

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331722-940

Luminaire Tested: **SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331722-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

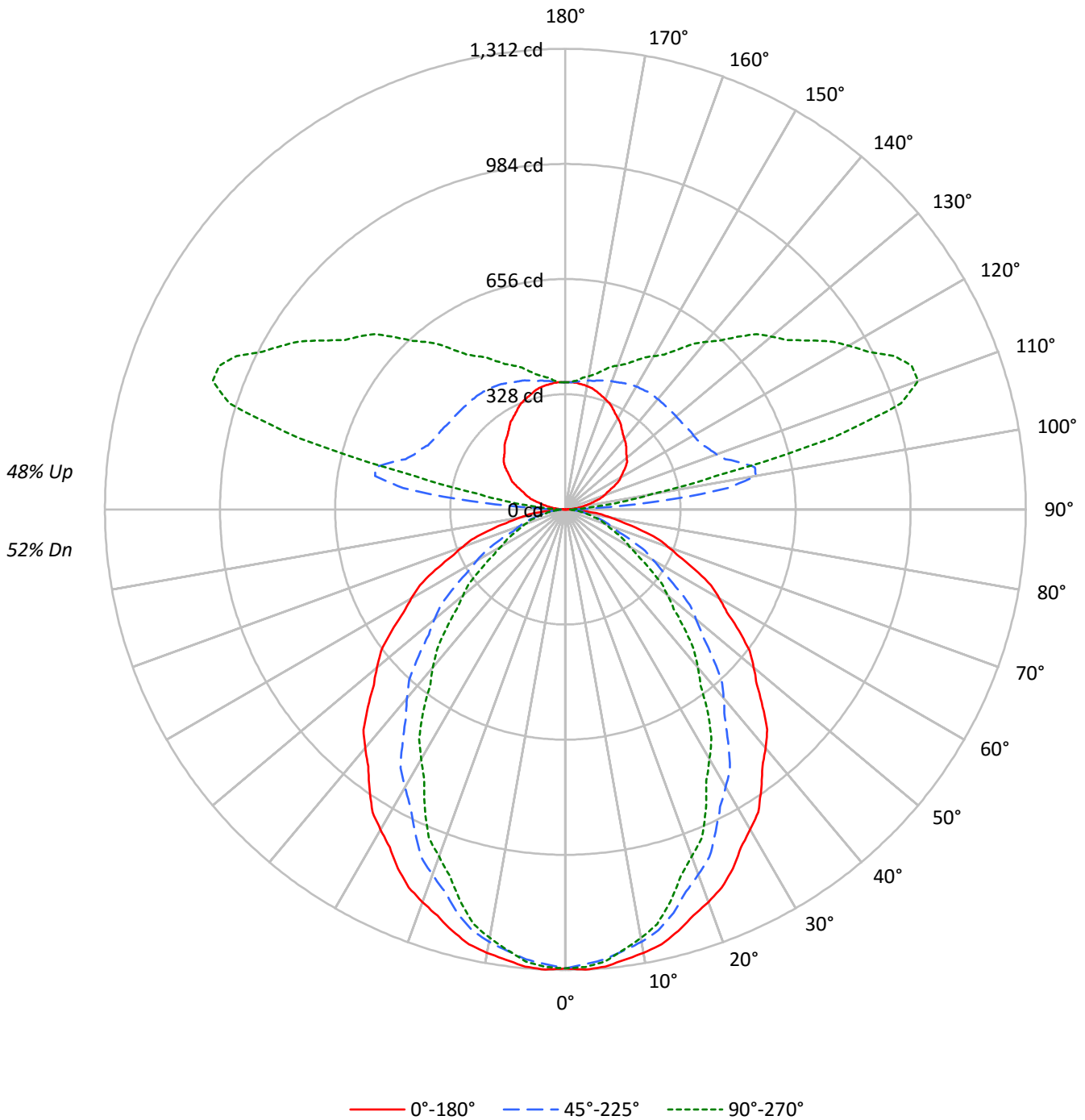
Lumens per Lamp: N/A
Luminaire Lumens: 5214.7 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331722-940
CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	44
2	90	83	77	72	83	77	72	68	66	62	59	56	53	51	46	44	43	38
3	83	73	66	61	76	68	62	57	59	54	50	50	46	43	41	39	37	33
4	76	65	58	52	70	61	54	49	52	47	43	45	41	38	37	34	32	29
5	70	58	51	45	64	55	48	42	47	42	38	40	36	33	34	31	28	25
6	64	53	45	39	60	49	42	37	43	37	33	37	32	29	31	28	25	22
7	60	48	40	34	55	45	38	33	39	33	29	33	29	26	28	25	23	20
8	56	43	36	31	51	41	34	29	36	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	31	26	33	27	24	28	24	21	24	21	19	16
10	48	37	30	25	45	34	28	24	30	25	21	26	22	19	22	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21111	21111	21111
5°	21191	20846	20960
10°	21028	20505	20330
15°	20787	19896	19323
20°	20452	19029	18076
25°	20110	18045	16864
30°	19634	17031	15310
35°	19170	15930	13947
40°	18704	14790	12370
45°	18155	13511	10942
50°	17595	12215	9540
55°	17022	10826	8194
60°	16353	9361	6801
65°	15595	7866	6193
70°	14691	6477	5693
75°	13587	5908	5315
80°	11985	5281	4844
85°	9429	4168	4168



TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	2.3
10°-20°	336.0	6.4
20°-30°	471.9	9.0
30°-40°	514.6	9.9
40°-50°	473.1	9.1
50°-60°	371.6	7.1
60°-70°	242.3	4.6
70°-80°	124.9	2.4
80°-90°	35.7	0.7
90°-100°	144.9	2.8
100°-110°	491.8	9.4
110°-120°	522.5	10.0
120°-130°	430.1	8.2
130°-140°	345.4	6.6
140°-150°	261.0	5.0
150°-160°	183.4	3.5
160°-170°	108.0	2.1
170°-180°	35.1	0.7
0°-30°	930.3	17.8
0°-40°	1444.9	27.7
0°-60°	2289.6	43.9
0°-90°	2692.4	51.6
90°-120°	1159.2	22.2
90°-150°	2195.7	42.1
90°-180°	2522.0	48.4
0°-180°	5214.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1308	1308	1308	1308	1308	
5°	1308	1301	1286	1296	1293	124
15°	1244	1229	1190	1168	1156	350
25°	1129	1089	1013	966	947	519
35°	973	910	808	736	708	608
45°	795	713	592	511	479	614
55°	605	510	385	316	291	540
65°	408	312	206	168	162	405
75°	218	137	95	87	85	230
85°	51	27	22	22	22	60
90°	1	9	24	23	23	3
95°	24	60	273	103	80	26
105°	85	128	516	923	786	90
115°	150	189	432	892	1034	149
125°	209	247	415	722	839	186
135°	245	293	410	607	695	190
145°	280	322	408	507	555	176
155°	318	344	397	449	466	147
165°	347	358	380	403	409	98
175°	362	362	365	370	369	34
180°	362	362	362	362	362	



TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5
2.5°	1312.2	1311.2	1310.1	1309.0	1308.1	1306.4	1304.0	1301.7	1299.4	1297.1	1299.2
5°	1307.5	1306.2	1304.8	1303.5	1302.3	1299.8	1296.5	1293.1	1289.6	1286.2	1288.5
7.5°	1294.0	1292.4	1290.8	1289.1	1287.5	1284.7	1280.7	1276.7	1272.6	1268.6	1269.4
10°	1282.6	1280.8	1279.0	1277.1	1275.2	1271.8	1266.5	1261.2	1256.0	1250.7	1249.9
12.5°	1268.5	1266.1	1263.9	1261.7	1259.4	1254.9	1248.1	1241.4	1234.7	1228.0	1226.5
15°	1243.6	1240.7	1237.8	1234.9	1232.0	1226.1	1217.2	1208.3	1199.3	1190.3	1185.4
17.5°	1213.1	1208.6	1204.3	1199.8	1195.4	1187.5	1176.0	1164.5	1153.1	1141.6	1135.7
20°	1190.3	1185.1	1179.8	1174.6	1169.3	1160.1	1146.9	1133.8	1120.7	1107.5	1100.9
22.5°	1165.7	1159.8	1154.0	1148.1	1142.2	1131.8	1117.0	1102.2	1087.4	1072.5	1064.0
25°	1128.8	1120.4	1112.0	1103.6	1095.2	1082.3	1064.9	1047.6	1030.2	1012.9	1002.1
27.5°	1084.3	1075.1	1066.0	1056.9	1047.8	1033.4	1013.8	994.3	974.6	955.1	942.5
30°	1053.1	1043.1	1033.1	1023.1	1013.2	997.6	976.6	955.6	934.5	913.5	900.1
32.5°	1022.8	1011.1	999.4	987.7	976.1	959.6	938.1	916.6	895.2	873.7	858.4
35°	972.6	959.2	945.8	932.4	919.0	900.7	877.5	854.4	831.3	808.2	791.6
37.5°	922.5	907.8	893.0	878.2	863.5	843.8	819.2	794.5	769.9	745.2	726.9
40°	887.4	871.6	855.9	840.1	824.3	803.7	778.2	752.7	727.2	701.7	683.0
42.5°	851.5	834.8	818.2	801.6	785.0	763.5	737.2	710.8	684.5	658.1	638.8
45°	795.1	777.5	759.9	742.3	724.7	702.0	674.5	646.8	619.2	591.7	572.9
47.5°	740.2	721.6	702.9	684.2	665.6	641.9	613.5	585.0	556.4	528.0	509.4
50°	700.5	681.8	663.2	644.4	625.8	602.0	573.1	544.1	515.2	486.3	468.1
52.5°	661.6	642.1	622.7	603.2	583.6	559.7	531.5	503.1	474.8	446.6	429.0
55°	604.7	584.2	563.7	543.1	522.6	498.1	469.8	441.3	413.0	384.6	368.8
57.5°	546.2	525.1	504.1	483.0	462.1	437.9	410.5	383.3	356.0	328.7	314.2
60°	506.4	485.4	464.4	443.4	422.3	398.2	371.1	344.0	317.0	289.9	276.5
62.5°	467.6	446.6	425.5	404.5	383.4	360.1	334.2	308.4	282.6	256.7	244.0
65°	408.2	386.9	365.6	344.3	323.1	300.5	276.9	253.2	229.5	205.9	197.0
67.5°	351.0	329.8	308.7	287.5	266.4	245.1	223.9	202.6	181.3	160.0	155.9
70°	311.2	290.7	270.2	249.7	229.2	209.8	191.7	173.5	155.4	137.2	134.6
72.5°	273.3	253.7	234.0	214.4	194.7	177.5	163.0	148.4	133.8	119.3	117.1
75°	217.8	199.3	180.9	162.5	144.1	130.5	121.5	112.5	103.6	94.7	92.8
77.5°	163.1	146.9	130.7	114.6	98.4	88.3	83.9	79.6	75.3	71.0	69.9
80°	128.9	115.6	102.2	88.7	75.3	67.3	64.6	62.1	59.4	56.8	55.7
82.5°	97.7	87.3	76.8	66.3	55.9	49.8	48.0	46.2	44.4	42.6	42.0
85°	50.9	45.4	39.9	34.3	28.8	25.7	24.9	24.1	23.3	22.5	22.5
87.5°	15.2	14.0	12.9	11.5	10.1	9.6	10.3	11.3	12.2	12.3	11.9
90°	0.7	2.8	5.6	7.0	8.4	10.4	13.9	18.8	23.0	23.7	23.0
92.5°	8.5	12.3	17.3	20.3	25.1	31.7	47.4	69.6	89.3	90.6	76.5
95°	24.4	27.2	34.2	40.4	51.5	68.3	100.4	161.0	241.9	273.2	239.1
97.5°	39.8	43.5	50.9	60.4	73.2	92.1	132.4	217.0	351.3	466.5	489.4
100°	53.7	55.7	62.1	73.2	87.1	106.6	143.6	228.6	379.2	550.6	651.0
102.5°	66.5	68.0	74.3	85.4	100.0	119.5	153.6	229.2	368.6	553.5	711.2
105°	85.1	87.8	92.7	103.2	118.5	138.0	170.8	232.8	347.9	516.5	702.0
107.5°	105.1	107.4	112.1	121.7	136.9	156.6	188.3	242.5	337.5	476.9	640.7
110°	118.5	121.3	125.5	134.6	149.2	169.4	200.0	250.2	335.3	458.0	602.3



TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.7	133.6	138.3	146.8	160.9	181.6	211.2	258.6	335.8	445.7	575.5
115°	149.9	153.4	157.6	165.9	179.9	198.7	228.6	271.2	338.8	432.2	542.3
117.5°	169.7	172.5	176.6	184.0	197.4	217.0	244.7	284.5	343.8	425.6	521.4
120°	181.9	184.8	188.9	195.2	209.1	228.6	255.8	293.5	347.1	421.7	510.2
122.5°	193.7	195.9	200.0	206.9	220.8	240.9	266.4	301.3	351.1	419.5	500.8
125°	209.1	211.2	215.3	223.7	237.7	257.2	282.3	313.7	356.9	415.4	487.2
127.5°	221.4	224.2	230.1	239.2	252.6	272.7	297.1	325.2	362.9	413.0	474.7
130°	228.6	231.4	238.4	248.2	262.1	281.6	306.0	332.5	367.4	412.0	466.4
132.5°	235.3	238.7	246.2	256.5	271.0	290.5	313.8	339.7	371.8	411.4	459.7
135°	245.4	248.2	256.5	267.0	283.0	302.6	324.9	349.2	377.1	410.5	450.3
137.5°	254.9	258.2	266.5	277.7	293.6	311.7	333.8	356.5	381.8	410.5	443.7
140°	262.1	264.8	273.2	284.4	299.7	317.9	338.8	360.3	384.1	409.8	439.9
142.5°	269.3	271.6	279.4	290.5	305.3	322.4	342.7	363.7	385.8	409.8	436.0
145°	280.2	283.0	290.0	300.4	314.3	329.7	348.6	368.0	387.5	408.5	430.8
147.5°	291.9	294.0	300.7	310.3	321.9	335.6	353.3	370.4	388.2	406.0	425.5
150°	299.7	301.8	307.4	316.5	326.9	339.5	355.5	371.5	387.5	404.3	421.0
152.5°	307.6	308.5	314.1	322.0	331.9	343.4	357.8	372.1	386.5	401.5	417.1
155°	318.5	319.2	323.4	331.1	338.8	349.2	361.1	372.9	384.8	396.6	409.8
157.5°	327.8	328.4	331.8	338.5	344.6	353.4	363.5	372.9	381.6	391.6	403.1
160°	333.9	334.6	337.3	343.0	348.6	356.1	364.5	372.9	379.9	388.3	398.1
162.5°	340.0	339.6	342.4	346.9	351.9	357.8	365.2	372.4	378.3	385.5	393.5
165°	347.1	346.4	347.9	352.0	355.5	359.7	366.0	370.9	375.1	379.9	386.2
167.5°	353.0	352.1	353.4	356.1	358.6	361.2	365.8	369.9	371.8	375.1	378.9
170°	356.9	355.5	356.1	358.3	359.7	361.8	365.2	368.7	370.1	372.2	375.1
172.5°	359.1	358.3	357.8	360.0	360.8	362.3	364.7	367.0	367.9	368.9	371.1
175°	361.8	361.1	360.3	361.8	361.8	362.5	363.8	365.2	364.5	365.2	366.0
177.5°	363.0	361.9	361.3	362.5	362.5	362.5	363.0	364.2	363.0	362.5	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5



TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5	1307.5
2.5°	1301.3	1303.4	1305.5	1306.4	1305.9	1305.5	1305.1	1304.7
5°	1290.9	1293.2	1295.7	1296.5	1295.7	1294.9	1294.1	1293.2
7.5°	1270.1	1270.7	1271.4	1271.0	1269.7	1268.4	1266.9	1265.6
10°	1249.1	1248.3	1247.5	1246.3	1244.7	1243.2	1241.6	1240.0
12.5°	1225.1	1223.7	1222.3	1220.3	1217.6	1215.0	1212.4	1209.8
15°	1180.4	1175.4	1170.4	1166.5	1164.0	1161.3	1158.7	1156.0
17.5°	1129.7	1123.7	1117.8	1112.6	1108.0	1103.6	1099.0	1094.5
20°	1094.4	1087.8	1081.2	1075.0	1069.3	1063.5	1057.7	1052.0
22.5°	1055.6	1047.1	1038.7	1032.2	1028.0	1023.6	1019.3	1015.0
25°	991.3	980.5	969.7	962.3	958.4	954.5	950.6	946.6
27.5°	930.0	917.4	904.8	895.5	889.2	882.9	876.6	870.4
30°	886.6	873.3	859.8	849.5	842.5	835.4	828.3	821.2
32.5°	843.1	827.8	812.5	801.5	794.9	788.2	781.5	774.8
35°	775.0	758.5	741.9	730.8	725.0	719.2	713.4	707.6
37.5°	708.7	690.5	672.3	659.8	653.2	646.5	639.9	633.3
40°	664.3	645.7	627.0	614.2	607.4	600.6	593.7	586.9
42.5°	619.6	600.2	580.9	567.9	561.3	554.7	548.0	541.4
45°	554.3	535.7	516.9	504.4	498.1	491.9	485.5	479.2
47.5°	490.8	472.3	453.7	441.6	435.9	430.1	424.4	418.7
50°	450.0	431.9	413.8	401.9	396.4	390.8	385.3	379.8
52.5°	411.5	394.0	376.5	365.2	360.1	355.0	349.9	344.8
55°	353.0	337.2	321.5	311.0	306.0	301.0	296.0	291.1
57.5°	299.8	285.3	270.9	261.5	257.3	253.1	248.9	244.7
60°	263.1	249.7	236.2	227.5	223.2	219.0	214.8	210.6
62.5°	231.2	218.5	205.6	198.0	195.5	193.0	190.4	187.9
65°	188.0	179.1	170.1	165.2	164.4	163.7	162.9	162.1
67.5°	151.8	147.7	143.6	141.1	140.3	139.4	138.6	137.8
70°	132.0	129.4	126.7	124.9	123.9	122.8	121.7	120.6
72.5°	114.9	112.6	110.4	109.1	108.3	107.7	107.1	106.5
75°	91.0	89.2	87.3	86.2	86.0	85.7	85.4	85.2
77.5°	68.9	67.9	66.8	66.1	65.6	65.2	64.8	64.4
80°	54.7	53.7	52.6	52.1	52.1	52.1	52.1	52.1
82.5°	41.4	40.7	40.0	39.8	39.8	39.8	39.8	39.8
85°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
87.5°	11.6	11.1	11.2	11.2	11.2	11.2	11.2	11.2
90°	22.3	21.0	22.3	23.0	23.0	23.0	23.0	23.0
92.5°	60.8	52.2	46.3	42.0	41.4	39.1	39.8	38.6
95°	182.6	140.1	110.8	95.5	86.4	80.9	78.7	79.5
97.5°	426.1	348.7	273.2	222.9	189.6	172.5	162.3	156.4
100°	636.4	550.0	454.5	370.1	312.3	282.3	262.1	249.5
102.5°	774.2	754.7	684.7	595.4	532.5	481.3	456.1	439.2
105°	846.9	925.7	934.8	911.8	868.5	825.3	795.3	785.6
107.5°	794.5	913.1	985.6	1019.4	1024.8	1022.4	1016.5	1003.4
110°	749.3	874.1	963.3	1020.5	1050.4	1063.7	1070.0	1069.3



