

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: P933857

Luminaire Tested: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P933857
REPORT IS A COMBINATION OF REPORTS P933674 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Asymmetric Frosted Continuous I
Lens
Light Source: -
Ballast/Driver: -

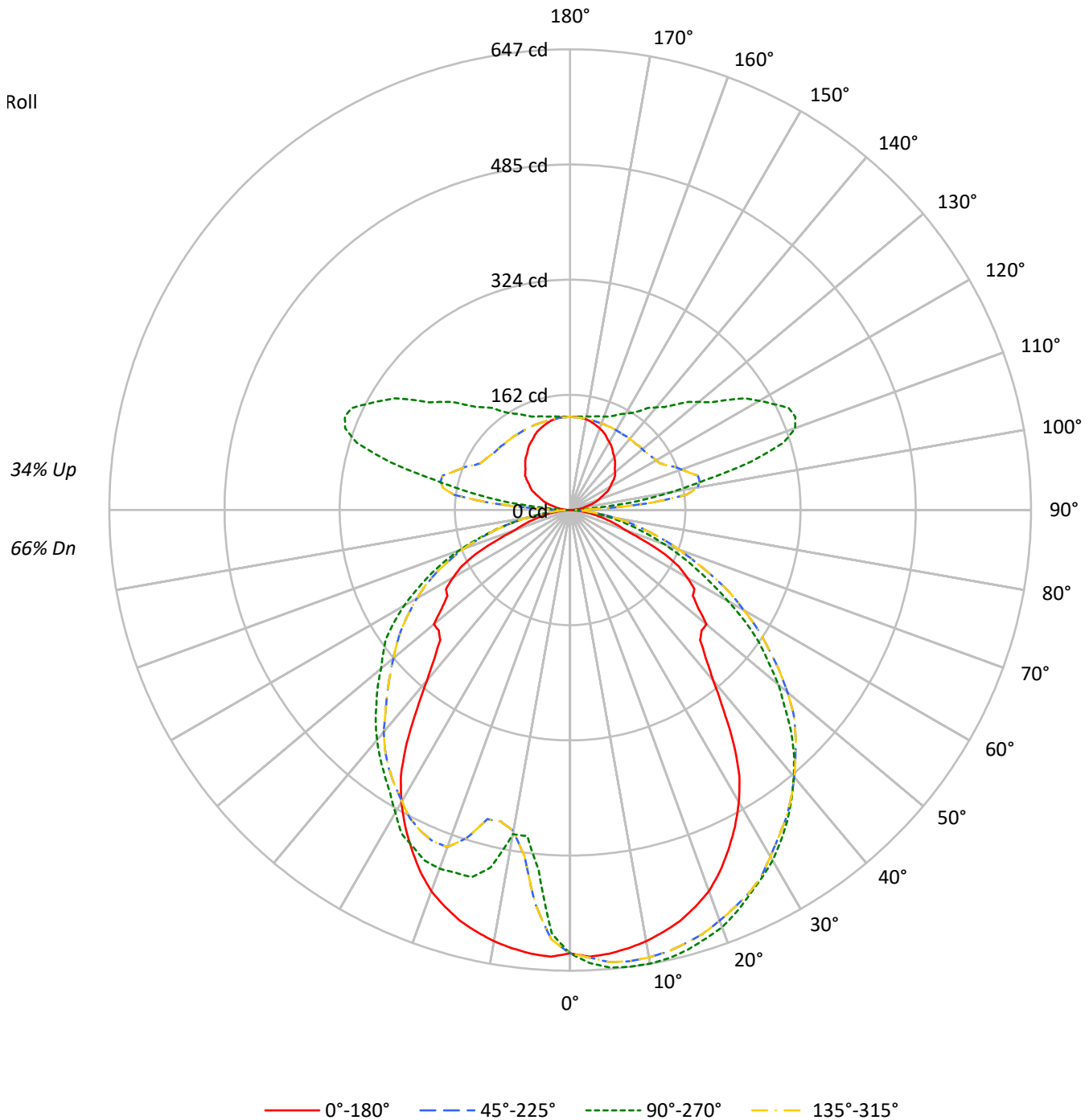
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2464.5 lumens
Efficiency: N/A
Efficacy: 112.0 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: Semi-Direct

Input Watts (W): 22
Input Voltage (V): NR
Input Current (A_{in}): 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: P933857
CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	66			
1	101	97	93	89	95	91	88	85	81	78	76	71	69	68	62	61	60	55			
2	92	85	78	73	87	80	74	70	71	67	63	63	59	56	55	52	50	46			
3	84	75	67	61	79	70	64	58	63	57	53	55	51	48	49	46	43	39			
4	77	66	58	52	72	62	55	49	56	50	45	49	45	41	43	40	37	34			
5	71	59	50	44	66	56	48	43	50	44	39	44	39	35	39	35	32	29			
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28	26			
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23			
8	56	43	35	30	53	41	34	29	37	31	27	33	28	25	30	26	22	20			
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	27	23	20	18			
10	49	36	29	24	46	35	28	23	31	26	22	28	23	20	25	21	18	16			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	5777	5777	5777	5777
5°	5814	5832	5814	4585
10°	5769	5745	5769	4107
15°	5699	5620	5699	4693
20°	5574	5473	5574	4703
25°	5323	5258	5323	4603
30°	5002	5079	5002	4385
35°	4453	4853	4453	4144
40°	3703	4587	3703	3963
45°	3303	4277	3303	3753
50°	3502	3905	3502	3543
55°	3285	3506	3285	3422
60°	3374	2977	3374	3135
65°	3045	2461	3045	2750
70°	2094	1962	2094	2307
75°	1813	1450	1813	1737
80°	1437	958	1437	1043
85°	778	506	778	431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 20°
 Vertical Angle: 45°
 Luminance: 5072 cd/sqm



