

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: P331360-830

Luminaire Tested: **SA2XXDIP-C675D925U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331360-830  
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-C675D925U830-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

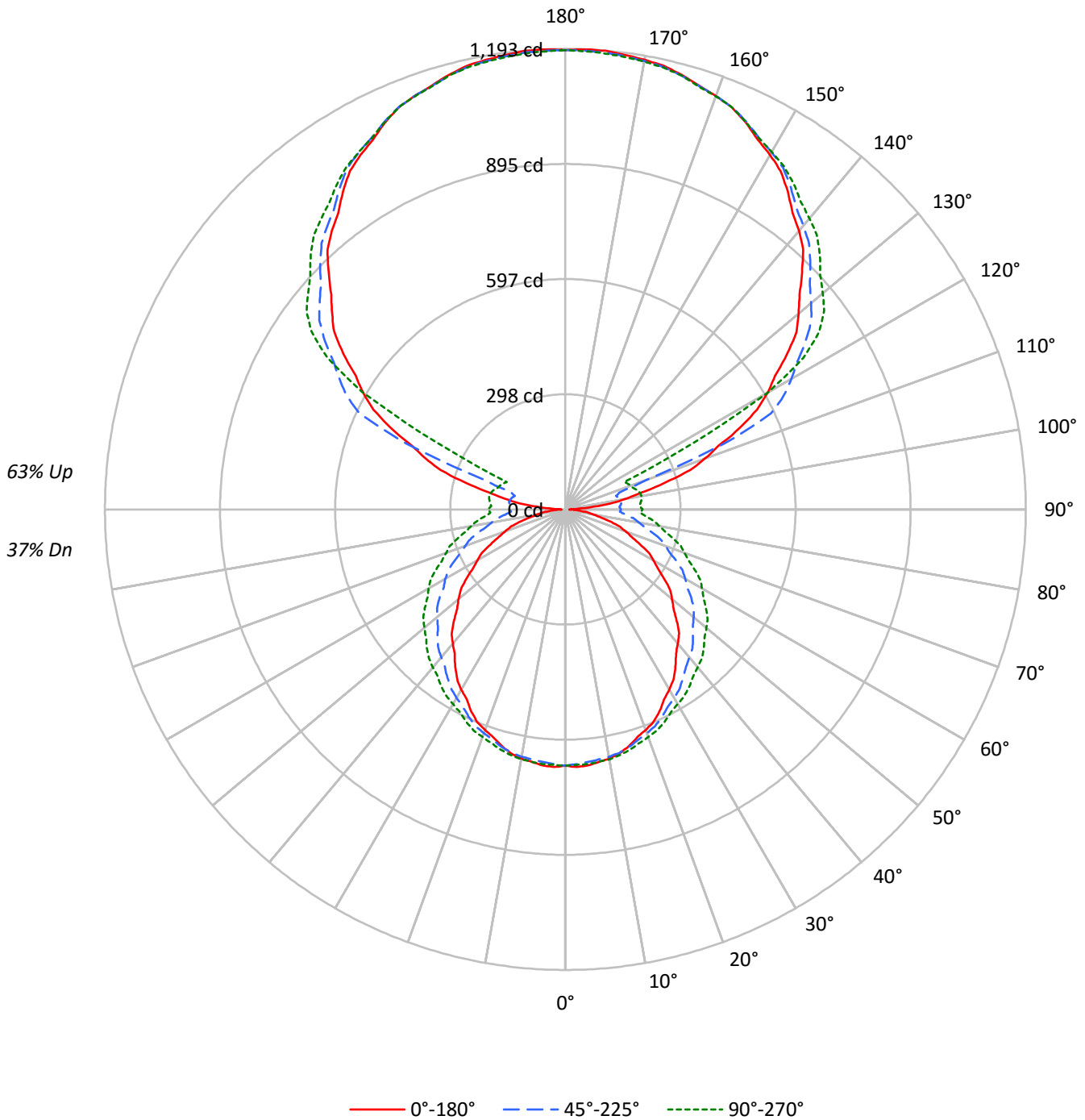
Lumens per Lamp: N/A  
Luminaire Lumens: 6022.1 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 52  
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





TEST NUMBER: P331360-830

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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	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	94	89	85	81	85	81	77	74	65	63	60	51	49	47	38	36	35	29
2	85	77	71	65	77	70	64	60	56	52	49	44	41	39	32	31	29	24
3	77	67	60	54	69	61	55	49	49	45	41	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	20	16
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	18	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	9
9	47	35	27	22	42	32	25	21	26	21	17	21	17	14	16	13	11	8
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	14	12	10	8

