

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: P853797

Luminaire Tested: SQ2-FA-100U-125D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853797
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-125D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

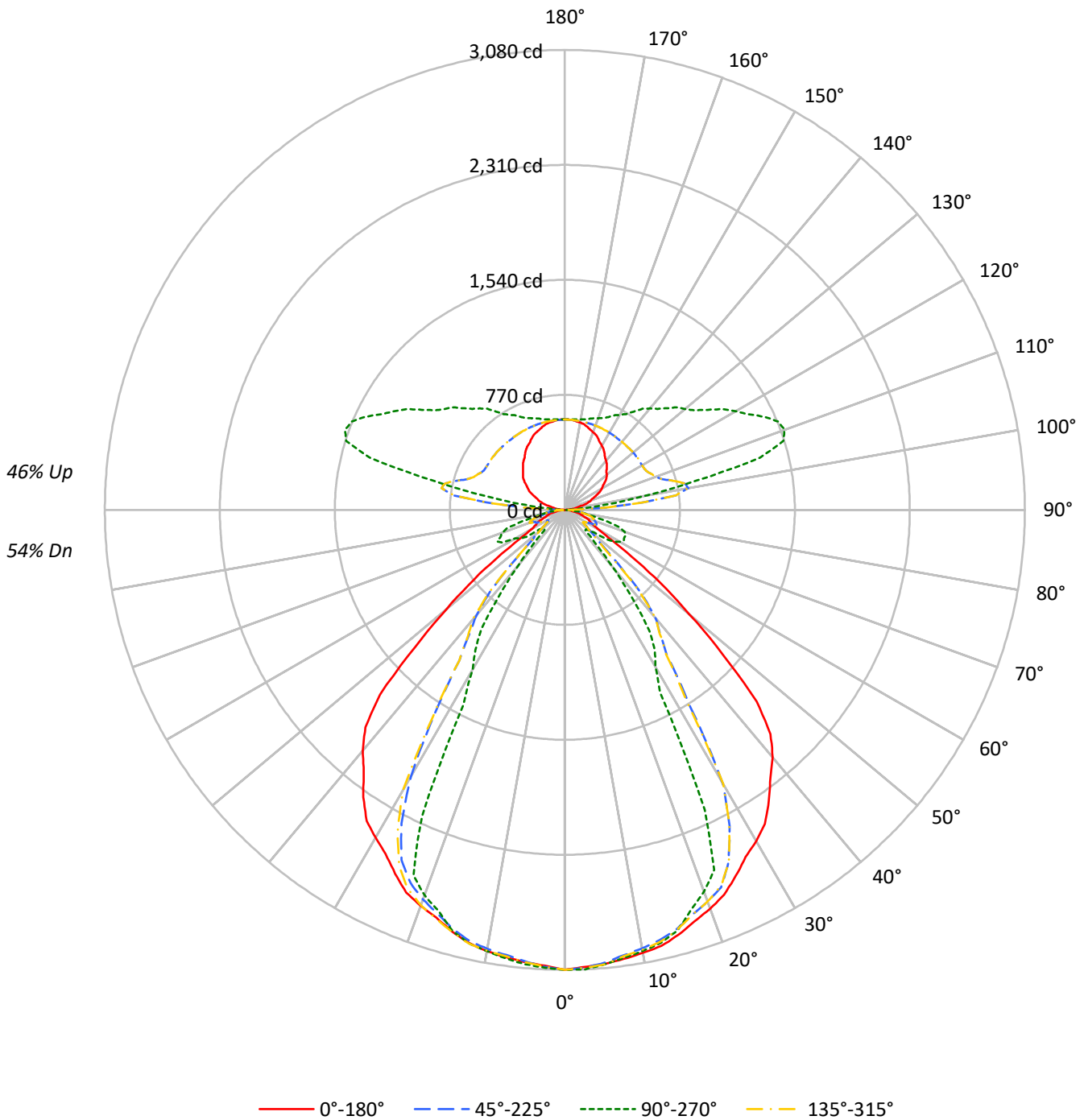
Lumens per Lamp: N/A
Luminaire Lumens: 8263.6 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 81.8
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	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				54
1	100	96	92	89	93	89	86	84	77	75	73	65	64	63	55	54	53				48	
2	92	85	80	75	85	80	75	71	69	66	63	59	57	55	50	48	47				43	
3	85	77	70	65	79	72	66	61	62	58	55	54	51	48	46	44	42				38	
4	79	69	62	56	73	65	58	54	57	52	48	49	46	43	42	40	38				34	
5	73	63	55	50	68	59	52	47	52	47	43	45	41	38	39	36	34				31	
6	68	57	50	44	63	54	47	42	47	42	38	42	38	35	36	33	31				28	
7	63	52	45	40	59	49	43	38	44	39	35	39	35	32	34	31	28				26	
8	59	48	41	36	55	45	39	34	40	35	32	36	32	29	31	28	26				24	
9	56	44	37	33	52	42	36	31	38	32	29	33	29	26	29	26	24				22	
10	52	41	34	30	49	39	33	29	35	30	27	31	27	24	28	25	22				21	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	49729	49729	49729	49729
5°	49469	49543	49279	49506
10°	49393	49201	49201	49201
15°	49232	48727	48844	48727
20°	48850	46775	48491	47215
25°	48209	39476	47878	40305
30°	47765	22648	47247	22952
35°	46929	19458	46333	19184
40°	45627	10233	44356	10134
45°	41475	4402	39991	4402
50°	27364	5310	25962	4958
55°	15299	9807	14517	8892
60°	8251	13801	8102	12377
65°	7278	16772	7633	19079
70°	6798	20068	6467	21163
75°	6376	17243	6519	17823
80°	5402	12311	5402	12961
85°	4742	6891	4298	8170

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 41475 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.9	3.5
10°-20°	822.3	10.0
20°-30°	1121.2	13.6
30°-40°	942.2	11.4
40°-50°	535.1	6.5
50°-60°	283.9	3.4
60°-70°	261.4	3.2
70°-80°	191.9	2.3
80°-90°	51.2	0.6
90°-100°	252.6	3.1
100°-110°	764.0	9.2
110°-120°	745.8	9.0
120°-130°	609.5	7.4
130°-140°	497.5	6.0
140°-150°	387.3	4.7
150°-160°	279.2	3.4
160°-170°	170.9	2.1
170°-180°	57.7	0.7
0°-30°	2233.3	27.0
0°-40°	3175.5	38.4
