

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: P855250

Luminaire Tested: SQ2-FA-100U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

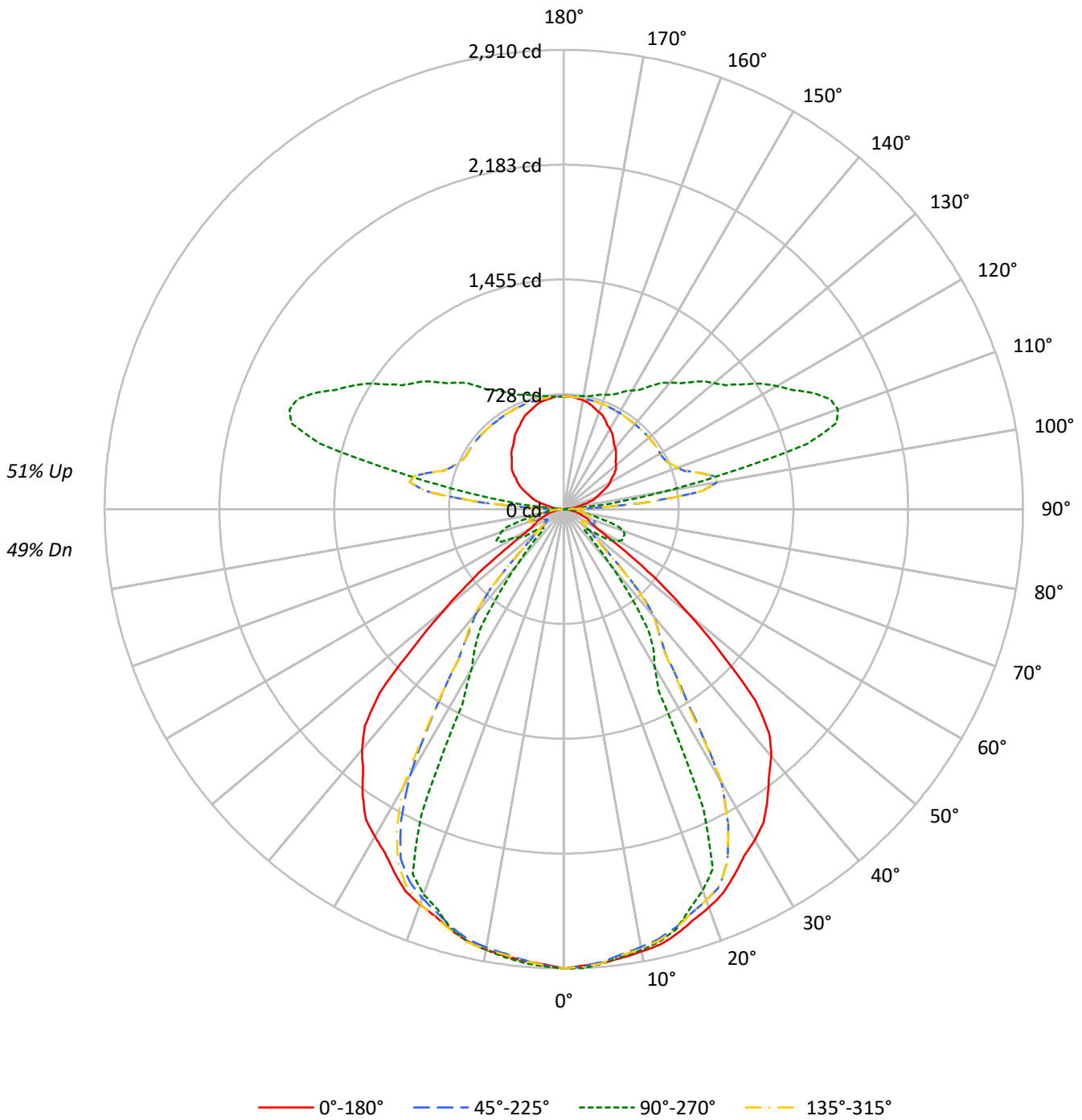
Test Method: LM-79-2019  
Report Number: P855250  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-100U-100D-835-UNV-STD-W-4  
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: 8696.5 lumens  
Efficiency: N/A  
Efficacy: 123.9 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	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°	46992	46992	46992	46992
5°	46746	46817	46567	46780
10°	46673	46493	46493	46493
15°	46522	46046	46156	46046
20°	46161	44201	45823	44615
25°	45555	37303	45243	38085
30°	45136	21403	44646	21690
35°	44346	18386	43781	18128
40°	43117	9670	41914	9577
45°	39192	4160	37787	4160
50°	25859	5016	24533	4687
55°	14460	9267	13717	8403
60°	7798	13043	7656	11693
65°	6873	15851	7213	18029
70°	6425	18958	6113	19997
75°	6020	16294	6163	16843
80°	5105	11641	5105	12245
85°	4465	6502	4076	7744

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 39192 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.9	3.1
10°-20°	777.0	8.9
20°-30°	1059.5	12.2
30°-40°	890.3	10.2
40°-50°	505.7	5.8
50°-60°	268.3	3.1
60°-70°	247.0	2.8
70°-80°	181.4	2.1
80°-90°	48.7	0.6
90°-100°	298.3	3.4
100°-110°	902.1	10.4
110°-120°	880.6	10.1
120°-130°	719.6	8.3
130°-140°	587.4	6.8
140°-150°	457.2	5.3
150°-160°	329.6	3.8
160°-170°	201.8	2.3
170°-180°	68.1	0.8
0°-30°	2110.4	24.3
0°-40°	3000.7	34.5
0°-60°	3774.7	43.4
0°-90°	4251.8	48.9
90°-120°	2081.0	23.9
90°-150°	3845.2	44.2
90°-180°	4445.0	51.1
0°-180°	8696.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2910	2910	2910	2910	2910	
5°	2884	2889	2873	2886	2884	274
15°	2783	2755	2761	2755	2783	785
25°	2557	2094	2540	2138	2557	1179
35°	2250	933	2221	920	2250	1405
45°	1716	182	1655	182	1716	1255
55°	514	329	487	298	514	495
65°	180	415	189	472	180	181
75°	96	261	99	270	96	100
85°	24	35	22	42	24	27
90°	0	7	0	7	0	3
95°	37	131	37	131	37	44
105°	157	1599	157	1599	157	165
115°	279	1741	279	1741	279	276