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

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.0
10°-20°	180.4	3.0
20°-30°	273.4	4.5
30°-40°	333.0	5.5
40°-50°	358.2	5.9
50°-60°	347.9	5.8
60°-70°	303.7	5.0
70°-80°	233.8	3.9
80°-90°	159.9	2.7
90°-100°	147.8	2.5
100°-110°	224.5	3.7
110°-120°	441.1	7.3
120°-130°	671.2	11.1
130°-140°	695.1	11.5
140°-150°	636.8	10.6
150°-160°	510.3	8.5
160°-170°	328.8	5.5
170°-180°	113.2	1.9
0°-30°	516.7	8.6
0°-40°	849.6	14.1
0°-60°	1555.7	25.8
0°-90°	2253.2	37.4
90°-120°	813.4	13.5
90°-150°	2816.6	46.8
90°-180°	3769.0	62.6
0°-180°	6022.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	10	76	144	185	200	9
95°	64	83	144	183	196	75
105°	266	307	135	177	192	285
115°	499	526	589	237	168	491
125°	702	715	760	791	803	626
135°	867	881	898	926	933	670
145°	1005	1005	1018	1030	1031	628
155°	1106	1099	1109	1113	1107	509
165°	1166	1161	1163	1168	1163	329
175°	1192	1187	1188	1193	1185	113
180°	1190	1190	1190	1190	1190	



TEST NUMBER: P331360-830

CATALOG NUMBER: SA2XXDIP-C675D925U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	19.0	32.2	45.3	58.5	71.7	85.3	99.2	113.3	127.2	141.2	150.1
90°	10.5	25.0	39.5	54.0	68.5	83.3	98.6	113.8	129.0	144.2	153.7
92.5°	26.2	37.6	48.9	60.3	71.6	84.3	98.2	112.2	126.1	140.1	148.9
95°	63.6	67.4	71.2	74.8	78.6	87.6	101.7	115.9	130.1	144.2	153.4
97.5°	117.8	109.0	100.1	91.2	82.4	85.7	101.0	116.5	131.9	147.3	156.0
100°	159.1	140.8	122.5	104.2	86.0	84.4	99.6	114.8	130.1	145.2	154.8
102.5°	203.8	205.5	207.2	208.9	210.5	203.6	187.9	172.4	156.8	141.3	151.0
105°	266.5	278.4	290.4	302.3	314.2	299.6	258.5	217.4	176.3	135.3	144.9
107.5°	339.1	348.7	358.4	367.9	377.5	356.3	304.3	252.3	200.4	148.4	153.4
110°	385.2	393.5	401.8	410.1	418.4	400.1	355.3	310.5	265.7	220.8	208.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	429.2	436.4	443.6	450.7	457.9	459.6	455.9	452.2	448.6	444.8	381.9
115°	498.8	504.4	510.0	515.7	521.2	531.2	545.6	560.1	574.5	588.9	506.7
117.5°	560.0	565.1	570.3	575.5	580.7	589.4	601.5	613.8	625.9	638.1	623.0
120°	605.5	609.2	612.9	616.6	620.4	628.2	640.2	652.2	664.2	676.2	684.5
122.5°	644.0	647.4	650.7	654.1	657.5	665.1	676.8	688.6	700.4	712.2	719.4
125°	701.7	704.3	706.7	709.3	711.7	718.2	728.7	739.1	749.6	760.1	767.2
127.5°	755.0	757.5	760.1	762.6	765.2	770.5	778.7	787.0	795.2	803.4	810.7
130°	788.7	791.5	794.4	797.3	800.1	804.8	811.4	818.0	824.6	831.2	838.4
132.5°	823.1	825.6	827.9	830.3	832.7	836.7	842.3	847.8	853.4	858.9	865.7
135°	867.0	870.0	873.1	876.1	879.2	882.7	886.5	890.3	894.2	898.1	904.5
137.5°	912.2	914.4	916.4	918.5	920.6	923.1	926.0	928.9	931.8	934.7	940.5
140°	941.9	943.1	944.4	945.7	947.1	949.0	951.6	954.1	956.6	959.1	964.3
142.5°	966.7	967.8	968.9	970.2	971.3	973.1	975.6	978.1	980.6	983.1	987.4
145°	1004.6	1004.4	1004.2	1004.0	1003.8	1005.3	1008.6	1011.8	1015.1	1018.3	1021.0
147.5°	1038.5	1037.7	1037.1	1036.3	1035.6	1036.8	1040.0	1043.3	1046.5	1049.7	1050.8
150°	1060.5	1059.2	1057.8	1056.5	1055.2	1056.0	1059.1	1062.2	1065.3	1068.3	1069.4
152.5°	1079.1	1077.6	1076.1	1074.7	1073.2	1073.8	1076.8	1079.7	1082.6	1085.5	1086.7
155°	1106.2	1104.5	1102.7	1101.0	1099.3	1099.6	1101.8	1104.2	1106.5	1108.7	1109.8
157.5°	1127.3	1125.9	1124.5	1122.9	1121.5	1121.6	1123.2	1124.8	1126.4	1128.0	1129.4
160°	1139.7	1138.6	1137.5	1136.2	1135.1	1135.1	1136.2	1137.5	1138.6	1139.7	1140.9
162.5°	1150.8	1149.6	1148.5	1147.3	1146.1	1146.0	1147.1	1148.0	1149.1	1150.1	1151.3
165°	1165.5	1164.4	1163.3	1162.1	1160.9	1160.6	1161.2	1161.8	1162.4	1163.0	1164.3
167.5°	1176.6	1175.4	1174.3	1173.1	1172.0	1171.7	1172.2	1172.7	1173.3	1173.8	1175.2
170°	1182.8	1181.6	1180.4	1179.3	1178.2	1177.8	1178.2	1178.6	1178.9	1179.3	1180.6
172.5°	1186.8	1185.7	1184.6	1183.5	1182.3	1181.9	1182.3	1182.7	1183.1	1183.5	1184.8
175°	1192.2	1190.9	1189.6	1188.2	1186.8	1186.4	1186.8	1187.1	1187.5	1187.9	1189.3
177.5°	1193.1	1192.0	1191.0	1189.9	1188.8	1188.4	1188.5	1188.6	1188.8	1188.9	1190.1
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	159.1	168.0	176.9	182.8	185.6	188.4	191.2	194.0
90°	163.2	172.8	182.3	188.5	191.4	194.4	197.4	200.3
92.5°	157.8	166.7	175.6	181.4	184.2	187.0	189.8	192.6
95°	162.4	171.4	180.6	186.2	188.7	191.1	193.4	195.8
97.5°	164.7	173.3	182.0	187.8	190.5	193.2	196.0	198.8
100°	164.2	173.6	183.0	189.2	191.9	194.6	197.4	200.1
102.5°	160.7	170.5	180.2	186.5	189.4	192.3	195.2	198.0
105°	154.4	164.0	173.6	179.9	183.0	186.2	189.4	192.5
107.5°	158.4	163.5	168.5	172.6	175.8	178.9	182.0	185.1
110°	196.3	184.0	171.7	167.1	170.2	173.4	176.5	179.6





