

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: P331721-930

Luminaire Tested: **SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331721-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

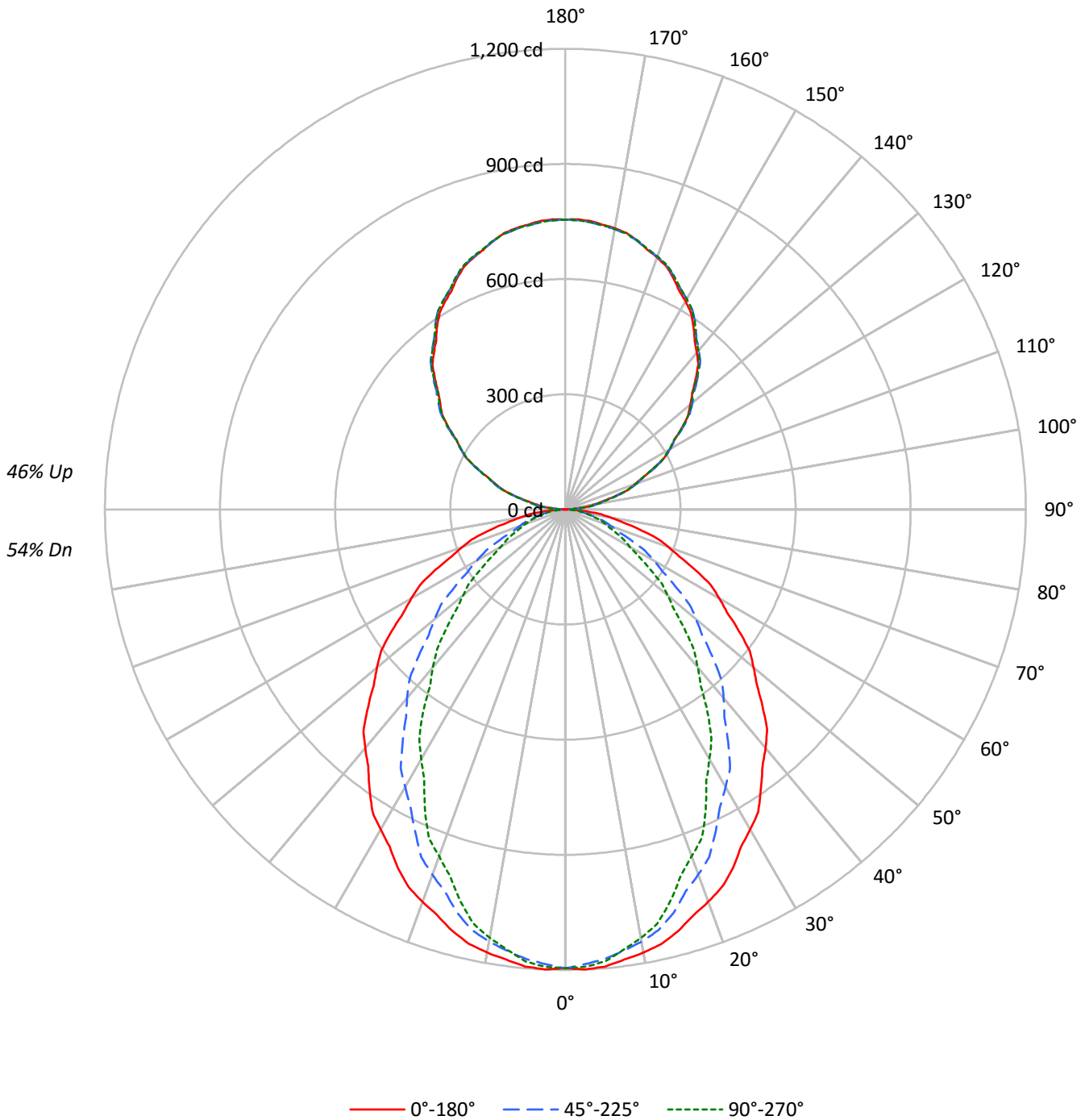
Lumens per Lamp: N/A  
Luminaire Lumens: 4573.4 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