0°-60°	3994.6	48.3
0°-90°	4499.2	54.4
90°-120°	1762.4	21.3
90°-150°	3256.6	39.4
90°-180°	3764.0	45.5
0°-180°	8263.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3080	3080	3080	3080	3080	
5°	3052	3057	3040	3054	3052	290
15°	2945	2915	2922	2915	2945	830
25°	2706	2216	2688	2262	2706	1248
35°	2381	987	2351	973	2381	1486
45°	1816	193	1751	193	1816	1328
55°	544	348	516	316	544	524
65°	190	439	200	499	190	191
75°	102	276	104	286	102	105
85°	26	37	23	44	26	28
90°	0	6	0	6	0	3
95°	31	111	31	111	31	37
105°	133	1354	133	1354	133	140
115°	236	1475	236	1475	236	234
125°	330	1167	330	1167	330	294
135°	396	962	396	962	396	307
145°	462	804	462	804	462	290
155°	527	685	527	685	527	243
165°	576	631	576	631	576	162
175°	603	607	603	607	603	57
180°	605	605	605	605	605	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0
2.5°	3063.3	3108.7	3068.9	3063.7	3080.0	3076.4	3070.7	3092.2	3055.9	3092.2	3063.3
5°	3052.2	3104.4	3045.2	3029.5	3056.8	3038.6	3054.5	3086.0	3040.5	3081.4	3035.9
7.5°	3033.1	3079.4	3008.5	2998.4	3025.2	3009.3	3015.9	3059.6	3021.5	3048.3	3007.1
10°	3012.7	3053.5	2982.5	2976.1	3001.0	2985.2	2991.8	3037.4	3001.0	3026.0	2984.8
12.5°	2990.4	3022.2	2950.9	2948.1	2969.5	2959.0	2962.0	3000.4	2971.3	2996.3	2956.9
15°	2945.3	2974.8	2903.5	2892.4	2915.1	2906.0	2910.5	2944.8	2922.1	2938.0	2903.5
17.5°	2889.6	2913.2	2842.2	2808.7	2809.7	2821.0	2842.2	2883.5	2863.1	2884.0	2835.2
20°	2843.1	2870.4	2792.0	2726.9	2722.3	2733.7	2792.0	2833.5	2822.2	2844.9	2775.7
22.5°	2789.2	2807.4	2736.3	2626.3	2610.8	2622.2	2728.8	2778.0	2773.9	2789.3	2703.3
25°	2706.1	2724.2	2594.6	2436.2	2215.9	2422.6	2599.2	2687.5	2687.5	2701.1	2587.6
27.5°	2621.5	2622.0	2387.4	1564.6	1380.2	1508.3	2384.1	2575.5	2597.3	2590.5	2367.4
30°	2562.0	2546.1	2116.1	1264.8	1214.8	1246.6	2118.4	2497.8	2534.2	2509.2	2062.6
32.5°	2493.3	2448.3	1562.3	1162.8	1121.9	1150.1	1510.7	2405.5	2469.1	2415.1	1622.2
35°	2380.9	2262.8	1191.6	1028.1	987.2	1023.5	1182.3	2223.5	2350.7	2205.3	1231.1
37.5°	2259.6	1798.6	1049.0	818.9	730.8	801.2	1043.9	1779.3	2210.4	1738.0	1048.0
40°	2164.8	1413.1	943.1	599.0	485.5	565.0	936.1	1348.1	2104.5	1450.4	919.8