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	2.3
10°-20°	159.6	6.5
20°-30°	246.7	10.0
30°-40°	294.5	11.9
40°-50°	296.2	12.0
50°-60°	257.7	10.5
60°-70°	182.7	7.4
70°-80°	96.7	3.9
80°-90°	24.6	1.0
90°-100°	63.9	2.6
100°-110°	168.0	6.8
110°-120°	174.2	7.1
120°-130°	139.7	5.7
130°-140°	109.6	4.4
140°-150°	84.1	3.4
150°-160°	60.6	2.5
160°-170°	37.1	1.5
170°-180°	12.5	0.5
0°-30°	462.4	18.8
0°-40°	756.9	30.7
0°-60°	1310.8	53.2
0°-90°	1614.8	65.5
90°-120°	406.0	16.5
90°-150°	739.5	30.0
90°-180°	850.0	34.5
0°-180°	2464.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	623	623	623	623	623	
5°	626	645	626	507	626	59
15°	597	639	597	534	597	168
25°	526	596	526	522	526	242
35°	400	532	400	454	400	247
45°	258	438	258	385	258	207
55°	210	323	210	316	210	193
65°	146	195	146	218	146	140
75°	55	92	55	111	55	58
85°	9	24	9	20	9	13
90°	1	3	1	3	1	1
95°	8	39	8	39	8	9
105°	30	263	30	263	30	32
115°	54	339	54	339	54	53
125°	75	270	75	270	75	66
135°	89	209	89	209	89	69
145°	103	170	103	170	103	65
155°	117	146	117	146	117	54
165°	126	136	126	136	126	36
175°	131	132	131	132	131	12
180°	131	131	131	131	131	



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6
2.5°	627.9	627.9	631.4	632.6	632.6	630.9	629.1	630.9	636.2	637.9	637.3
5°	625.5	630.3	636.8	637.9	639.1	638.5	637.3	638.5	644.4	645.6	646.2
7.5°	620.9	629.7	637.9	639.7	641.4	639.7	639.1	640.3	646.2	647.3	647.3
10°	615.0	627.3	636.8	637.9	639.7	637.9	637.9	640.3	646.2	647.3	647.9
12.5°	606.7	623.8	632.6	633.8	636.2	635.5	635.0	637.3	643.3	644.4	644.4
15°	597.2	617.3	625.5	626.8	630.9	629.7	629.7	632.0	638.5	640.3	639.7
17.5°	584.3	609.1	618.5	620.3	623.2	622.6	623.2	625.5	631.4	632.6	633.3
20°	569.6	597.9	609.1	610.9	613.8	613.8	613.8	616.7	622.6	625.0	625.0
22.5°	549.6	586.1	597.9	599.1	602.6	602.6	603.7	607.9	613.1	613.8	613.8
25°	526.0	573.1	583.1	586.7	590.2	592.0	593.7	596.1	597.9	597.2	597.9
27.5°	501.2	556.7	569.6	571.9	576.7	578.4	580.8	581.3	582.0	583.7	582.6
30°	473.6	533.7	553.1	555.4	563.1	564.3	561.9	563.1	566.1	567.2	568.4
32.5°	442.4	499.5	536.0	541.3	548.4	544.9	544.3	546.0	550.8	550.8	551.9
35°	400.0	473.0	520.1	524.9	530.1	526.0	528.4	528.9	531.9	533.7	533.0
37.5°	353.4	450.0	503.6	507.1	511.3	506.0	509.5	511.3	513.6	512.5	512.5
40°	312.1	414.1	484.2	486.6	490.1	486.0	489.5	490.7	491.8	490.7	490.1
42.5°	281.6	374.6	463.6	466.6	464.2	467.1	468.3	470.7	468.8	466.6	466.6
45°	258.0	364.1	441.2	444.7	441.2	445.9	447.7	447.7	442.4	441.2	440.6
47.5°	250.3	342.8	418.8	418.8	417.0	422.9	425.9	421.8	416.5	414.6	414.6
50°	249.8	319.3	388.2	385.8	394.1	401.1	398.2	394.1	390.0	383.5	383.5
52.5°	226.8	290.4	348.7	357.6	370.5	374.6	369.9	365.8	358.7	355.8	353.4
55°	210.3	260.3	312.8	330.4	344.0	349.3	340.4	336.3	325.8	324.0	322.8
57.5°	206.8	216.8	279.8	302.1	318.6	318.1	312.8	305.1	296.3	294.5	294.0
60°	189.7	156.7	244.4	271.0	288.0	286.2	281.6	274.5	266.2	265.1	263.9
62.5°	172.0	113.7	204.4	234.4	258.6	258.0	253.9	243.3	237.4	234.4	232.0
65°	146.1	95.4	145.5	195.0	229.8	230.9	222.0	214.4	207.9	204.4	203.8
67.5°	111.4	77.7	98.4	162.6	202.0	200.9	189.7	186.1	177.9	176.1	172.6
70°	82.5	51.8	68.3	131.9	175.0	172.0	163.2	159.1	151.4	147.3	144.9
72.5°	68.3	41.8	50.1	102.5	147.3	143.7	136.0	131.4	124.9	121.4	119.0
75°	55.3	44.2	38.3	76.0	119.5	117.3	110.1	105.4	100.1	95.4	96.0
77.5°	40.7	41.2	30.7	55.9	94.9	91.3	87.2	81.3	79.0	74.2	74.2
80°	30.7	32.4	23.0	38.3	68.3	68.3	64.8	60.7	56.6	54.2	54.2
82.5°	20.6	20.6	17.0	24.2	46.5	44.8	42.4	41.2	38.9	37.7	37.7
85°	9.4	11.8	10.6	14.8	25.3	26.5	26.5	25.3	24.8	23.5	24.2
87.5°	3.0	5.3	6.5	8.3	13.0	13.5	14.1	14.1	14.1	14.8	14.8
90°	0.9	1.6	2.3	2.5	3.9	5.7	6.7	6.0	4.5	3.3	3.3
92.5°	3.5	9.5	15.5	17.0	23.9	33.1	37.7	33.0	23.7	16.7	16.0
95°	8.4	19.4	30.4	33.1	58.8	92.9	110.1	98.2	74.5	56.7	54.7
97.5°	14.6	24.2	33.9	36.4	79.1	136.1	164.7	157.2	142.2	131.0	127.1
100°	19.3	28.1	36.9	39.1	86.5	149.8	181.5	182.0	183.1	183.9	179.3
102.5°	23.4	31.5	39.8	41.8	89.9	154.1	186.2	195.8	214.8	229.1	225.2
105°	30.3	37.2	44.1	45.8	92.5	154.6	185.7	207.1	249.9	281.9	279.8
107.5°	37.3	43.7	50.2	51.8	92.9	147.7	175.1	205.0	264.6	309.4	310.0
110°	42.1	47.9	53.7	55.2	92.2	141.7	166.4	199.7	266.4	316.5	318.6



