

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P934250

Luminaire Tested: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

Issue Date: 12/17/2024

**Test Information**

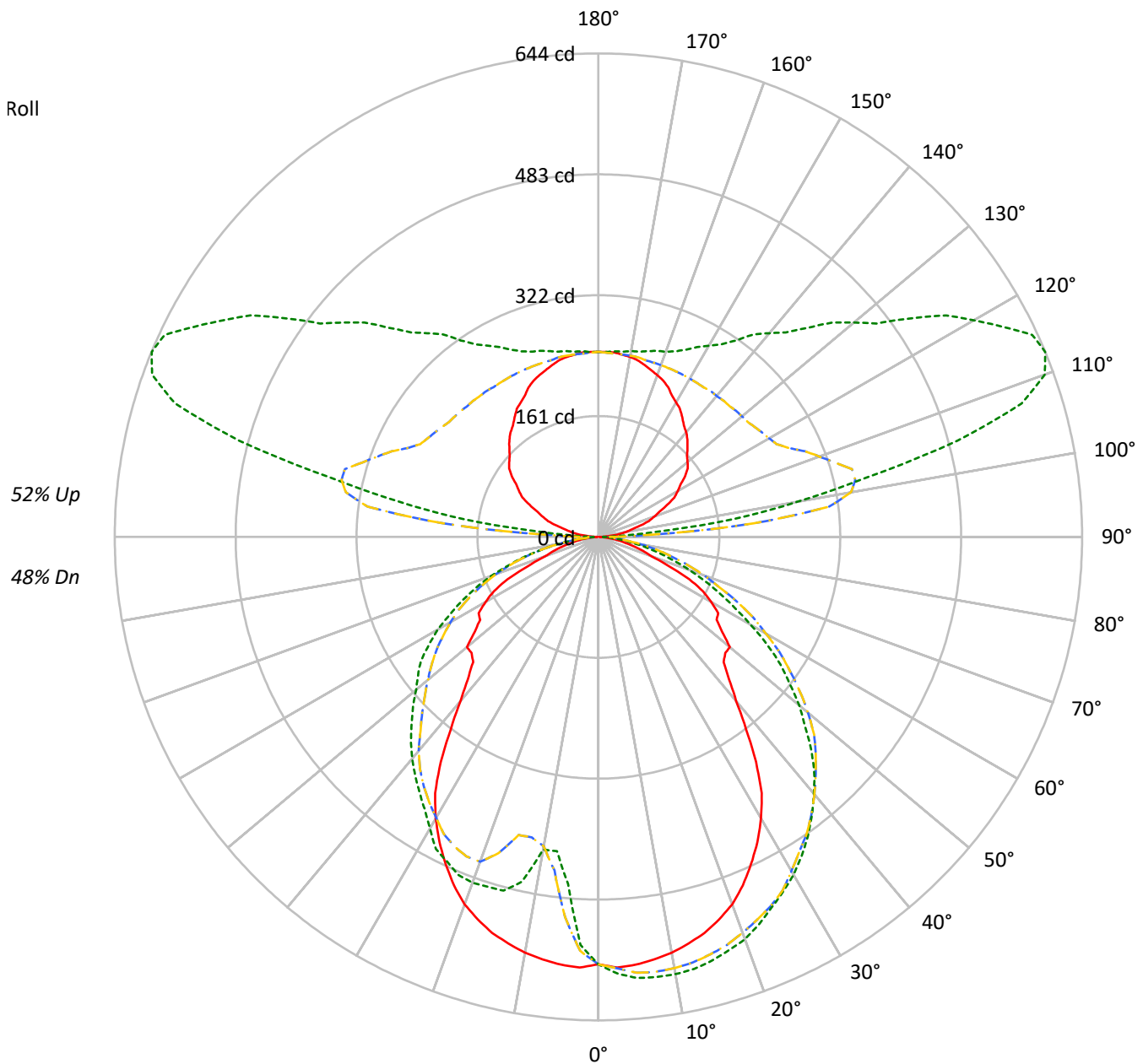
Test Method: LM-79-2019  
Report Number: P934250  
REPORT IS A COMBINATION OF REPORTS P933690 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Asymmetric Frosted Continuous I  
Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3075.5 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.26 / 1.36  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 4' x H: 0.1')  
CIE Type: General Diffuse  
  
Input Watts (W): 28.4  
Input Voltage (V): NR  
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: P934250  
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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - - - 90°-270°    - - - 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	82	82	82	68	68	68	54	54	54	48	48	48	48
1	97	93	89	86	89	86	83	80	72	70	68	60	58	56	48	47	46	41	41	41	41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34	34	34	34
3	81	71	64	58	74	66	60	55	56	51	47	46	43	40	38	35	33	29	29	29	29
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	33	31	28	25	25	25	25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	21	21	21	21
6	62	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19	19	19	19
7	58	45	38	32	53	42	35	30	36	30	26	30	26	23	25	22	19	17	17	17	17
8	54	41	34	28	49	38	31	27	33	27	23	28	23	20	23	20	17	15	15	15	15
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	21	18	16	13	13	13	13
10	47	34	27	22	43	32	26	21	28	22	19	23	19	16	20	16	14	12	12	12	12

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

	0°	90°	180°	270°
0°	5282	5282	5282	5282
5°	5315	5332	5315	4193
10°	5275	5252	5275	3755
15°	5210	5138	5210	4291
20°	5095	5004	5095	4300
25°	4867	4807	4867	4208
30°	4573	4644	4573	4009
35°	4071	4437	4071	3789
40°	3386	4195	3386	3623
45°	3019	3910	3019	3431
50°	3202	3571	3202	3239
55°	3002	3205	3002	3129
60°	3084	2721	3084	2866
65°	2782	2251	2782	2514
70°	1914	1793	1914	2109
75°	1659	1326	1659	1588
80°	1310	877	1310	955
85°	712	463	712	394

