

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: P934458

Luminaire Tested: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P934458
REPORT IS A COMBINATION OF REPORTS P933698 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Asymmetric Frosted Continuous I
Lens
Light Source: -
Ballast/Driver: -

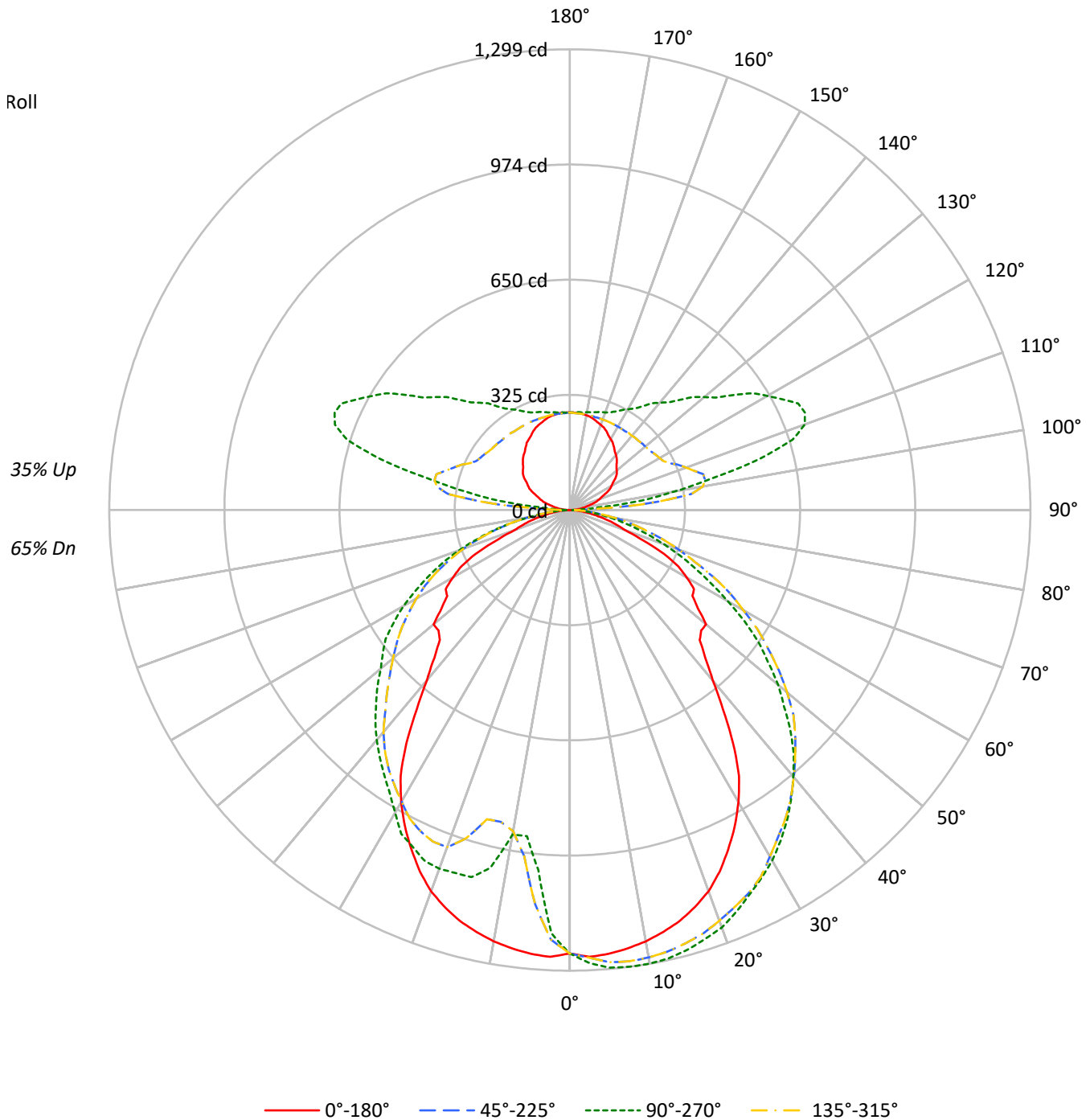
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5025.4 lumens
Efficiency: N/A
Efficacy: 111.2 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): 45.2
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