125°	390	1378	390	1378	390	347
135°	468	1136	468	1136	468	362
145°	546	950	546	950	546	342
155°	622	808	622	808	622	286
165°	681	746	681	746	681	192
175°	712	716	712	716	712	68
180°	714	714	714	714	714	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2894.7	2937.6	2900.0	2895.0	2910.5	2907.0	2901.7	2922.0	2887.7	2922.0	2894.7
5°	2884.2	2933.5	2877.6	2862.8	2888.6	2871.4	2886.3	2916.1	2873.2	2911.8	2868.8
7.5°	2866.2	2910.0	2842.9	2833.3	2858.7	2843.6	2849.9	2891.2	2855.2	2880.5	2841.6
10°	2846.8	2885.4	2818.3	2812.3	2835.8	2820.8	2827.1	2870.2	2835.8	2859.5	2820.4
12.5°	2825.8	2855.8	2788.4	2785.8	2806.0	2796.1	2798.9	2835.3	2807.8	2831.4	2794.2
15°	2783.2	2811.1	2743.7	2733.2	2754.7	2746.1	2750.3	2782.6	2761.3	2776.2	2743.7
17.5°	2730.5	2752.8	2685.7	2654.1	2655.0	2665.7	2685.7	2724.8	2705.5	2725.3	2679.1
20°	2686.6	2712.4	2638.4	2576.8	2572.5	2583.2	2638.4	2677.6	2666.9	2688.3	2623.0
22.5°	2635.6	2652.8	2585.6	2481.7	2467.1	2477.9	2578.6	2625.0	2621.2	2635.8	2554.5
25°	2557.1	2574.3	2451.7	2302.1	2093.9	2289.2	2456.2	2539.6	2539.6	2552.5	2445.2
27.5°	2477.2	2477.7	2256.0	1478.5	1304.2	1425.2	2252.9	2433.8	2454.4	2447.9	2237.1
30°	2421.0	2406.0	1999.5	1195.2	1148.0	1177.9	2001.8	2360.3	2394.7	2371.1	1949.1
32.5°	2356.0	2313.6	1476.4	1098.7	1060.1	1086.7	1427.6	2273.2	2333.3	2282.1	1533.0
35°	2249.9	2138.2	1126.0	971.5	932.8	967.2	1117.2	2101.0	2221.2	2084.0	1163.4
37.5°	2135.2	1699.5	991.2	773.8	690.5	757.1	986.4	1681.3	2088.7	1642.3	990.3
40°	2045.7	1335.3	891.2	566.1	458.8	533.8	884.5	1273.9	1988.6	1370.6	869.2
42.5°	1926.3	1173.0	715.6	359.5	281.4	329.1	686.1	1145.9	1865.7	1187.5	691.9
45°	1716.4	1008.2	423.6	197.2	182.2	190.8	390.7	989.6	1654.9	968.3	432.4
47.5°	1359.6	769.0	272.2	167.6	183.9	167.6	263.8	744.5	1284.0	743.2	271.7
50°	1029.5	600.2	210.7	169.6	199.7	169.6	204.2	579.8	976.7	633.4	208.6
52.5°	762.5	501.6	172.1	186.0	240.1	189.4	167.3	488.2	723.9	510.9	162.8
55°	513.7	393.5	138.3	245.6	329.2	252.0	138.3	382.2	487.3	377.9	133.9
57.5°	325.7	292.6	140.0	315.7	375.8	321.7	142.3	282.1	312.6	283.4	122.9