42.5°	2038.5	1241.3	757.2	380.5	297.8	348.2	726.1	1212.6	1974.4	1256.7	732.1
45°	1816.4	1066.9	448.3	208.7	192.8	201.9	413.5	1047.3	1751.4	1024.6	457.6
47.5°	1438.7	813.7	288.0	177.4	194.7	177.4	279.2	787.9	1358.8	786.5	287.6
50°	1089.4	635.2	223.0	179.6	211.4	179.6	216.0	613.5	1033.6	670.3	220.7
52.5°	806.9	530.8	182.1	196.9	254.1	200.5	177.0	516.7	766.1	540.8	172.4
55°	543.5	416.3	146.3	259.8	348.4	266.7	146.3	404.4	515.7	399.8	141.7
57.5°	344.7	309.7	148.2	334.1	397.7	340.4	150.5	298.5	330.8	299.9	130.1
60°	255.5	244.2	164.9	354.7	427.4	359.3	167.2	235.0	250.9	232.7	139.4
62.5°	210.9	192.3	198.4	384.2	444.1	374.2	202.5	183.4	219.3	175.7	154.2
65°	190.5	124.6	234.6	389.0	439.0	389.0	236.9	118.0	199.8	127.1	209.1
67.5°	171.9	92.4	226.7	386.4	441.8	387.3	221.1	88.2	164.9	85.9	213.7
70°	144.0	82.7	213.7	393.3	425.1	379.6	213.7	80.3	137.0	78.0	250.9
72.5°	119.9	78.5	198.8	363.1	376.8	349.5	200.7	78.1	120.3	70.4	236.0
75°	102.2	77.2	190.5	290.0	276.4	276.4	185.8	75.0	104.5	70.5	183.5
77.5°	76.7	68.5	157.9	189.3	178.9	178.9	155.2	66.1	72.9	62.0	149.1
80°	58.1	62.6	130.1	139.2	132.4	132.4	125.4	60.3	58.1	58.1	123.1
82.5°	45.1	53.2	100.3	102.1	97.1	95.3	97.6	52.8	45.1	48.7	95.2
85°	25.6	36.9	53.4	44.0	37.2	34.9	51.1	34.6	23.2	34.6	51.1
87.5°	9.3	16.9	9.7	8.8	8.6	8.8	9.7	16.9	9.3	15.1	11.6
90°	0.0	1.9	11.4	6.6	5.7	6.6	11.4	1.9	0.0	1.9	11.4
92.5°	10.6	42.9	154.2	51.1	36.8	51.1	154.2	42.9	10.6	42.9	154.2
95°	31.3	99.1	476.7	176.1	111.1	176.1	476.7	99.1	31.3	99.1	476.7
97.5°	60.6	126.1	751.3	497.1	302.7	497.1	751.3	126.1	60.6	126.1	751.3
100°	78.8	142.9	839.4	811.5	545.0	811.5	839.4	142.9	78.8	142.9	839.4
102.5°	99.3	161.2	821.2	1138.2	907.4	1138.2	821.2	161.2	99.3	161.2	821.2
105°	132.9	186.8	750.1	1424.6	1354.1	1424.6	750.1	186.8	132.9	186.8	750.1
107.5°	164.8	216.3	681.8	1453.0	1534.7	1453.0	681.8	216.3	164.8	216.3	681.8
110°	186.1	235.3	647.6	1417.2	1565.8	1417.2	647.6	235.3	186.1	235.3	647.6



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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°	206.6	254.3	627.1	1357.4	1545.3	1357.4	627.1	254.3	206.6	254.3	627.1
115°	236.4	281.9	606.8	1255.5	1474.6	1255.5	606.8	281.9	236.4	281.9	606.8