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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	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	65
1	101	97	93	89	95	91	88	84	80	78	75	71	69	67	62	60	59	55
2	92	85	78	73	86	80	74	69	70	66	63	62	59	56	54	52	50	46
3	84	74	67	61	79	70	63	58	62	57	53	55	51	47	48	45	42	39
4	77	66	58	52	72	62	55	49	55	49	45	49	44	41	43	39	36	33
5	71	59	50	44	66	56	48	42	49	43	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25
7	60	48	39	34	56	45	38	32	40	34	30	36	31	27	32	28	25	22
8	56	43	35	30	52	41	34	29	37	31	27	33	28	24	29	25	22	20
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	27	23	20	18
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11602	11602	11602	11602
5°	11676	11712	11676	9209
10°	11586	11536	11586	8248
15°	11445	11286	11445	9425
20°	11194	10991	11194	9444
25°	10691	10559	10691	9245
30°	10046	10200	10046	8805
35°	8942	9747	8942	8323
40°	7439	9213	7439	7957
45°	6633	8588	6633	7538
50°	7032	7843	7032	7117
55°	6596	7040	6596	6873
60°	6776	5978	6776	6295
65°	6114	4942	6114	5525
70°	4204	3938	4204	4631
75°	3647	2911	3647	3487
80°	2878	1926	2878	2095
85°	1565	1019	1565	866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 20°
 Vertical Angle: 45°
 Luminance: 10186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.9	2.2
10°-20°	320.5	6.4
20°-30°	495.4	9.9
30°-40°	591.4	11.8
40°-50°	594.8	11.8
50°-60°	517.6	10.3
60°-70°	367.0	7.3
70°-80°	194.1	3.9
80°-90°	49.4	1.0
90°-100°	134.0	2.7
100°-110°	352.4	7.0
110°-120°	365.4	7.3
120°-130°	293.1	5.8
130°-140°	230.0	4.6
140°-150°	176.5	3.5
150°-160°	127.1	2.5
160°-170°	77.8	1.5
170°-180°	26.3	0.5
0°-30°	928.7	18.5
0°-40°	1520.1	30.2
0°-60°	2632.5	52.4
0°-90°	3243.0	64.5
90°-120°	851.7	16.9
90°-150°	1551.3	30.9
90°-180°	1782.0	35.5
0°-180°	5025.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1250	1250	1250	1250	1250	
5°	1256	1295	1256	1018	1256	119
15°	1199	1283	1199	1072	1199	337
25°	1056	1197	1056	1048	1056	485
35°	803	1068	803	912	803	497
45°	518	880	518	772	518	415
55°	422	650	422	634	422	388
65°	293	392	293	438	293	280
75°	111	186	111	222	111	117
85°	19	47	19	40	19	26
90°	2	7	2	7	2	2
95°	18	81	18	81	18	20
105°	64	552	64	552	64	67
115°	113	710	113	710	113	111
125°	157	566	157	566	157	139
135°	187	439	187	439	187	145
145°	217	356	217	356	217	136
155°	245	307	245	307	245	113
165°	264	286	264	286	264	75
175°	275	277	275	277	275	26
180°	275	275	275	275	275	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3
2.5°	1261.0	1261.0	1268.1	1270.4	1270.4	1266.9	1263.4	1266.9	1277.5	1281.1	1279.9
5°	1256.3	1265.7	1278.8	1281.1	1283.4	1282.3	1279.9	1282.3	1294.1	1296.5	1297.7
7.5°	1246.8	1264.5	1281.1	1284.7	1288.2	1284.7	1283.4	1285.8	1297.7	1300.0	1300.0
10°	1235.0	1259.8	1278.8	1281.1	1284.7	1281.1	1281.1	1285.8	1297.7	1300.0	1301.2
12.5°	1218.4	1252.7	1270.4	1272.9	1277.5	1276.4	1275.2	1279.9	1291.8	1294.1	1294.1
15°	1199.4	1239.7	1256.3	1258.6	1266.9	1264.5	1264.5	1269.3	1282.3	1285.8	1284.7
17.5°	1173.5	1223.2	1242.1	1245.6	1251.6	1250.3	1251.6	1256.3	1268.1	1270.4	1271.6
20°	1143.9	1200.7	1223.2	1226.7	1232.6	1232.6	1232.6	1238.5	1250.3	1255.0	1255.0
22.5°	1103.7	1177.0	1200.7	1203.0	1210.1	1210.1	1212.5	1220.8	1231.4	1232.6	1232.6
25°	1056.4	1151.0	1171.1	1178.2	1185.3	1188.8	1192.4	1197.1	1200.7	1199.4	1200.7
27.5°	1006.7	1117.9	1143.9	1148.6	1158.1	1161.7	1166.3	1167.6	1168.7	1172.2	1169.9
30°	951.1	1071.7	1110.7	1115.5	1130.9	1133.2	1128.5	1130.9	1136.8	1139.2	1141.5
32.5°	888.3	1003.1	1076.4	1087.1	1101.3	1094.2	1093.0	1096.6	1106.1	1106.1	1108.4
35°	803.2	949.9	1044.6	1054.0	1064.6	1056.4	1061.0	1062.3	1068.2	1071.7	1070.5
37.5°	709.7	903.7	1011.4	1018.5	1026.7	1016.1	1023.3	1026.7	1031.5	1029.2	1029.2
40°	627.0	831.6	972.4	977.1	984.2	975.9	983.0	985.4	987.7	985.4	984.2
42.5°	565.5	752.3	930.9	936.9	932.1	938.0	940.4	945.2	941.6	936.9	936.9
45°	518.1	731.0	886.0	893.1	886.0	895.5	899.0	899.0	888.3	886.0	884.8
47.5°	502.7	688.5	841.1	841.1	837.5	849.3	855.3	847.0	836.3	832.8	832.8
50°	501.6	641.1	779.5	774.8	791.4	805.6	799.7	791.4	783.1	770.1	770.1
52.5°	455.4	583.2	700.3	718.0	744.1	752.3	742.8	734.6	720.4	714.5	709.7
55°	422.3	522.9	628.2	663.6	690.8	701.5	683.7	675.4	654.1	650.6	648.2
57.5°	415.2	435.3	561.9	606.8	640.0	638.8	628.2	612.8	595.0	591.4	590.3
60°	380.9	314.6	490.9	544.2	578.5	574.9	565.5	551.2	534.7	532.4	529.9
62.5°	345.4	228.3	410.5	470.8	519.3	518.1	509.9	488.6	476.8	470.8	466.1
65°	293.4	191.6	292.1	391.5	461.4	463.7	446.0	430.6	417.6	410.5	409.2
67.5°	223.6	156.1	197.5	326.5	405.8	403.3	380.9	373.8	357.2	353.6	346.6
70°	165.6	104.1	137.3	265.0	351.3	345.4	327.7	319.4	304.0	295.7	291.0
72.5°	137.3	84.0	100.5	205.8	295.7	288.6	273.2	263.8	250.8	243.7	239.0
75°	111.2	88.7	76.9	152.6	240.1	235.4	221.2	211.7	201.1	191.6	192.9
77.5°	81.7	82.8	61.5	112.4	190.4	183.4	175.0	163.2	158.5	149.1	149.1
80°	61.5	65.1	46.1	76.9	137.3	137.3	130.1	121.9	113.5	108.9	108.9
82.5°	41.4	41.4	34.3	48.5	93.5	89.9	85.1	82.8	78.1	75.7	75.7
85°	18.9	23.6	21.3	29.5	50.9	53.3	53.3	50.9	49.7	47.3	48.5
87.5°	5.9	10.7	13.0	16.6	26.1	27.2	28.4	28.4	28.4	29.5	29.5
90°	1.9	3.3	4.8	5.2	8.1	12.1	14.1	12.4	9.3	7.0	7.0
92.5°	7.3	19.9	32.5	35.6	50.0	69.3	79.0	69.2	49.7	35.1	33.7
95°	17.7	40.6	63.7	69.4	123.2	194.9	230.8	205.9	156.2	119.0	114.8
97.5°	30.6	50.9	71.1	76.2	165.9	285.6	345.4	329.7	298.3	274.8	266.7
100°	40.6	58.9	77.4	81.9	181.5	314.3	380.7	381.9	384.2	385.9	376.3
102.5°	49.1	66.3	83.4	87.7	188.6	323.3	390.6	410.7	450.7	480.7	472.5
105°	63.5	78.0	92.5	96.2	193.9	324.4	389.6	434.4	524.1	591.4	587.1
107.5°	78.3	91.8	105.3	108.7	194.9	310.0	367.4	430.0	555.2	649.0	650.1
110°	88.2	100.4	112.6	115.7	193.5	297.2	349.0	418.9	558.9	663.8	668.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	97.9	109.6	121.2	124.2	193.5	286.0	332.2	403.8	546.9	654.4	661.5
115°	112.7	123.5	134.2	136.9	195.3	273.1	312.0	381.0	518.9	622.4	632.2
117.5°	127.3	137.1	146.8	149.2	198.9	265.1	298.2	360.5	484.9	578.3	589.1
120°	135.8	145.0	154.2	156.5	201.9	262.4	292.7	349.5	463.3	548.6	559.2
122.5°	144.1	153.5	162.7	165.0	206.1	261.0	288.4	339.6	442.1	518.9	529.3
125°	156.9	165.3	173.7	175.8	211.8	259.8	283.8	327.3	414.4	479.6	489.2
127.5°	167.2	175.7	184.3	186.4	217.6	259.2	280.0	317.3	392.0	448.0	456.1
130°	172.7	181.9	191.1	193.4	221.8	259.6	278.4	311.7	378.3	428.1	435.6
132.5°	178.4	187.7	196.8	199.1	225.2	259.8	277.2	306.9	366.5	411.1	417.8
135°	186.9	195.3	203.7	205.7	228.8	259.6	275.0	299.8	349.7	387.1	392.9
137.5°	195.6	203.9	212.2	214.2	234.4	261.2	274.6	295.6	337.8	369.4	374.2
140°	202.8	210.4	218.1	220.0	237.7	261.4	273.2	291.5	328.0	355.3	359.6
142.5°	208.3	215.4	222.4	224.2	240.6	262.3	273.2	289.3	321.2	345.2	349.0
145°	216.8	222.9	229.1	230.6	244.2	262.4	271.5	284.5	310.7	330.3	333.1
147.5°	225.4	231.3	237.3	238.8	249.7	264.2	271.5	281.8	302.3	317.7	320.2
150°	230.8	236.2	241.6	243.0	252.5	265.1	271.5	280.1	297.5	310.6	312.6
152.5°	236.5	240.7	244.8	245.8	254.4	265.7	271.5	278.9	293.8	304.9	306.3
155°	245.0	248.1	251.1	251.9	258.4	267.1	271.5	277.4	289.2	298.0	299.0
157.5°	251.3	254.3	257.2	257.9	262.4	268.4	271.5	276.0	285.2	292.1	292.9
160°	255.6	257.8	260.2	260.7	264.3	269.0	271.5	275.4	283.3	289.2	289.5
162.5°	259.8	261.5	263.2	263.7	266.3	269.8	271.5	274.8	281.4	286.4	286.8
165°	264.5	266.0	267.6	268.0	269.1	270.7	271.5	273.8	278.5	282.1	282.5
167.5°	268.7	269.4	270.1	270.3	271.3	272.6	273.2	274.9	278.0	280.3	280.5
170°	271.5	272.2	272.9	273.1	273.2	273.2	273.2	274.9	278.0	280.3	280.3
172.5°	272.9	273.1	273.2	273.2	273.2	273.2	273.2	274.5	276.9	278.8	278.6
175°	275.0	275.0	275.0	275.0	274.4	273.6	273.2	274.1	275.7	276.8	276.8
177.5°	275.0	275.0	275.0	275.0	274.5	274.0	273.7	274.3	275.6	276.5	276.3
180°	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0