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 20°  
 Vertical Angle: 45°  
 Luminance: 4637 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	1.7
10°-20°	145.9	4.7
20°-30°	225.5	7.3
30°-40°	269.2	8.8
40°-50°	270.8	8.8
50°-60°	235.6	7.7
60°-70°	167.1	5.4
70°-80°	88.4	2.9
80°-90°	23.0	0.7
90°-100°	120.2	3.9
100°-110°	316.0	10.3
110°-120°	327.7	10.7
120°-130°	262.9	8.5
130°-140°	206.2	6.7
140°-150°	158.3	5.1
150°-160°	114.0	3.7
160°-170°	69.8	2.3
170°-180°	23.6	0.8
0°-30°	422.8	13.7
0°-40°	692.0	22.5
0°-60°	1198.4	39.0
0°-90°	1476.9	48.0
90°-120°	763.9	24.8
90°-150°	1391.3	45.2
90°-180°	1599.0	52.0
0°-180°	3075.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	569	569	569	569	569	
5°	572	590	572	464	572	54
15°	546	584	546	488	546	154
25°	481	545	481	477	481	221
35°	366	486	366	415	366	226
45°	236	401	236	352	236	189
55°	192	296	192	289	192	177
65°	134	178	134	199	134	128
75°	51	85	51	101	51	53
85°	9	22	9	18	9	12
90°	2	6	2	6	2	2
95°	16	73	16	73	16	18
105°	57	495	57	495	57	60
115°	101	637	101	637	101	100
125°	141	507	141	507	141	125
135°	168	394	168	394	168	130
145°	194	319	194	319	194	122
155°	220	275	220	275	220	101
165°	237	256	237	256	237	67
175°	247	248	247	248	247	23
180°	247	247	247	247	247	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	574.1	574.1	577.3	578.4	578.4	576.8	575.2	576.8	581.6	583.2	582.7
5°	571.9	576.2	582.2	583.2	584.3	583.8	582.7	583.8	589.2	590.2	590.8
7.5°	567.6	575.7	583.2	584.8	586.4	584.8	584.3	585.4	590.8	591.8	591.8
10°	562.3	573.5	582.2	583.2	584.8	583.2	583.2	585.4	590.8	591.8	592.4
12.5°	554.7	570.3	578.4	579.4	581.6	581.1	580.6	582.7	588.1	589.2	589.2
15°	546.0	564.3	571.9	573.0	576.8	575.7	575.7	577.8	583.8	585.4	584.8
17.5°	534.2	556.9	565.5	567.1	569.8	569.2	569.8	571.9	577.3	578.4	579.0
20°	520.7	546.6	556.9	558.5	561.1	561.1	561.1	563.9	569.2	571.4	571.4
22.5°	502.4	535.8	546.6	547.7	550.9	550.9	552.0	555.8	560.6	561.1	561.1
25°	480.9	524.0	533.1	536.4	539.6	541.2	542.8	545.0	546.6	546.0	546.6
27.5°	458.3	508.9	520.7	522.9	527.2	528.9	531.0	531.5	532.1	533.7	532.6
30°	433.0	487.9	505.6	507.8	514.8	515.9	513.8	514.8	517.5	518.6	519.7
32.5°	404.5	456.7	490.1	494.9	501.4	498.2	497.6	499.2	503.6	503.6	504.6
35°	365.7	432.4	475.5	479.9	484.7	480.9	483.1	483.6	486.3	487.9	487.3
37.5°	323.1	411.5	460.4	463.7	467.4	462.6	465.8	467.4	469.6	468.6	468.6
40°	285.4	378.6	442.7	444.9	448.1	444.3	447.5	448.6	449.7	448.6	448.1
42.5°	257.4	342.5	423.8	426.6	424.4	427.0	428.2	430.3	428.6	426.6	426.6
45°	235.8	332.8	403.3	406.6	403.3	407.7	409.3	409.3	404.5	403.3	402.8
47.5°	228.9	313.4	382.9	382.9	381.3	386.6	389.4	385.6	380.8	379.1	379.1
50°	228.4	291.9	354.9	352.8	360.3	366.7	364.1	360.3	356.5	350.6	350.6
52.5°	207.3	265.5	318.8	326.9	338.7	342.5	338.2	334.4	327.9	325.3	323.1
55°	192.2	238.0	285.9	302.1	314.5	319.4	311.2	307.5	297.8	296.2	295.1
57.5°	189.0	198.2	255.8	276.2	291.3	290.8	285.9	279.0	270.9	269.2	268.8
60°	173.4	143.3	223.5	247.7	263.3	261.7	257.4	250.9	243.4	242.3	241.3
62.5°	157.2	103.9	186.9	214.3	236.4	235.8	232.1	222.4	217.1	214.3	212.2
65°	133.5	87.2	133.1	178.3	210.1	211.1	203.0	196.0	190.1	186.9	186.3
67.5°	101.8	71.1	89.9	148.6	184.7	183.6	173.4	170.2	162.6	161.0	157.8
70°	75.4	47.4	62.5	120.6	160.0	157.2	149.2	145.4	138.4	134.7	132.5
72.5°	62.5	38.2	45.8	93.7	134.7	131.4	124.4	120.1	114.2	111.0	108.8
75°	50.6	40.4	35.0	69.5	109.3	107.2	100.7	96.4	91.5	87.2	87.8
77.5°	37.2	37.7	28.0	51.2	86.7	83.5	79.7	74.4	72.2	67.9	67.9
80°	28.0	29.6	21.0	35.0	62.5	62.5	59.3	55.5	51.7	49.5	49.5
82.5°	18.9	18.9	15.6	22.1	42.6	41.0	38.8	37.7	35.6	34.4	34.4
85°	8.6	10.8	9.7	13.5	23.1	24.3	24.3	23.1	22.6	21.5	22.1
87.5°	2.7	4.8	5.9	7.5	11.9	12.4	12.9	12.9	12.9	13.5	13.5
90°	1.7	3.0	4.3	4.7	7.3	10.8	12.6	11.2	8.4	6.3	6.3
92.5°	6.6	17.8	29.1	32.0	44.9	62.2	70.8	62.1	44.6	31.5	30.2
95°	15.9	36.5	57.1	62.2	110.5	174.8	207.0	184.7	140.1	106.7	102.9
97.5°	27.5	45.6	63.8	68.3	148.8	256.2	309.8	295.7	267.6	246.4	239.2
100°	36.4	52.8	69.4	73.5	162.8	281.9	341.4	342.5	344.6	346.1	337.5
102.5°	44.0	59.4	74.8	78.6	169.2	290.0	350.3	368.3	404.2	431.1	423.7
105°	56.9	69.9	82.9	86.2	173.9	290.9	349.4	389.6	470.1	530.5	526.5
107.5°	70.2	82.3	94.4	97.5	174.8	278.0	329.6	385.7	497.9	582.1	583.1
110°	79.1	90.0	101.0	103.7	173.5	266.5	313.0	375.7	501.2	595.3	599.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	87.8	98.3	108.7	111.4	173.5	256.5	297.9	362.2	490.6	586.9	593.3
115°	101.1	110.7	120.4	122.8	175.1	244.9	279.8	341.7	465.4	558.2	567.0
117.5°	114.2	122.9	131.7	133.9	178.4	237.8	267.5	323.3	434.9	518.7	528.4
120°	121.8	130.1	138.3	140.4	181.1	235.4	262.5	313.5	415.6	492.1	501.6
122.5°	129.3	137.6	145.9	148.0	184.9	234.1	258.6	304.6	396.5	465.4	474.7