117.5°	266.1	309.1	599.5	1160.1	1384.4	1160.1	599.5	309.1	266.1	309.1	599.5
120°	285.8	326.7	597.3	1104.5	1319.9	1104.5	597.3	326.7	285.8	326.7	597.3
122.5°	304.0	342.7	597.3	1055.5	1254.5	1055.5	597.3	342.7	304.0	342.7	597.3
125°	330.4	366.7	598.2	991.5	1167.0	991.5	598.2	366.7	330.4	366.7	598.2
127.5°	351.9	389.4	597.3	943.3	1092.9	943.3	597.3	389.4	351.9	389.4	597.3
130°	365.6	404.6	597.3	915.6	1051.1	915.6	597.3	404.6	365.6	404.6	597.3
132.5°	377.7	417.5	596.5	890.3	1015.4	890.3	596.5	417.5	377.7	417.5	596.5
135°	396.0	437.7	594.4	855.1	961.9	855.1	594.4	437.7	396.0	437.7	594.4
137.5°	416.3	456.0	594.4	817.5	916.5	817.5	594.4	456.0	416.3	456.0	594.4
140°	429.2	468.2	594.4	793.1	886.9	793.1	594.4	468.2	429.2	468.2	594.4
142.5°	442.1	479.6	593.7	770.8	852.7	770.8	593.7	479.6	442.1	479.6	593.7
145°	462.4	496.8	594.4	735.6	804.3	735.6	594.4	496.8	462.4	496.8	594.4
147.5°	482.7	511.9	595.6	706.5	759.3	706.5	595.6	511.9	482.7	511.9	595.6
150°	495.7	522.6	596.3	690.4	734.9	690.4	596.3	522.6	495.7	522.6	596.3
152.5°	507.8	531.8	597.1	676.5	712.9	676.5	597.1	531.8	507.8	531.8	597.1
155°	527.0	544.6	598.2	659.6	684.6	659.6	598.2	544.6	527.0	544.6	598.2
157.5°	543.7	558.0	599.4	647.0	664.5	647.0	599.4	558.0	543.7	558.0	599.4
160°	553.6	565.7	600.1	639.3	652.3	639.3	600.1	565.7	553.6	565.7	600.1
162.5°	563.5	572.6	600.9	632.5	643.2	632.5	600.9	572.6	563.5	572.6	600.9
165°	576.4	582.9	601.1	624.0	631.4	624.0	601.1	582.9	576.4	582.9	601.1
167.5°	587.4	590.7	602.2	617.5	620.6	617.5	602.2	590.7	587.4	590.7	602.2
170°	593.5	595.3	603.0	614.4	615.3	614.4	603.0	595.3	593.5	595.3	603.0
172.5°	597.3	598.4	603.0	611.3	611.5	611.3	603.0	598.4	597.3	598.4	603.0
175°	603.0	603.0	603.9	608.6	606.8	608.6	603.9	603.0	603.0	603.0	603.9
177.5°	605.6	604.9	604.1	606.3	604.9	606.3	604.1	604.9	605.6	604.9	604.1
180°	604.9	604.9	604.9	604.9	604.9	604.9	604.9	604.9	604.9	604.9	604.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3080.0	3080.0	3080.0	3080.0	3080.0	3080.0
2.5°	3056.2	3068.9	3068.9	3061.4	3097.8	3063.3
5°	3024.9	3054.5	3040.8	3040.5	3086.2	3052.2
7.5°	3003.1	3030.8	3018.1	3015.5	3060.4	3033.1