TEST NUMBER: P331722-940

CATALOG NUMBER: SA2XXRDIP-C865D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	708.1	827.8	923.2	988.7	1030.4	1052.6	1064.4	1068.2
115°	657.3	764.6	856.0	927.7	977.2	1009.3	1027.4	1033.8
117.5°	619.1	713.4	796.2	863.5	914.0	947.9	967.0	972.2
120°	600.1	686.6	760.5	823.9	872.7	905.4	925.7	932.6
122.5°	585.1	664.3	734.2	791.6	835.4	867.5	885.6	891.4
125°	563.2	635.0	696.3	748.6	789.1	815.6	832.9	838.6
127.5°	541.6	606.5	664.4	712.7	748.0	772.8	787.8	792.3
130°	527.6	587.6	642.7	688.7	722.8	746.5	760.5	766.1
132.5°	514.2	569.8	620.4	663.6	697.2	720.9	733.7	738.7
135°	495.6	541.6	587.6	626.6	656.7	679.7	692.1	695.0
137.5°	480.7	519.2	555.7	589.7	617.1	636.9	647.8	652.0
140°	471.2	504.7	536.7	567.4	589.7	607.8	618.3	622.5
142.5°	463.4	491.9	519.4	545.1	566.3	582.7	592.1	592.9
145°	452.4	475.4	497.0	517.2	534.0	545.8	552.8	554.8
147.5°	443.9	462.0	478.8	493.7	507.5	516.9	521.7	522.9
150°	437.7	453.1	467.7	480.3	490.7	499.1	503.3	504.0
152.5°	431.6	445.9	458.3	469.1	477.3	484.6	487.7	487.8
155°	423.1	434.3	444.7	452.4	460.0	464.9	467.7	466.4
157.5°	413.2	422.6	431.3	437.3	442.7	446.8	448.1	448.1
160°	407.1	414.7	422.4	427.3	432.2	435.7	436.3	436.3
162.5°	400.9	407.5	414.0	417.9	422.7	425.1	425.8	425.2
165°	391.7	396.6	401.5	404.3	407.1	409.8	409.8	409.2
167.5°	383.0	386.7	390.0	392.6	393.9	395.4	395.2	394.4
170°	378.5	380.6	383.3	384.8	385.5	387.5	386.8	385.5
172.5°	373.4	375.1	377.3	378.1	378.8	379.8	379.1	378.3
175°	368.0	368.7	369.4	370.1	370.1	370.9	370.1	368.7
177.5°	364.2	364.2	364.7	364.7	364.7	364.7	364.2	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5

(END OF REPORT)