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: P331721-930  
CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**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	100	100	100	100	85	85	85	72	72	72	60	60	60	54
1	99	95	91	88	92	88	85	82	76	73	71	64	62	61	53	52	51	46
2	91	84	78	73	84	78	73	68	67	63	60	57	54	52	48	46	44	40
3	83	74	67	61	77	69	63	58	60	55	51	51	47	44	43	40	38	34
4	76	66	58	52	71	61	55	49	53	48	44	46	42	38	39	36	33	30
5	70	59	51	45	65	55	48	43	48	42	38	41	37	34	35	32	29	26
6	65	53	45	39	60	50	43	37	43	38	34	37	33	30	32	29	26	23
7	60	48	40	35	56	45	38	33	40	34	30	34	30	27	29	26	23	21
8	56	44	36	31	52	41	34	30	36	31	27	31	27	24	27	24	21	19
9	52	40	33	28	48	38	31	27	33	28	24	29	25	22	25	22	19	17
10	49	37	30	25	45	35	28	24	31	25	22	27	23	20	23	20	18	16

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

	0°	45°	90°
0°	19302	19302	19302
5°	19376	19060	19164
10°	19226	18748	18589
15°	19005	18191	17668
20°	18699	17399	16526
25°	18387	16498	15419
30°	17952	15571	13998
35°	17527	14564	12751
40°	17102	13523	11310
45°	16600	12353	10003
50°	16088	11170	8721
55°	15564	9897	7491
60°	14951	8561	6219
65°	14258	7194	5662
70°	13430	5925	5207
75°	12420	5402	4860
80°	10962	4826	4426
85°	8633	3798	3798



TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.9	2.4
10°-20°	307.2	6.7
20°-30°	431.5	9.4
30°-40°	470.5	10.3
40°-50°	432.6	9.5
50°-60°	339.7	7.4
60°-70°	221.5	4.8
70°-80°	114.2	2.5
80°-90°	32.6	0.7
90°-100°	47.9	1.0
100°-110°	148.6	3.2
110°-120°	254.0	5.6
120°-130°	334.1	7.3
130°-140°	375.0	8.2
140°-150°	367.7	8.0
150°-160°	308.4	6.7
160°-170°	204.5	4.5
170°-180°	71.5	1.6
0°-30°	850.6	18.6
0°-40°	1321.1	28.9
0°-60°	2093.4	45.8
0°-90°	2461.7	53.8
90°-120°	450.5	9.9
90°-150°	1527.2	33.4
90°-180°	2112.0	46.2
0°-180°	4573.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1190	1176	1185	1182	113
15°	1137	1124	1088	1068	1057	320
25°	1032	995	926	883	866	474
35°	889	832	739	673	647	556
45°	727	652	541	467	438	561
55°	553	467	352	289	266	494
65°	373	285	188	153	148	370
75°	199	126	87	79	78	211
85°	47	25	20	20	20	55
90°	1	9	22	21	22	4
95°	33	39	41	41	40	38
105°	137	139	140	141	142	145
115°	255	258	258	257	255	252
125°	371	376	375	373	372	331
135°	480	487	488	487	486	371
145°	582	587	591	591	589	364
155°	666	668	670	673	671	306
165°	725	724	724	728	725	204
175°	754	752	751	755	751	72
180°	755	755	755	755	755	



TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1199.8	1198.8	1197.8	1196.9	1196.0	1194.4	1192.3	1190.2	1188.1	1185.9	1187.9
5°	1195.5	1194.3	1193.0	1191.8	1190.7	1188.5	1185.4	1182.3	1179.1	1176.0	1178.1
7.5°	1183.1	1181.6	1180.1	1178.7	1177.1	1174.6	1170.9	1167.3	1163.6	1159.9	1160.6
10°	1172.7	1171.0	1169.4	1167.7	1166.0	1162.8	1158.0	1153.2	1148.3	1143.5	1142.8
12.5°	1159.8	1157.6	1155.6	1153.6	1151.4	1147.4	1141.2	1135.1	1128.9	1122.7	1121.4
15°	1137.0	1134.4	1131.7	1129.1	1126.4	1121.0	1112.9	1104.7	1096.5	1088.3	1083.8
17.5°	1109.1	1105.1	1101.1	1097.0	1093.0	1085.7	1075.2	1064.7	1054.3	1043.7	1038.4
20°	1088.3	1083.5	1078.7	1073.9	1069.1	1060.7	1048.6	1036.7	1024.7	1012.6	1006.6
22.5°	1065.8	1060.5	1055.1	1049.7	1044.3	1034.9	1021.2	1007.7	994.2	980.6	972.8
25°	1032.1	1024.4	1016.7	1009.0	1001.4	989.5	973.6	957.8	941.9	926.1	916.2
27.5°	991.4	983.0	974.7	966.3	958.0	944.9	926.9	909.1	891.1	873.3	861.8
30°	962.9	953.7	944.6	935.5	926.3	912.2	892.9	873.7	854.4	835.2	823.0
32.5°	935.1	924.5	913.8	903.1	892.4	877.3	857.7	838.0	818.5	798.8	784.9
35°	889.2	877.0	864.8	852.5	840.2	823.5	802.3	781.2	760.1	738.9	723.7
37.5°	843.4	830.0	816.5	803.0	789.5	771.5	749.0	726.4	703.9	681.3	664.6
40°	811.4	797.0	782.5	768.1	753.7	734.8	711.5	688.2	664.9	641.6	624.4
42.5°	778.5	763.3	748.1	733.0	717.7	698.1	674.0	649.9	625.8	601.7	584.1
45°	727.0	710.9	694.8	678.7	662.6	641.9	616.7	591.4	566.1	541.0	523.8
47.5°	676.8	659.7	642.7	625.6	608.5	586.9	560.9	534.8	508.7	482.7	465.8
50°	640.5	623.4	606.3	589.2	572.2	550.4	524.0	497.5	471.1	444.7	428.0
52.5°	605.0	587.1	569.3	551.5	533.6	511.8	485.9	460.0	434.1	408.3	392.2
55°	552.9	534.1	515.4	496.6	477.8	455.4	429.5	403.5	377.6	351.6	337.2
57.5°	499.4	480.1	460.9	441.6	422.5	400.4	375.4	350.4	325.5	300.5	287.3
60°	463.0	443.8	424.6	405.4	386.1	364.1	339.3	314.5	289.8	265.1	252.8
62.5°	427.5	408.3	389.1	369.8	350.6	329.2	305.6	282.0	258.4	234.7	223.1
65°	373.2	353.8	334.3	314.8	295.4	274.8	253.2	231.5	209.9	188.3	180.1
67.5°	320.9	301.6	282.3	262.9	243.5	224.1	204.7	185.2	165.8	146.3	142.5
70°	284.5	265.8	247.0	228.3	209.5	191.8	175.3	158.7	142.1	125.5	123.1
72.5°	249.9	232.0	213.9	196.0	178.0	162.3	149.0	135.7	122.4	109.1	107.0
75°	199.1	182.2	165.4	148.5	131.8	119.3	111.0	102.9	94.7	86.6	84.9
77.5°	149.1	134.3	119.5	104.8	90.0	80.7	76.7	72.8	68.9	64.9	63.9
80°	117.9	105.7	93.4	81.1	68.9	61.6	59.1	56.7	54.3	51.9	51.0
82.5°	89.4	79.8	70.2	60.7	51.1	45.5	43.9	42.2	40.6	39.0	38.4
85°	46.6	41.5	36.4	31.4	26.3	23.5	22.7	22.0	21.3	20.5	20.5
87.5°	13.9	12.8	11.6	10.4	9.2	8.9	9.5	10.1	10.8	11.4	11.2
90°	0.7	2.4	4.1	5.7	7.4	9.9	13.0	16.1	19.2	22.3	22.0
92.5°	11.3	12.6	13.9	15.1	16.3	17.3	18.0	18.8	19.6	20.3	20.3
95°	33.1	34.6	36.0	37.4	38.8	39.6	39.9	40.2	40.5	40.8	40.8
97.5°	60.6	61.8	63.0	64.2	65.6	66.4	66.9	67.5	68.0	68.6	68.6
100°	81.0	82.1	83.2	84.3	85.4	86.3	86.7	87.1	87.5	88.0	88.0
102.5°	102.3	103.2	104.2	105.1	106.0	106.7	107.2	107.8	108.3	108.8	108.9
105°	137.1	137.5	137.9	138.3	138.7	139.1	139.3	139.7	139.9	140.2	140.5
107.5°	171.9	172.6	173.2	173.8	174.4	174.7	174.7	174.7	174.7	174.7	174.9
110°	194.4	195.2	196.1	196.9	197.8	198.2	198.2	198.2	198.2	198.2	198.2



TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.8	219.7	220.5	221.4	222.3	222.6	222.5	222.4	222.3	222.2	221.8
115°	254.9	255.8	256.6	257.5	258.3	258.6	258.3	258.0	257.7	257.5	257.3
117.5°	290.8	292.0	293.1	294.2	295.4	295.5	294.7	294.0	293.2	292.4	292.0
120°	314.8	315.9	317.1	318.2	319.4	319.4	318.2	317.1	315.9	314.8	314.8
122.5°	336.7	338.1	339.5	340.8	342.2	342.4	341.7	340.9	340.1	339.2	338.9
125°	370.9	372.2	373.4	374.7	376.0	376.4	376.0	375.5	375.1	374.7	374.3
127.5°	404.1	405.8	407.4	409.0	410.6	411.2	410.7	410.2	409.6	409.1	408.6
130°	425.1	426.9	428.8	430.6	432.4	433.2	432.9	432.6	432.4	432.1	431.8
132.5°	448.5	450.0	451.5	453.0	454.5	455.3	455.3	455.4	455.4	455.5	454.9
135°	479.9	481.4	483.0	484.5	486.1	487.0	487.3	487.5	487.9	488.1	488.0
137.5°	512.9	514.1	515.4	516.7	518.0	518.8	519.2	519.5	519.9	520.2	520.2
140°	532.8	534.0	535.3	536.5	537.9	538.8	539.6	540.3	541.0	541.7	541.7
142.5°	553.2	554.4	555.7	557.0	558.2	559.1	559.6	560.1	560.6	561.1	561.2
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	590.9
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	616.8
150°	626.5	627.3	628.1	629.0	629.8	630.6	631.1	631.7	632.3	632.8	633.2
152.5°	642.2	643.1	643.9	644.8	645.6	646.4	647.1	647.8	648.4	649.1	649.6
155°	665.9	666.3	666.8	667.2	667.6	668.1	668.5	669.0	669.4	669.8	670.5
157.5°	686.2	686.5	686.8	687.1	687.4	687.6	687.9	688.1	688.4	688.6	689.6
160°	698.5	698.7	699.0	699.3	699.6	699.8	699.9	700.1	700.3	700.3	701.2
162.5°	709.6	709.7	709.8	709.8	709.9	710.0	710.1	710.3	710.5	710.5	711.5
165°	724.6	724.5	724.3	724.1	724.0	723.9	723.9	723.9	723.9	723.9	725.0
167.5°	737.0	736.6	736.2	735.8	735.4	735.2	735.2	735.1	735.1	735.0	736.1
170°	743.7	743.3	742.8	742.4	742.0	741.7	741.6	741.4	741.3	741.1	742.2
172.5°	748.3	747.9	747.5	747.0	746.6	746.3	746.2	746.0	745.9	745.8	746.7
175°	753.9	753.5	753.0	752.6	752.2	751.9	751.5	751.3	751.0	750.7	751.7
177.5°	756.2	755.9	755.5	755.1	754.8	754.6	754.3	754.1	753.8	753.7	754.3
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1



TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1189.8	1191.7	1193.6	1194.4	1194.0	1193.6	1193.3	1192.9
5°	1180.3	1182.4	1184.6	1185.4	1184.6	1183.9	1183.2	1182.4
7.5°	1161.2	1161.8	1162.5	1162.1	1160.9	1159.7	1158.4	1157.2
10°	1142.1	1141.3	1140.6	1139.5	1138.1	1136.7	1135.2	1133.8
12.5°	1120.1	1118.8	1117.5	1115.7	1113.3	1110.9	1108.5	1106.1
15°	1079.2	1074.6	1070.1	1066.6	1064.2	1061.8	1059.4	1057.0
17.5°	1032.9	1027.4	1022.1	1017.2	1013.1	1009.0	1004.9	1000.7
20°	1000.6	994.6	988.6	982.9	977.6	972.3	967.0	961.8
22.5°	965.2	957.4	949.7	943.8	939.9	935.9	932.0	928.1
25°	906.4	896.5	886.6	879.9	876.3	872.7	869.1	865.5
27.5°	850.3	838.8	827.3	818.7	813.0	807.2	801.5	795.8
30°	810.7	798.4	786.1	776.7	770.3	763.8	757.3	750.8
32.5°	770.9	756.8	742.9	732.8	726.8	720.6	714.5	708.4
35°	708.6	693.5	678.3	668.1	662.8	657.5	652.2	646.9
37.5°	648.0	631.3	614.7	603.2	597.2	591.1	585.1	579.0
40°	607.4	590.4	573.2	561.6	555.4	549.1	542.8	536.6
42.5°	566.5	548.8	531.2	519.3	513.2	507.2	501.1	495.0
45°	506.8	489.8	472.6	461.2	455.4	449.7	443.9	438.1
47.5°	448.7	431.8	414.8	403.7	398.5	393.2	388.0	382.8
50°	411.5	394.8	378.3	367.5	362.4	357.3	352.3	347.2
52.5°	376.3	360.3	344.2	333.9	329.2	324.6	319.9	315.3
55°	322.8	308.3	293.9	284.4	279.8	275.2	270.7	266.1
57.5°	274.1	260.9	247.7	239.1	235.3	231.4	227.6	223.7
60°	240.5	228.3	216.0	208.0	204.1	200.2	196.4	192.6
62.5°	211.4	199.7	188.0	181.0	178.7	176.4	174.1	171.8
65°	171.9	163.7	155.6	151.1	150.3	149.7	149.0	148.2
67.5°	138.8	135.0	131.3	129.0	128.2	127.4	126.7	126.0
70°	120.7	118.3	115.9	114.2	113.2	112.3	111.3	110.3
72.5°	105.0	103.0	100.9	99.7	99.1	98.5	97.9	97.3
75°	83.2	81.5	79.8	78.8	78.6	78.4	78.1	77.9
77.5°	63.0	62.0	61.1	60.4	60.0	59.6	59.3	58.9
80°	50.0	49.1	48.1	47.6	47.6	47.6	47.6	47.6
82.5°	37.8	37.2	36.6	36.4	36.4	36.4	36.4	36.4
85°	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
87.5°	10.9	10.6	10.4	10.3	10.3	10.4	10.4	10.4
90°	21.8	21.4	21.2	21.1	21.3	21.4	21.5	21.7
92.5°	20.4	20.5	20.5	20.5	20.5	20.6	20.6	20.6
95°	40.8	40.8	40.8	40.7	40.4	40.1	39.8	39.5
97.5°	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.4
100°	88.0	88.0	88.0	87.9	87.7	87.6	87.5	87.3
102.5°	109.1	109.2	109.3	109.3	109.2	109.0	108.8	108.7
105°	140.8	141.0	141.4	141.5	141.5	141.5	141.5	141.5
107.5°	175.0	175.0	175.2	175.0	174.3	173.7	173.0	172.4
110°	198.2	198.2	198.2	198.0	197.5	197.1	196.7	196.2