125°	140.7	148.2	155.8	157.7	190.0	233.0	254.6	293.6	371.6	430.2	438.8
127.5°	149.9	157.6	165.3	167.2	195.1	232.5	251.1	284.6	351.6	401.8	409.0
130°	154.9	163.2	171.4	173.4	198.9	232.8	249.7	279.6	339.3	384.0	390.7
132.5°	160.0	168.3	176.5	178.6	202.0	233.0	248.6	275.3	328.7	368.7	374.8
135°	167.7	175.1	182.7	184.5	205.2	232.8	246.6	268.9	313.7	347.2	352.4
137.5°	175.5	182.8	190.3	192.2	210.2	234.2	246.3	265.2	303.0	331.3	335.6
140°	181.9	188.7	195.6	197.3	213.2	234.5	245.1	261.5	294.1	318.6	322.6
142.5°	186.9	193.2	199.5	201.1	215.8	235.3	245.1	259.4	288.1	309.6	313.0
145°	194.5	199.9	205.5	206.9	219.1	235.4	243.5	255.2	278.6	296.2	298.8
147.5°	202.1	207.5	212.8	214.2	224.0	237.0	243.5	252.7	271.2	285.0	287.2
150°	207.0	211.8	216.7	217.9	226.4	237.8	243.5	251.3	266.8	278.6	280.3
152.5°	212.2	215.8	219.5	220.4	228.1	238.3	243.5	250.1	263.5	273.4	274.7
155°	219.8	222.5	225.2	225.9	231.7	239.5	243.5	248.8	259.4	267.3	268.2
157.5°	225.4	228.1	230.7	231.3	235.4	240.7	243.5	247.6	255.8	262.0	262.7
160°	229.3	231.3	233.4	233.8	237.0	241.3	243.5	247.0	254.1	259.4	259.7
162.5°	233.0	234.6	236.1	236.5	238.8	241.9	243.5	246.4	252.4	256.9	257.2
165°	237.2	238.6	240.0	240.3	241.4	242.7	243.5	245.6	249.8	253.0	253.3
167.5°	241.0	241.6	242.3	242.4	243.3	244.5	245.1	246.5	249.3	251.4	251.6
170°	243.5	244.1	244.8	244.9	245.0	245.1	245.1	246.5	249.3	251.4	251.4
172.5°	244.8	244.9	245.1	245.1	245.1	245.1	245.1	246.2	248.4	250.1	249.9
175°	246.6	246.6	246.6	246.6	246.1	245.4	245.1	245.8	247.2	248.3	248.3
177.5°	246.6	246.6	246.6	246.6	246.2	245.7	245.5	246.0	247.2	248.0	247.8
180°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	583.8	582.2	583.8	582.7	583.2	581.6	576.8	575.2	576.8	578.4	578.4
5°	590.8	589.7	590.8	590.8	590.2	589.2	583.8	582.7	583.8	584.3	583.2
7.5°	592.9	591.3	592.9	591.8	591.8	590.8	585.4	584.3	584.8	586.4	584.8
10°	592.9	591.3	592.9	592.4	591.8	590.8	585.4	583.2	583.2	584.8	583.2
12.5°	590.2	589.2	590.2	589.2	589.2	588.1	582.7	580.6	581.1	581.6	579.4
15°	585.9	584.3	585.9	584.8	585.4	583.8	577.8	575.7	575.7	576.8	573.0
17.5°	579.4	577.3	579.4	579.0	578.4	577.3	571.9	569.8	569.2	569.8	567.1
20°	571.9	570.3	571.9	571.4	571.4	569.2	563.9	561.1	561.1	561.1	558.5
22.5°	560.1	558.5	560.1	561.1	561.1	560.6	555.8	552.0	550.9	550.9	547.7
25°	546.6	545.0	546.6	546.6	546.0	546.6	545.0	542.8	541.2	539.6	536.4
27.5°	533.7	532.6	533.7	532.6	533.7	532.1	531.5	531.0	528.9	527.2	522.9
30°	520.7	519.7	520.7	519.7	518.6	517.5	514.8	513.8	515.9	514.8	507.8
32.5°	504.6	503.6	504.6	504.6	503.6	503.6	499.2	497.6	498.2	501.4	494.9
35°	487.9	486.3	487.9	487.3	487.9	486.3	483.6	483.1	480.9	484.7	479.9
37.5°	468.6	466.9	468.6	468.6	468.6	469.6	467.4	465.8	462.6	467.4	463.7
40°	448.6	446.5	448.6	448.1	448.6	449.7	448.6	447.5	444.3	448.1	444.9
42.5°	426.0	425.4	426.0	426.6	426.6	428.6	430.3	428.2	427.0	424.4	426.6
45°	401.7	400.7	401.7	402.8	403.3	404.5	409.3	409.3	407.7	403.3	406.6
47.5°	375.9	373.2	375.9	379.1	379.1	380.8	385.6	389.4	386.6	381.3	382.9
50°	348.4	349.0	348.4	350.6	350.6	356.5	360.3	364.1	366.7	360.3	352.8
52.5°	321.5	321.0	321.5	323.1	325.3	327.9	334.4	338.2	342.5	338.7	326.9
55°	294.5	295.7	294.5	295.1	296.2	297.8	307.5	311.2	319.4	314.5	302.1
57.5°	267.6	266.0	267.6	268.8	269.2	270.9	279.0	285.9	290.8	291.3	276.2
60°	236.4	234.2	236.4	241.3	242.3	243.4	250.9	257.4	261.7	263.3	247.7
62.5°	208.9	205.2	208.9	212.2	214.3	217.1	222.4	232.1	235.8	236.4	214.3
65°	179.9	178.3	179.9	186.3	186.9	190.1	196.0	203.0	211.1	210.1	178.3
67.5°	153.5	153.5	153.5	157.8	161.0	162.6	170.2	173.4	183.6	184.7	148.6
70°	129.3	128.7	129.3	132.5	134.7	138.4	145.4	149.2	157.2	160.0	120.6
72.5°	106.1	105.5	106.1	108.8	111.0	114.2	120.1	124.4	131.4	134.7	93.7
75°	85.6	84.6	85.6	87.8	87.2	91.5	96.4	100.7	107.2	109.3	69.5
77.5°	65.7	65.7	65.7	67.9	67.9	72.2	74.4	79.7	83.5	86.7	51.2
80°	49.0	48.5	49.0	49.5	49.5	51.7	55.5	59.3	62.5	62.5	35.0
82.5°	34.4	33.4	34.4	34.4	34.4	35.6	37.7	38.8	41.0	42.6	22.1
85°	21.5	21.5	21.5	22.1	21.5	22.6	23.1	24.3	24.3	23.1	13.5
87.5°	14.0	13.5	14.0	13.5	13.5	12.9	12.9	12.9	12.4	11.9	7.5
90°	6.3	6.3	6.3	6.3	6.3	8.4	11.2	12.6	10.8	7.3	4.7
92.5°	25.2	20.2	25.2	30.2	31.5	44.6	62.1	70.8	62.2	44.9	32.0
95°	87.8	72.7	87.8	102.9	106.7	140.1	184.7	207.0	174.8	110.5	62.2
97.5°	210.4	181.6	210.4	239.2	246.4	267.6	295.7	309.8	256.2	148.8	68.3
100°	303.1	268.8	303.1	337.5	346.1	344.6	342.5	341.4	281.9	162.8	73.5
102.5°	394.4	365.0	394.4	423.7	431.1	404.2	368.3	350.3	290.0	169.2	78.6
105°	510.7	494.9	510.7	526.5	530.5	470.1	389.6	349.4	290.9	173.9	86.2
107.5°	586.8	590.7	586.8	583.1	582.1	497.9	385.7	329.6	278.0	174.8	97.5
110°	615.9	632.4	615.9	599.4	595.3	501.2	375.7	313.0	266.5	173.5	103.7





