

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: P853796

Luminaire Tested: SQ2-FA-100U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853796  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-100U-100D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

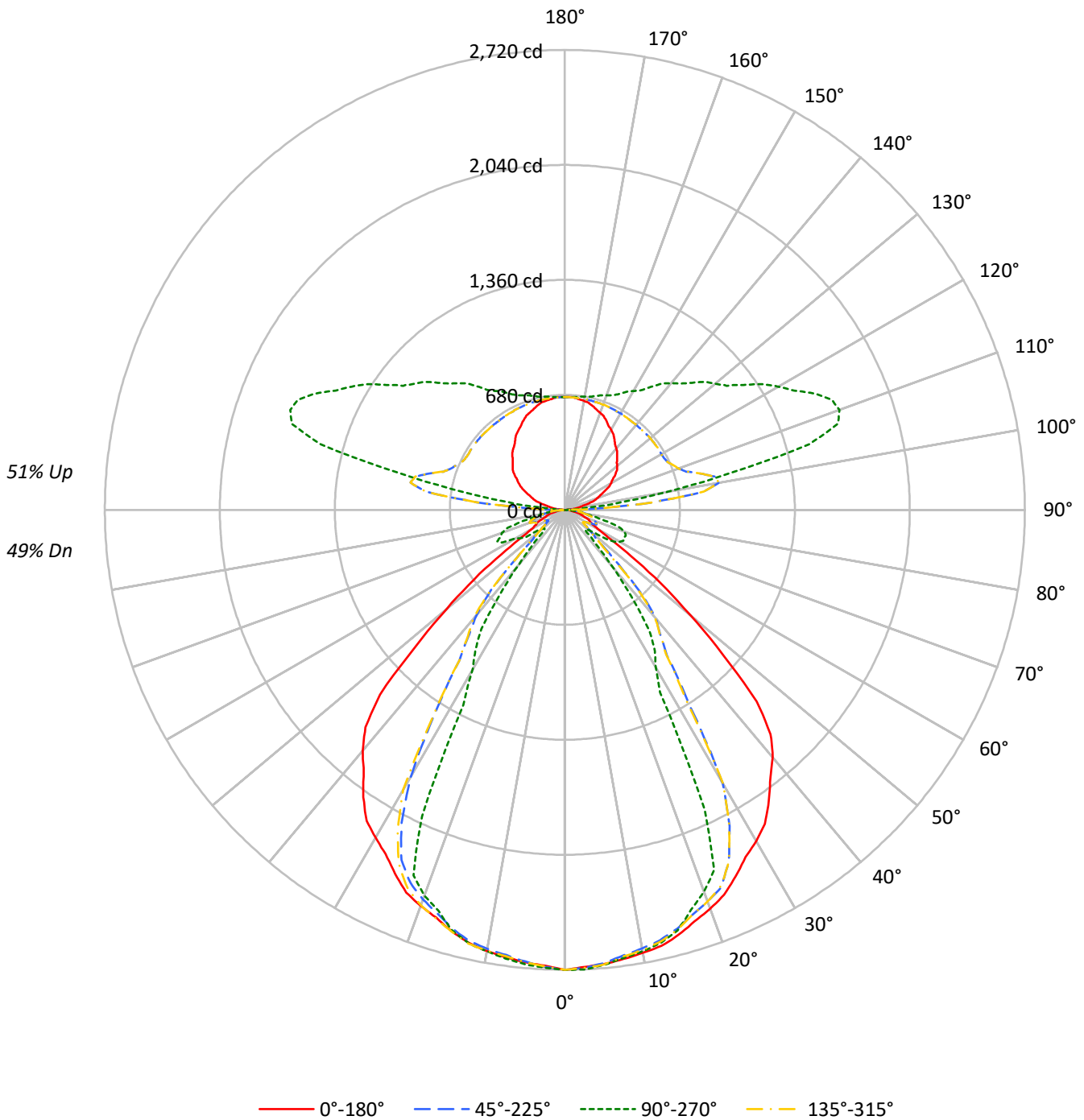
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8128.6 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 70.2  
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	0
RCR																		
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	99	95	91	88	91	87	84	82	74	72	70	62	60	59	50	49	49	43
2	91	84	79	74	84	78	73	69	66	63	60	56	53	51	46	44	43	38
3	84	75	69	63	77	70	64	60	60	56	52	51	48	45	42	40	38	34
4	77	68	60	55	71	63	57	52	54	50	46	46	43	40	39	36	34	31
5	72	61	54	48	66	57	51	46	49	44	41	42	39	36	36	33	31	28
6	67	56	48	43	62	52	45	41	45	40	36	39	35	32	33	30	28	25
7	62	51	43	38	57	48	41	37	42	37	33	36	32	29	31	28	26	23
8	58	47	39	35	54	44	37	33	38	33	30	33	30	27	29	26	24	21
9	54	43	36	31	50	40	34	30	36	31	27	31	27	25	27	24	22	20
10	51	40	33	29	47	38	31	27	33	28	25	29	25	23	25	22	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	43923	43923	43923	43923
5°	43692	43759	43527	43726
10°	43625	43458	43458	43458
15°	43483	43039	43141	43039
20°	43148	41314	42830	41701
25°	42580	34867	42287	35600
30°	42189	20005	41730	20273
35°	41449	17186	40923	16943
40°	40301	9038	39178	8951
45°	36634	3889	35321	3889
50°	24169	4690	22933	4381
55°	13515	8662	12822	7854
60°	7288	12190	7156	10931
65°	6426	14816	6739	16852
70°	6005	17722	5712	18694
75°	5633	15228	5758	15739
80°	4770	10869	4770	11446
85°	4187	6076	3798	7225

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 36634 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.0	3.1
10°-20°	726.3	8.9
20°-30°	990.3	12.2
30°-40°	832.2	10.2
40°-50°	472.7	5.8
50°-60°	250.8	3.1
60°-70°	230.9	2.8
70°-80°	169.5	2.1
80°-90°	45.5	0.6
90°-100°	278.8	3.4
100°-110°	843.2	10.4
110°-120°	823.1	10.1
120°-130°	672.6	8.3
130°-140°	549.0	6.8
140°-150°	427.4	5.3
150°-160°	308.1	3.8
160°-170°	188.6	2.3
170°-180°	63.7	0.8
0°-30°	1972.6	24.3
