

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: P935957

Luminaire Tested: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

Issue Date: 12/17/2024

**Test Information**

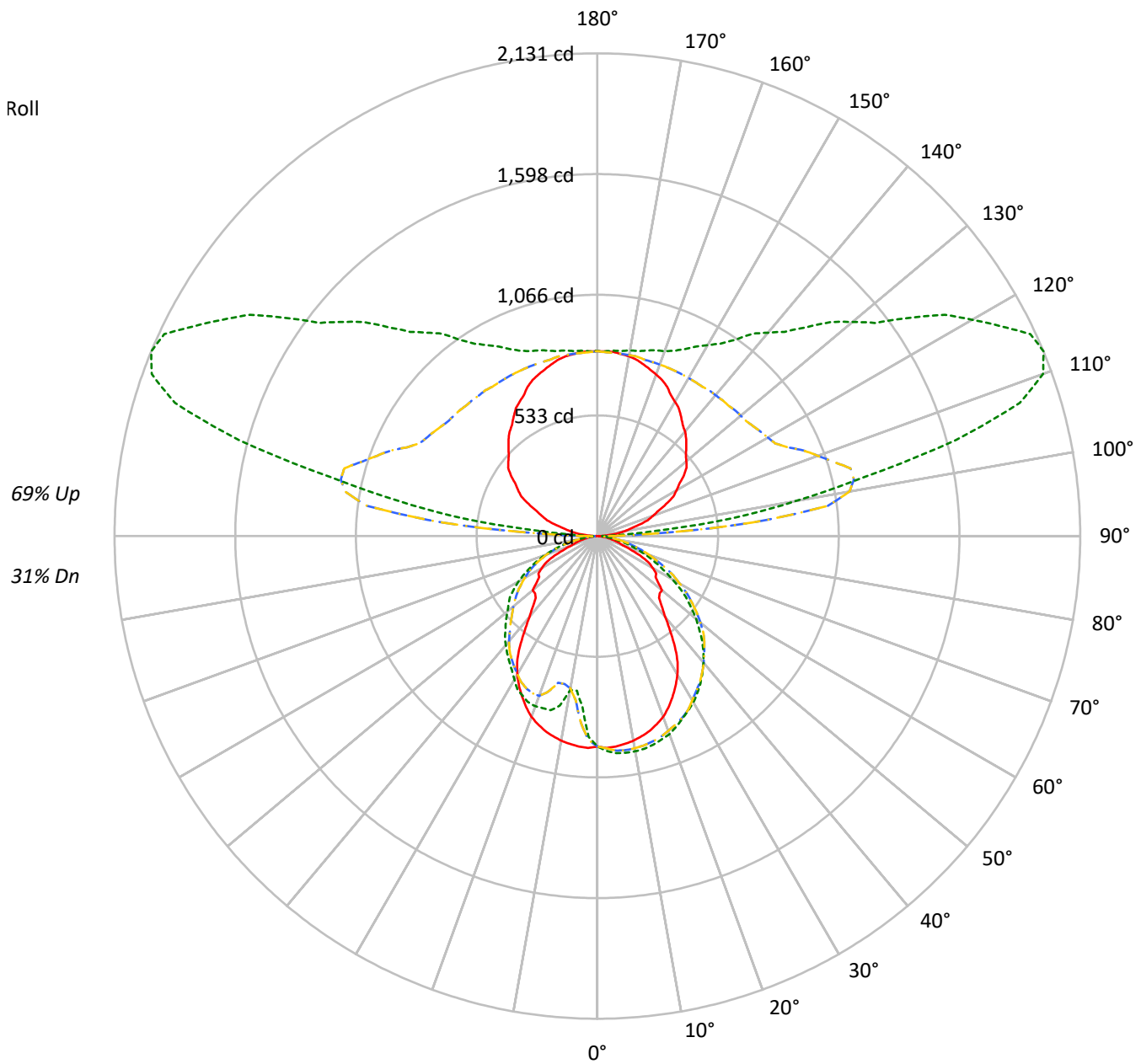
Test Method: LM-79-2019  
Report Number: P935957  
REPORT IS A COMBINATION OF REPORTS P933774 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Asymmetric Frosted Continuous I  
Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7701.8 lumens  
Efficiency: N/A  
Efficacy: 121.1 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-Indirect  
  
Input Watts (W): 63.6  
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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CATALOG NUMBER: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

### 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																
RC	80					70														0		
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10			0		
RCR																						
0	103	103	103	103		92	92	92	92		73	73	73		55	55	55		39	39	39	31
1	94	89	86	82		84	81	77	75		64	62	60		49	47	46		34	34	33	26
2	85	78	72	67		76	70	65	61		56	52	49		43	40	38		30	29	28	22
3	78	69	61	56		70	62	56	51		49	45	42		38	35	32		27	25	24	19
4	71	61	53	47		64	55	48	43		44	39	35		33	30	28		24	22	20	16
5	65	54	46	40		58	49	42	37		39	34	30		30	27	24		22	19	18	14
6	60	48	40	35		54	44	37	32		35	30	26		27	23	21		19	17	15	12
7	55	43	36	30		49	39	33	28		32	27	23		24	21	18		18	15	14	11
8	51	39	32	27		46	36	29	24		29	24	20		22	19	16		16	14	12	10
9	47	36	28	23		43	32	26	22		26	21	18		20	17	14		15	13	11	9
10	44	33	26	21		40	30	23	19		24	19	16		19	15	13		14	12	10	8

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

	0°	90°	180°	270°
0°	8616	8616	8616	8616
5°	8670	8697	8670	6838
10°	8602	8568	8602	6125
15°	8500	8382	8500	6998
20°	8312	8161	8312	7013
25°	7939	7840	7939	6865
30°	7459	7574	7459	6538
35°	6641	7238	6641	6180
40°	5524	6841	5524	5909
45°	4926	6377	4926	5597
50°	5222	5824	5222	5284
55°	4898	5228	4898	5104
60°	5031	4440	5031	4674
65°	4539	3669	4539	4104
70°	3123	2924	3123	3438
75°	2709	2162	2709	2588
80°	2139	1428	2139	1557
85°	1168	756	1168	644