TEST NUMBER: P934250

CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
112.5°	618.6	643.8	618.6	593.3	586.9	490.6	362.2	297.9	256.5	173.5	111.4
115°	602.1	637.2	602.1	567.0	558.2	465.4	341.7	279.8	244.9	175.1	122.8
117.5°	567.3	606.3	567.3	528.4	518.7	434.9	323.3	267.5	237.8	178.4	133.9
120°	539.3	577.1	539.3	501.6	492.1	415.6	313.5	262.5	235.4	181.1	140.4
122.5°	512.1	549.3	512.1	474.7	465.4	396.5	304.6	258.6	234.1	184.9	148.0
125°	473.0	507.4	473.0	438.8	430.2	371.6	293.6	254.6	233.0	190.0	157.7
127.5°	438.0	467.0	438.0	409.0	401.8	351.6	284.6	251.1	232.5	195.1	167.2
130°	417.5	444.2	417.5	390.7	384.0	339.3	279.6	249.7	232.8	198.9	173.4
132.5°	398.7	422.7	398.7	374.8	368.7	328.7	275.3	248.6	233.0	202.0	178.6
135°	373.1	393.7	373.1	352.4	347.2	313.7	268.9	246.6	232.8	205.2	184.5
137.5°	352.4	369.4	352.4	335.6	331.3	303.0	265.2	246.3	234.2	210.2	192.2
140°	338.4	354.2	338.4	322.6	318.6	294.1	261.5	245.1	234.5	213.2	197.3
142.5°	326.7	340.3	326.7	313.0	309.6	288.1	259.4	245.1	235.3	215.8	201.1
145°	309.2	319.4	309.2	298.8	296.2	278.6	255.2	243.5	235.4	219.1	206.9
147.5°	295.7	304.2	295.7	287.2	285.0	271.2	252.7	243.5	237.0	224.0	214.2
150°	287.2	294.1	287.2	280.3	278.6	266.8	251.3	243.5	237.8	226.4	217.9
152.5°	279.9	285.1	279.9	274.7	273.4	263.5	250.1	243.5	238.3	228.1	220.4
155°	271.7	275.1	271.7	268.2	267.3	259.4	248.8	243.5	239.5	231.7	225.9
157.5°	265.1	267.5	265.1	262.7	262.0	255.8	247.6	243.5	240.7	235.4	231.3
160°	261.1	262.5	261.1	259.7	259.4	254.1	247.0	243.5	241.3	237.0	233.8
162.5°	258.6	259.9	258.6	257.2	256.9	252.4	246.4	243.5	241.9	238.8	236.5
165°	254.8	256.2	254.8	253.3	253.0	249.8	245.6	243.5	242.7	241.4	240.3
167.5°	252.1	252.7	252.1	251.6	251.4	249.3	246.5	245.1	244.5	243.3	242.4
170°	251.4	251.4	251.4	251.4	251.4	249.3	246.5	245.1	245.1	245.0	244.9
172.5°	249.4	248.9	249.4	249.9	250.1	248.4	246.2	245.1	245.1	245.1	245.1
175°	248.3	248.3	248.3	248.3	248.3	247.2	245.8	245.1	245.4	246.1	246.6
177.5°	247.2	246.6	247.2	247.8	248.0	247.2	246.0	245.5	245.7	246.2	246.6
180°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6