0°-40°	2804.8	34.5
0°-60°	3528.2	43.4
0°-90°	3974.1	48.9
90°-120°	1945.0	23.9
90°-150°	3594.0	44.2
90°-180°	4154.0	51.1
0°-180°	8128.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2720	2720	2720	2720	2720	
5°	2696	2700	2686	2698	2696	256
15°	2601	2575	2581	2575	2601	733
25°	2390	1957	2374	1998	2390	1102
35°	2103	872	2076	860	2103	1313
45°	1604	170	1547	170	1604	1173
55°	480	308	456	279	480	462
65°	168	388	176	441	168	169
75°	90	244	92	252	90	93
85°	23	33	20	39	23	25
90°	0	6	0	6	0	3
95°	35	123	35	123	35	41
105°	147	1494	147	1494	147	154
115°	261	1627	261	1627	261	258
125°	365	1288	365	1288	365	324
135°	437	1062	437	1062	437	338
145°	510	888	510	888	510	320
155°	582	756	582	756	582	268
165°	636	697	636	697	636	179
175°	665	670	665	670	665	63
180°	668	668	668	668	668	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2705.7	2745.8	2710.6	2706.0	2720.4	2717.2	2712.2	2731.2	2699.1	2731.2	2705.7
5°	2695.8	2741.9	2689.7	2675.8	2699.9	2683.9	2697.9	2725.7	2685.6	2721.7	2681.4
7.5°	2679.0	2719.9	2657.2	2648.3	2672.0	2658.0	2663.8	2702.4	2668.7	2692.4	2656.0
10°	2660.9	2697.0	2634.3	2628.6	2650.7	2636.6	2642.5	2682.8	2650.7	2672.7	2636.3
12.5°	2641.2	2669.3	2606.4	2603.9	2622.8	2613.5	2616.2	2650.1	2624.4	2646.5	2611.7
15°	2601.4	2627.5	2564.5	2554.7	2574.8	2566.7	2570.7	2601.0	2580.9	2595.0	2564.5
17.5°	2552.2	2573.1	2510.3	2480.8	2481.6	2491.7	2510.3	2546.9	2528.8	2547.3	2504.2
20°	2511.2	2535.2	2466.0	2408.5	2404.5	2414.5	2466.0	2502.7	2492.7	2512.8	2451.7
22.5°	2463.6	2479.6	2416.8	2319.6	2306.0	2316.0	2410.2	2453.6	2450.0	2463.7	2387.7
25°	2390.1	2406.2	2291.6	2151.8	1957.2	2139.8	2295.7	2373.7	2373.7	2385.7	2285.5
27.5°	2315.4	2315.8	2108.6	1382.0	1219.1	1332.2	2105.8	2274.8	2294.1	2288.1	2091.0
30°	2262.9	2248.9	1869.0	1117.1	1073.0	1101.1	1871.1	2206.2	2238.3	2216.2	1821.8
32.5°	2202.2	2162.5	1379.9	1027.0	990.9	1015.8	1334.4	2124.7	2180.9	2133.1	1432.8
35°	2102.9	1998.6	1052.5	908.0	871.9	904.0	1044.3	1963.9	2076.2	1947.8	1087.4
37.5°	1995.8	1588.6	926.5	723.3	645.4	707.6	922.0	1571.6	1952.3	1535.1	925.7
40°	1912.1	1248.1	833.0	529.1	428.8	499.0	826.8	1190.8	1858.8	1281.0	812.4