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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3
2.5°	1282.3	1278.8	1282.3	1279.9	1281.1	1277.5	1266.9	1263.4	1266.9	1270.4	1270.4
5°	1297.7	1295.3	1297.7	1297.7	1296.5	1294.1	1282.3	1279.9	1282.3	1283.4	1281.1
7.5°	1302.4	1298.8	1302.4	1300.0	1300.0	1297.7	1285.8	1283.4	1284.7	1288.2	1284.7
10°	1302.4	1298.8	1302.4	1301.2	1300.0	1297.7	1285.8	1281.1	1281.1	1284.7	1281.1
12.5°	1296.5	1294.1	1296.5	1294.1	1294.1	1291.8	1279.9	1275.2	1276.4	1277.5	1272.9
15°	1287.0	1283.4	1287.0	1284.7	1285.8	1282.3	1269.3	1264.5	1264.5	1266.9	1258.6
17.5°	1272.9	1268.1	1272.9	1271.6	1270.4	1268.1	1256.3	1251.6	1250.3	1251.6	1245.6
20°	1256.3	1252.7	1256.3	1255.0	1255.0	1250.3	1238.5	1232.6	1232.6	1232.6	1226.7
22.5°	1230.2	1226.7	1230.2	1232.6	1232.6	1231.4	1220.8	1212.5	1210.1	1210.1	1203.0
25°	1200.7	1197.1	1200.7	1200.7	1199.4	1200.7	1197.1	1192.4	1188.8	1185.3	1178.2
27.5°	1172.2	1169.9	1172.2	1169.9	1172.2	1168.7	1167.6	1166.3	1161.7	1158.1	1148.6
30°	1143.9	1141.5	1143.9	1141.5	1139.2	1136.8	1130.9	1128.5	1133.2	1130.9	1115.5
32.5°	1108.4	1106.1	1108.4	1108.4	1106.1	1106.1	1096.6	1093.0	1094.2	1101.3	1087.1
35°	1071.7	1068.2	1071.7	1070.5	1071.7	1068.2	1062.3	1061.0	1056.4	1064.6	1054.0
37.5°	1029.2	1025.6	1029.2	1029.2	1029.2	1031.5	1026.7	1023.3	1016.1	1026.7	1018.5
40°	985.4	980.6	985.4	984.2	985.4	987.7	985.4	983.0	975.9	984.2	977.1
42.5°	935.7	934.5	935.7	936.9	936.9	941.6	945.2	940.4	938.0	932.1	936.9
45°	882.4	880.1	882.4	884.8	886.0	888.3	899.0	899.0	895.5	886.0	893.1
47.5°	825.7	819.7	825.7	832.8	832.8	836.3	847.0	855.3	849.3	837.5	841.1
50°	765.3	766.6	765.3	770.1	770.1	783.1	791.4	799.7	805.6	791.4	774.8
52.5°	706.2	705.1	706.2	709.7	714.5	720.4	734.6	742.8	752.3	744.1	718.0
55°	647.0	649.5	647.0	648.2	650.6	654.1	675.4	683.7	701.5	690.8	663.6
57.5°	588.0	584.4	588.0	590.3	591.4	595.0	612.8	628.2	638.8	640.0	606.8
60°	519.3	514.5	519.3	529.9	532.4	534.7	551.2	565.5	574.9	578.5	544.2
62.5°	458.9	450.7	458.9	466.1	470.8	476.8	488.6	509.9	518.1	519.3	470.8
65°	395.1	391.5	395.1	409.2	410.5	417.6	430.6	446.0	463.7	461.4	391.5
67.5°	337.2	337.2	337.2	346.6	353.6	357.2	373.8	380.9	403.3	405.8	326.5
70°	283.9	282.7	283.9	291.0	295.7	304.0	319.4	327.7	345.4	351.3	265.0
72.5°	233.0	231.9	233.0	239.0	243.7	250.8	263.8	273.2	288.6	295.7	205.8
75°	188.1	185.7	188.1	192.9	191.6	201.1	211.7	221.2	235.4	240.1	152.6
77.5°	144.3	144.3	144.3	149.1	149.1	158.5	163.2	175.0	183.4	190.4	112.4
80°	107.6	106.5	107.6	108.9	108.9	113.5	121.9	130.1	137.3	137.3	76.9
82.5°	75.7	73.3	75.7	75.7	75.7	78.1	82.8	85.1	89.9	93.5	48.5
85°	47.3	47.3	47.3	48.5	47.3	49.7	50.9	53.3	53.3	50.9	29.5
87.5°	30.8	29.5	30.8	29.5	29.5	28.4	28.4	28.4	27.2	26.1	16.6
90°	7.0	7.0	7.0	7.0	7.0	9.3	12.4	14.1	12.1	8.1	5.2
92.5°	28.1	22.5	28.1	33.7	35.1	49.7	69.2	79.0	69.3	50.0	35.6
95°	97.9	81.0	97.9	114.8	119.0	156.2	205.9	230.8	194.9	123.2	69.4
97.5°	234.6	202.4	234.6	266.7	274.8	298.3	329.7	345.4	285.6	165.9	76.2
100°	338.0	299.7	338.0	376.3	385.9	384.2	381.9	380.7	314.3	181.5	81.9
102.5°	439.7	406.9	439.7	472.5	480.7	450.7	410.7	390.6	323.3	188.6	87.7
105°	569.4	551.8	569.4	587.1	591.4	524.1	434.4	389.6	324.4	193.9	96.2
107.5°	654.3	658.6	654.3	650.1	649.0	555.2	430.0	367.4	310.0	194.9	108.7
110°	686.7	705.1	686.7	668.4	663.8	558.9	418.9	349.0	297.2	193.5	115.7