TEST NUMBER: P934250

CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
0°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	577.3	574.1	574.1	568.7	566.5	564.9	562.3	554.2	552.0	549.8	553.1
5°	582.2	576.2	571.9	562.3	554.2	550.9	540.7	521.3	508.4	498.7	493.3
7.5°	583.2	575.7	567.6	552.5	533.1	524.5	493.3	457.8	448.1	439.5	434.0
10°	582.2	573.5	562.3	539.6	493.8	478.7	447.5	424.4	418.4	416.8	418.4
12.5°	578.4	570.3	554.7	517.0	452.9	442.7	424.4	410.9	409.9	412.5	427.0
15°	571.9	564.3	546.0	486.9	430.3	422.8	409.9	405.0	410.9	429.8	473.4
17.5°	565.5	556.9	534.2	457.2	413.1	407.7	398.5	408.2	441.6	466.9	481.5
20°	556.9	546.6	520.7	435.7	400.7	395.8	391.5	435.1	460.4	469.6	477.7
22.5°	546.6	535.8	502.4	420.6	387.8	384.0	386.6	450.2	460.4	466.9	473.9
25°	533.1	524.0	480.9	408.7	377.5	373.2	383.4	448.6	454.5	456.1	470.2
27.5°	520.7	508.9	458.3	398.0	365.1	363.5	386.2	441.6	445.9	447.5	462.6
30°	505.6	487.9	433.0	386.6	352.2	351.6	386.6	433.0	431.9	436.2	451.3
32.5°	490.1	456.7	404.5	372.7	339.8	339.3	382.9	420.0	419.0	424.9	436.2
35°	475.5	432.4	365.7	356.5	324.2	324.7	373.7	405.0	405.5	410.9	417.9
37.5°	460.4	411.5	323.1	338.7	309.2	309.2	361.4	391.0	389.9	391.5	401.2
40°	442.7	378.6	285.4	315.6	295.1	293.5	346.3	375.9	372.1	371.6	385.0
42.5°	423.8	342.5	257.4	284.9	279.0	276.8	327.9	357.6	350.6	352.2	369.5
45°	403.3	332.8	235.8	240.7	262.3	260.7	308.0	336.6	331.7	336.1	353.8
47.5°	382.9	313.4	228.9	199.8	244.5	244.0	285.9	316.1	313.4	317.7	336.6
50°	354.9	291.9	228.4	171.3	224.6	226.7	259.6	296.2	296.2	300.0	319.9
52.5°	318.8	265.5	207.3	155.1	201.4	207.9	236.4	279.0	280.0	283.8	301.6
55°	285.9	238.0	192.2	142.7	173.9	188.0	213.8	261.2	263.3	267.1	283.3
57.5°	255.8	198.2	189.0	128.2	148.6	162.1	193.8	244.0	245.0	248.3	263.9
60°	223.5	143.3	173.4	112.6	126.6	136.8	175.5	223.5	227.2	229.4	242.9
62.5°	186.9	103.9	157.2	101.8	115.8	118.0	160.5	204.1	208.9	210.5	218.7
65°	133.1	87.2	133.5	92.7	104.5	105.0	144.3	184.2	188.5	191.2	197.1
67.5°	89.9	71.1	101.8	84.0	95.9	96.4	128.7	161.0	166.9	169.1	172.9
70°	62.5	47.4	75.4	74.8	86.2	87.2	112.0	140.0	145.4	147.0	149.2
72.5°	45.8	38.2	62.5	67.3	76.0	77.0	94.8	116.4	121.7	123.3	124.4
75°	35.0	40.4	50.6	58.7	64.6	65.1	77.6	94.8	98.5	99.7	100.1
77.5°	28.0	37.7	37.2	47.4	52.8	51.7	60.9	73.2	76.4	76.4	76.4
80°	21.0	29.6	28.0	34.0	38.8	37.7	43.6	52.3	53.3	54.4	53.9
82.5°	15.6	18.9	18.9	21.5	25.9	24.8	29.1	34.0	34.0	34.0	35.0
85°	9.7	10.8	8.6	11.3	14.5	14.0	16.1	18.3	18.9	18.9	17.7
87.5°	5.9	4.8	2.7	4.3	6.4	6.4	7.5	8.1	7.5	7.5	7.5
90°	4.3	3.0	1.7	3.0	4.3	4.7	7.3	10.8	12.6	11.2	8.4
92.5°	29.1	17.8	6.6	17.8	29.1	32.0	44.9	62.2	70.8	62.1	44.6
95°	57.1	36.5	15.9	36.5	57.1	62.2	110.5	174.8	207.0	184.7	140.1
97.5°	63.8	45.6	27.5	45.6	63.8	68.3	148.8	256.2	309.8	295.7	267.6
100°	69.4	52.8	36.4	52.8	69.4	73.5	162.8	281.9	341.4	342.5	344.6
102.5°	74.8	59.4	44.0	59.4	74.8	78.6	169.2	290.0	350.3	368.3	404.2
105°	82.9	69.9	56.9	69.9	82.9	86.2	173.9	290.9	349.4	389.6	470.1
107.5°	94.4	82.3	70.2	82.3	94.4	97.5	174.8	278.0	329.6	385.7	497.9
110°	101.0	90.0	79.1	90.0	101.0	103.7	173.5	266.5	313.0	375.7	501.2



