

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: P331372-927

Luminaire Tested: **SA2XXDIP-C675D1080U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331372-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D1080U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1080 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5553.2 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

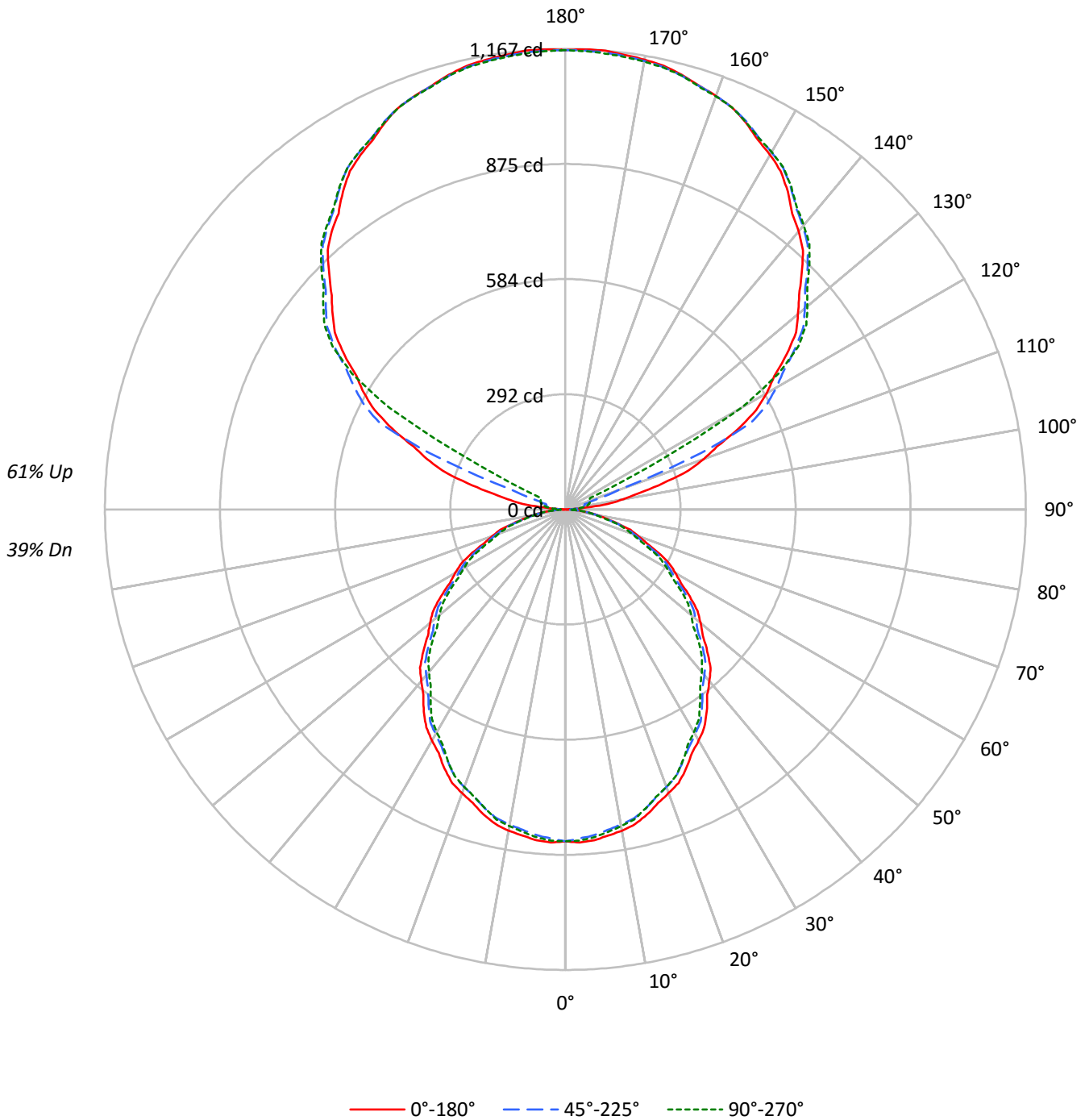
Input Watts (W): 56.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	57	52	52	48	44	41	38	36	31	29	28	23
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	36	31	51	41	34	29	34	28	25	27	23	20	21	18	16	13
8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	16	14	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	33	26	22	41	31	25	20	26	21	17	21	17	15	16	14	12	10

