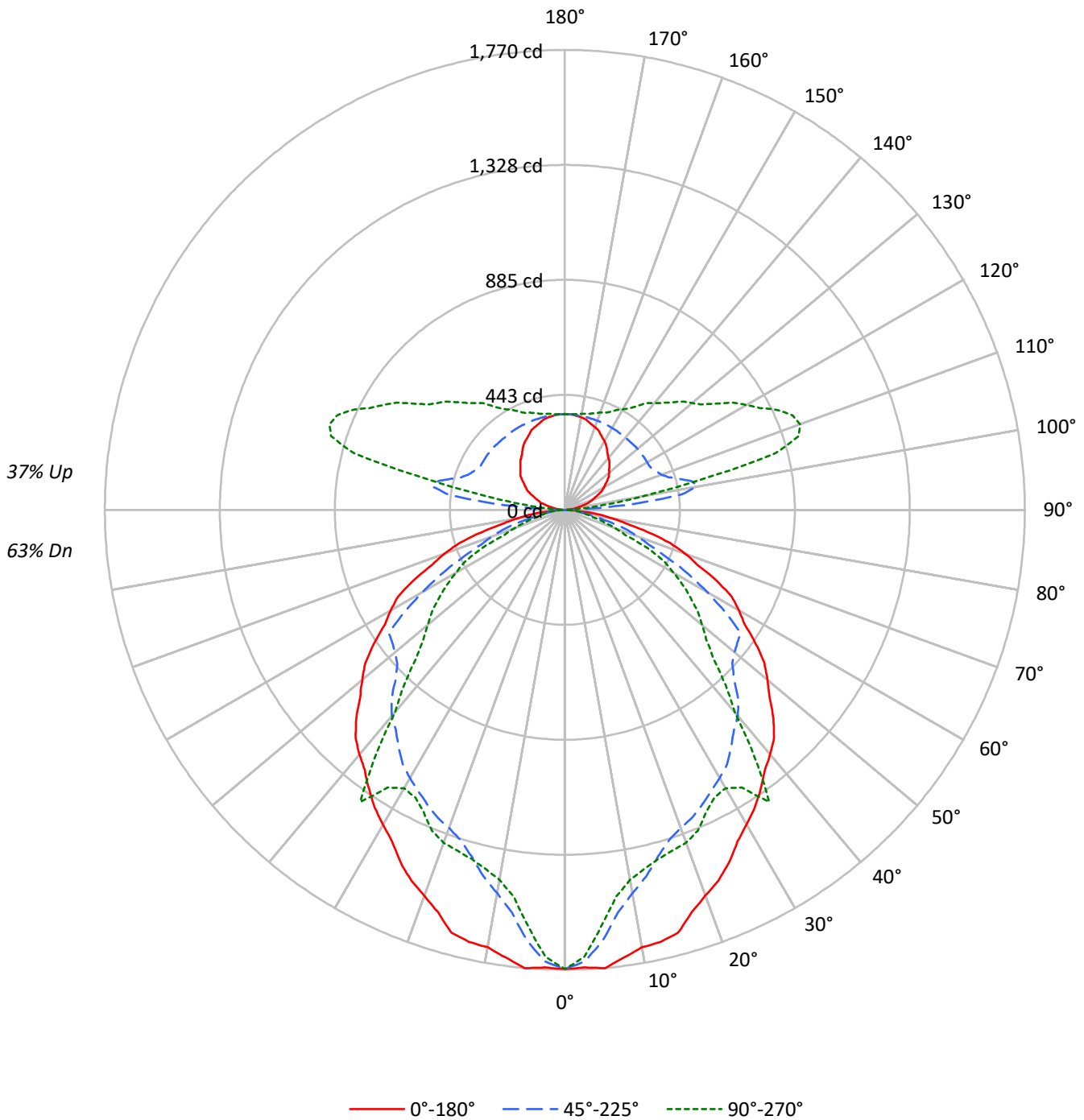
Lumens per Lamp: N/A
Luminaire Lumens: 6199.4 lumens
Efficiency: N/A
Efficacy: 149.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20				20				20	
RC	80									50				30				10	0
RW	70	50	30	10	70	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°	28530	28530	28530
5°	28691	26976	26075
10°	28032	24558	23704
15°	28159	23099	23239
20°	27153	22386	23426
25°	26657	22283	22882
30°	26077	22223	23068
35°	25882	21969	27039
40°	25901	21827	21439
45°	25912	20998	18466
50°	25551	21411	17314
55°	25225	23237	16608
60°	24974	20360	15581
65°	24539	16504	13551
70°	23174	14044	9682
75°	20661	10593	7342
80°	16885	6881	6881
85°	10578	6243	4668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25912 cd/sqm



TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.5	2.5
10°-20°	409.0	6.6
20°-30°	599.6	9.7
30°-40°	726.2	11.7
40°-50°	714.1	11.5
50°-60°	621.7	10.0
60°-70°	432.2	7.0
70°-80°	204.9	3.3
80°-90°	45.6	0.7
90°-100°	146.9	2.4
100°-110°	466.0	7.5
110°-120°	456.9	7.4
120°-130°	371.8	6.0
130°-140°	303.2	4.9
140°-150°	236.4	3.8
150°-160°	170.3	2.7
160°-170°	104.0	1.7
170°-180°	35.1	0.6
0°-30°	1164.1	18.8
0°-40°	1890.2	30.5
0°-60°	3226.0	52.0
0°-90°	3908.7	63.1
90°-120°	1069.8	17.3
90°-150°	1981.2	32.0
90°-180°	2291.0	37.0
0°-180°	6199.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1767	1767	1767	1767	1767	
5°	1770	1769	1664	1612	1609	166
15°	1685	1500	1382	1372	1390	470
25°	1496	1273	1251	1289	1284	688
35°	1313	1061	1115	1211	1372	822
45°	1135	841	920	952	809	872
55°	896	654	826	595	590	801
65°	642	450	432	355	355	631
75°	331	229	170	121	118	351
85°	57	37	34	27	25	77
90°	0	1	4	4	4	3
95°	20	59	267	99	64	23
105°	81	114	459	875	839	86
115°	145	172	371	771	907	143
125°	201	224	365	604	712	179
135°	242	266	363	520	586	187
145°	283	305	363	449	488	177
155°	322	334	364	400	416	149
165°	352	355	365	379	383	99
175°	368	367	368	370	369	35
180°	369	369	369	369	369	



TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1767.0	1767.0	1767.0	1767.0	1767.0
2.5°	1762.9	1781.3	1740.1	1723.9	1721.2
5°	1770.2	1768.6	1664.4	1612.2	1608.8
7.5°	1738.0	1687.0	1562.5	1504.9	1502.3
10°	1709.8	1632.5	1497.9	1445.8	1445.8
12.5°	1703.0	1581.1	1445.4	1407.0	1414.9
15°	1684.6	1500.5	1381.9	1372.3	1390.3
17.5°	1623.4	1425.1	1332.5	1354.5	1375.5
20°	1580.3	1384.7	1302.9	1343.7	1363.4
22.5°	1544.0	1345.8	1281.4	1326.0	1336.6
25°	1496.3	1272.7	1250.8	1289.4	1284.4
27.5°	1439.0	1205.7	1220.2	1243.8	1246.7
30°	1398.7	1165.3	1192.0	1216.0	1237.3
32.5°	1359.8	1118.4	1161.0	1218.0	1266.9
35°	1313.1	1061.4	1114.6	1210.7	1371.8
37.5°	1263.9	994.3	1067.9	1148.7	1200.0
40°	1228.9	946.2	1035.6	1135.5	1017.2
42.5°	1191.3	908.5	987.2	1116.1	916.2
45°	1134.8	840.6	919.6	951.7	808.7
47.5°	1068.2	787.8	873.9	793.6	737.7
50°	1017.2	752.5	852.4	725.5	689.3
52.5°	967.4	715.9	837.6	669.2	644.9
55°	896.1	654.4	825.5	595.1	590.0
57.5°	820.4	591.9	730.0	530.5	539.0
60°	773.4	551.5	630.5	492.4	482.5
62.5°	723.6	512.2	537.6	443.9	434.1
65°	642.3	449.8	432.0	354.7	354.7
67.5°	552.7	385.0	350.0	290.3	250.8
70°	490.9	343.0	297.5	231.4	205.1
72.5°	425.0	298.1	243.8	189.6	159.4
75°	331.2	229.2	169.8	121.0	117.7
77.5°	239.4	165.1	114.3	89.7	90.1
80°	181.6	125.6	74.0	72.4	74.0
82.5°	127.7	86.4	55.1	57.5	57.8
85°	57.1	37.4	33.7	26.8	25.2
87.5°	12.1	11.1	7.5	7.5	7.5
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.5	25.8	82.4	27.4	19.2
95°	19.7	59.4	266.8	98.9	63.7
97.5°	36.7	77.0	451.9	282.4	173.3
100°	48.7	87.3	515.0	469.5	305.1
102.5°	61.8	98.5	503.9	689.6	527.8
105°	81.2	114.1	459.4	875.0	838.6
107.5°	100.7	131.1	416.9	894.3	943.3
110°	113.6	143.1	395.5	872.1	962.7



TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.7	154.3	383.5	833.6	948.9
115°	145.0	172.2	371.2	771.0	907.1
117.5°	162.8	188.7	366.3	710.7	847.9
120°	174.0	198.9	365.4	673.5	806.2
122.5°	185.2	209.2	365.4	643.5	767.2
125°	200.7	224.5	365.4	604.5	712.2
127.5°	214.3	237.3	365.4	574.2	666.0
130°	222.7	246.5	365.4	556.4	639.1
132.5°	231.1	254.9	364.4	542.3	616.8
135°	242.4	266.3	363.0	520.0	585.8
137.5°	253.6	278.5	362.8	498.8	557.5
140°	261.0	286.0	361.9	483.8	537.0
142.5°	270.3	294.3	362.8	468.8	518.5
145°	283.1	304.6	363.0	448.7	488.3
147.5°	295.8	314.2	363.3	430.8	463.2
150°	305.1	319.8	364.2	420.5	446.6
152.5°	312.4	325.4	364.2	412.1	433.6
155°	322.5	333.8	364.2	400.5	416.4
157.5°	333.2	340.9	365.4	393.4	404.4
160°	338.7	345.5	365.4	388.8	397.9
162.5°	344.3	349.3	365.4	385.0	391.3
165°	351.5	354.9	365.4	379.3	382.8
167.5°	358.2	359.1	366.5	375.5	378.4
170°	361.9	361.9	366.5	373.5	374.7
172.5°	363.7	364.7	366.5	371.6	371.9
175°	367.7	366.6	367.7	370.0	368.8
177.5°	368.8	367.9	367.9	369.8	367.9
180°	368.8	368.8	368.8	368.8	368.8



TEST NUMBER: P855376

CATALOG NUMBER: SQ2-PH1-050U-075D-840-UNV-STD-W-4

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	20.10	21.08	20.94	21.94	23.01	18.77	19.75	19.61	20.61	21.68
	3H	22.13	23.01	22.98	23.88	24.98	19.81	20.69	20.66	21.56	22.66
	4H	22.87	23.70	23.74	24.57	25.68	20.03	20.86	20.90	21.74	22.85
	6H	23.36	24.13	24.24	25.01	26.13	20.18	20.95	21.06	21.83	22.96
	8H	23.49	24.22	24.38	25.12	26.24	20.22	20.95	21.11	21.85	22.97
	12H	23.54	24.23	24.43	25.12	26.27	20.22	20.92	21.12	21.81	22.96
4H	2H	20.49	21.32	21.36	22.19	23.30	19.43	20.26	20.30	21.13	22.24
	3H	22.61	23.30	23.49	24.20	25.33	20.62	21.31	21.50	22.22	23.34
	4H	23.43	24.05	24.32	24.96	26.11	20.90	21.53	21.79	22.43	23.58
	6H	24.02	24.56	24.93	25.49	26.64	21.11	21.65	22.02	22.58	23.74
	8H	24.19	24.69	25.10	25.62	26.78	21.17	21.68	22.09	22.60	23.77
	12H	24.26	24.72	25.20	25.66	26.83	21.19	21.64	22.12	22.58	23.76
8H	4H	23.45	23.96	24.37	24.88	26.05	21.12	21.63	22.04	22.55	23.72
	6H	24.11	24.53	25.05	25.49	26.66	21.40	21.82	22.34	22.78	23.95
	8H	24.34	24.70	25.29	25.66	26.84	21.51	21.87	22.46	22.83	24.01
	12H	24.45	24.78	25.41	25.73	26.96	21.55	21.88	22.51	22.83	24.06
12H	4H	23.41	23.87	24.34	24.81	25.98	21.13	21.58	22.06	22.52	23.70
	6H	24.08	24.45	25.03	25.41	26.59	21.43	21.80	22.38	22.76	23.94
	8H	24.32	24.65	25.27	25.59	26.83	21.55	21.88	22.51	22.83	24.06