TEST NUMBER: P934458

CATALOG NUMBER: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
112.5°	689.7	717.9	689.7	661.5	654.4	546.9	403.8	332.2	286.0	193.5	124.2
115°	671.3	710.4	671.3	632.2	622.4	518.9	381.0	312.0	273.1	195.3	136.9
117.5°	632.5	676.0	632.5	589.1	578.3	484.9	360.5	298.2	265.1	198.9	149.2
120°	601.3	643.5	601.3	559.2	548.6	463.3	349.5	292.7	262.4	201.9	156.5
122.5°	570.9	612.5	570.9	529.3	518.9	442.1	339.6	288.4	261.0	206.1	165.0
125°	527.4	565.7	527.4	489.2	479.6	414.4	327.3	283.8	259.8	211.8	175.8
127.5°	488.4	520.7	488.4	456.1	448.0	392.0	317.3	280.0	259.2	217.6	186.4
130°	465.5	495.3	465.5	435.6	428.1	378.3	311.7	278.4	259.6	221.8	193.4
132.5°	444.5	471.3	444.5	417.8	411.1	366.5	306.9	277.2	259.8	225.2	199.1
135°	416.0	439.0	416.0	392.9	387.1	349.7	299.8	275.0	259.6	228.8	205.7
137.5°	393.0	411.8	393.0	374.2	369.4	337.8	295.6	274.6	261.2	234.4	214.2
140°	377.3	394.9	377.3	359.6	355.3	328.0	291.5	273.2	261.4	237.7	220.0
142.5°	364.2	379.4	364.2	349.0	345.2	321.2	289.3	273.2	262.3	240.6	224.2
145°	344.7	356.2	344.7	333.1	330.3	310.7	284.5	271.5	262.4	244.2	230.6
147.5°	329.7	339.1	329.7	320.2	317.7	302.3	281.8	271.5	264.2	249.7	238.8
150°	320.3	328.0	320.3	312.6	310.6	297.5	280.1	271.5	265.1	252.5	243.0
152.5°	312.1	317.9	312.1	306.3	304.9	293.8	278.9	271.5	265.7	254.4	245.8
155°	302.9	306.7	302.9	299.0	298.0	289.2	277.4	271.5	267.1	258.4	251.9
157.5°	295.5	298.2	295.5	292.9	292.1	285.2	276.0	271.5	268.4	262.4	257.9
160°	291.2	292.7	291.2	289.5	289.2	283.3	275.4	271.5	269.0	264.3	260.7
162.5°	288.3	289.7	288.3	286.8	286.4	281.4	274.8	271.5	269.8	266.3	263.7
165°	284.1	285.7	284.1	282.5	282.1	278.5	273.8	271.5	270.7	269.1	268.0
167.5°	281.1	281.8	281.1	280.5	280.3	278.0	274.9	273.2	272.6	271.3	270.3
170°	280.3	280.3	280.3	280.3	280.3	278.0	274.9	273.2	273.2	273.2	273.1
172.5°	278.1	277.5	278.1	278.6	278.8	276.9	274.5	273.2	273.2	273.2	273.2
175°	276.8	276.8	276.8	276.8	276.8	275.7	274.1	273.2	273.6	274.4	275.0
177.5°	275.7	275.0	275.7	276.3	276.5	275.6	274.3	273.7	274.0	274.5	275.0
180°	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0