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

	0°	45°	90°
0°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.1	1.4
10°-20°	222.5	4.0
20°-30°	327.1	5.9
30°-40°	379.9	6.8
40°-50°	379.5	6.8
50°-60°	331.0	6.0
60°-70°	244.7	4.4
70°-80°	138.6	2.5
80°-90°	40.1	0.7
90°-100°	38.8	0.7
100°-110°	142.4	2.6
110°-120°	380.6	6.9
120°-130°	628.2	11.3
130°-140°	668.1	12.0
140°-150°	620.9	11.2
150°-160°	499.2	9.0
160°-170°	321.7	5.8
170°-180°	110.7	2.0
0°-30°	628.7	11.3
0°-40°	1008.6	18.2
0°-60°	1719.1	31.0
0°-90°	2142.6	38.6
90°-120°	561.7	10.1
90°-150°	2478.9	44.6
90°-180°	3411.0	61.4
0°-180°	5553.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	1	10	17	21	23	4
95°	55	29	33	37	36	67
105°	256	267	51	60	64	274
115°	484	499	520	148	69	477
125°	685	696	712	717	720	610
135°	847	860	868	876	875	654
145°	983	983	996	1002	998	614
155°	1082	1076	1085	1089	1083	498
165°	1140	1136	1138	1143	1138	322
175°	1166	1161	1162	1167	1160	111
180°	1164	1164	1164	1164	1164	



TEST NUMBER: P331372-927

CATALOG NUMBER: SA2XXDIP-C675D1080U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.8	12.0	12.0	12.2	12.3	12.4	12.4	12.4	12.4	12.4	12.2
90°	0.9	2.9	5.0	7.1	9.1	10.9	12.4	13.9	15.4	16.9	17.7
92.5°	17.0	16.8	16.6	16.5	16.2	16.6	17.3	18.1	18.8	19.6	20.0
95°	54.7	48.6	42.4	36.2	30.0	27.6	28.9	30.3	31.5	32.9	33.7
97.5°	108.6	91.3	73.8	56.4	39.1	31.8	34.9	37.9	41.0	44.0	44.7
100°	149.1	123.4	97.8	72.2	46.5	35.3	38.4	41.7	44.8	48.0	49.5
102.5°	193.5	188.1	182.7	177.2	171.8	155.8	129.2	102.6	76.0	49.4	51.3
105°	256.0	261.7	267.2	272.8	278.5	255.7	204.6	153.5	102.4	51.3	53.4
107.5°	327.3	331.8	336.3	340.8	345.4	317.0	255.7	194.5	133.2	71.9	69.8
110°	373.0	377.0	381.0	384.8	388.8	363.7	309.6	255.6	201.5	147.3	128.7



TEST NUMBER: P331372-927

CATALOG NUMBER: SA2XXDIP-C675D1080U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	416.2	419.7	423.1	426.6	430.1	425.2	411.8	398.5	385.1	371.7	303.5
115°	484.3	487.4	490.6	493.8	496.9	500.9	505.6	510.2	514.9	519.6	432.9
117.5°	545.0	548.6	552.2	555.7	559.3	562.6	565.9	569.1	572.3	575.5	554.5
120°	589.5	592.3	595.1	597.9	600.7	603.8	607.2	610.5	613.9	617.3	619.5
122.5°	627.2	630.2	633.1	636.1	639.1	642.4	646.0	649.7	653.4	657.0	658.4
125°	684.7	687.1	689.5	692.0	694.3	697.4	700.9	704.5	708.1	711.6	712.9
127.5°	736.7	739.4	742.1	744.8	747.5	750.1	752.8	755.4	758.1	760.8	762.7
130°	769.7	772.7	775.7	778.7	781.6	784.2	786.2	788.3	790.4	792.4	794.5
132.5°	803.4	806.0	808.5	811.0	813.6	815.9	817.9	820.0	822.0	824.1	825.9
135°	847.2	850.2	853.2	856.2	859.1	861.5	863.2	864.8	866.6	868.2	870.1
137.5°	891.4	893.6	895.6	897.8	899.8	901.8	903.8	905.7	907.6	909.5	911.3
140°	920.4	921.9	923.4	925.0	926.5	928.2	930.3	932.3	934.4	936.4	938.1
142.5°	944.7	946.0	947.4	948.7	950.1	952.0	954.3	956.6	959.0	961.4	962.9
145°	982.8	982.5	982.4	982.2	982.0	983.5	986.7	989.8	993.1	996.2	997.5
147.5°	1016.0	1015.3	1014.5	1013.8	1013.1	1014.3	1017.5	1020.6	1023.7	1026.9	1027.9
150°	1037.5	1036.2	1034.9	1033.6	1032.3	1033.1	1036.1	1039.1	1042.1	1045.0	1046.2
152.5°	1055.7	1054.2	1052.7	1051.3	1049.9	1050.5	1053.4	1056.2	1059.1	1061.9	1063.0
155°	1082.1	1080.5	1078.8	1077.1	1075.4	1075.7	1077.9	1080.1	1082.4	1084.7	1085.8
157.5°	1102.9	1101.5	1100.0	1098.6	1097.2	1097.3	1098.8	1100.3	1101.9	1103.5	1104.8
160°	1115.0	1113.9	1112.7	1111.6	1110.5	1110.5	1111.6	1112.7	1113.9	1115.0	1116.1
162.5°	1125.8	1124.7	1123.5	1122.4	1121.3	1121.2	1122.1	1123.2	1124.1	1125.1	1126.3
165°	1140.3	1139.1	1138.0	1136.9	1135.8	1135.4	1136.0	1136.6	1137.2	1137.7	1139.0
167.5°	1151.0	1149.9	1148.7	1147.6	1146.5	1146.2	1146.8	1147.2	1147.8	1148.3	1149.6
170°	1157.1	1156.0	1154.8	1153.7	1152.6	1152.2	1152.6	1152.9	1153.3	1153.7	1155.0
172.5°	1161.1	1160.0	1158.9	1157.8	1156.7	1156.3	1156.7	1157.0	1157.4	1157.8	1159.0
175°	1166.3	1165.1	1163.7	1162.4	1161.1	1160.6	1161.0	1161.4	1161.7	1162.1	1163.5
177.5°	1167.2	1166.2	1165.1	1164.0	1163.0	1162.5	1162.7	1162.8	1163.0	1163.2	1164.2
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8