TEST NUMBER: P934250

CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
112.5°	108.7	98.3	87.8	98.3	108.7	111.4	173.5	256.5	297.9	362.2	490.6
115°	120.4	110.7	101.1	110.7	120.4	122.8	175.1	244.9	279.8	341.7	465.4
117.5°	131.7	122.9	114.2	122.9	131.7	133.9	178.4	237.8	267.5	323.3	434.9
120°	138.3	130.1	121.8	130.1	138.3	140.4	181.1	235.4	262.5	313.5	415.6
122.5°	145.9	137.6	129.3	137.6	145.9	148.0	184.9	234.1	258.6	304.6	396.5
125°	155.8	148.2	140.7	148.2	155.8	157.7	190.0	233.0	254.6	293.6	371.6
127.5°	165.3	157.6	149.9	157.6	165.3	167.2	195.1	232.5	251.1	284.6	351.6
130°	171.4	163.2	154.9	163.2	171.4	173.4	198.9	232.8	249.7	279.6	339.3
132.5°	176.5	168.3	160.0	168.3	176.5	178.6	202.0	233.0	248.6	275.3	328.7
135°	182.7	175.1	167.7	175.1	182.7	184.5	205.2	232.8	246.6	268.9	313.7
137.5°	190.3	182.8	175.5	182.8	190.3	192.2	210.2	234.2	246.3	265.2	303.0
140°	195.6	188.7	181.9	188.7	195.6	197.3	213.2	234.5	245.1	261.5	294.1
142.5°	199.5	193.2	186.9	193.2	199.5	201.1	215.8	235.3	245.1	259.4	288.1
145°	205.5	199.9	194.5	199.9	205.5	206.9	219.1	235.4	243.5	255.2	278.6
147.5°	212.8	207.5	202.1	207.5	212.8	214.2	224.0	237.0	243.5	252.7	271.2
150°	216.7	211.8	207.0	211.8	216.7	217.9	226.4	237.8	243.5	251.3	266.8
152.5°	219.5	215.8	212.2	215.8	219.5	220.4	228.1	238.3	243.5	250.1	263.5
155°	225.2	222.5	219.8	222.5	225.2	225.9	231.7	239.5	243.5	248.8	259.4
157.5°	230.7	228.1	225.4	228.1	230.7	231.3	235.4	240.7	243.5	247.6	255.8
160°	233.4	231.3	229.3	231.3	233.4	233.8	237.0	241.3	243.5	247.0	254.1
162.5°	236.1	234.6	233.0	234.6	236.1	236.5	238.8	241.9	243.5	246.4	252.4
165°	240.0	238.6	237.2	238.6	240.0	240.3	241.4	242.7	243.5	245.6	249.8
167.5°	242.3	241.6	241.0	241.6	242.3	242.4	243.3	244.5	245.1	246.5	249.3
170°	244.8	244.1	243.5	244.1	244.8	244.9	245.0	245.1	245.1	246.5	249.3
172.5°	245.1	244.9	244.8	244.9	245.1	245.1	245.1	245.1	245.1	246.2	248.4
175°	246.6	246.6	246.6	246.6	246.6	246.6	246.1	245.4	245.1	245.8	247.2
177.5°	246.6	246.6	246.6	246.6	246.6	246.6	246.2	245.7	245.5	246.0	247.2
180°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6



TEST NUMBER: P934250  
 CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
0°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	549.3	547.7	549.8	544.0	549.8	547.7	549.3	553.1	549.8	552.0	554.2
5°	482.0	479.3	470.7	463.7	470.7	479.3	482.0	493.3	498.7	508.4	521.3
7.5°	430.8	428.6	426.6	422.2	426.6	428.6	430.8	434.0	439.5	448.1	457.8
10°	419.5	420.0	423.3	422.8	423.3	420.0	419.5	418.4	416.8	418.4	424.4
12.5°	448.6	453.5	471.2	470.2	471.2	453.5	448.6	427.0	412.5	409.9	410.9
15°	482.0	483.6	487.3	487.9	487.3	483.6	482.0	473.4	429.8	410.9	405.0
17.5°	485.3	485.7	488.5	488.5	488.5	485.7	485.3	481.5	466.9	441.6	408.2
20°	482.5	483.6	489.0	490.1	489.0	483.6	482.5	477.7	469.6	460.4	435.1
22.5°	481.5	483.6	487.9	487.3	487.9	483.6	481.5	473.9	466.9	460.4	450.2
25°	476.1	476.1	476.6	477.1	476.6	476.1	476.1	470.2	456.1	454.5	448.6
27.5°	464.8	465.8	469.0	468.6	469.0	465.8	464.8	462.6	447.5	445.9	441.6
30°	454.5	453.5	450.7	448.6	450.7	453.5	454.5	451.3	436.2	431.9	433.0
32.5°	437.3	434.6	431.9	430.3	431.9	434.6	437.3	436.2	424.9	419.0	420.0
35°	416.8	417.4	416.8	415.2	416.8	417.4	416.8	417.9	410.9	405.5	405.0
37.5°	402.3	403.3	402.8	400.7	402.8	403.3	402.3	401.2	391.5	389.9	391.0
40°	387.2	387.8	387.2	385.6	387.2	387.8	387.2	385.0	371.6	372.1	375.9
42.5°	372.7	372.1	370.5	369.5	370.5	372.1	372.7	369.5	352.2	350.6	357.6
45°	356.0	356.5	353.2	351.6	353.2	356.5	356.0	353.8	336.1	331.7	336.6
47.5°	339.3	339.3	336.6	334.9	336.6	339.3	339.3	336.6	317.7	313.4	316.1
50°	321.5	321.0	317.2	316.6	317.2	321.0	321.5	319.9	300.0	296.2	296.2
52.5°	301.0	301.0	301.6	302.7	301.6	301.0	301.0	301.6	283.8	280.0	279.0
55°	283.3	283.8	287.6	288.7	287.6	283.8	283.3	283.3	267.1	263.3	261.2
57.5°	265.0	265.0	267.6	267.6	267.6	265.0	265.0	263.9	248.3	245.0	244.0
60°	244.0	245.0	247.2	246.7	247.2	245.0	244.0	242.9	229.4	227.2	223.5
62.5°	221.9	223.0	223.5	222.4	223.5	223.0	221.9	218.7	210.5	208.9	204.1
65°	198.7	199.8	200.3	199.2	200.3	199.8	198.7	197.1	191.2	188.5	184.2
67.5°	175.1	174.5	173.9	176.1	173.9	174.5	175.1	172.9	169.1	166.9	161.0
70°	150.8	150.8	150.2	151.4	150.2	150.8	150.8	149.2	147.0	145.4	140.0
72.5°	124.9	124.4	126.6	124.9	126.6	124.4	124.9	124.4	123.3	121.7	116.4
75°	99.7	100.7	99.7	101.3	99.7	100.7	99.7	100.1	99.7	98.5	94.8
77.5°	76.0	77.0	76.0	76.0	76.0	77.0	76.0	76.4	76.4	76.4	73.2
80°	53.9	53.3	53.3	52.8	53.3	53.3	53.9	53.9	54.4	53.3	52.3
82.5°	34.4	34.0	34.0	35.0	34.0	34.0	34.4	35.0	34.0	34.0	34.0
85°	18.9	19.4	18.3	18.3	18.3	19.4	18.9	17.7	18.9	18.9	18.3
87.5°	7.0	6.4	6.4	6.4	6.4	6.4	7.0	7.5	7.5	7.5	8.1
90°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	8.4	11.2	12.6	10.8
92.5°	31.5	30.2	25.2	20.2	25.2	30.2	31.5	44.6	62.1	70.8	62.2
95°	106.7	102.9	87.8	72.7	87.8	102.9	106.7	140.1	184.7	207.0	174.8
97.5°	246.4	239.2	210.4	181.6	210.4	239.2	246.4	267.6	295.7	309.8	256.2
100°	346.1	337.5	303.1	268.8	303.1	337.5	346.1	344.6	342.5	341.4	281.9
102.5°	431.1	423.7	394.4	365.0	394.4	423.7	431.1	404.2	368.3	350.3	290.0
105°	530.5	526.5	510.7	494.9	510.7	526.5	530.5	470.1	389.6	349.4	290.9
107.5°	582.1	583.1	586.8	590.7	586.8	583.1	582.1	497.9	385.7	329.6	278.0
110°	595.3	599.4	615.9	632.4	615.9	599.4	595.3	501.2	375.7	313.0	266.5