TEST NUMBER: P934458

CATALOG NUMBER: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

CANDELA DISTRIBUTION (continued):

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
0°	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3
2.5°	1268.1	1261.0	1261.0	1249.1	1244.4	1240.9	1235.0	1217.3	1212.5	1207.8	1214.8
5°	1278.8	1265.7	1256.3	1235.0	1217.3	1210.1	1187.6	1145.1	1116.6	1095.4	1083.6
7.5°	1281.1	1264.5	1246.8	1213.7	1171.1	1152.2	1083.6	1005.5	984.2	965.2	953.4
10°	1278.8	1259.8	1235.0	1185.3	1084.8	1051.6	983.0	932.1	919.1	915.5	919.1
12.5°	1270.4	1252.7	1218.4	1135.6	994.9	972.4	932.1	902.6	900.2	906.1	938.0
15°	1256.3	1239.7	1199.4	1069.4	945.2	928.6	900.2	889.6	902.6	943.9	1039.8
17.5°	1242.1	1223.2	1173.5	1004.3	907.3	895.5	875.3	896.7	970.0	1025.6	1057.5
20°	1223.2	1200.7	1143.9	957.0	880.1	869.4	859.9	955.8	1011.4	1031.5	1049.2
22.5°	1200.7	1177.0	1103.7	923.9	851.7	843.4	849.3	989.0	1011.4	1025.6	1041.0
25°	1171.1	1151.0	1056.4	897.8	829.2	819.7	842.2	985.4	998.4	1001.9	1032.7
27.5°	1143.9	1117.9	1006.7	874.2	802.0	798.4	848.1	970.0	979.5	983.0	1016.1
30°	1110.7	1071.7	951.1	849.3	773.6	772.5	849.3	951.1	948.7	958.2	991.3
32.5°	1076.4	1003.1	888.3	818.6	746.4	745.3	841.1	922.7	920.3	933.4	958.2
35°	1044.6	949.9	803.2	783.1	712.1	713.3	820.9	889.6	890.7	902.6	918.0
37.5°	1011.4	903.7	709.7	744.1	679.0	679.0	793.7	858.8	856.5	859.9	881.3
40°	972.4	831.6	627.0	693.2	648.2	644.7	760.7	825.7	817.4	816.3	845.8
42.5°	930.9	752.3	565.5	625.7	612.8	608.0	720.4	785.5	770.1	773.6	811.5
45°	886.0	731.0	518.1	528.8	576.0	572.6	676.6	739.3	728.7	738.2	777.2
47.5°	841.1	688.5	502.7	438.9	537.0	535.8	628.2	694.4	688.5	697.9	739.3
50°	779.5	641.1	501.6	376.2	493.3	498.0	570.1	650.6	650.6	658.9	702.6
52.5°	700.3	583.2	455.4	340.7	442.4	456.6	519.3	612.8	615.1	623.4	662.4
55°	628.2	522.9	422.3	313.4	382.1	412.8	469.6	573.7	578.5	586.7	622.2
57.5°	561.9	435.3	415.2	281.6	326.5	356.1	425.8	535.8	538.3	545.3	579.6
60°	490.9	314.6	380.9	247.2	278.0	300.5	385.6	490.9	499.2	503.9	533.5
62.5°	410.5	228.3	345.4	223.6	254.4	259.1	352.5	448.3	458.9	462.5	480.2
65°	292.1	191.6	293.4	203.5	229.5	230.6	317.0	404.6	414.0	419.9	433.0
67.5°	197.5	156.1	223.6	184.5	210.6	211.7	282.7	353.6	366.7	371.5	379.7
70°	137.3	104.1	165.6	164.5	189.3	191.6	246.0	307.5	319.4	322.9	327.7
72.5°	100.5	84.0	137.3	147.9	166.8	169.1	208.2	255.5	267.3	270.9	273.2
75°	76.9	88.7	111.2	128.9	141.9	143.2	170.4	208.2	216.5	218.8	220.0
77.5°	61.5	82.8	81.7	104.1	115.9	113.5	133.7	160.9	168.0	168.0	168.0
80°	46.1	65.1	61.5	74.5	85.1	82.8	95.8	114.8	117.1	119.4	118.3
82.5°	34.3	41.4	41.4	47.3	56.8	54.4	63.8	74.5	74.5	74.5	76.9
85°	21.3	23.6	18.9	24.8	32.0	30.8	35.5	40.2	41.4	41.4	39.0
87.5°	13.0	10.7	5.9	9.5	14.2	14.2	16.6	17.7	16.6	16.6	16.6
90°	4.8	3.3	1.9	3.3	4.8	5.2	8.1	12.1	14.1	12.4	9.3
92.5°	32.5	19.9	7.3	19.9	32.5	35.6	50.0	69.3	79.0	69.2	49.7
95°	63.7	40.6	17.7	40.6	63.7	69.4	123.2	194.9	230.8	205.9	156.2
97.5°	71.1	50.9	30.6	50.9	71.1	76.2	165.9	285.6	345.4	329.7	298.3
100°	77.4	58.9	40.6	58.9	77.4	81.9	181.5	314.3	380.7	381.9	384.2
102.5°	83.4	66.3	49.1	66.3	83.4	87.7	188.6	323.3	390.6	410.7	450.7
105°	92.5	78.0	63.5	78.0	92.5	96.2	193.9	324.4	389.6	434.4	524.1
107.5°	105.3	91.8	78.3	91.8	105.3	108.7	194.9	310.0	367.4	430.0	555.2
110°	112.6	100.4	88.2	100.4	112.6	115.7	193.5	297.2	349.0	418.9	558.9



TEST NUMBER: P934458

CATALOG NUMBER: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

CANDELA DISTRIBUTION (continued):