TEST NUMBER: P331721-930

CATALOG NUMBER: SA2XXRDIP-C865D725U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.4	221.1	220.8	220.5	220.1	219.8	219.6	219.2
115°	257.1	257.1	256.9	256.6	256.2	255.8	255.4	254.9
117.5°	291.7	291.4	291.0	290.7	290.2	289.8	289.3	288.9
120°	314.8	314.8	314.8	314.6	314.1	313.7	313.3	312.9
122.5°	338.6	338.3	337.9	337.6	337.3	337.0	336.6	336.4
125°	373.9	373.4	373.0	372.8	372.6	372.4	372.3	372.2
127.5°	408.1	407.6	407.1	406.6	406.2	405.7	405.3	404.8
130°	431.5	431.2	431.0	430.5	429.9	429.4	428.8	428.3
132.5°	454.3	453.6	453.1	452.5	452.0	451.6	451.1	450.7
135°	487.9	487.7	487.5	487.3	486.9	486.5	486.0	485.6
137.5°	520.1	519.9	519.8	519.5	518.9	518.4	517.8	517.2
140°	541.7	541.7	541.7	541.4	540.9	540.3	539.7	539.2
142.5°	561.3	561.4	561.5	561.3	560.7	560.1	559.6	559.1
145°	591.0	591.2	591.3	591.1	590.5	590.0	589.4	588.8
147.5°	617.1	617.4	617.8	617.7	617.1	616.5	616.0	615.5
150°	633.7	634.1	634.5	634.5	634.1	633.7	633.2	632.8
152.5°	650.2	650.8	651.3	651.3	650.8	650.2	649.6	649.1
155°	671.2	671.9	672.6	672.8	672.3	671.9	671.5	671.1
157.5°	690.6	691.5	692.5	692.6	691.9	691.3	690.6	689.9
160°	702.1	703.0	703.8	703.9	703.4	702.8	702.2	701.6
162.5°	712.5	713.5	714.4	714.5	713.9	713.2	712.5	711.8
165°	725.9	726.9	727.9	728.1	727.3	726.6	725.9	725.2
167.5°	737.0	738.0	739.0	739.2	738.4	737.7	736.9	736.2
170°	743.1	744.1	745.1	745.2	744.4	743.5	742.7	741.8
172.5°	747.7	748.7	749.7	749.7	748.9	748.0	747.2	746.4
175°	752.7	753.7	754.6	754.7	753.9	753.0	752.2	751.4
177.5°	755.0	755.7	756.4	756.4	755.7	755.0	754.3	753.7
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1

(END OF REPORT)