TEST NUMBER: P934250

CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
112.5°	586.9	593.3	618.6	643.8	618.6	593.3	586.9	490.6	362.2	297.9	256.5
115°	558.2	567.0	602.1	637.2	602.1	567.0	558.2	465.4	341.7	279.8	244.9
117.5°	518.7	528.4	567.3	606.3	567.3	528.4	518.7	434.9	323.3	267.5	237.8
120°	492.1	501.6	539.3	577.1	539.3	501.6	492.1	415.6	313.5	262.5	235.4
122.5°	465.4	474.7	512.1	549.3	512.1	474.7	465.4	396.5	304.6	258.6	234.1
125°	430.2	438.8	473.0	507.4	473.0	438.8	430.2	371.6	293.6	254.6	233.0
127.5°	401.8	409.0	438.0	467.0	438.0	409.0	401.8	351.6	284.6	251.1	232.5
130°	384.0	390.7	417.5	444.2	417.5	390.7	384.0	339.3	279.6	249.7	232.8
132.5°	368.7	374.8	398.7	422.7	398.7	374.8	368.7	328.7	275.3	248.6	233.0
135°	347.2	352.4	373.1	393.7	373.1	352.4	347.2	313.7	268.9	246.6	232.8
137.5°	331.3	335.6	352.4	369.4	352.4	335.6	331.3	303.0	265.2	246.3	234.2
140°	318.6	322.6	338.4	354.2	338.4	322.6	318.6	294.1	261.5	245.1	234.5
142.5°	309.6	313.0	326.7	340.3	326.7	313.0	309.6	288.1	259.4	245.1	235.3
145°	296.2	298.8	309.2	319.4	309.2	298.8	296.2	278.6	255.2	243.5	235.4
147.5°	285.0	287.2	295.7	304.2	295.7	287.2	285.0	271.2	252.7	243.5	237.0
150°	278.6	280.3	287.2	294.1	287.2	280.3	278.6	266.8	251.3	243.5	237.8
152.5°	273.4	274.7	279.9	285.1	279.9	274.7	273.4	263.5	250.1	243.5	238.3
155°	267.3	268.2	271.7	275.1	271.7	268.2	267.3	259.4	248.8	243.5	239.5
157.5°	262.0	262.7	265.1	267.5	265.1	262.7	262.0	255.8	247.6	243.5	240.7
160°	259.4	259.7	261.1	262.5	261.1	259.7	259.4	254.1	247.0	243.5	241.3
162.5°	256.9	257.2	258.6	259.9	258.6	257.2	256.9	252.4	246.4	243.5	241.9
165°	253.0	253.3	254.8	256.2	254.8	253.3	253.0	249.8	245.6	243.5	242.7
167.5°	251.4	251.6	252.1	252.7	252.1	251.6	251.4	249.3	246.5	245.1	244.5
170°	251.4	251.4	251.4	251.4	251.4	251.4	251.4	249.3	246.5	245.1	245.1
172.5°	250.1	249.9	249.4	248.9	249.4	249.9	250.1	248.4	246.2	245.1	245.1
175°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	247.2	245.8	245.1	245.4
177.5°	248.0	247.8	247.2	246.6	247.2	247.8	248.0	247.2	246.0	245.5	245.7
180°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6



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**CANDELA DISTRIBUTION (continued):**