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
112.5°	121.2	109.6	97.9	109.6	121.2	124.2	193.5	286.0	332.2	403.8	546.9
115°	134.2	123.5	112.7	123.5	134.2	136.9	195.3	273.1	312.0	381.0	518.9
117.5°	146.8	137.1	127.3	137.1	146.8	149.2	198.9	265.1	298.2	360.5	484.9
120°	154.2	145.0	135.8	145.0	154.2	156.5	201.9	262.4	292.7	349.5	463.3
122.5°	162.7	153.5	144.1	153.5	162.7	165.0	206.1	261.0	288.4	339.6	442.1
125°	173.7	165.3	156.9	165.3	173.7	175.8	211.8	259.8	283.8	327.3	414.4
127.5°	184.3	175.7	167.2	175.7	184.3	186.4	217.6	259.2	280.0	317.3	392.0
130°	191.1	181.9	172.7	181.9	191.1	193.4	221.8	259.6	278.4	311.7	378.3
132.5°	196.8	187.7	178.4	187.7	196.8	199.1	225.2	259.8	277.2	306.9	366.5
135°	203.7	195.3	186.9	195.3	203.7	205.7	228.8	259.6	275.0	299.8	349.7
137.5°	212.2	203.9	195.6	203.9	212.2	214.2	234.4	261.2	274.6	295.6	337.8
140°	218.1	210.4	202.8	210.4	218.1	220.0	237.7	261.4	273.2	291.5	328.0
142.5°	222.4	215.4	208.3	215.4	222.4	224.2	240.6	262.3	273.2	289.3	321.2
145°	229.1	222.9	216.8	222.9	229.1	230.6	244.2	262.4	271.5	284.5	310.7
147.5°	237.3	231.3	225.4	231.3	237.3	238.8	249.7	264.2	271.5	281.8	302.3
150°	241.6	236.2	230.8	236.2	241.6	243.0	252.5	265.1	271.5	280.1	297.5
152.5°	244.8	240.7	236.5	240.7	244.8	245.8	254.4	265.7	271.5	278.9	293.8
155°	251.1	248.1	245.0	248.1	251.1	251.9	258.4	267.1	271.5	277.4	289.2
157.5°	257.2	254.3	251.3	254.3	257.2	257.9	262.4	268.4	271.5	276.0	285.2
160°	260.2	257.8	255.6	257.8	260.2	260.7	264.3	269.0	271.5	275.4	283.3
162.5°	263.2	261.5	259.8	261.5	263.2	263.7	266.3	269.8	271.5	274.8	281.4
165°	267.6	266.0	264.5	266.0	267.6	268.0	269.1	270.7	271.5	273.8	278.5
167.5°	270.1	269.4	268.7	269.4	270.1	270.3	271.3	272.6	273.2	274.9	278.0
170°	272.9	272.2	271.5	272.2	272.9	273.1	273.2	273.2	273.2	274.9	278.0
172.5°	273.2	273.1	272.9	273.1	273.2	273.2	273.2	273.2	273.2	274.5	276.9
175°	275.0	275.0	275.0	275.0	275.0	275.0	274.4	273.6	273.2	274.1	275.7
177.5°	275.0	275.0	275.0	275.0	275.0	275.0	274.5	274.0	273.7	274.3	275.6
180°	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0



TEST NUMBER: P934458

CATALOG NUMBER: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
0°	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3	1250.3
2.5°	1206.6	1203.0	1207.8	1194.7	1207.8	1203.0	1206.6	1214.8	1207.8	1212.5	1217.3
5°	1058.7	1052.8	1033.9	1018.5	1033.9	1052.8	1058.7	1083.6	1095.4	1116.6	1145.1
7.5°	946.3	941.6	936.9	927.4	936.9	941.6	946.3	953.4	965.2	984.2	1005.5
10°	921.5	922.7	929.8	928.6	929.8	922.7	921.5	919.1	915.5	919.1	932.1
12.5°	985.4	996.0	1035.1	1032.7	1035.1	996.0	985.4	938.0	906.1	900.2	902.6
15°	1058.7	1062.3	1070.5	1071.7	1070.5	1062.3	1058.7	1039.8	943.9	902.6	889.6
17.5°	1065.8	1067.0	1072.9	1072.9	1072.9	1067.0	1065.8	1057.5	1025.6	970.0	896.7
20°	1059.9	1062.3	1074.1	1076.4	1074.1	1062.3	1059.9	1049.2	1031.5	1011.4	955.8
22.5°	1057.5	1062.3	1071.7	1070.5	1071.7	1062.3	1057.5	1041.0	1025.6	1011.4	989.0
25°	1045.7	1045.7	1046.9	1048.1	1046.9	1045.7	1045.7	1032.7	1001.9	998.4	985.4
27.5°	1020.8	1023.3	1030.3	1029.2	1030.3	1023.3	1020.8	1016.1	983.0	979.5	970.0
30°	998.4	996.0	990.1	985.4	990.1	996.0	998.4	991.3	958.2	948.7	951.1
32.5°	960.5	954.6	948.7	945.2	948.7	954.6	960.5	958.2	933.4	920.3	922.7
35°	915.5	916.8	915.5	912.1	915.5	916.8	915.5	918.0	902.6	890.7	889.6
37.5°	883.7	886.0	884.8	880.1	884.8	886.0	883.7	881.3	859.9	856.5	858.8
40°	850.5	851.7	850.5	847.0	850.5	851.7	850.5	845.8	816.3	817.4	825.7
42.5°	818.6	817.4	813.8	811.5	813.8	817.4	818.6	811.5	773.6	770.1	785.5
45°	781.9	783.1	776.0	772.5	776.0	783.1	781.9	777.2	738.2	728.7	739.3
47.5°	745.3	745.3	739.3	735.8	739.3	745.3	745.3	739.3	697.9	688.5	694.4
50°	706.2	705.1	696.7	695.6	696.7	705.1	706.2	702.6	658.9	650.6	650.6
52.5°	661.3	661.3	662.4	664.8	662.4	661.3	661.3	662.4	623.4	615.1	612.8
55°	622.2	623.4	631.6	634.1	631.6	623.4	622.2	622.2	586.7	578.5	573.7
57.5°	582.0	582.0	588.0	588.0	588.0	582.0	582.0	579.6	545.3	538.3	535.8
60°	535.8	538.3	542.9	541.8	542.9	538.3	535.8	533.5	503.9	499.2	490.9
62.5°	487.3	489.7	490.9	488.6	490.9	489.7	487.3	480.2	462.5	458.9	448.3
65°	436.5	438.9	440.0	437.7	440.0	438.9	436.5	433.0	419.9	414.0	404.6
67.5°	384.4	383.3	382.1	386.8	382.1	383.3	384.4	379.7	371.5	366.7	353.6
70°	331.2	331.2	330.0	332.4	330.0	331.2	331.2	327.7	322.9	319.4	307.5
72.5°	274.4	273.2	278.0	274.4	278.0	273.2	274.4	273.2	270.9	267.3	255.5
75°	218.8	221.2	218.8	222.4	218.8	221.2	218.8	220.0	218.8	216.5	208.2
77.5°	166.8	169.1	166.8	166.8	166.8	169.1	166.8	168.0	168.0	168.0	160.9
80°	118.3	117.1	117.1	115.9	117.1	117.1	118.3	118.3	119.4	117.1	114.8
82.5°	75.7	74.5	74.5	76.9	74.5	74.5	75.7	76.9	74.5	74.5	74.5
85°	41.4	42.6	40.2	40.2	40.2	42.6	41.4	39.0	41.4	41.4	40.2
87.5°	15.4	14.2	14.2	14.2	14.2	14.2	15.4	16.6	16.6	16.6	17.7
90°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	9.3	12.4	14.1	12.1
92.5°	35.1	33.7	28.1	22.5	28.1	33.7	35.1	49.7	69.2	79.0	69.3
95°	119.0	114.8	97.9	81.0	97.9	114.8	119.0	156.2	205.9	230.8	194.9
97.5°	274.8	266.7	234.6	202.4	234.6	266.7	274.8	298.3	329.7	345.4	285.6
100°	385.9	376.3	338.0	299.7	338.0	376.3	385.9	384.2	381.9	380.7	314.3
102.5°	480.7	472.5	439.7	406.9	439.7	472.5	480.7	450.7	410.7	390.6	323.3
105°	591.4	587.1	569.4	551.8	569.4	587.1	591.4	524.1	434.4	389.6	324.4
107.5°	649.0	650.1	654.3	658.6	654.3	650.1	649.0	555.2	430.0	367.4	310.0
110°	663.8	668.4	686.7	705.1	686.7	668.4	663.8	558.9	418.9	349.0	297.2