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 20°  
 Vertical Angle: 45°  
 Luminance: 7564 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.8	1.1
10°-20°	238.0	3.1
20°-30°	367.8	4.8
30°-40°	439.1	5.7
40°-50°	441.7	5.7
50°-60°	384.4	5.0
60°-70°	272.5	3.5
70°-80°	144.2	1.9
80°-90°	39.0	0.5
90°-100°	397.9	5.2
100°-110°	1046.0	13.6
110°-120°	1084.6	14.1
120°-130°	870.0	11.3
130°-140°	682.6	8.9
140°-150°	523.9	6.8
150°-160°	377.3	4.9
160°-170°	230.9	3.0
170°-180°	78.0	1.0
0°-30°	689.6	9.0
0°-40°	1128.8	14.7
0°-60°	1954.8	25.4
0°-90°	2410.5	31.3
90°-120°	2528.5	32.8
90°-150°	4605.1	59.8
90°-180°	5291.0	68.7
0°-180°	7701.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	928	928	928	928	928	
5°	933	962	933	756	933	88
15°	891	953	891	796	891	251
25°	784	889	784	778	784	360
35°	596	793	596	677	596	369
45°	385	654	385	574	385	308
55°	314	482	314	471	314	288
65°	218	291	218	325	218	208
75°	83	138	83	165	83	87
85°	14	35	14	30	14	19
90°	5	21	5	21	5	5
95°	53	240	53	240	53	58
105°	188	1638	188	1638	188	200
115°	335	2109	335	2109	335	331
125°	466	1680	466	1680	466	413
135°	555	1303	555	1303	555	429
145°	644	1057	644	1057	644	403
155°	728	910	728	910	728	334
165°	785	848	785	848	785	222
175°	816	822	816	822	816	77
180°	816	816	816	816	816	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5
2.5°	936.4	936.4	941.7	943.5	943.5	940.8	938.2	940.8	948.7	951.4	950.5
5°	932.8	940.0	949.6	951.4	953.1	952.3	950.5	952.3	961.0	962.8	963.7
7.5°	925.8	939.1	951.4	954.0	956.6	954.0	953.1	954.9	963.7	965.4	965.4
10°	917.0	935.5	949.6	951.4	954.0	951.4	951.4	954.9	963.7	965.4	966.3
12.5°	904.7	930.2	943.5	945.2	948.7	947.9	947.0	950.5	959.3	961.0	961.0
15°	890.7	920.5	932.8	934.6	940.8	939.1	939.1	942.6	952.3	954.9	954.0
17.5°	871.4	908.3	922.3	924.9	929.3	928.5	929.3	932.8	941.7	943.5	944.3
20°	849.4	891.6	908.3	910.9	915.3	915.3	915.3	919.7	928.5	932.0	932.0
22.5°	819.5	874.0	891.6	893.3	898.6	898.6	900.3	906.5	914.4	915.3	915.3
25°	784.4	854.7	869.6	874.9	880.1	882.8	885.4	888.9	891.6	890.7	891.6
27.5°	747.5	830.1	849.4	852.9	859.9	862.6	866.1	867.0	867.8	870.5	868.7
30°	706.2	795.8	824.8	828.3	839.7	841.5	838.0	839.7	844.1	845.9	847.6
32.5°	659.7	744.9	799.3	807.2	817.8	812.5	811.6	814.3	821.3	821.3	823.1
35°	596.5	705.4	775.6	782.7	790.6	784.4	787.9	788.8	793.2	795.8	795.0
37.5°	527.1	671.1	751.0	756.3	762.5	754.5	759.8	762.5	766.0	764.2	764.2
40°	465.6	617.5	722.1	725.6	730.8	724.7	730.0	731.7	733.5	731.7	730.8
42.5°	419.9	558.7	691.3	695.7	692.2	696.6	698.3	701.9	699.2	695.7	695.7
45°	384.8	542.9	657.9	663.2	657.9	665.0	667.6	667.6	659.7	657.9	657.1
47.5°	373.4	511.3	624.6	624.6	621.9	630.7	635.1	629.0	621.0	618.4	618.4
50°	372.5	476.1	578.9	575.4	587.7	598.2	593.8	587.7	581.5	571.9	571.9
52.5°	338.2	433.1	520.0	533.2	552.5	558.7	551.7	545.5	535.0	530.6	527.1
55°	313.6	388.3	466.5	492.8	513.0	520.9	507.7	501.6	485.8	483.2	481.4
57.5°	308.3	323.3	417.3	450.7	475.2	474.4	466.5	455.0	441.9	439.2	438.4
60°	282.8	233.6	364.6	404.1	429.6	426.9	419.9	409.4	397.1	395.3	393.6
62.5°	256.5	169.5	304.8	349.7	385.7	384.8	378.6	362.8	354.0	349.7	346.1
65°	217.8	142.3	216.9	290.7	342.6	344.4	331.2	319.8	310.0	304.8	303.9
67.5°	166.0	115.9	146.7	242.4	301.3	299.5	282.8	277.5	265.2	262.6	257.3