10°	2980.6	3001.0	2992.0	2998.7	3039.9	3012.7
12.5°	2949.1	2973.2	2964.1	2974.6	3012.2	2990.4
15°	2894.7	2915.1	2919.6	2924.4	2968.0	2945.3
17.5°	2804.8	2814.8	2837.5	2869.6	2915.0	2889.6
20°	2734.2	2747.9	2761.5	2817.5	2870.4	2843.1
22.5°	2653.9	2649.4	2681.2	2746.9	2812.8	2789.2
25°	2437.3	2262.4	2455.5	2624.8	2712.9	2706.1
27.5°	1697.0	1472.7	1671.2	2422.7	2607.9	2621.5
30°	1335.6	1231.1	1333.3	2162.5	2530.2	2562.0
32.5°	1185.8	1114.0	1176.2	1645.9	2432.4	2493.3
35°	1023.2	973.3	1023.2	1231.1	2240.1	2380.9
37.5°	819.0	716.8	817.2	1063.8	1810.8	2259.6
40°	610.3	480.8	592.1	952.3	1447.2	2164.8
42.5°	406.6	309.9	384.8	749.8	1251.7	2038.5
45°	220.0	192.8	211.0	452.9	1021.5	1816.4
47.5°	172.6	182.6	172.6	285.7	781.5	1438.7
50°	165.6	197.4	165.6	220.7	646.5	1089.4
52.5°	180.5	214.2	178.7	174.2	527.6	806.9
55°	204.6	315.9	206.9	141.7	386.8	543.5
57.5°	291.3	355.4	294.5	134.3	297.9	344.7
60°	299.2	383.3	297.0	141.7	230.5	255.5
62.5°	353.9	474.3	353.5	162.1	171.4	210.9
65°	454.0	499.4	458.5	206.7	122.3	190.5
67.5°	430.9	463.2	426.4	221.6	84.2	171.9
70°	423.3	448.3	418.8	253.2	78.1	144.0
72.5°	394.9	398.1	386.8	234.6	70.3	119.9
75°	306.1	285.7	294.8	202.1	70.4	102.2
77.5°	190.3	182.1	183.5	154.2	62.1	76.7
80°	143.9	139.4	137.1	130.1	58.1	58.1
82.5°	106.7	102.2	99.9	100.3	48.7	45.1
85°	48.7	44.1	41.9	58.1	34.6	25.6
87.5°	10.6	10.4	8.8	11.6	13.3	9.3
90°	6.6	5.7	6.6	11.4	1.9	0.0
92.5°	51.1	36.8	51.1	154.2	42.9	10.6
95°	176.1	111.1	176.1	476.7	99.1	31.3
97.5°	497.1	302.7	497.1	751.3	126.1	60.6
100°	811.5	545.0	811.5	839.4	142.9	78.8
102.5°	1138.2	907.4	1138.2	821.2	161.2	99.3
105°	1424.6	1354.1	1424.6	750.1	186.8	132.9
107.5°	1453.0	1534.7	1453.0	681.8	216.3	164.8
110°	1417.2	1565.8	1417.2	647.6	235.3	186.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1357.4	1545.3	1357.4	627.1	254.3	206.6
115°	1255.5	1474.6	1255.5	606.8	281.9	236.4
117.5°	1160.1	1384.4	1160.1	599.5	309.1	266.1
120°	1104.5	1319.9	1104.5	597.3	326.7	285.8
122.5°	1055.5	1254.5	1055.5	597.3	342.7	304.0
125°	991.5	1167.0	991.5	598.2	366.7	330.4
127.5°	943.3	1092.9	943.3	597.3	389.4	351.9
130°	915.6	1051.1	915.6	597.3	404.6	365.6
132.5°	890.3	1015.4	890.3	596.5	417.5	377.7