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CANDELA DISTRIBUTION (continued):

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
112.5°	654.4	661.5	689.7	717.9	689.7	661.5	654.4	546.9	403.8	332.2	286.0
115°	622.4	632.2	671.3	710.4	671.3	632.2	622.4	518.9	381.0	312.0	273.1
117.5°	578.3	589.1	632.5	676.0	632.5	589.1	578.3	484.9	360.5	298.2	265.1
120°	548.6	559.2	601.3	643.5	601.3	559.2	548.6	463.3	349.5	292.7	262.4
122.5°	518.9	529.3	570.9	612.5	570.9	529.3	518.9	442.1	339.6	288.4	261.0
125°	479.6	489.2	527.4	565.7	527.4	489.2	479.6	414.4	327.3	283.8	259.8
127.5°	448.0	456.1	488.4	520.7	488.4	456.1	448.0	392.0	317.3	280.0	259.2
130°	428.1	435.6	465.5	495.3	465.5	435.6	428.1	378.3	311.7	278.4	259.6
132.5°	411.1	417.8	444.5	471.3	444.5	417.8	411.1	366.5	306.9	277.2	259.8
135°	387.1	392.9	416.0	439.0	416.0	392.9	387.1	349.7	299.8	275.0	259.6
137.5°	369.4	374.2	393.0	411.8	393.0	374.2	369.4	337.8	295.6	274.6	261.2
140°	355.3	359.6	377.3	394.9	377.3	359.6	355.3	328.0	291.5	273.2	261.4
142.5°	345.2	349.0	364.2	379.4	364.2	349.0	345.2	321.2	289.3	273.2	262.3
145°	330.3	333.1	344.7	356.2	344.7	333.1	330.3	310.7	284.5	271.5	262.4
147.5°	317.7	320.2	329.7	339.1	329.7	320.2	317.7	302.3	281.8	271.5	264.2
150°	310.6	312.6	320.3	328.0	320.3	312.6	310.6	297.5	280.1	271.5	265.1
152.5°	304.9	306.3	312.1	317.9	312.1	306.3	304.9	293.8	278.9	271.5	265.7
155°	298.0	299.0	302.9	306.7	302.9	299.0	298.0	289.2	277.4	271.5	267.1
157.5°	292.1	292.9	295.5	298.2	295.5	292.9	292.1	285.2	276.0	271.5	268.4
160°	289.2	289.5	291.2	292.7	291.2	289.5	289.2	283.3	275.4	271.5	269.0
162.5°	286.4	286.8	288.3	289.7	288.3	286.8	286.4	281.4	274.8	271.5	269.8
165°	282.1	282.5	284.1	285.7	284.1	282.5	282.1	278.5	273.8	271.5	270.7
167.5°	280.3	280.5	281.1	281.8	281.1	280.5	280.3	278.0	274.9	273.2	272.6
170°	280.3	280.3	280.3	280.3	280.3	280.3	280.3	278.0	274.9	273.2	273.2
172.5°	278.8	278.6	278.1	277.5	278.1	278.6	278.8	276.9	274.5	273.2	273.2
175°	276.8	276.8	276.8	276.8	276.8	276.8	276.8	275.7	274.1	273.2	273.6
177.5°	276.5	276.3	275.7	275.0	275.7	276.3	276.5	275.6	274.3	273.7	274.0
180°	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0	275.0



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CANDELA DISTRIBUTION (continued):