70°	123.0	77.3	101.9	196.7	260.9	256.5	243.3	237.1	225.7	219.6	216.1
72.5°	101.9	62.4	74.7	152.8	219.6	214.3	202.9	195.9	186.2	180.9	177.4
75°	82.6	65.9	57.1	113.3	178.3	174.8	164.2	157.2	149.3	142.3	143.2
77.5°	60.6	61.5	45.7	83.4	141.4	136.1	130.0	121.2	117.7	110.7	110.7
80°	45.7	48.3	34.3	57.1	101.9	101.9	96.6	90.5	84.3	80.8	80.8
82.5°	30.7	30.7	25.5	36.0	69.4	66.8	63.2	61.5	58.0	56.2	56.2
85°	14.1	17.6	15.8	22.0	37.8	39.5	39.5	37.8	36.9	35.1	36.0
87.5°	4.4	7.9	9.7	12.3	19.3	20.2	21.1	21.1	21.1	22.0	22.0
90°	5.4	9.8	14.2	15.4	24.2	35.8	41.6	37.0	27.8	20.8	20.8
92.5°	21.9	59.1	96.4	105.7	148.6	205.8	234.4	205.4	147.6	104.1	100.0
95°	52.6	120.8	188.9	206.0	365.7	578.8	685.3	611.6	464.0	353.3	340.8
97.5°	90.9	151.1	211.2	226.3	492.6	847.9	1025.5	978.9	885.6	815.7	791.8
100°	120.5	175.0	229.6	243.2	538.8	933.0	1130.1	1133.5	1140.4	1145.5	1117.0
102.5°	145.7	196.7	247.5	260.2	560.1	959.8	1159.7	1219.1	1337.9	1427.1	1402.7
105°	188.5	231.6	274.6	285.4	575.7	962.8	1156.4	1289.5	1555.9	1755.7	1742.6
107.5°	232.3	272.4	312.7	322.7	578.7	920.0	1090.7	1276.4	1648.0	1926.6	1929.8
110°	261.8	298.1	334.5	343.5	574.3	882.0	1035.9	1243.6	1658.9	1970.5	1984.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	290.9	325.5	360.1	368.7	574.5	848.9	986.1	1198.6	1623.7	1942.5	1963.4
115°	334.7	366.6	398.5	406.5	579.8	810.8	926.3	1131.1	1540.6	1847.8	1876.8
117.5°	378.0	407.0	436.0	443.2	590.6	787.0	885.2	1070.0	1439.6	1716.8	1749.0
120°	403.1	430.5	457.7	464.5	599.3	779.0	868.8	1037.6	1375.3	1628.6	1659.9
122.5°	427.8	455.3	482.9	489.7	611.9	774.8	856.3	1008.3	1312.4	1540.5	1571.3
125°	465.7	490.7	515.8	522.1	628.9	771.3	842.6	971.7	1230.0	1423.7	1452.2
127.5°	496.3	521.6	546.9	553.2	645.8	769.3	831.0	942.0	1163.7	1330.1	1354.1
130°	512.8	540.0	567.2	574.1	658.3	770.5	826.7	925.4	1122.8	1270.9	1293.0
132.5°	529.7	557.0	584.2	591.1	668.3	771.3	822.8	911.1	1088.0	1220.5	1240.3
135°	554.9	579.8	604.5	610.8	679.3	770.5	816.2	890.2	1038.2	1149.3	1166.4
137.5°	580.6	605.2	629.8	636.0	695.7	775.4	815.2	877.7	1002.8	1096.7	1110.7
140°	602.1	624.7	647.4	653.0	705.8	776.2	811.3	865.3	973.4	1054.5	1067.6
142.5°	618.5	639.4	660.3	665.6	714.1	778.9	811.3	858.8	953.7	1025.0	1036.2
145°	643.7	662.0	680.2	684.7	725.1	779.0	805.8	844.7	922.3	980.5	989.1
147.5°	668.8	686.7	704.4	708.9	741.2	784.3	805.8	836.4	897.4	943.3	950.3
150°	685.3	701.4	717.4	721.4	749.5	787.0	805.8	831.7	883.2	922.0	927.7
152.5°	702.3	714.5	726.6	729.7	755.1	788.9	805.8	827.9	872.0	905.0	909.3
155°	727.5	736.5	745.5	747.8	767.1	792.9	805.8	823.4	858.5	884.7	887.6
157.5°	746.1	754.9	763.6	765.8	779.1	797.0	805.8	819.5	846.7	867.1	869.2
160°	758.7	765.5	772.4	774.0	784.7	798.8	805.8	817.5	840.9	858.4	859.5
162.5°	771.3	776.4	781.5	782.8	790.5	800.7	805.8	815.7	835.4	850.2	851.2
165°	785.0	789.6	794.2	795.4	798.9	803.6	805.8	812.9	827.0	837.5	838.7
167.5°	797.6	799.8	802.0	802.5	805.4	809.4	811.3	815.9	825.2	832.1	832.6
170°	805.8	808.0	810.2	810.8	810.9	811.2	811.3	815.9	825.2	832.1	832.1
172.5°	810.2	810.7	811.2	811.3	811.3	811.3	811.3	815.0	822.3	827.7	827.3
175°	816.2	816.2	816.2	816.2	814.5	812.3	811.3	813.6	818.2	821.7	821.7
177.5°	816.2	816.2	816.2	816.2	815.0	813.3	812.4	814.3	817.9	820.6	820.1
180°	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2