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	46.7	52.3	57.8	59.2	92.2	136.3	158.4	192.5	260.8	312.0	315.3
115°	53.8	58.8	63.9	65.3	93.1	130.3	148.8	181.6	247.4	296.7	301.3
117.5°	60.7	65.3	70.0	71.1	94.9	126.4	142.2	171.9	231.2	275.7	280.9
120°	64.7	69.1	73.5	74.6	96.2	125.1	139.5	166.6	220.9	261.6	266.6
122.5°	68.7	73.1	77.5	78.6	98.2	124.4	137.5	161.9	210.7	247.3	252.2
125°	74.7	78.8	82.8	83.9	101.0	123.8	135.3	156.0	197.5	228.6	233.2
127.5°	79.7	83.8	87.8	88.9	103.7	123.5	133.4	151.2	186.9	213.6	217.5
130°	82.3	86.7	91.1	92.2	105.7	123.8	132.7	148.6	180.3	204.1	207.6
132.5°	85.1	89.5	93.9	94.9	107.3	123.8	132.1	146.3	174.7	196.0	199.2
135°	89.1	93.1	97.1	98.1	109.1	123.8	131.0	142.9	166.7	184.5	187.3
137.5°	93.3	97.2	101.2	102.1	111.7	124.5	130.9	140.9	161.0	176.1	178.4
140°	96.7	100.3	104.0	104.9	113.3	124.6	130.3	138.9	156.3	169.3	171.4
142.5°	99.3	102.7	106.0	106.9	114.7	125.1	130.3	137.9	153.2	164.6	166.4
145°	103.4	106.3	109.3	110.0	116.5	125.1	129.4	135.6	148.1	157.5	158.9
147.5°	107.4	110.2	113.1	113.8	119.0	125.9	129.4	134.3	144.1	151.5	152.6
150°	110.1	112.6	115.2	115.8	120.3	126.4	129.4	133.5	141.8	148.1	149.0
152.5°	112.8	114.7	116.6	117.2	121.2	126.7	129.4	132.9	140.0	145.4	146.1
155°	116.8	118.2	119.7	120.1	123.1	127.3	129.4	132.2	137.9	142.1	142.5
157.5°	119.8	121.2	122.6	123.0	125.1	128.0	129.4	131.6	136.0	139.2	139.6
160°	121.8	122.9	124.0	124.3	125.9	128.2	129.4	131.2	135.0	137.8	138.0
162.5°	123.8	124.6	125.5	125.7	126.9	128.6	129.4	131.0	134.1	136.5	136.7
165°	126.0	126.7	127.5	127.7	128.2	129.0	129.4	130.5	132.8	134.5	134.6
167.5°	128.1	128.4	128.8	128.8	129.3	129.9	130.3	131.0	132.4	133.6	133.7
170°	129.4	129.7	130.1	130.2	130.2	130.3	130.3	131.0	132.4	133.6	133.6
172.5°	130.1	130.2	130.3	130.3	130.3	130.3	130.3	130.9	132.0	132.9	132.8
175°	131.0	131.0	131.0	131.0	130.8	130.4	130.3	130.6	131.4	131.9	131.9
177.5°	131.0	131.0	131.0	131.0	130.9	130.6	130.4	130.7	131.3	131.7	131.7
180°	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6
2.5°	638.5	636.8	638.5	637.3	637.9	636.2	630.9	629.1	630.9	632.6	632.6
5°	646.2	645.0	646.2	646.2	645.6	644.4	638.5	637.3	638.5	639.1	637.9
7.5°	648.5	646.8	648.5	647.3	647.3	646.2	640.3	639.1	639.7	641.4	639.7
10°	648.5	646.8	648.5	647.9	647.3	646.2	640.3	637.9	637.9	639.7	637.9
12.5°	645.6	644.4	645.6	644.4	644.4	643.3	637.3	635.0	635.5	636.2	633.8
15°	640.9	639.1	640.9	639.7	640.3	638.5	632.0	629.7	629.7	630.9	626.8
17.5°	633.8	631.4	633.8	633.3	632.6	631.4	625.5	623.2	622.6	623.2	620.3
20°	625.5	623.8	625.5	625.0	625.0	622.6	616.7	613.8	613.8	613.8	610.9
22.5°	612.6	610.9	612.6	613.8	613.8	613.1	607.9	603.7	602.6	602.6	599.1
25°	597.9	596.1	597.9	597.9	597.2	597.9	596.1	593.7	592.0	590.2	586.7
27.5°	583.7	582.6	583.7	582.6	583.7	582.0	581.3	580.8	578.4	576.7	571.9
30°	569.6	568.4	569.6	568.4	567.2	566.1	563.1	561.9	564.3	563.1	555.4
32.5°	551.9	550.8	551.9	551.9	550.8	550.8	546.0	544.3	544.9	548.4	541.3
35°	533.7	531.9	533.7	533.0	533.7	531.9	528.9	528.4	526.0	530.1	524.9
37.5°	512.5	510.7	512.5	512.5	512.5	513.6	511.3	509.5	506.0	511.3	507.1
40°	490.7	488.3	490.7	490.1	490.7	491.8	490.7	489.5	486.0	490.1	486.6
42.5°	465.9	465.3	465.9	466.6	466.6	468.8	470.7	468.3	467.1	464.2	466.6
45°	439.4	438.3	439.4	440.6	441.2	442.4	447.7	447.7	445.9	441.2	444.7
47.5°	411.1	408.2	411.1	414.6	414.6	416.5	421.8	425.9	422.9	417.0	418.8
50°	381.1	381.7	381.1	383.5	383.5	390.0	394.1	398.2	401.1	394.1	385.8
52.5°	351.7	351.1	351.7	353.4	355.8	358.7	365.8	369.9	374.6	370.5	357.6
55°	322.2	323.4	322.2	322.8	324.0	325.8	336.3	340.4	349.3	344.0	330.4
57.5°	292.7	291.0	292.7	294.0	294.5	296.3	305.1	312.8	318.1	318.6	302.1
60°	258.6	256.2	258.6	263.9	265.1	266.2	274.5	281.6	286.2	288.0	271.0
62.5°	228.5	224.4	228.5	232.0	234.4	237.4	243.3	253.9	258.0	258.6	234.4
65°	196.7	195.0	196.7	203.8	204.4	207.9	214.4	222.0	230.9	229.8	195.0
67.5°	167.8	167.8	167.8	172.6	176.1	177.9	186.1	189.7	200.9	202.0	162.6
70°	141.4	140.8	141.4	144.9	147.3	151.4	159.1	163.2	172.0	175.0	131.9
72.5°	116.0	115.4	116.0	119.0	121.4	124.9	131.4	136.0	143.7	147.3	102.5
75°	93.6	92.5	93.6	96.0	95.4	100.1	105.4	110.1	117.3	119.5	76.0
77.5°	71.8	71.8	71.8	74.2	74.2	79.0	81.3	87.2	91.3	94.9	55.9
80°	53.6	53.0	53.6	54.2	54.2	56.6	60.7	64.8	68.3	68.3	38.3
82.5°	37.7	36.5	37.7	37.7	37.7	38.9	41.2	42.4	44.8	46.5	24.2
85°	23.5	23.5	23.5	24.2	23.5	24.8	25.3	26.5	26.5	25.3	14.8
87.5°	15.3	14.8	15.3	14.8	14.8	14.1	14.1	14.1	13.5	13.0	8.3
90°	3.3	3.3	3.3	3.3	3.3	4.5	6.0	6.7	5.7	3.9	2.5
92.5°	13.4	10.7	13.4	16.0	16.7	23.7	33.0	37.7	33.1	23.9	17.0
95°	46.7	38.6	46.7	54.7	56.7	74.5	98.2	110.1	92.9	58.8	33.1
97.5°	111.8	96.5	111.8	127.1	131.0	142.2	157.2	164.7	136.1	79.1	36.4
100°	161.2	142.9	161.2	179.3	183.9	183.1	182.0	181.5	149.8	86.5	39.1
102.5°	209.6	193.9	209.6	225.2	229.1	214.8	195.8	186.2	154.1	89.9	41.8
105°	271.5	263.1	271.5	279.8	281.9	249.9	207.1	185.7	154.6	92.5	45.8
107.5°	312.0	314.0	312.0	310.0	309.4	264.6	205.0	175.1	147.7	92.9	51.8
110°	327.3	336.1	327.3	318.6	316.5	266.4	199.7	166.4	141.7	92.2	55.2