135°	855.1	961.9	855.1	594.4	437.7	396.0
137.5°	817.5	916.5	817.5	594.4	456.0	416.3
140°	793.1	886.9	793.1	594.4	468.2	429.2
142.5°	770.8	852.7	770.8	593.7	479.6	442.1
145°	735.6	804.3	735.6	594.4	496.8	462.4
147.5°	706.5	759.3	706.5	595.6	511.9	482.7
150°	690.4	734.9	690.4	596.3	522.6	495.7
152.5°	676.5	712.9	676.5	597.1	531.8	507.8
155°	659.6	684.6	659.6	598.2	544.6	527.0
157.5°	647.0	664.5	647.0	599.4	558.0	543.7
160°	639.3	652.3	639.3	600.1	565.7	553.6
162.5°	632.5	643.2	632.5	600.9	572.6	563.5
165°	624.0	631.4	624.0	601.1	582.9	576.4
167.5°	617.5	620.6	617.5	602.2	590.7	587.4
170°	614.4	615.3	614.4	603.0	595.3	593.5
172.5°	611.3	611.5	611.3	603.0	598.4	597.3
175°	608.6	606.8	608.6	603.9	603.0	603.0
177.5°	606.3	604.9	606.3	604.1	604.9	605.6
180°	604.9	604.9	604.9	604.9	604.9	604.9



TEST NUMBER: P853797

CATALOG NUMBER: SQ2-FA-100U-125D-930-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	13.91	14.69	14.85	15.64	16.85	12.76	13.55	13.70	14.49	15.71
	3H	14.60	15.31	15.56	16.26	17.50	18.91	19.62	19.86	20.57	21.81
	4H	15.01	15.68	15.98	16.63	17.88	20.19	20.85	21.15	21.81	23.06
	6H	15.37	15.98	16.34	16.94	18.20	20.79	21.40	21.77	22.37	23.62
	8H	15.48	16.06	16.46	17.04	18.30	20.91	21.50	21.90	22.47	23.73
	12H	15.55	16.11	16.54	17.08	18.36	20.95	21.51	21.94	22.48	23.76
4H	2H	14.30	14.96	15.27	15.92	17.17	13.29	13.96	14.26	14.91	16.16
	3H	15.29	15.85	16.27	16.83	18.09	19.61	20.17	20.59	21.15	22.42
	4H	15.85	16.36	16.84	17.34	18.62	21.06	21.57	22.05	22.55	23.84
	6H	16.33	16.76	17.32	17.76	19.05	21.80	22.23	22.80	23.24	24.52
	8H	16.50	16.90	17.50	17.90	19.20	21.97	22.37	22.96	23.37	24.66
	12H	16.61	16.98	17.63	17.99	19.29	22.02	22.39	23.04	23.40	24.70
8H	4H	16.95	17.36	17.95	18.35	19.65	21.18	21.59	22.18	22.59	23.88
	6H	17.56	17.89	18.58	18.93	20.22	22.06	22.40	23.08	23.43	24.73
	8H	17.79	18.09	18.82	19.11	20.43	22.31	22.61	23.34	23.63	24.95
	12H	17.96	18.22	19.00	19.24	20.60	22.43	22.69	23.46	23.71	25.07
12H	4H	17.09	17.46	18.11	18.47	19.77	21.14	21.51	22.16	22.52	23.82
	6H	17.83	18.13	18.86	19.15	20.47	22.07	22.37	23.10	23.39	24.70
	8H	18.13	18.39	19.16	19.41	20.77	22.35	22.61	23.38	23.63	24.99