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**CANDELA DISTRIBUTION (continued):**

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5
2.5°	952.3	949.6	952.3	950.5	951.4	948.7	940.8	938.2	940.8	943.5	943.5
5°	963.7	961.9	963.7	963.7	962.8	961.0	952.3	950.5	952.3	953.1	951.4
7.5°	967.2	964.6	967.2	965.4	965.4	963.7	954.9	953.1	954.0	956.6	954.0
10°	967.2	964.6	967.2	966.3	965.4	963.7	954.9	951.4	951.4	954.0	951.4
12.5°	962.8	961.0	962.8	961.0	961.0	959.3	950.5	947.0	947.9	948.7	945.2
15°	955.8	953.1	955.8	954.0	954.9	952.3	942.6	939.1	939.1	940.8	934.6
17.5°	945.2	941.7	945.2	944.3	943.5	941.7	932.8	929.3	928.5	929.3	924.9
20°	932.8	930.2	932.8	932.0	932.0	928.5	919.7	915.3	915.3	915.3	910.9
22.5°	913.5	910.9	913.5	915.3	915.3	914.4	906.5	900.3	898.6	898.6	893.3
25°	891.6	888.9	891.6	891.6	890.7	891.6	888.9	885.4	882.8	880.1	874.9
27.5°	870.5	868.7	870.5	868.7	870.5	867.8	867.0	866.1	862.6	859.9	852.9
30°	849.4	847.6	849.4	847.6	845.9	844.1	839.7	838.0	841.5	839.7	828.3
32.5°	823.1	821.3	823.1	823.1	821.3	821.3	814.3	811.6	812.5	817.8	807.2
35°	795.8	793.2	795.8	795.0	795.8	793.2	788.8	787.9	784.4	790.6	782.7
37.5°	764.2	761.6	764.2	764.2	764.2	766.0	762.5	759.8	754.5	762.5	756.3
40°	731.7	728.2	731.7	730.8	731.7	733.5	731.7	730.0	724.7	730.8	725.6
42.5°	694.8	693.9	694.8	695.7	695.7	699.2	701.9	698.3	696.6	692.2	695.7
45°	655.3	653.5	655.3	657.1	657.9	659.7	667.6	667.6	665.0	657.9	663.2
47.5°	613.1	608.8	613.1	618.4	618.4	621.0	629.0	635.1	630.7	621.9	624.6
50°	568.3	569.2	568.3	571.9	571.9	581.5	587.7	593.8	598.2	587.7	575.4
52.5°	524.4	523.6	524.4	527.1	530.6	535.0	545.5	551.7	558.7	552.5	533.2
55°	480.5	482.3	480.5	481.4	483.2	485.8	501.6	507.7	520.9	513.0	492.8
57.5°	436.6	434.0	436.6	438.4	439.2	441.9	455.0	466.5	474.4	475.2	450.7
60°	385.7	382.1	385.7	393.6	395.3	397.1	409.4	419.9	426.9	429.6	404.1
62.5°	340.9	334.7	340.9	346.1	349.7	354.0	362.8	378.6	384.8	385.7	349.7
65°	293.4	290.7	293.4	303.9	304.8	310.0	319.8	331.2	344.4	342.6	290.7
67.5°	250.3	250.3	250.3	257.3	262.6	265.2	277.5	282.8	299.5	301.3	242.4
70°	210.8	209.9	210.8	216.1	219.6	225.7	237.1	243.3	256.5	260.9	196.7
72.5°	173.0	172.1	173.0	177.4	180.9	186.2	195.9	202.9	214.3	219.6	152.8
75°	139.6	137.9	139.6	143.2	142.3	149.3	157.2	164.2	174.8	178.3	113.3
77.5°	107.2	107.2	107.2	110.7	110.7	117.7	121.2	130.0	136.1	141.4	83.4
80°	79.9	79.0	79.9	80.8	80.8	84.3	90.5	96.6	101.9	101.9	57.1
82.5°	56.2	54.5	56.2	56.2	56.2	58.0	61.5	63.2	66.8	69.4	36.0
85°	35.1	35.1	35.1	36.0	35.1	36.9	37.8	39.5	39.5	37.8	22.0
87.5°	22.8	22.0	22.8	22.0	22.0	21.1	21.1	21.1	20.2	19.3	12.3
90°	20.8	20.8	20.8	20.8	20.8	27.8	37.0	41.6	35.8	24.2	15.4
92.5°	83.4	66.8	83.4	100.0	104.1	147.6	205.4	234.4	205.8	148.6	105.7
95°	290.6	240.5	290.6	340.8	353.3	464.0	611.6	685.3	578.8	365.7	206.0
97.5°	696.4	600.9	696.4	791.8	815.7	885.6	978.9	1025.5	847.9	492.6	226.3
100°	1003.4	889.6	1003.4	1117.0	1145.5	1140.4	1133.5	1130.1	933.0	538.8	243.2
102.5°	1305.3	1207.9	1305.3	1402.7	1427.1	1337.9	1219.1	1159.7	959.8	560.1	260.2
105°	1690.3	1637.9	1690.3	1742.6	1755.7	1555.9	1289.5	1156.4	962.8	575.7	285.4
107.5°	1942.5	1955.1	1942.5	1929.8	1926.6	1648.0	1276.4	1090.7	920.0	578.7	322.7
110°	2038.6	2093.2	2038.6	1984.1	1970.5	1658.9	1243.6	1035.9	882.0	574.3	343.5





TEST NUMBER: P935957

CATALOG NUMBER: SQ4-FA-150U-075D-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°	2047.2	2130.9	2047.2	1963.4	1942.5	1623.7	1198.6	986.1	848.9	574.5	368.7
115°	1993.0	2109.1	1993.0	1876.8	1847.8	1540.6	1131.1	926.3	810.8	579.8	406.5
117.5°	1877.8	2006.6	1877.8	1749.0	1716.8	1439.6	1070.0	885.2	787.0	590.6	443.2
120°	1785.1	1910.2	1785.1	1659.9	1628.6	1375.3	1037.6	868.8	779.0	599.3	464.5
122.5°	1694.8	1818.2	1694.8	1571.3	1540.5	1312.4	1008.3	856.3	774.8	611.9	489.7
125°	1565.8	1679.6	1565.8	1452.2	1423.7	1230.0	971.7	842.6	771.3	628.9	522.1
127.5°	1450.0	1545.9	1450.0	1354.1	1330.1	1163.7	942.0	831.0	769.3	645.8	553.2
130°	1381.7	1470.3	1381.7	1293.0	1270.9	1122.8	925.4	826.7	770.5	658.3	574.1
132.5°	1319.6	1399.0	1319.6	1240.3	1220.5	1088.0	911.1	822.8	771.3	668.3	591.1
135°	1234.8	1303.2	1234.8	1166.4	1149.3	1038.2	890.2	816.2	770.5	679.3	610.8
137.5°	1166.7	1222.7	1166.7	1110.7	1096.7	1002.8	877.7	815.2	775.4	695.7	636.0
140°	1119.9	1172.3	1119.9	1067.6	1054.5	973.4	865.3	811.3	776.2	705.8	653.0
142.5°	1081.3	1126.2	1081.3	1036.2	1025.0	953.7	858.8	811.3	778.9	714.1	665.6
145°	1023.2	1057.3	1023.2	989.1	980.5	922.3	844.7	805.8	779.0	725.1	684.7
147.5°	978.6	1006.9	978.6	950.3	943.3	897.4	836.4	805.8	784.3	741.2	708.9
150°	950.6	973.4	950.6	927.7	922.0	883.2	831.7	805.8	787.0	749.5	721.4
152.5°	926.6	943.8	926.6	909.3	905.0	872.0	827.9	805.8	788.9	755.1	729.7
155°	899.0	910.4	899.0	887.6	884.7	858.5	823.4	805.8	792.9	767.1	747.8
157.5°	877.2	885.2	877.2	869.2	867.1	846.7	819.5	805.8	797.0	779.1	765.8
160°	864.2	868.8	864.2	859.5	858.4	840.9	817.5	805.8	798.8	784.7	774.0
162.5°	855.6	860.0	855.6	851.2	850.2	835.4	815.7	805.8	800.7	790.5	782.8
165°	843.3	848.0	843.3	838.7	837.5	827.0	812.9	805.8	803.6	798.9	795.4
167.5°	834.6	836.5	834.6	832.6	832.1	825.2	815.9	811.3	809.4	805.4	802.5
170°	832.1	832.1	832.1	832.1	832.1	825.2	815.9	811.3	811.2	810.9	810.8
172.5°	825.6	823.9	825.6	827.3	827.7	822.3	815.0	811.3	811.3	811.3	811.3
175°	821.7	821.7	821.7	821.7	821.7	818.2	813.6	811.3	812.3	814.5	816.2
177.5°	818.1	816.2	818.1	820.1	820.6	817.9	814.3	812.4	813.3	815.0	816.2
180°	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2