	330°	337.5°	340°	350°	360°
0°	569.2	569.2	569.2	569.2	569.2
2.5°	562.3	564.9	566.5	568.7	574.1
5°	540.7	550.9	554.2	562.3	571.9
7.5°	493.3	524.5	533.1	552.5	567.6
10°	447.5	478.7	493.8	539.6	562.3
12.5°	424.4	442.7	452.9	517.0	554.7
15°	409.9	422.8	430.3	486.9	546.0
17.5°	398.5	407.7	413.1	457.2	534.2
20°	391.5	395.8	400.7	435.7	520.7
22.5°	386.6	384.0	387.8	420.6	502.4
25°	383.4	373.2	377.5	408.7	480.9
27.5°	386.2	363.5	365.1	398.0	458.3
30°	386.6	351.6	352.2	386.6	433.0
32.5°	382.9	339.3	339.8	372.7	404.5
35°	373.7	324.7	324.2	356.5	365.7
37.5°	361.4	309.2	309.2	338.7	323.1
40°	346.3	293.5	295.1	315.6	285.4
42.5°	327.9	276.8	279.0	284.9	257.4
45°	308.0	260.7	262.3	240.7	235.8
47.5°	285.9	244.0	244.5	199.8	228.9
50°	259.6	226.7	224.6	171.3	228.4
52.5°	236.4	207.9	201.4	155.1	207.3
55°	213.8	188.0	173.9	142.7	192.2
57.5°	193.8	162.1	148.6	128.2	189.0
60°	175.5	136.8	126.6	112.6	173.4
62.5°	160.5	118.0	115.8	101.8	157.2
65°	144.3	105.0	104.5	92.7	133.5
67.5°	128.7	96.4	95.9	84.0	101.8
70°	112.0	87.2	86.2	74.8	75.4
72.5°	94.8	77.0	76.0	67.3	62.5
75°	77.6	65.1	64.6	58.7	50.6
77.5°	60.9	51.7	52.8	47.4	37.2
80°	43.6	37.7	38.8	34.0	28.0
82.5°	29.1	24.8	25.9	21.5	18.9
85°	16.1	14.0	14.5	11.3	8.6
87.5°	7.5	6.4	6.4	4.3	2.7
90°	7.3	4.7	4.3	3.0	1.7
92.5°	44.9	32.0	29.1	17.8	6.6
95°	110.5	62.2	57.1	36.5	15.9
97.5°	148.8	68.3	63.8	45.6	27.5
100°	162.8	73.5	69.4	52.8	36.4
102.5°	169.2	78.6	74.8	59.4	44.0
105°	173.9	86.2	82.9	69.9	56.9
107.5°	174.8	97.5	94.4	82.3	70.2
110°	173.5	103.7	101.0	90.0	79.1



TEST NUMBER: P934250

CATALOG NUMBER: SQ4-FA-050U-050D-930-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	330°	337.5°	340°	350°	360°
112.5°	173.5	111.4	108.7	98.3	87.8
115°	175.1	122.8	120.4	110.7	101.1
117.5°	178.4	133.9	131.7	122.9	114.2
120°	181.1	140.4	138.3	130.1	121.8
122.5°	184.9	148.0	145.9	137.6	129.3
125°	190.0	157.7	155.8	148.2	140.7
127.5°	195.1	167.2	165.3	157.6	149.9
130°	198.9	173.4	171.4	163.2	154.9
132.5°	202.0	178.6	176.5	168.3	160.0
135°	205.2	184.5	182.7	175.1	167.7
137.5°	210.2	192.2	190.3	182.8	175.5
140°	213.2	197.3	195.6	188.7	181.9
142.5°	215.8	201.1	199.5	193.2	186.9
145°	219.1	206.9	205.5	199.9	194.5
147.5°	224.0	214.2	212.8	207.5	202.1
150°	226.4	217.9	216.7	211.8	207.0
152.5°	228.1	220.4	219.5	215.8	212.2
155°	231.7	225.9	225.2	222.5	219.8
157.5°	235.4	231.3	230.7	228.1	225.4
160°	237.0	233.8	233.4	231.3	229.3
162.5°	238.8	236.5	236.1	234.6	233.0
165°	241.4	240.3	240.0	238.6	237.2
167.5°	243.3	242.4	242.3	241.6	241.0
170°	245.0	244.9	244.8	244.1	243.5
172.5°	245.1	245.1	245.1	244.9	244.8
175°	246.1	246.6	246.6	246.6	246.6
177.5°	246.2	246.6	246.6	246.6	246.6
180°	246.6	246.6	246.6	246.6	246.6



TEST NUMBER: P934250  
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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	10.39	11.23	11.36	12.22	13.52	13.19	14.03	14.16	15.02	16.32
	3H	10.87	11.62	11.85	12.62	13.94	14.52	15.28	15.51	16.28	17.60
	4H	11.06	11.77	12.05	12.77	14.10	14.96	15.67	15.96	16.68	18.00
	6H	11.17	11.83	12.18	12.84	14.18	15.24	15.89	16.24	16.90	18.24
	8H	11.18	11.80	12.19	12.82	14.16	15.31	15.93	16.32	16.95	18.29
	12H	11.15	11.74	12.17	12.76	14.12	15.34	15.94	16.36	16.95	18.31
4H	2H	11.41	12.13	12.42	13.13	14.46	13.60	14.31	14.60	15.31	16.64
	3H	12.44	13.03	13.45	14.06	15.41	15.09	15.69	16.11	16.72	18.06
	4H	12.71	13.26	13.73	14.28	15.65	15.61	16.16	16.63	17.18	18.54
	6H	12.84	13.31	13.87	14.35	15.71	15.97	16.44	17.00	17.48	18.84
	8H	12.84	13.28	13.88	14.32	15.70	16.07	16.51	17.10	17.55	18.92
	12H	12.81	13.21	13.86	14.26	15.64	16.12	16.52	17.17	17.57	18.95
8H	4H	13.16	13.60	14.19	14.64	16.01	15.74	16.17	16.77	17.21	18.59
	6H	13.42	13.78	14.48	14.86	16.24	16.16	16.53	17.22	17.61	18.98
	8H	13.46	13.78	14.53	14.85	16.24	16.31	16.63	17.37	17.69	19.09
	12H	13.45	13.73	14.52	14.79	16.22	16.40	16.68	17.47	17.74	19.18
12H	4H	13.16	13.56	14.22	14.61	16.00	15.70	16.10	16.75	17.15	18.53
	6H	13.48	13.80	14.55	14.86	16.26	16.16	16.48	17.23	17.54	18.94
	8H	13.55	13.83	14.62	14.89	16.32	16.32	16.60	17.38	17.66	19.09