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
112.5°	328.7	342.2	328.7	315.3	312.0	260.8	192.5	158.4	136.3	92.2	59.2
115°	320.1	338.7	320.1	301.3	296.7	247.4	181.6	148.8	130.3	93.1	65.3
117.5°	301.5	322.2	301.5	280.9	275.7	231.2	171.9	142.2	126.4	94.9	71.1
120°	286.7	306.7	286.7	266.6	261.6	220.9	166.6	139.5	125.1	96.2	74.6
122.5°	272.1	291.9	272.1	252.2	247.3	210.7	161.9	137.5	124.4	98.2	78.6
125°	251.5	269.7	251.5	233.2	228.6	197.5	156.0	135.3	123.8	101.0	83.9
127.5°	232.8	248.2	232.8	217.5	213.6	186.9	151.2	133.4	123.5	103.7	88.9
130°	221.9	236.1	221.9	207.6	204.1	180.3	148.6	132.7	123.8	105.7	92.2
132.5°	211.9	224.7	211.9	199.2	196.0	174.7	146.3	132.1	123.8	107.3	94.9
135°	198.3	209.3	198.3	187.3	184.5	166.7	142.9	131.0	123.8	109.1	98.1
137.5°	187.3	196.4	187.3	178.4	176.1	161.0	140.9	130.9	124.5	111.7	102.1
140°	179.8	188.2	179.8	171.4	169.3	156.3	138.9	130.3	124.6	113.3	104.9
142.5°	173.6	180.8	173.6	166.4	164.6	153.2	137.9	130.3	125.1	114.7	106.9
145°	164.3	169.8	164.3	158.9	157.5	148.1	135.6	129.4	125.1	116.5	110.0
147.5°	157.1	161.7	157.1	152.6	151.5	144.1	134.3	129.4	125.9	119.0	113.8
150°	152.6	156.3	152.6	149.0	148.1	141.8	133.5	129.4	126.4	120.3	115.8
152.5°	148.8	151.6	148.8	146.1	145.4	140.0	132.9	129.4	126.7	121.2	117.2
155°	144.4	146.2	144.4	142.5	142.1	137.9	132.2	129.4	127.3	123.1	120.1
157.5°	140.9	142.2	140.9	139.6	139.2	136.0	131.6	129.4	128.0	125.1	123.0
160°	138.8	139.5	138.8	138.0	137.8	135.0	131.2	129.4	128.2	125.9	124.3
162.5°	137.4	138.1	137.4	136.7	136.5	134.1	131.0	129.4	128.6	126.9	125.7
165°	135.4	136.1	135.4	134.6	134.5	132.8	130.5	129.4	129.0	128.2	127.7
167.5°	133.9	134.3	133.9	133.7	133.6	132.4	131.0	130.3	129.9	129.3	128.8
170°	133.6	133.6	133.6	133.6	133.6	132.4	131.0	130.3	130.3	130.2	130.2
172.5°	132.5	132.3	132.5	132.8	132.9	132.0	130.9	130.3	130.3	130.3	130.3
175°	131.9	131.9	131.9	131.9	131.9	131.4	130.6	130.3	130.4	130.8	131.0
177.5°	131.4	131.0	131.4	131.7	131.7	131.3	130.7	130.4	130.6	130.9	131.0
180°	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
0°	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6
2.5°	631.4	627.9	627.9	622.0	619.6	617.9	615.0	606.1	603.7	601.4	605.0
5°	636.8	630.3	625.5	615.0	606.1	602.6	591.4	570.2	556.1	545.4	539.5
7.5°	637.9	629.7	620.9	604.4	583.1	573.7	539.5	500.7	490.1	480.7	474.7
10°	636.8	627.3	615.0	590.2	540.2	523.6	489.5	464.2	457.7	455.9	457.7
12.5°	632.6	623.8	606.7	565.5	495.4	484.2	464.2	449.4	448.3	451.2	467.1
15°	625.5	617.3	597.2	532.5	470.7	462.4	448.3	442.9	449.4	470.1	517.8