TEST NUMBER: P935957

CATALOG NUMBER: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

**CANDELA DISTRIBUTION (continued):**

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
0°	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5
2.5°	941.7	936.4	936.4	927.6	924.1	921.4	917.0	903.9	900.3	896.8	902.1
5°	949.6	940.0	932.8	917.0	903.9	898.6	881.9	850.3	829.2	813.4	804.6
7.5°	951.4	939.1	925.8	901.2	869.6	855.6	804.6	746.6	730.8	716.8	708.0
10°	949.6	935.5	917.0	880.1	805.5	780.9	730.0	692.2	682.5	679.9	682.5
12.5°	943.5	930.2	904.7	843.3	738.7	722.1	692.2	670.2	668.5	672.9	696.6
15°	932.8	920.5	890.7	794.1	701.9	689.6	668.5	660.6	670.2	701.0	772.1
17.5°	922.3	908.3	871.4	745.8	673.7	665.0	650.0	665.8	720.3	761.6	785.3
20°	908.3	891.6	849.4	710.6	653.5	645.6	638.6	709.8	751.0	766.0	779.1
22.5°	891.6	874.0	819.5	686.0	632.5	626.3	630.7	734.3	751.0	761.6	773.0
25°	869.6	854.7	784.4	666.7	615.8	608.8	625.4	731.7	741.4	744.0	766.8
27.5°	849.4	830.1	747.5	649.2	595.6	592.9	629.8	720.3	727.3	730.0	754.5
30°	824.8	795.8	706.2	630.7	574.5	573.6	630.7	706.2	704.5	711.5	736.1
32.5°	799.3	744.9	659.7	607.9	554.3	553.4	624.6	685.2	683.4	693.1	711.5
35°	775.6	705.4	596.5	581.5	528.8	529.7	609.6	660.6	661.4	670.2	681.6
37.5°	751.0	671.1	527.1	552.5	504.2	504.2	589.4	637.7	636.0	638.6	654.4
40°	722.1	617.5	465.6	514.8	481.4	478.8	564.8	613.1	607.0	606.1	628.1
42.5°	691.3	558.7	419.9	464.7	455.0	451.5	535.0	583.3	571.9	574.5	602.6
45°	657.9	542.9	384.8	392.7	427.8	425.2	502.5	549.0	541.1	548.1	577.1
47.5°	624.6	511.3	373.4	325.9	398.8	398.0	466.5	515.7	511.3	518.3	549.0
50°	578.9	476.1	372.5	279.3	366.3	369.9	423.4	483.2	483.2	489.3	521.8
52.5°	520.0	433.1	338.2	253.0	328.6	339.1	385.7	455.0	456.8	463.0	491.9
55°	466.5	388.3	313.6	232.7	283.7	306.5	348.8	426.1	429.6	435.7	462.1
57.5°	417.3	323.3	308.3	209.0	242.4	264.4	316.3	398.0	399.7	405.0	430.5
60°	364.6	233.6	282.8	183.6	206.4	223.1	286.3	364.6	370.7	374.2	396.2
62.5°	304.8	169.5	256.5	166.0	188.8	192.3	261.7	333.0	340.9	343.5	356.7
65°	216.9	142.3	217.8	151.1	170.4	171.3	235.4	300.4	307.4	311.8	321.5
67.5°	146.7	115.9	166.0	137.0	156.3	157.2	209.9	262.6	272.3	275.8	281.9
70°	101.9	77.3	123.0	122.1	140.5	142.3	182.7	228.4	237.1	239.8	243.3
72.5°	74.7	62.4	101.9	109.8	123.8	125.6	154.6	189.7	198.5	201.1	202.9
75°	57.1	65.9	82.6	95.7	105.4	106.3	126.5	154.6	160.7	162.5	163.4
77.5°	45.7	61.5	60.6	77.3	86.1	84.3	99.2	119.4	124.7	124.7	124.7
80°	34.3	48.3	45.7	55.3	63.2	61.5	71.1	85.2	87.0	88.7	87.8
82.5°	25.5	30.7	30.7	35.1	42.2	40.4	47.4	55.3	55.3	55.3	57.1
85°	15.8	17.6	14.1	18.4	23.7	22.8	26.3	29.9	30.7	30.7	29.0
87.5°	9.7	7.9	4.4	7.0	10.5	10.5	12.3	13.2	12.3	12.3	12.3
90°	14.2	9.8	5.4	9.8	14.2	15.4	24.2	35.8	41.6	37.0	27.8
92.5°	96.4	59.1	21.9	59.1	96.4	105.7	148.6	205.8	234.4	205.4	147.6
95°	188.9	120.8	52.6	120.8	188.9	206.0	365.7	578.8	685.3	611.6	464.0
97.5°	211.2	151.1	90.9	151.1	211.2	226.3	492.6	847.9	1025.5	978.9	885.6
100°	229.6	175.0	120.5	175.0	229.6	243.2	538.8	933.0	1130.1	1133.5	1140.4
102.5°	247.5	196.7	145.7	196.7	247.5	260.2	560.1	959.8	1159.7	1219.1	1337.9
105°	274.6	231.6	188.5	231.6	274.6	285.4	575.7	962.8	1156.4	1289.5	1555.9
107.5°	312.7	272.4	232.3	272.4	312.7	322.7	578.7	920.0	1090.7	1276.4	1648.0
110°	334.5	298.1	261.8	298.1	334.5	343.5	574.3	882.0	1035.9	1243.6	1658.9