	330°	337.5°	340°	350°	360°
0°	1250.3	1250.3	1250.3	1250.3	1250.3
2.5°	1235.0	1240.9	1244.4	1249.1	1261.0
5°	1187.6	1210.1	1217.3	1235.0	1256.3
7.5°	1083.6	1152.2	1171.1	1213.7	1246.8
10°	983.0	1051.6	1084.8	1185.3	1235.0
12.5°	932.1	972.4	994.9	1135.6	1218.4
15°	900.2	928.6	945.2	1069.4	1199.4
17.5°	875.3	895.5	907.3	1004.3	1173.5
20°	859.9	869.4	880.1	957.0	1143.9
22.5°	849.3	843.4	851.7	923.9	1103.7
25°	842.2	819.7	829.2	897.8	1056.4
27.5°	848.1	798.4	802.0	874.2	1006.7
30°	849.3	772.5	773.6	849.3	951.1
32.5°	841.1	745.3	746.4	818.6	888.3
35°	820.9	713.3	712.1	783.1	803.2
37.5°	793.7	679.0	679.0	744.1	709.7
40°	760.7	644.7	648.2	693.2	627.0
42.5°	720.4	608.0	612.8	625.7	565.5
45°	676.6	572.6	576.0	528.8	518.1
47.5°	628.2	535.8	537.0	438.9	502.7
50°	570.1	498.0	493.3	376.2	501.6
52.5°	519.3	456.6	442.4	340.7	455.4
55°	469.6	412.8	382.1	313.4	422.3
57.5°	425.8	356.1	326.5	281.6	415.2
60°	385.6	300.5	278.0	247.2	380.9
62.5°	352.5	259.1	254.4	223.6	345.4
65°	317.0	230.6	229.5	203.5	293.4
67.5°	282.7	211.7	210.6	184.5	223.6
70°	246.0	191.6	189.3	164.5	165.6
72.5°	208.2	169.1	166.8	147.9	137.3
75°	170.4	143.2	141.9	128.9	111.2
77.5°	133.7	113.5	115.9	104.1	81.7
80°	95.8	82.8	85.1	74.5	61.5
82.5°	63.8	54.4	56.8	47.3	41.4
85°	35.5	30.8	32.0	24.8	18.9
87.5°	16.6	14.2	14.2	9.5	5.9
90°	8.1	5.2	4.8	3.3	1.9
92.5°	50.0	35.6	32.5	19.9	7.3
95°	123.2	69.4	63.7	40.6	17.7
97.5°	165.9	76.2	71.1	50.9	30.6
100°	181.5	81.9	77.4	58.9	40.6
102.5°	188.6	87.7	83.4	66.3	49.1
105°	193.9	96.2	92.5	78.0	63.5
107.5°	194.9	108.7	105.3	91.8	78.3
110°	193.5	115.7	112.6	100.4	88.2



TEST NUMBER: P934458
 CATALOG NUMBER: SQ4-FA-050U-100D-93050-1D-UNV-STD-W-4-3500K

CANDELA DISTRIBUTION (continued):

	330°	337.5°	340°	350°	360°
112.5°	193.5	124.2	121.2	109.6	97.9
115°	195.3	136.9	134.2	123.5	112.7
117.5°	198.9	149.2	146.8	137.1	127.3
120°	201.9	156.5	154.2	145.0	135.8
122.5°	206.1	165.0	162.7	153.5	144.1
125°	211.8	175.8	173.7	165.3	156.9
127.5°	217.6	186.4	184.3	175.7	167.2
130°	221.8	193.4	191.1	181.9	172.7
132.5°	225.2	199.1	196.8	187.7	178.4
135°	228.8	205.7	203.7	195.3	186.9
137.5°	234.4	214.2	212.2	203.9	195.6
140°	237.7	220.0	218.1	210.4	202.8
142.5°	240.6	224.2	222.4	215.4	208.3
145°	244.2	230.6	229.1	222.9	216.8
147.5°	249.7	238.8	237.3	231.3	225.4
150°	252.5	243.0	241.6	236.2	230.8
152.5°	254.4	245.8	244.8	240.7	236.5
155°	258.4	251.9	251.1	248.1	245.0
157.5°	262.4	257.9	257.2	254.3	251.3
160°	264.3	260.7	260.2	257.8	255.6
162.5°	266.3	263.7	263.2	261.5	259.8
165°	269.1	268.0	267.6	266.0	264.5
167.5°	271.3	270.3	270.1	269.4	268.7
170°	273.2	273.1	272.9	272.2	271.5
172.5°	273.2	273.2	273.2	273.1	272.9
175°	274.4	275.0	275.0	275.0	275.0
177.5°	274.5	275.0	275.0	275.0	275.0
180°	275.0	275.0	275.0	275.0	275.0



TEST NUMBER: P934458
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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	14.55	15.56	15.37	16.41	17.45	17.35	18.36	18.17	19.20	20.25
	3H	15.04	15.95	15.88	16.80	17.88	18.70	19.60	19.53	20.46	21.53
	4H	15.24	16.09	16.09	16.95	18.04	19.14	20.00	19.99	20.86	21.94
	6H	15.37	16.15	16.23	17.02	18.12	19.43	20.21	20.29	21.08	22.18
	8H	15.37	16.12	16.24	17.01	18.11	19.50	20.25	20.37	21.14	22.24
	12H	15.35	16.06	16.23	16.94	18.07	19.54	20.26	20.42	21.14	22.26
4H	2H	15.60	16.45	16.45	17.31	18.40	17.78	18.63	18.64	19.49	20.58
	3H	16.64	17.35	17.50	18.24	19.34	19.29	20.00	20.16	20.89	22.00
	4H	16.92	17.57	17.80	18.46	19.59	19.82	20.47	20.70	21.36	22.48
	6H	17.05	17.61	17.95	18.53	19.66	20.18	20.74	21.08	21.66	22.79
	8H	17.06	17.58	17.96	18.49	19.64	20.29	20.81	21.19	21.72	22.86
	12H	17.04	17.51	17.95	18.44	19.58	20.35	20.82	21.26	21.75	22.90
8H	4H	17.38	17.90	18.28	18.81	19.96	19.95	20.48	20.85	21.39	22.53
	6H	17.65	18.08	18.57	19.03	20.17	20.39	20.82	21.31	21.77	22.92
	8H	17.69	18.07	18.63	19.02	20.18	20.54	20.92	21.47	21.86	23.02
	12H	17.68	18.02	18.62	18.95	20.17	20.64	20.97	21.57	21.91	23.12
12H	4H	17.39	17.86	18.31	18.79	19.94	19.93	20.40	20.84	21.32	22.47
	6H	17.71	18.09	18.64	19.03	20.19	20.39	20.77	21.32	21.71	22.87
	8H	17.78	18.12	18.72	19.05	20.26	20.55	20.89	21.49	21.82	23.03