17.5°	618.5	609.1	584.3	500.1	451.8	445.9	435.9	446.5	483.0	510.7	526.6
20°	609.1	597.9	569.6	476.6	438.3	432.9	428.3	476.0	503.6	513.6	522.5
22.5°	597.9	586.1	549.6	460.1	424.1	420.0	422.9	492.5	503.6	510.7	518.4
25°	583.1	573.1	526.0	447.1	412.9	408.2	419.4	490.7	497.1	498.9	514.2
27.5°	569.6	556.7	501.2	435.3	399.4	397.6	422.4	483.0	487.7	489.5	506.0
30°	553.1	533.7	473.6	422.9	385.2	384.6	422.9	473.6	472.4	477.1	493.6
32.5°	536.0	499.5	442.4	407.6	371.7	371.1	418.8	459.4	458.3	464.7	477.1
35°	520.1	473.0	400.0	390.0	354.6	355.2	408.8	442.9	443.5	449.4	457.1
37.5°	503.6	450.0	353.4	370.5	338.1	338.1	395.2	427.6	426.5	428.3	438.8
40°	484.2	414.1	312.1	345.2	322.8	321.0	378.7	411.1	407.0	406.5	421.1
42.5°	463.6	374.6	281.6	311.6	305.1	302.8	358.7	391.1	383.5	385.2	404.1
45°	441.2	364.1	258.0	263.3	286.9	285.1	336.9	368.2	362.8	367.6	387.0
47.5°	418.8	342.8	250.3	218.5	267.4	266.8	312.8	345.8	342.8	347.5	368.2
50°	388.2	319.3	249.8	187.3	245.7	247.9	284.0	324.0	324.0	328.1	349.9
52.5°	348.7	290.4	226.8	169.6	220.3	227.4	258.6	305.1	306.3	310.4	329.9
55°	312.8	260.3	210.3	156.1	190.2	205.6	233.8	285.7	288.0	292.1	309.9
57.5°	279.8	216.8	206.8	140.2	162.6	177.3	212.0	266.8	268.0	271.6	288.6
60°	244.4	156.7	189.7	123.1	138.4	149.6	192.0	244.4	248.6	250.9	265.7
62.5°	204.4	113.7	172.0	111.4	126.7	129.0	175.6	223.3	228.5	230.3	239.2
65°	145.5	95.4	146.1	101.4	114.3	114.9	157.8	201.5	206.1	209.1	215.6
67.5°	98.4	77.7	111.4	91.9	104.9	105.4	140.8	176.1	182.6	185.0	189.1
70°	68.3	51.8	82.5	81.9	94.2	95.4	122.5	153.2	159.1	160.8	163.2
72.5°	50.1	41.8	68.3	73.6	83.1	84.2	103.6	127.3	133.2	134.9	136.0
75°	38.3	44.2	55.3	64.2	70.7	71.2	84.8	103.6	107.8	109.0	109.5
77.5°	30.7	41.2	40.7	51.8	57.7	56.6	66.6	80.1	83.6	83.6	83.6
80°	23.0	32.4	30.7	37.2	42.4	41.2	47.7	57.2	58.3	59.5	58.9
82.5°	17.0	20.6	20.6	23.5	28.3	27.1	31.8	37.2	37.2	37.2	38.3
85°	10.6	11.8	9.4	12.4	15.9	15.3	17.7	20.0	20.6	20.6	19.4
87.5°	6.5	5.3	3.0	4.7	7.0	7.0	8.3	8.9	8.3	8.3	8.3
90°	2.3	1.6	0.9	1.6	2.3	2.5	3.9	5.7	6.7	6.0	4.5
92.5°	15.5	9.5	3.5	9.5	15.5	17.0	23.9	33.1	37.7	33.0	23.7
95°	30.4	19.4	8.4	19.4	30.4	33.1	58.8	92.9	110.1	98.2	74.5
97.5°	33.9	24.2	14.6	24.2	33.9	36.4	79.1	136.1	164.7	157.2	142.2
100°	36.9	28.1	19.3	28.1	36.9	39.1	86.5	149.8	181.5	182.0	183.1
102.5°	39.8	31.5	23.4	31.5	39.8	41.8	89.9	154.1	186.2	195.8	214.8
105°	44.1	37.2	30.3	37.2	44.1	45.8	92.5	154.6	185.7	207.1	249.9
107.5°	50.2	43.7	37.3	43.7	50.2	51.8	92.9	147.7	175.1	205.0	264.6
110°	53.7	47.9	42.1	47.9	53.7	55.2	92.2	141.7	166.4	199.7	266.4