42.5°	1800.5	1096.4	668.8	336.0	263.0	307.5	641.3	1071.0	1743.9	1110.0	646.7
45°	1604.4	942.4	396.0	184.3	170.3	178.3	365.2	925.0	1546.9	905.0	404.2
47.5°	1270.8	718.7	254.4	156.7	171.9	156.7	246.6	695.9	1200.2	694.7	254.0
50°	962.2	561.0	197.0	158.6	186.7	158.6	190.8	541.9	913.0	592.0	194.9
52.5°	712.7	468.8	160.8	173.9	224.4	177.1	156.3	456.4	676.6	477.6	152.2
55°	480.1	367.7	129.3	229.5	307.7	235.5	129.3	357.2	455.5	353.1	125.1
57.5°	304.5	273.6	130.9	295.1	351.2	300.7	132.9	263.7	292.1	264.9	114.9
60°	225.7	215.6	145.7	313.3	377.5	317.3	147.7	207.5	221.6	205.5	123.1
62.5°	186.3	169.8	175.2	339.3	392.3	330.5	178.9	162.0	193.7	155.2	136.2
65°	168.2	110.1	207.2	343.6	387.8	343.6	209.3	104.2	176.4	112.2	184.6
67.5°	151.8	81.6	200.2	341.3	390.2	342.1	195.3	77.9	145.7	75.9	188.7
70°	127.2	73.0	188.7	347.4	375.4	335.3	188.7	70.9	121.0	68.9	221.6
72.5°	105.9	69.4	175.6	320.7	332.8	308.7	177.3	69.0	106.3	62.1	208.4
75°	90.3	68.2	168.2	256.2	244.1	244.1	164.1	66.2	92.3	62.2	162.1
77.5°	67.7	60.5	139.5	167.2	158.0	158.0	137.0	58.4	64.4	54.8	131.7
80°	51.3	55.3	114.9	123.0	116.9	116.9	110.8	53.3	51.3	51.3	108.7
82.5°	39.8	47.0	88.6	90.2	85.8	84.2	86.2	46.6	39.8	43.0	84.1
85°	22.6	32.6	47.2	38.8	32.8	30.8	45.1	30.5	20.5	30.5	45.1
87.5°	8.2	15.0	9.1	8.0	7.8	8.0	9.1	15.0	8.2	13.4	10.7
90°	0.0	2.0	12.6	7.3	6.3	7.3	12.6	2.0	0.0	2.0	12.6
92.5°	11.7	47.4	170.2	56.4	40.7	56.4	170.2	47.4	11.7	47.4	170.2
95°	34.6	109.4	526.1	194.3	122.6	194.3	526.1	109.4	34.6	109.4	526.1
97.5°	66.9	139.2	829.1	548.6	334.1	548.6	829.1	139.2	66.9	139.2	829.1
100°	87.0	157.7	926.4	895.6	601.5	895.6	926.4	157.7	87.0	157.7	926.4
102.5°	109.6	177.9	906.2	1256.1	1001.4	1256.1	906.2	177.9	109.6	177.9	906.2
105°	146.7	206.1	827.9	1572.2	1494.3	1572.2	827.9	206.1	146.7	206.1	827.9
107.5°	181.9	238.7	752.4	1603.5	1693.7	1603.5	752.4	238.7	181.9	238.7	752.4
110°	205.4	259.7	714.7	1564.1	1728.0	1564.1	714.7	259.7	205.4	259.7	714.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	228.0	280.7	692.1	1498.0	1705.4	1498.0	692.1	280.7	228.0	280.7	692.1
115°	260.9	311.1	669.6	1385.6	1627.4	1385.6	669.6	311.1	260.9	311.1	669.6