60°	241.5	230.7	155.8	335.2	403.9	339.5	158.0	222.0	237.1	219.9	131.7
62.5°	199.3	181.7	187.4	363.0	419.6	353.5	191.4	173.3	207.2	166.0	145.8
65°	179.9	117.7	221.7	367.7	414.9	367.7	223.8	111.5	188.8	120.1	197.6
67.5°	162.4	87.4	214.2	365.1	417.5	366.0	208.9	83.3	155.8	81.1	201.9
70°	136.1	78.1	201.9	371.6	401.6	358.7	201.9	75.8	129.5	73.7	237.1
72.5°	113.3	74.2	187.9	343.1	356.0	330.2	189.7	73.8	113.7	66.4	223.1
75°	96.5	73.0	179.9	274.1	261.2	261.2	175.6	70.8	98.8	66.5	173.4
77.5°	72.4	64.7	149.3	178.9	169.0	169.0	146.7	62.5	68.9	58.6	140.9
80°	54.9	59.2	122.9	131.5	125.2	125.2	118.5	57.0	54.9	54.9	116.3
82.5°	42.6	50.4	94.8	96.4	91.8	90.1	92.2	49.9	42.6	46.1	90.0
85°	24.1	34.9	50.5	41.5	35.1	32.9	48.3	32.7	22.0	32.7	48.3
87.5°	8.8	16.1	9.7	8.6	8.4	8.6	9.7	16.1	8.8	14.4	11.4
90°	0.0	2.2	13.5	7.8	6.7	7.8	13.5	2.2	0.0	2.2	13.5
92.5°	12.6	50.7	182.1	60.4	43.5	60.4	182.1	50.7	12.6	50.7	182.1
95°	37.0	117.0	562.8	207.9	131.2	207.9	562.8	117.0	37.0	117.0	562.8
97.5°	71.5	148.9	887.0	587.0	357.4	587.0	887.0	148.9	71.5	148.9	887.0
100°	93.0	168.7	991.1	958.2	643.6	958.2	991.1	168.7	93.0	168.7	991.1
102.5°	117.2	190.2	969.6	1343.9	1071.3	1343.9	969.6	190.2	117.2	190.2	969.6
105°	157.0	220.6	885.8	1682.1	1598.7	1682.1	885.8	220.6	157.0	220.6	885.8
107.5°	194.6	255.3	805.0	1715.5	1812.0	1715.5	805.0	255.3	194.6	255.3	805.0
110°	219.8	277.8	764.7	1673.4	1848.8	1673.4	764.7	277.8	219.8	277.8	764.7



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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°	244.0	300.3	740.4	1602.7	1824.6	1602.7	740.4	300.3	244.0	300.3	740.4
115°	279.2	332.8	716.5	1482.4	1741.2	1482.4	716.5	332.8	279.2	332.8	716.5
117.5°	314.1	365.0	707.9	1369.8	1634.6	1369.8	707.9	365.0	314.1	365.0	707.9
120°	337.5	385.7	705.1	1304.0	1558.4	1304.0	705.1	385.7	337.5	385.7	705.1
122.5°	359.0	404.6	705.1	1246.2	1481.2	1246.2	705.1	404.6	359.0	404.6	705.1
125°	390.2	432.9	706.3	1170.7	1377.9	1170.7	706.3	432.9	390.2	432.9	706.3
127.5°	415.5	459.8	705.1	1113.7	1290.4	1113.7	705.1	459.8	415.5	459.8	705.1