TEST NUMBER: P935957

CATALOG NUMBER: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

**CANDELA DISTRIBUTION (continued):**

	160°	170°	180°	190°	200°	202.5°	210°	220°	225°	230°	240°
112.5°	360.1	325.5	290.9	325.5	360.1	368.7	574.5	848.9	986.1	1198.6	1623.7
115°	398.5	366.6	334.7	366.6	398.5	406.5	579.8	810.8	926.3	1131.1	1540.6
117.5°	436.0	407.0	378.0	407.0	436.0	443.2	590.6	787.0	885.2	1070.0	1439.6
120°	457.7	430.5	403.1	430.5	457.7	464.5	599.3	779.0	868.8	1037.6	1375.3
122.5°	482.9	455.3	427.8	455.3	482.9	489.7	611.9	774.8	856.3	1008.3	1312.4
125°	515.8	490.7	465.7	490.7	515.8	522.1	628.9	771.3	842.6	971.7	1230.0
127.5°	546.9	521.6	496.3	521.6	546.9	553.2	645.8	769.3	831.0	942.0	1163.7
130°	567.2	540.0	512.8	540.0	567.2	574.1	658.3	770.5	826.7	925.4	1122.8
132.5°	584.2	557.0	529.7	557.0	584.2	591.1	668.3	771.3	822.8	911.1	1088.0
135°	604.5	579.8	554.9	579.8	604.5	610.8	679.3	770.5	816.2	890.2	1038.2
137.5°	629.8	605.2	580.6	605.2	629.8	636.0	695.7	775.4	815.2	877.7	1002.8
140°	647.4	624.7	602.1	624.7	647.4	653.0	705.8	776.2	811.3	865.3	973.4
142.5°	660.3	639.4	618.5	639.4	660.3	665.6	714.1	778.9	811.3	858.8	953.7
145°	680.2	662.0	643.7	662.0	680.2	684.7	725.1	779.0	805.8	844.7	922.3
147.5°	704.4	686.7	668.8	686.7	704.4	708.9	741.2	784.3	805.8	836.4	897.4
150°	717.4	701.4	685.3	701.4	717.4	721.4	749.5	787.0	805.8	831.7	883.2
152.5°	726.6	714.5	702.3	714.5	726.6	729.7	755.1	788.9	805.8	827.9	872.0
155°	745.5	736.5	727.5	736.5	745.5	747.8	767.1	792.9	805.8	823.4	858.5
157.5°	763.6	754.9	746.1	754.9	763.6	765.8	779.1	797.0	805.8	819.5	846.7
160°	772.4	765.5	758.7	765.5	772.4	774.0	784.7	798.8	805.8	817.5	840.9
162.5°	781.5	776.4	771.3	776.4	781.5	782.8	790.5	800.7	805.8	815.7	835.4
165°	794.2	789.6	785.0	789.6	794.2	795.4	798.9	803.6	805.8	812.9	827.0
167.5°	802.0	799.8	797.6	799.8	802.0	802.5	805.4	809.4	811.3	815.9	825.2
170°	810.2	808.0	805.8	808.0	810.2	810.8	810.9	811.2	811.3	815.9	825.2
172.5°	811.2	810.7	810.2	810.7	811.2	811.3	811.3	811.3	811.3	815.0	822.3
175°	816.2	816.2	816.2	816.2	816.2	816.2	814.5	812.3	811.3	813.6	818.2
177.5°	816.2	816.2	816.2	816.2	816.2	816.2	815.0	813.3	812.4	814.3	817.9
180°	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2