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
112.5°	57.8	52.3	46.7	52.3	57.8	59.2	92.2	136.3	158.4	192.5	260.8
115°	63.9	58.8	53.8	58.8	63.9	65.3	93.1	130.3	148.8	181.6	247.4
117.5°	70.0	65.3	60.7	65.3	70.0	71.1	94.9	126.4	142.2	171.9	231.2
120°	73.5	69.1	64.7	69.1	73.5	74.6	96.2	125.1	139.5	166.6	220.9
122.5°	77.5	73.1	68.7	73.1	77.5	78.6	98.2	124.4	137.5	161.9	210.7
125°	82.8	78.8	74.7	78.8	82.8	83.9	101.0	123.8	135.3	156.0	197.5
127.5°	87.8	83.8	79.7	83.8	87.8	88.9	103.7	123.5	133.4	151.2	186.9
130°	91.1	86.7	82.3	86.7	91.1	92.2	105.7	123.8	132.7	148.6	180.3
132.5°	93.9	89.5	85.1	89.5	93.9	94.9	107.3	123.8	132.1	146.3	174.7
135°	97.1	93.1	89.1	93.1	97.1	98.1	109.1	123.8	131.0	142.9	166.7
137.5°	101.2	97.2	93.3	97.2	101.2	102.1	111.7	124.5	130.9	140.9	161.0
140°	104.0	100.3	96.7	100.3	104.0	104.9	113.3	124.6	130.3	138.9	156.3
142.5°	106.0	102.7	99.3	102.7	106.0	106.9	114.7	125.1	130.3	137.9	153.2
145°	109.3	106.3	103.4	106.3	109.3	110.0	116.5	125.1	129.4	135.6	148.1
147.5°	113.1	110.2	107.4	110.2	113.1	113.8	119.0	125.9	129.4	134.3	144.1
150°	115.2	112.6	110.1	112.6	115.2	115.8	120.3	126.4	129.4	133.5	141.8
152.5°	116.6	114.7	112.8	114.7	116.6	117.2	121.2	126.7	129.4	132.9	140.0
155°	119.7	118.2	116.8	118.2	119.7	120.1	123.1	127.3	129.4	132.2	137.9
157.5°	122.6	121.2	119.8	121.2	122.6	123.0	125.1	128.0	129.4	131.6	136.0
160°	124.0	122.9	121.8	122.9	124.0	124.3	125.9	128.2	129.4	131.2	135.0
162.5°	125.5	124.6	123.8	124.6	125.5	125.7	126.9	128.6	129.4	131.0	134.1
165°	127.5	126.7	126.0	126.7	127.5	127.7	128.2	129.0	129.4	130.5	132.8
167.5°	128.8	128.4	128.1	128.4	128.8	128.8	129.3	129.9	130.3	131.0	132.4
170°	130.1	129.7	129.4	129.7	130.1	130.2	130.2	130.3	130.3	131.0	132.4
172.5°	130.3	130.2	130.1	130.2	130.3	130.3	130.3	130.3	130.3	130.9	132.0
175°	131.0	131.0	131.0	131.0	131.0	131.0	130.8	130.4	130.3	130.6	131.4
177.5°	131.0	131.0	131.0	131.0	131.0	131.0	130.9	130.6	130.4	130.7	131.3
180°	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
0°	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6	622.6
2.5°	600.8	599.1	601.4	595.0	601.4	599.1	600.8	605.0	601.4	603.7	606.1
5°	527.2	524.3	514.9	507.1	514.9	524.3	527.2	539.5	545.4	556.1	570.2
7.5°	471.2	468.8	466.6	461.8	466.6	468.8	471.2	474.7	480.7	490.1	500.7
10°	458.8	459.4	463.0	462.4	463.0	459.4	458.8	457.7	455.9	457.7	464.2
12.5°	490.7	496.0	515.4	514.2	515.4	496.0	490.7	467.1	451.2	448.3	449.4
15°	527.2	528.9	533.0	533.7	533.0	528.9	527.2	517.8	470.1	449.4	442.9
17.5°	530.8	531.3	534.3	534.3	534.3	531.3	530.8	526.6	510.7	483.0	446.5
20°	527.8	528.9	534.9	536.0	534.9	528.9	527.8	522.5	513.6	503.6	476.0
22.5°	526.6	528.9	533.7	533.0	533.7	528.9	526.6	518.4	510.7	503.6	492.5
25°	520.7	520.7	521.3	521.9	521.3	520.7	520.7	514.2	498.9	497.1	490.7
27.5°	508.4	509.5	513.0	512.5	513.0	509.5	508.4	506.0	489.5	487.7	483.0
30°	497.1	496.0	493.0	490.7	493.0	496.0	497.1	493.6	477.1	472.4	473.6
32.5°	478.3	475.3	472.4	470.7	472.4	475.3	478.3	477.1	464.7	458.3	459.4
35°	455.9	456.5	455.9	454.2	455.9	456.5	455.9	457.1	449.4	443.5	442.9
37.5°	440.0	441.2	440.6	438.3	440.6	441.2	440.0	438.8	428.3	426.5	427.6
40°	423.5	424.1	423.5	421.8	423.5	424.1	423.5	421.1	406.5	407.0	411.1
42.5°	407.6	407.0	405.2	404.1	405.2	407.0	407.6	404.1	385.2	383.5	391.1
45°	389.4	390.0	386.4	384.6	386.4	390.0	389.4	387.0	367.6	362.8	368.2
47.5°	371.1	371.1	368.2	366.3	368.2	371.1	371.1	368.2	347.5	342.8	345.8
50°	351.7	351.1	346.9	346.3	346.9	351.1	351.7	349.9	328.1	324.0	324.0
52.5°	329.3	329.3	329.9	331.0	329.9	329.3	329.3	329.9	310.4	306.3	305.1
55°	309.9	310.4	314.5	315.7	314.5	310.4	309.9	309.9	292.1	288.0	285.7
57.5°	289.8	289.8	292.7	292.7	292.7	289.8	289.8	288.6	271.6	268.0	266.8
60°	266.8	268.0	270.3	269.8	270.3	268.0	266.8	265.7	250.9	248.6	244.4
62.5°	242.7	243.9	244.4	243.3	244.4	243.9	242.7	239.2	230.3	228.5	223.3
65°	217.4	218.5	219.1	217.9	219.1	218.5	217.4	215.6	209.1	206.1	201.5
67.5°	191.5	190.9	190.2	192.6	190.2	190.9	191.5	189.1	185.0	182.6	176.1
70°	164.9	164.9	164.3	165.6	164.3	164.9	164.9	163.2	160.8	159.1	153.2
72.5°	136.7	136.0	138.4	136.7	138.4	136.0	136.7	136.0	134.9	133.2	127.3
75°	109.0	110.1	109.0	110.8	109.0	110.1	109.0	109.5	109.0	107.8	103.6
77.5°	83.1	84.2	83.1	83.1	83.1	84.2	83.1	83.6	83.6	83.6	80.1
80°	58.9	58.3	58.3	57.7	58.3	58.3	58.9	58.9	59.5	58.3	57.2
82.5°	37.7	37.2	37.2	38.3	37.2	37.2	37.7	38.3	37.2	37.2	37.2
85°	20.6	21.2	20.0	20.0	20.0	21.2	20.6	19.4	20.6	20.6	20.0
87.5°	7.6	7.0	7.0	7.0	7.0	7.0	7.6	8.3	8.3	8.3	8.9
90°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.5	6.0	6.7	5.7
92.5°	16.7	16.0	13.4	10.7	13.4	16.0	16.7	23.7	33.0	37.7	33.1
95°	56.7	54.7	46.7	38.6	46.7	54.7	56.7	74.5	98.2	110.1	92.9
97.5°	131.0	127.1	111.8	96.5	111.8	127.1	131.0	142.2	157.2	164.7	136.1
100°	183.9	179.3	161.2	142.9	161.2	179.3	183.9	183.1	182.0	181.5	149.8
102.5°	229.1	225.2	209.6	193.9	209.6	225.2	229.1	214.8	195.8	186.2	154.1
105°	281.9	279.8	271.5	263.1	271.5	279.8	281.9	249.9	207.1	185.7	154.6
107.5°	309.4	310.0	312.0	314.0	312.0	310.0	309.4	264.6	205.0	175.1	147.7
110°	316.5	318.6	327.3	336.1	327.3	318.6	316.5	266.4	199.7	166.4	141.7