130°	431.6	477.7	705.1	1081.1	1241.1	1081.1	705.1	477.7	431.6	477.7	705.1
132.5°	446.0	493.0	704.3	1051.2	1199.0	1051.2	704.3	493.0	446.0	493.0	704.3
135°	467.5	516.8	701.9	1009.7	1135.7	1009.7	701.9	516.8	467.5	516.8	701.9
137.5°	491.5	538.4	701.9	965.3	1082.1	965.3	701.9	538.4	491.5	538.4	701.9
140°	506.8	552.8	701.9	936.5	1047.1	936.5	701.9	552.8	506.8	552.8	701.9
142.5°	522.0	566.3	701.0	910.1	1006.7	910.1	701.0	566.3	522.0	566.3	701.0
145°	546.0	586.5	701.9	868.4	949.6	868.4	701.9	586.5	546.0	586.5	701.9
147.5°	570.0	604.4	703.2	834.1	896.5	834.1	703.2	604.4	570.0	604.4	703.2
150°	585.2	617.0	704.1	815.1	867.8	815.1	704.1	617.0	585.2	617.0	704.1
152.5°	599.6	627.8	704.9	798.7	841.7	798.7	704.9	627.8	599.6	627.8	704.9
155°	622.2	643.0	706.3	778.7	808.3	778.7	706.3	643.0	622.2	643.0	706.3
157.5°	642.0	658.9	707.6	764.0	784.6	764.0	707.6	658.9	642.0	658.9	707.6
160°	653.6	667.9	708.5	754.8	770.2	754.8	708.5	667.9	653.6	667.9	708.5
162.5°	665.3	676.1	709.4	746.8	759.5	746.8	709.4	676.1	665.3	676.1	709.4
165°	680.6	688.2	709.7	736.8	745.5	736.8	709.7	688.2	680.6	688.2	709.7
167.5°	693.5	697.4	711.0	729.0	732.8	729.0	711.0	697.4	693.5	697.4	711.0
170°	700.7	702.9	711.9	725.4	726.5	725.4	711.9	702.9	700.7	702.9	711.9
172.5°	705.1	706.5	711.9	721.8	722.0	721.8	711.9	706.5	705.1	706.5	711.9
175°	711.9	711.9	713.1	718.6	716.5	718.6	713.1	711.9	711.9	711.9	713.1
177.5°	715.1	714.2	713.3	715.9	714.2	715.9	713.3	714.2	715.1	714.2	713.3
180°	714.2	714.2	714.2	714.2	714.2	714.2	714.2	714.2	714.2	714.2	714.2



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2887.9	2900.0	2900.0	2892.9	2927.3	2894.7
5°	2858.5	2886.3	2873.4	2873.2	2916.3	2884.2
7.5°	2837.8	2863.9	2851.9	2849.4	2891.9	2866.2
10°	2816.5	2835.8	2827.2	2833.7	2872.6	2846.8
12.5°	2786.7	2809.5	2801.0	2810.8	2846.4	2825.8
15°	2735.3	2754.7	2758.9	2763.4	2804.6	2783.2
17.5°	2650.4	2659.9	2681.3	2711.6	2754.6	2730.5
20°	2583.7	2596.6	2609.5	2662.5	2712.4	2686.6
22.5°	2507.9	2503.6	2533.6	2595.7	2658.1	2635.6
25°	2303.2	2137.8	2320.3	2480.3	2563.6	2557.1