TEST NUMBER: P935957

CATALOG NUMBER: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
0°	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5	928.5
2.5°	896.0	893.3	896.8	887.2	896.8	893.3	896.0	902.1	896.8	900.3	903.9
5°	786.2	781.8	767.7	756.3	767.7	781.8	786.2	804.6	813.4	829.2	850.3
7.5°	702.7	699.2	695.7	688.7	695.7	699.2	702.7	708.0	716.8	730.8	746.6
10°	684.3	685.2	690.4	689.6	690.4	685.2	684.3	682.5	679.9	682.5	692.2
12.5°	731.7	739.6	768.6	766.8	768.6	739.6	731.7	696.6	672.9	668.5	670.2
15°	786.2	788.8	795.0	795.8	795.0	788.8	786.2	772.1	701.0	670.2	660.6
17.5°	791.4	792.3	796.7	796.7	796.7	792.3	791.4	785.3	761.6	720.3	665.8
20°	787.0	788.8	797.6	799.3	797.6	788.8	787.0	779.1	766.0	751.0	709.8
22.5°	785.3	788.8	795.8	795.0	795.8	788.8	785.3	773.0	761.6	751.0	734.3
25°	776.5	776.5	777.4	778.3	777.4	776.5	776.5	766.8	744.0	741.4	731.7
27.5°	758.1	759.8	765.1	764.2	765.1	759.8	758.1	754.5	730.0	727.3	720.3
30°	741.4	739.6	735.2	731.7	735.2	739.6	741.4	736.1	711.5	704.5	706.2
32.5°	713.3	708.9	704.5	701.9	704.5	708.9	713.3	711.5	693.1	683.4	685.2
35°	679.9	680.8	679.9	677.3	679.9	680.8	679.9	681.6	670.2	661.4	660.6
37.5°	656.2	657.9	657.1	653.5	657.1	657.9	656.2	654.4	638.6	636.0	637.7
40°	631.6	632.5	631.6	629.0	631.6	632.5	631.6	628.1	606.1	607.0	613.1
42.5°	607.9	607.0	604.4	602.6	604.4	607.0	607.9	602.6	574.5	571.9	583.3
45°	580.6	581.5	576.3	573.6	576.3	581.5	580.6	577.1	548.1	541.1	549.0
47.5°	553.4	553.4	549.0	546.4	549.0	553.4	553.4	549.0	518.3	511.3	515.7
50°	524.4	523.6	517.4	516.5	517.4	523.6	524.4	521.8	489.3	483.2	483.2
52.5°	491.1	491.1	491.9	493.7	491.9	491.1	491.1	491.9	463.0	456.8	455.0
55°	462.1	463.0	469.1	470.9	469.1	463.0	462.1	462.1	435.7	429.6	426.1
57.5°	432.2	432.2	436.6	436.6	436.6	432.2	432.2	430.5	405.0	399.7	398.0
60°	398.0	399.7	403.2	402.3	403.2	399.7	398.0	396.2	374.2	370.7	364.6
62.5°	361.9	363.7	364.6	362.8	364.6	363.7	361.9	356.7	343.5	340.9	333.0
65°	324.2	325.9	326.8	325.1	326.8	325.9	324.2	321.5	311.8	307.4	300.4
67.5°	285.4	284.6	283.7	287.2	283.7	284.6	285.4	281.9	275.8	272.3	262.6
70°	245.9	245.9	245.0	246.8	245.0	245.9	245.9	243.3	239.8	237.1	228.4
72.5°	203.8	202.9	206.4	203.8	206.4	202.9	203.8	202.9	201.1	198.5	189.7
75°	162.5	164.2	162.5	165.1	162.5	164.2	162.5	163.4	162.5	160.7	154.6
77.5°	123.8	125.6	123.8	123.8	123.8	125.6	123.8	124.7	124.7	124.7	119.4
80°	87.8	87.0	87.0	86.1	87.0	87.0	87.8	87.8	88.7	87.0	85.2
82.5°	56.2	55.3	55.3	57.1	55.3	55.3	56.2	57.1	55.3	55.3	55.3
85°	30.7	31.6	29.9	29.9	29.9	31.6	30.7	29.0	30.7	30.7	29.9
87.5°	11.4	10.5	10.5	10.5	10.5	10.5	11.4	12.3	12.3	12.3	13.2
90°	20.8	20.8	20.8	20.8	20.8	20.8	20.8	27.8	37.0	41.6	35.8
92.5°	104.1	100.0	83.4	66.8	83.4	100.0	104.1	147.6	205.4	234.4	205.8
95°	353.3	340.8	290.6	240.5	290.6	340.8	353.3	464.0	611.6	685.3	578.8
97.5°	815.7	791.8	696.4	600.9	696.4	791.8	815.7	885.6	978.9	1025.5	847.9
100°	1145.5	1117.0	1003.4	889.6	1003.4	1117.0	1145.5	1140.4	1133.5	1130.1	933.0
102.5°	1427.1	1402.7	1305.3	1207.9	1305.3	1402.7	1427.1	1337.9	1219.1	1159.7	959.8
105°	1755.7	1742.6	1690.3	1637.9	1690.3	1742.6	1755.7	1555.9	1289.5	1156.4	962.8
107.5°	1926.6	1929.8	1942.5	1955.1	1942.5	1929.8	1926.6	1648.0	1276.4	1090.7	920.0
110°	1970.5	1984.1	2038.6	2093.2	2038.6	1984.1	1970.5	1658.9	1243.6	1035.9	882.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	260°	270°	280°	290°	292.5°	300°	310°	315°	320°
112.5°	1942.5	1963.4	2047.2	2130.9	2047.2	1963.4	1942.5	1623.7	1198.6	986.1	848.9
115°	1847.8	1876.8	1993.0	2109.1	1993.0	1876.8	1847.8	1540.6	1131.1	926.3	810.8
117.5°	1716.8	1749.0	1877.8	2006.6	1877.8	1749.0	1716.8	1439.6	1070.0	885.2	787.0
120°	1628.6	1659.9	1785.1	1910.2	1785.1	1659.9	1628.6	1375.3	1037.6	868.8	779.0
122.5°	1540.5	1571.3	1694.8	1818.2	1694.8	1571.3	1540.5	1312.4	1008.3	856.3	774.8
125°	1423.7	1452.2	1565.8	1679.6	1565.8	1452.2	1423.7	1230.0	971.7	842.6	771.3
127.5°	1330.1	1354.1	1450.0	1545.9	1450.0	1354.1	1330.1	1163.7	942.0	831.0	769.3
130°	1270.9	1293.0	1381.7	1470.3	1381.7	1293.0	1270.9	1122.8	925.4	826.7	770.5
132.5°	1220.5	1240.3	1319.6	1399.0	1319.6	1240.3	1220.5	1088.0	911.1	822.8	771.3
135°	1149.3	1166.4	1234.8	1303.2	1234.8	1166.4	1149.3	1038.2	890.2	816.2	770.5
137.5°	1096.7	1110.7	1166.7	1222.7	1166.7	1110.7	1096.7	1002.8	877.7	815.2	775.4
140°	1054.5	1067.6	1119.9	1172.3	1119.9	1067.6	1054.5	973.4	865.3	811.3	776.2
142.5°	1025.0	1036.2	1081.3	1126.2	1081.3	1036.2	1025.0	953.7	858.8	811.3	778.9
145°	980.5	989.1	1023.2	1057.3	1023.2	989.1	980.5	922.3	844.7	805.8	779.0
147.5°	943.3	950.3	978.6	1006.9	978.6	950.3	943.3	897.4	836.4	805.8	784.3
150°	922.0	927.7	950.6	973.4	950.6	927.7	922.0	883.2	831.7	805.8	787.0
152.5°	905.0	909.3	926.6	943.8	926.6	909.3	905.0	872.0	827.9	805.8	788.9
155°	884.7	887.6	899.0	910.4	899.0	887.6	884.7	858.5	823.4	805.8	792.9
157.5°	867.1	869.2	877.2	885.2	877.2	869.2	867.1	846.7	819.5	805.8	797.0
160°	858.4	859.5	864.2	868.8	864.2	859.5	858.4	840.9	817.5	805.8	798.8
162.5°	850.2	851.2	855.6	860.0	855.6	851.2	850.2	835.4	815.7	805.8	800.7
165°	837.5	838.7	843.3	848.0	843.3	838.7	837.5	827.0	812.9	805.8	803.6
167.5°	832.1	832.6	834.6	836.5	834.6	832.6	832.1	825.2	815.9	811.3	809.4
170°	832.1	832.1	832.1	832.1	832.1	832.1	832.1	825.2	815.9	811.3	811.2
172.5°	827.7	827.3	825.6	823.9	825.6	827.3	827.7	822.3	815.0	811.3	811.3
175°	821.7	821.7	821.7	821.7	821.7	821.7	821.7	818.2	813.6	811.3	812.3
177.5°	820.6	820.1	818.1	816.2	818.1	820.1	820.6	817.9	814.3	812.4	813.3
180°	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2	816.2



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**CANDELA DISTRIBUTION (continued):**