117.5°	293.6	341.2	661.7	1280.3	1527.9	1280.3	661.7	341.2	293.6	341.2	661.7
120°	315.4	360.5	659.1	1218.9	1456.6	1218.9	659.1	360.5	315.4	360.5	659.1
122.5°	335.5	378.2	659.1	1164.8	1384.5	1164.8	659.1	378.2	335.5	378.2	659.1
125°	364.7	404.6	660.2	1094.2	1287.9	1094.2	660.2	404.6	364.7	404.6	660.2
127.5°	388.4	429.8	659.1	1041.0	1206.2	1041.0	659.1	429.8	388.4	429.8	659.1
130°	403.5	446.5	659.1	1010.5	1160.1	1010.5	659.1	446.5	403.5	446.5	659.1
132.5°	416.9	460.7	658.3	982.5	1120.7	982.5	658.3	460.7	416.9	460.7	658.3
135°	437.0	483.1	656.0	943.7	1061.5	943.7	656.0	483.1	437.0	483.1	656.0
137.5°	459.4	503.3	656.0	902.2	1011.5	902.2	656.0	503.3	459.4	503.3	656.0
140°	473.7	516.7	656.0	875.3	978.8	875.3	656.0	516.7	473.7	516.7	656.0
142.5°	487.9	529.3	655.2	850.7	941.0	850.7	655.2	529.3	487.9	529.3	655.2
145°	510.3	548.3	656.0	811.8	887.6	811.8	656.0	548.3	510.3	548.3	656.0
147.5°	532.8	564.9	657.3	779.7	837.9	779.7	657.3	564.9	532.8	564.9	657.3
150°	547.0	576.7	658.1	761.9	811.1	761.9	658.1	576.7	547.0	576.7	658.1
152.5°	560.4	586.9	658.9	746.6	786.8	746.6	658.9	586.9	560.4	586.9	658.9
155°	581.6	601.1	660.2	727.9	755.6	727.9	660.2	601.1	581.6	601.1	660.2
157.5°	600.0	615.8	661.5	714.1	733.3	714.1	661.5	615.8	600.0	615.8	661.5
160°	610.9	624.3	662.3	705.6	719.9	705.6	662.3	624.3	610.9	624.3	662.3
162.5°	621.8	631.9	663.1	698.0	709.9	698.0	663.1	631.9	621.8	631.9	663.1
165°	636.1	643.3	663.3	688.7	696.9	688.7	663.3	643.3	636.1	643.3	663.3
167.5°	648.2	651.9	664.6	681.4	684.9	681.4	664.6	651.9	648.2	651.9	664.6
170°	655.0	657.0	665.4	678.0	679.1	678.0	665.4	657.0	655.0	657.0	665.4
172.5°	659.1	660.4	665.4	674.7	674.9	674.7	665.4	660.4	659.1	660.4	665.4
175°	665.4	665.4	666.5	671.7	669.6	671.7	666.5	665.4	665.4	665.4	666.5
177.5°	668.4	667.5	666.7	669.2	667.5	669.2	666.7	667.5	668.4	667.5	666.7
180°	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2699.3	2710.6	2710.6	2704.0	2736.1	2705.7
5°	2671.8	2697.9	2685.8	2685.6	2725.9	2695.8
7.5°	2652.5	2676.9	2665.7	2663.4	2703.1	2679.0
10°	2632.6	2650.7	2642.7	2648.6	2685.0	2660.9
12.5°	2604.8	2626.1	2618.0	2627.3	2660.5	2641.2