TEST NUMBER: P331372-927

CATALOG NUMBER: SA2XXDIP-C675D1080U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	12.0	11.7	11.5	11.3	11.2	11.2	11.1	11.0
90°	18.7	19.6	20.6	21.2	21.6	22.0	22.3	22.7
92.5°	20.5	21.0	21.5	21.9	22.1	22.3	22.5	22.7
95°	34.7	35.6	36.6	37.0	36.8	36.6	36.4	36.2
97.5°	45.5	46.2	47.0	47.5	47.7	47.9	48.1	48.3
100°	51.0	52.5	54.0	54.9	55.3	55.7	56.1	56.4
102.5°	53.2	55.2	57.1	58.4	58.9	59.4	60.0	60.4
105°	55.5	57.5	59.6	61.0	61.8	62.5	63.2	64.0
107.5°	67.7	65.6	63.5	62.9	63.6	64.3	65.1	65.8
110°	110.0	91.3	72.5	63.5	64.2	65.0	65.8	66.5





TEST NUMBER: P331372-927

CATALOG NUMBER: SA2XXDIP-C675D1080U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.2	166.9	98.6	64.8	65.4	66.0	66.6	67.2
115°	346.3	259.7	173.0	122.9	109.5	96.0	82.5	69.1
117.5°	533.6	512.6	491.7	459.1	414.8	370.5	326.2	281.9
120°	621.8	624.0	626.3	614.7	589.5	564.2	538.9	513.7
122.5°	659.7	661.1	662.4	660.6	655.8	650.9	645.9	641.0
125°	714.2	715.5	716.8	717.8	718.4	718.9	719.5	720.0
127.5°	764.6	766.5	768.4	769.4	769.5	769.7	769.8	769.8
130°	796.5	798.6	800.7	801.6	801.5	801.2	801.1	800.9
132.5°	827.6	829.4	831.2	831.9	831.7	831.6	831.4	831.2
135°	872.0	873.9	875.7	876.5	876.1	875.7	875.4	875.0
137.5°	913.1	915.0	916.8	917.4	916.8	916.2	915.5	914.9
140°	939.8	941.5	943.2	943.6	942.6	941.7	940.7	939.8
142.5°	964.4	966.0	967.5	967.8	966.9	965.9	965.0	964.1
145°	998.9	1000.1	1001.5	1001.6	1000.8	999.8	998.9	997.9
147.5°	1028.8	1029.8	1030.8	1030.9	1030.1	1029.3	1028.5	1027.7
150°	1047.3	1048.5	1049.6	1049.6	1048.7	1047.8	1046.9	1045.9
152.5°	1064.1	1065.3	1066.4	1066.4	1065.1	1063.9	1062.6	1061.4
155°	1086.9	1088.1	1089.2	1088.9	1087.4	1086.0	1084.5	1083.0
157.5°	1106.0	1107.3	1108.6	1108.5	1107.1	1105.6	1104.1	1102.6
160°	1117.2	1118.3	1119.4	1119.4	1118.1	1116.7	1115.5	1114.1
162.5°	1127.6	1128.9	1130.2	1130.0	1128.4	1126.8	1125.1	1123.6
165°	1140.3	1141.6	1143.0	1143.0	1141.6	1140.3	1139.0	1137.7
167.5°	1151.0	1152.2	1153.6	1153.3	1151.7	1150.0	1148.3	1146.6
170°	1156.3	1157.6	1159.0	1158.7	1157.1	1155.4	1153.7	1152.0
172.5°	1160.4	1161.7	1163.0	1162.8	1161.1	1159.4	1157.8	1156.0
175°	1164.7	1166.1	1167.4	1167.1	1165.2	1163.3	1161.5	1159.6
177.5°	1165.2	1166.3	1167.4	1167.2	1165.9	1164.5	1163.2	1161.8
180°	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8	1163.8

(END OF REPORT)