	330°	337.5°	340°	350°	360°
0°	928.5	928.5	928.5	928.5	928.5
2.5°	917.0	921.4	924.1	927.6	936.4
5°	881.9	898.6	903.9	917.0	932.8
7.5°	804.6	855.6	869.6	901.2	925.8
10°	730.0	780.9	805.5	880.1	917.0
12.5°	692.2	722.1	738.7	843.3	904.7
15°	668.5	689.6	701.9	794.1	890.7
17.5°	650.0	665.0	673.7	745.8	871.4
20°	638.6	645.6	653.5	710.6	849.4
22.5°	630.7	626.3	632.5	686.0	819.5
25°	625.4	608.8	615.8	666.7	784.4
27.5°	629.8	592.9	595.6	649.2	747.5
30°	630.7	573.6	574.5	630.7	706.2
32.5°	624.6	553.4	554.3	607.9	659.7
35°	609.6	529.7	528.8	581.5	596.5
37.5°	589.4	504.2	504.2	552.5	527.1
40°	564.8	478.8	481.4	514.8	465.6
42.5°	535.0	451.5	455.0	464.7	419.9
45°	502.5	425.2	427.8	392.7	384.8
47.5°	466.5	398.0	398.8	325.9	373.4
50°	423.4	369.9	366.3	279.3	372.5
52.5°	385.7	339.1	328.6	253.0	338.2
55°	348.8	306.5	283.7	232.7	313.6
57.5°	316.3	264.4	242.4	209.0	308.3
60°	286.3	223.1	206.4	183.6	282.8
62.5°	261.7	192.3	188.8	166.0	256.5
65°	235.4	171.3	170.4	151.1	217.8
67.5°	209.9	157.2	156.3	137.0	166.0
70°	182.7	142.3	140.5	122.1	123.0
72.5°	154.6	125.6	123.8	109.8	101.9
75°	126.5	106.3	105.4	95.7	82.6
77.5°	99.2	84.3	86.1	77.3	60.6
80°	71.1	61.5	63.2	55.3	45.7
82.5°	47.4	40.4	42.2	35.1	30.7
85°	26.3	22.8	23.7	18.4	14.1
87.5°	12.3	10.5	10.5	7.0	4.4
90°	24.2	15.4	14.2	9.8	5.4
92.5°	148.6	105.7	96.4	59.1	21.9
95°	365.7	206.0	188.9	120.8	52.6
97.5°	492.6	226.3	211.2	151.1	90.9
100°	538.8	243.2	229.6	175.0	120.5
102.5°	560.1	260.2	247.5	196.7	145.7
105°	575.7	285.4	274.6	231.6	188.5
107.5°	578.7	322.7	312.7	272.4	232.3
110°	574.3	343.5	334.5	298.1	261.8



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CATALOG NUMBER: SQ4-FA-150U-075D-93050-1D-UNV-STD-W-4-3000K

**CANDELA DISTRIBUTION (continued):**

	330°	337.5°	340°	350°	360°
112.5°	574.5	368.7	360.1	325.5	290.9
115°	579.8	406.5	398.5	366.6	334.7
117.5°	590.6	443.2	436.0	407.0	378.0
120°	599.3	464.5	457.7	430.5	403.1
122.5°	611.9	489.7	482.9	455.3	427.8
125°	628.9	522.1	515.8	490.7	465.7
127.5°	645.8	553.2	546.9	521.6	496.3
130°	658.3	574.1	567.2	540.0	512.8
132.5°	668.3	591.1	584.2	557.0	529.7
135°	679.3	610.8	604.5	579.8	554.9
137.5°	695.7	636.0	629.8	605.2	580.6
140°	705.8	653.0	647.4	624.7	602.1
142.5°	714.1	665.6	660.3	639.4	618.5
145°	725.1	684.7	680.2	662.0	643.7
147.5°	741.2	708.9	704.4	686.7	668.8
150°	749.5	721.4	717.4	701.4	685.3
152.5°	755.1	729.7	726.6	714.5	702.3
155°	767.1	747.8	745.5	736.5	727.5
157.5°	779.1	765.8	763.6	754.9	746.1
160°	784.7	774.0	772.4	765.5	758.7
162.5°	790.5	782.8	781.5	776.4	771.3
165°	798.9	795.4	794.2	789.6	785.0
167.5°	805.4	802.5	802.0	799.8	797.6
170°	810.9	810.8	810.2	808.0	805.8
172.5°	811.3	811.3	811.2	810.7	810.2
175°	814.5	816.2	816.2	816.2	816.2
177.5°	815.0	816.2	816.2	816.2	816.2
180°	816.2	816.2	816.2	816.2	816.2



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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	10.24	10.95	11.34	12.05	13.57	13.03	13.75	14.14	14.85	16.36
	3H	10.70	11.34	11.81	12.45	13.98	14.36	15.00	15.47	16.11	17.64
	4H	10.89	11.49	12.01	12.60	14.14	14.79	15.40	15.91	16.50	18.04
	6H	11.00	11.56	12.13	12.67	14.22	15.06	15.62	16.19	16.73	18.28
	8H	10.99	11.53	12.13	12.65	14.20	15.12	15.66	16.26	16.78	18.33
	12H	10.96	11.47	12.10	12.59	14.15	15.15	15.66	16.29	16.78	18.34
4H	2H	11.24	11.85	12.37	12.96	14.50	13.43	14.03	14.56	15.14	16.68
	3H	12.26	12.76	13.39	13.90	15.45	14.91	15.42	16.04	16.55	18.10
	4H	12.53	12.99	13.66	14.12	15.69	15.42	15.89	16.56	17.01	18.58
	6H	12.64	13.04	13.79	14.19	15.75	15.77	16.17	16.92	17.32	18.88
	8H	12.65	13.02	13.79	14.16	15.73	15.87	16.24	17.01	17.38	18.96
	12H	12.61	12.94	13.77	14.09	15.68	15.92	16.25	17.08	17.40	18.99
8H	4H	12.96	13.33	14.11	14.47	16.05	15.54	15.91	16.68	17.05	18.63
	6H	13.22	13.52	14.38	14.71	16.28	15.96	16.27	17.12	17.45	19.02
	8H	13.26	13.53	14.43	14.69	16.28	16.10	16.37	17.28	17.53	19.13
	12H	13.24	13.47	14.41	14.63	16.26	16.19	16.43	17.36	17.58	19.21
12H	4H	12.96	13.30	14.12	14.45	16.03	15.49	15.83	16.66	16.98	18.57
	6H	13.28	13.54	14.45	14.70	16.30	15.96	16.22	17.13	17.38	18.98
	8H	13.33	13.57	14.51	14.73	16.36	16.10	16.34	17.28	17.50	19.13