27.5°	1603.7	1391.6	1579.1	2289.4	2464.3	2477.2
30°	1262.0	1163.4	1259.9	2043.4	2391.0	2421.0
32.5°	1120.5	1052.7	1111.5	1555.4	2298.5	2356.0
35°	966.9	919.7	966.9	1163.4	2116.8	2249.9
37.5°	773.9	677.3	772.2	1005.3	1711.2	2135.2
40°	576.7	454.4	559.5	899.9	1367.5	2045.7
42.5°	384.2	292.8	363.6	708.5	1182.8	1926.3
45°	207.9	182.2	199.4	428.0	965.3	1716.4
47.5°	163.1	172.5	163.1	270.0	738.4	1359.6
50°	156.5	186.6	156.5	208.6	610.9	1029.5
52.5°	170.7	202.3	168.8	164.7	498.5	762.5
55°	193.4	298.5	195.6	133.9	365.5	513.7
57.5°	275.3	335.9	278.3	126.9	281.6	325.7
60°	282.8	362.1	280.7	133.9	217.8	241.5
62.5°	334.4	448.3	334.1	153.2	161.9	199.3
65°	429.0	471.9	433.3	195.3	115.7	179.9
67.5°	407.2	437.6	402.9	209.4	79.6	162.4
70°	400.0	423.6	395.7	239.2	73.9	136.1
72.5°	373.2	376.2	365.5	221.7	66.4	113.3
75°	289.3	270.0	278.6	190.9	66.5	96.5
77.5°	179.8	172.1	173.4	145.8	58.7	72.4
80°	136.0	131.7	129.6	122.9	54.9	54.9
82.5°	100.8	96.5	94.4	94.8	46.1	42.6
85°	45.9	41.8	39.6	54.9	32.7	24.1
87.5°	10.3	10.1	8.6	11.4	12.7	8.8
90°	7.8	6.7	7.8	13.5	2.2	0.0
92.5°	60.4	43.5	60.4	182.1	50.7	12.6
95°	207.9	131.2	207.9	562.8	117.0	37.0
97.5°	587.0	357.4	587.0	887.0	148.9	71.5
100°	958.2	643.6	958.2	991.1	168.7	93.0
102.5°	1343.9	1071.3	1343.9	969.6	190.2	117.2
105°	1682.1	1598.7	1682.1	885.8	220.6	157.0
107.5°	1715.5	1812.0	1715.5	805.0	255.3	194.6
110°	1673.4	1848.8	1673.4	764.7	277.8	219.8





TEST NUMBER: P855250

CATALOG NUMBER: SQ2-FA-100U-100D-835-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1602.7	1824.6	1602.7	740.4	300.3	244.0
115°	1482.4	1741.2	1482.4	716.5	332.8	279.2
117.5°	1369.8	1634.6	1369.8	707.9	365.0	314.1
120°	1304.0	1558.4	1304.0	705.1	385.7	337.5
122.5°	1246.2	1481.2	1246.2	705.1	404.6	359.0
125°	1170.7	1377.9	1170.7	706.3	432.9	390.2
127.5°	1113.7	1290.4	1113.7	705.1	459.8	415.5
130°	1081.1	1241.1	1081.1	705.1	477.7	431.6
132.5°	1051.2	1199.0	1051.2	704.3	493.0	446.0
135°	1009.7	1135.7	1009.7	701.9	516.8	467.5
137.5°	965.3	1082.1	965.3	701.9	538.4	491.5
140°	936.5	1047.1	936.5	701.9	552.8	506.8