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
112.5°	312.0	315.3	328.7	342.2	328.7	315.3	312.0	260.8	192.5	158.4	136.3
115°	296.7	301.3	320.1	338.7	320.1	301.3	296.7	247.4	181.6	148.8	130.3
117.5°	275.7	280.9	301.5	322.2	301.5	280.9	275.7	231.2	171.9	142.2	126.4
120°	261.6	266.6	286.7	306.7	286.7	266.6	261.6	220.9	166.6	139.5	125.1
122.5°	247.3	252.2	272.1	291.9	272.1	252.2	247.3	210.7	161.9	137.5	124.4
125°	228.6	233.2	251.5	269.7	251.5	233.2	228.6	197.5	156.0	135.3	123.8
127.5°	213.6	217.5	232.8	248.2	232.8	217.5	213.6	186.9	151.2	133.4	123.5
130°	204.1	207.6	221.9	236.1	221.9	207.6	204.1	180.3	148.6	132.7	123.8
132.5°	196.0	199.2	211.9	224.7	211.9	199.2	196.0	174.7	146.3	132.1	123.8
135°	184.5	187.3	198.3	209.3	198.3	187.3	184.5	166.7	142.9	131.0	123.8
137.5°	176.1	178.4	187.3	196.4	187.3	178.4	176.1	161.0	140.9	130.9	124.5
140°	169.3	171.4	179.8	188.2	179.8	171.4	169.3	156.3	138.9	130.3	124.6
142.5°	164.6	166.4	173.6	180.8	173.6	166.4	164.6	153.2	137.9	130.3	125.1
145°	157.5	158.9	164.3	169.8	164.3	158.9	157.5	148.1	135.6	129.4	125.1
147.5°	151.5	152.6	157.1	161.7	157.1	152.6	151.5	144.1	134.3	129.4	125.9
150°	148.1	149.0	152.6	156.3	152.6	149.0	148.1	141.8	133.5	129.4	126.4
152.5°	145.4	146.1	148.8	151.6	148.8	146.1	145.4	140.0	132.9	129.4	126.7
155°	142.1	142.5	144.4	146.2	144.4	142.5	142.1	137.9	132.2	129.4	127.3
157.5°	139.2	139.6	140.9	142.2	140.9	139.6	139.2	136.0	131.6	129.4	128.0
160°	137.8	138.0	138.8	139.5	138.8	138.0	137.8	135.0	131.2	129.4	128.2
162.5°	136.5	136.7	137.4	138.1	137.4	136.7	136.5	134.1	131.0	129.4	128.6
165°	134.5	134.6	135.4	136.1	135.4	134.6	134.5	132.8	130.5	129.4	129.0
167.5°	133.6	133.7	133.9	134.3	133.9	133.7	133.6	132.4	131.0	130.3	129.9
170°	133.6	133.6	133.6	133.6	133.6	133.6	133.6	132.4	131.0	130.3	130.3
172.5°	132.9	132.8	132.5	132.3	132.5	132.8	132.9	132.0	130.9	130.3	130.3
175°	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.4	130.6	130.3	130.4
177.5°	131.7	131.7	131.4	131.0	131.4	131.7	131.7	131.3	130.7	130.4	130.6
180°	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	330°	337.5°	340°	350°	360°
0°	622.6	622.6	622.6	622.6	622.6
2.5°	615.0	617.9	619.6	622.0	627.9
5°	591.4	602.6	606.1	615.0	625.5
7.5°	539.5	573.7	583.1	604.4	620.9
10°	489.5	523.6	540.2	590.2	615.0
12.5°	464.2	484.2	495.4	565.5	606.7
15°	448.3	462.4	470.7	532.5	597.2
17.5°	435.9	445.9	451.8	500.1	584.3
20°	428.3	432.9	438.3	476.6	569.6
22.5°	422.9	420.0	424.1	460.1	549.6
25°	419.4	408.2	412.9	447.1	526.0
27.5°	422.4	397.6	399.4	435.3	501.2
30°	422.9	384.6	385.2	422.9	473.6
32.5°	418.8	371.1	371.7	407.6	442.4
35°	408.8	355.2	354.6	390.0	400.0
37.5°	395.2	338.1	338.1	370.5	353.4
40°	378.7	321.0	322.8	345.2	312.1
42.5°	358.7	302.8	305.1	311.6	281.6
45°	336.9	285.1	286.9	263.3	258.0
47.5°	312.8	266.8	267.4	218.5	250.3
50°	284.0	247.9	245.7	187.3	249.8
52.5°	258.6	227.4	220.3	169.6	226.8
55°	233.8	205.6	190.2	156.1	210.3
57.5°	212.0	177.3	162.6	140.2	206.8
60°	192.0	149.6	138.4	123.1	189.7
62.5°	175.6	129.0	126.7	111.4	172.0
65°	157.8	114.9	114.3	101.4	146.1
67.5°	140.8	105.4	104.9	91.9	111.4
70°	122.5	95.4	94.2	81.9	82.5
72.5°	103.6	84.2	83.1	73.6	68.3
75°	84.8	71.2	70.7	64.2	55.3
77.5°	66.6	56.6	57.7	51.8	40.7
80°	47.7	41.2	42.4	37.2	30.7
82.5°	31.8	27.1	28.3	23.5	20.6
85°	17.7	15.3	15.9	12.4	9.4
87.5°	8.3	7.0	7.0	4.7	3.0
90°	3.9	2.5	2.3	1.6	0.9
92.5°	23.9	17.0	15.5	9.5	3.5
95°	58.8	33.1	30.4	19.4	8.4
97.5°	79.1	36.4	33.9	24.2	14.6
100°	86.5	39.1	36.9	28.1	19.3
102.5°	89.9	41.8	39.8	31.5	23.4
105°	92.5	45.8	44.1	37.2	30.3
107.5°	92.9	51.8	50.2	43.7	37.3
110°	92.2	55.2	53.7	47.9	42.1