15°	2556.7	2574.8	2578.8	2583.0	2621.5	2601.4
17.5°	2477.3	2486.1	2506.2	2534.6	2574.7	2552.2
20°	2415.0	2427.0	2439.1	2488.6	2535.2	2511.2
22.5°	2344.1	2340.1	2368.1	2426.2	2484.4	2463.6
25°	2152.7	1998.3	2168.8	2318.3	2396.1	2390.1
27.5°	1498.9	1300.7	1476.0	2139.8	2303.4	2315.4
30°	1179.6	1087.4	1177.6	1910.0	2234.8	2262.9
32.5°	1047.3	984.0	1038.9	1453.8	2148.4	2202.2
35°	903.8	859.6	903.8	1087.4	1978.5	2102.9
37.5°	723.4	633.1	721.8	939.6	1599.4	1995.8
40°	539.0	424.7	523.0	841.2	1278.2	1912.1
42.5°	359.1	273.7	339.9	662.3	1105.6	1800.5
45°	194.4	170.3	186.3	400.1	902.3	1604.4
47.5°	152.4	161.3	152.4	252.3	690.2	1270.8
50°	146.3	174.4	146.3	194.9	571.0	962.2
52.5°	159.5	189.2	157.9	153.9	466.0	712.7
55°	180.7	279.0	182.7	125.1	341.7	480.1
57.5°	257.3	313.9	260.1	118.6	263.1	304.5
60°	264.3	338.5	262.3	125.1	203.6	225.7
62.5°	312.6	418.9	312.2	143.2	151.4	186.3
65°	401.0	441.1	405.0	182.6	108.1	168.2
67.5°	380.6	409.1	376.6	195.7	74.4	151.8
70°	373.9	396.0	369.9	223.6	69.0	127.2
72.5°	348.8	351.6	341.6	207.2	62.1	105.9
75°	270.4	252.3	260.4	178.5	62.2	90.3
77.5°	168.1	160.8	162.0	136.2	54.9	67.7
80°	127.1	123.1	121.1	114.9	51.3	51.3
82.5°	94.3	90.3	88.3	88.6	43.0	39.8
85°	43.0	39.0	37.0	51.3	30.6	22.6
87.5°	9.7	9.5	8.1	10.7	11.8	8.2
90°	7.3	6.3	7.3	12.6	2.0	0.0
92.5°	56.4	40.7	56.4	170.2	47.4	11.7
95°	194.3	122.6	194.3	526.1	109.4	34.6
97.5°	548.6	334.1	548.6	829.1	139.2	66.9
100°	895.6	601.5	895.6	926.4	157.7	87.0
102.5°	1256.1	1001.4	1256.1	906.2	177.9	109.6
105°	1572.2	1494.3	1572.2	827.9	206.1	146.7
107.5°	1603.5	1693.7	1603.5	752.4	238.7	181.9
110°	1564.1	1728.0	1564.1	714.7	259.7	205.4





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1498.0	1705.4	1498.0	692.1	280.7	228.0
115°	1385.6	1627.4	1385.6	669.6	311.1	260.9
117.5°	1280.3	1527.9	1280.3	661.7	341.2	293.6
120°	1218.9	1456.6	1218.9	659.1	360.5	315.4
122.5°	1164.8	1384.5	1164.8	659.1	378.2	335.5
125°	1094.2	1287.9	1094.2	660.2	404.6	364.7
127.5°	1041.0	1206.2	1041.0	659.1	429.8	388.4
130°	1010.5	1160.1	1010.5	659.1	446.5	403.5
132.5°	982.5	1120.7	982.5	658.3	460.7	416.9
135°	943.7	1061.5	943.7	656.0	483.1	437.0