142.5°	910.1	1006.7	910.1	701.0	566.3	522.0
145°	868.4	949.6	868.4	701.9	586.5	546.0
147.5°	834.1	896.5	834.1	703.2	604.4	570.0
150°	815.1	867.8	815.1	704.1	617.0	585.2
152.5°	798.7	841.7	798.7	704.9	627.8	599.6
155°	778.7	808.3	778.7	706.3	643.0	622.2
157.5°	764.0	784.6	764.0	707.6	658.9	642.0
160°	754.8	770.2	754.8	708.5	667.9	653.6
162.5°	746.8	759.5	746.8	709.4	676.1	665.3
165°	736.8	745.5	736.8	709.7	688.2	680.6
167.5°	729.0	732.8	729.0	711.0	697.4	693.5
170°	725.4	726.5	725.4	711.9	702.9	700.7
172.5°	721.8	722.0	721.8	711.9	706.5	705.1
175°	718.6	716.5	718.6	713.1	711.9	711.9
177.5°	715.9	714.2	715.9	713.3	714.2	715.1
180°	714.2	714.2	714.2	714.2	714.2	714.2

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TEST NUMBER: P855250

CATALOG NUMBER: SQ2-FA-100U-100D-835-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	13.19	13.94	14.18	14.92	16.22	12.04	12.80	13.03	13.78	15.08
	3H	13.88	14.56	14.88	15.55	16.87	18.19	18.86	19.19	19.86	21.18
	4H	14.29	14.93	15.30	15.92	17.25	19.46	20.10	20.47	21.10	22.42
	6H	14.64	15.23	15.66	16.23	17.57	20.07	20.65	21.09	21.66	22.99
	8H	14.76	15.31	15.78	16.33	17.66	20.19	20.74	21.21	21.76	23.10
	12H	14.82	15.35	15.85	16.37	17.72	20.23	20.76	21.26	21.77	23.12
4H	2H	13.57	14.21	14.59	15.21	16.53	12.57	13.21	13.59	14.20	15.53
	3H	14.57	15.10	15.59	16.12	17.46	18.89	19.42	19.91	20.45	21.78
	4H	15.12	15.61	16.15	16.63	17.99	20.34	20.82	21.37	21.84	23.20
	6H	15.60	16.01	16.64	17.06	18.42	21.07	21.49	22.11	22.53	23.89
	8H	15.77	16.16	16.81	17.19	18.56	21.24	21.63	22.28	22.66	24.03
	12H	15.88	16.23	16.94	17.28	18.66	21.29	21.65	22.35	22.70	24.07
8H	4H	16.22	16.61	17.26	17.64	19.02	20.46	20.85	21.50	21.88	23.25
	6H	16.83	17.15	17.89	18.22	19.59	21.33	21.65	22.40	22.73	24.10
	8H	17.06	17.34	18.13	18.41	19.79	21.58	21.86	22.65	22.93	24.31
	12H	17.23	17.48	18.30	18.53	19.96	21.70	21.95	22.77	23.00	24.43
12H	4H	16.36	16.71	17.42	17.76	19.14	20.41	20.76	21.47	21.81	23.19
	6H	17.10	17.38	18.17	18.45	19.83	21.34	21.62	22.41	22.69	24.07
	8H	17.40	17.64	18.47	18.70	20.13	21.62	21.87	22.69	22.92	24.35