TEST NUMBER: P933857

CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

CANDELA DISTRIBUTION (continued):

	330°	337.5°	340°	350°	360°
112.5°	92.2	59.2	57.8	52.3	46.7
115°	93.1	65.3	63.9	58.8	53.8
117.5°	94.9	71.1	70.0	65.3	60.7
120°	96.2	74.6	73.5	69.1	64.7
122.5°	98.2	78.6	77.5	73.1	68.7
125°	101.0	83.9	82.8	78.8	74.7
127.5°	103.7	88.9	87.8	83.8	79.7
130°	105.7	92.2	91.1	86.7	82.3
132.5°	107.3	94.9	93.9	89.5	85.1
135°	109.1	98.1	97.1	93.1	89.1
137.5°	111.7	102.1	101.2	97.2	93.3
140°	113.3	104.9	104.0	100.3	96.7
142.5°	114.7	106.9	106.0	102.7	99.3
145°	116.5	110.0	109.3	106.3	103.4
147.5°	119.0	113.8	113.1	110.2	107.4
150°	120.3	115.8	115.2	112.6	110.1
152.5°	121.2	117.2	116.6	114.7	112.8
155°	123.1	120.1	119.7	118.2	116.8
157.5°	125.1	123.0	122.6	121.2	119.8
160°	125.9	124.3	124.0	122.9	121.8
162.5°	126.9	125.7	125.5	124.6	123.8
165°	128.2	127.7	127.5	126.7	126.0
167.5°	129.3	128.8	128.8	128.4	128.1
170°	130.2	130.2	130.1	129.7	129.4
172.5°	130.3	130.3	130.3	130.2	130.1
175°	130.8	131.0	131.0	131.0	131.0
177.5°	130.9	131.0	131.0	131.0	131.0
180°	131.0	131.0	131.0	131.0	131.0



TEST NUMBER: P933857
 CATALOG NUMBER: SQ4-FA-025U-050D-93050-1D-UNV-STD-W-4-3000K

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	12.21	13.23	13.02	14.06	15.09	15.01	16.03	15.82	16.86	17.89
	3H	12.70	13.61	13.52	14.46	15.52	16.35	17.27	17.18	18.11	19.17
	4H	12.90	13.76	13.74	14.61	15.68	16.80	17.66	17.64	18.51	19.58
	6H	13.02	13.82	13.88	14.68	15.76	17.08	17.88	17.94	18.74	19.82
	8H	13.03	13.79	13.89	14.67	15.75	17.16	17.92	18.02	18.79	19.88
	12H	13.01	13.73	13.88	14.60	15.71	17.20	17.92	18.07	18.79	19.90
4H	2H	13.25	14.12	14.10	14.97	16.04	15.44	16.30	16.28	17.15	18.22
	3H	14.29	15.01	15.15	15.90	16.98	16.95	17.67	17.81	18.55	19.64
	4H	14.58	15.23	15.45	16.11	17.23	17.48	18.13	18.35	19.01	20.12
	6H	14.71	15.28	15.60	16.18	17.30	17.84	18.41	18.73	19.31	20.43
	8H	14.72	15.25	15.61	16.15	17.28	17.95	18.48	18.84	19.38	20.50
	12H	14.70	15.17	15.60	16.09	17.23	18.01	18.48	18.91	19.40	20.54
8H	4H	15.04	15.57	15.93	16.47	17.60	17.61	18.14	18.50	19.04	20.17
	6H	15.31	15.74	16.22	16.69	17.81	18.05	18.49	18.96	19.43	20.56
	8H	15.35	15.74	16.28	16.67	17.82	18.20	18.58	19.12	19.52	20.66
	12H	15.34	15.68	16.27	16.61	17.81	18.30	18.64	19.23	19.56	20.76
12H	4H	15.05	15.53	15.96	16.45	17.58	17.59	18.06	18.49	18.98	20.12
	6H	15.37	15.76	16.29	16.69	17.84	18.05	18.44	18.97	19.37	20.51
	8H	15.44	15.78	16.37	16.71	17.91	18.21	18.55	19.14	19.48	20.68