137.5°	902.2	1011.5	902.2	656.0	503.3	459.4
140°	875.3	978.8	875.3	656.0	516.7	473.7
142.5°	850.7	941.0	850.7	655.2	529.3	487.9
145°	811.8	887.6	811.8	656.0	548.3	510.3
147.5°	779.7	837.9	779.7	657.3	564.9	532.8
150°	761.9	811.1	761.9	658.1	576.7	547.0
152.5°	746.6	786.8	746.6	658.9	586.9	560.4
155°	727.9	755.6	727.9	660.2	601.1	581.6
157.5°	714.1	733.3	714.1	661.5	615.8	600.0
160°	705.6	719.9	705.6	662.3	624.3	610.9
162.5°	698.0	709.9	698.0	663.1	631.9	621.8
165°	688.7	696.9	688.7	663.3	643.3	636.1
167.5°	681.4	684.9	681.4	664.6	651.9	648.2
170°	678.0	679.1	678.0	665.4	657.0	655.0
172.5°	674.7	674.9	674.7	665.4	660.4	659.1
175°	671.7	669.6	671.7	666.5	665.4	665.4
177.5°	669.2	667.5	669.2	666.7	667.5	668.4
180°	667.5	667.5	667.5	667.5	667.5	667.5



TEST NUMBER: P853796

CATALOG NUMBER: SQ2-FA-100U-100D-940-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	12.95	13.70	13.94	14.69	15.98	11.81	12.56	12.80	13.55	14.84
	3H	13.65	14.32	14.65	15.32	16.63	17.96	18.63	18.95	19.62	20.94
	4H	14.05	14.69	15.07	15.69	17.01	19.23	19.87	20.24	20.86	22.19
	6H	14.41	14.99	15.43	15.99	17.33	19.83	20.42	20.85	21.42	22.76
	8H	14.52	15.08	15.55	16.10	17.43	19.95	20.51	20.98	21.53	22.86
	12H	14.59	15.12	15.62	16.13	17.49	19.99	20.52	21.02	21.53	22.89
4H	2H	13.34	13.98	14.36	14.97	16.30	12.33	12.97	13.35	13.97	15.29
	3H	14.33	14.86	15.35	15.89	17.23	18.65	19.18	19.68	20.21	21.55
	4H	14.89	15.38	15.92	16.40	17.76	20.10	20.59	21.13	21.61	22.97
	6H	15.36	15.78	16.40	16.82	18.18	20.84	21.25	21.88	22.29	23.65
	8H	15.53	15.92	16.57	16.96	18.33	21.00	21.39	22.04	22.43	23.80
	12H	15.65	16.00	16.70	17.05	18.42	21.06	21.41	22.12	22.46	23.84
8H	4H	15.99	16.38	17.03	17.41	18.78	20.22	20.61	21.26	21.65	23.02
	6H	16.59	16.91	17.66	17.99	19.36	21.10	21.42	22.16	22.50	23.86
	8H	16.83	17.11	17.90	18.17	19.56	21.35	21.63	22.42	22.69	24.08
	12H	17.00	17.24	18.07	18.30	19.73	21.47	21.71	22.54	22.77	24.20
12H	4H	16.13	16.48	17.19	17.53	18.90	20.18	20.53	21.24	21.58	22.95
	6H	16.87	17.15	17.94	18.21	19.60	21.11	21.39	22.18	22.45	23.84
	8H	17.16	17.41	18.24	18.47	19.90	21.39	21.63	22.46	22.69	24.12