TEST NUMBER: P331360-830

CATALOG NUMBER: SA2XXDIP-C675D925U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.0	256.0	193.0	163.1	166.0	169.0	171.9	174.9
115°	424.5	342.4	260.2	213.5	202.0	190.6	179.2	167.8
117.5°	607.9	592.9	577.8	548.7	505.6	462.5	419.4	376.4
120°	692.8	701.1	709.4	701.7	678.3	654.8	631.3	607.8
122.5°	726.6	733.8	741.0	743.1	740.1	737.1	734.1	731.0
125°	774.3	781.5	788.5	793.3	795.9	798.3	800.9	803.3
127.5°	817.9	825.2	832.5	837.1	839.1	841.1	843.1	845.1
130°	845.6	852.9	860.2	864.5	866.0	867.5	869.1	870.6
132.5°	872.4	879.2	886.0	890.1	891.6	893.2	894.7	896.2
135°	910.9	917.3	923.7	927.6	928.9	930.2	931.5	932.8
137.5°	946.3	952.2	957.9	961.2	962.1	962.8	963.7	964.4
140°	969.4	974.6	979.7	982.5	982.8	983.1	983.4	983.7
142.5°	991.7	996.0	1000.3	1002.6	1002.7	1002.9	1003.1	1003.1
145°	1023.6	1026.2	1028.9	1030.2	1030.3	1030.4	1030.6	1030.7
147.5°	1052.0	1053.2	1054.3	1054.8	1054.5	1054.2	1054.0	1053.7
150°	1070.5	1071.8	1072.9	1073.0	1072.0	1071.0	1070.1	1069.1
152.5°	1087.8	1088.9	1090.1	1090.1	1088.7	1087.5	1086.3	1085.0
155°	1111.1	1112.2	1113.3	1113.1	1111.6	1110.0	1108.5	1107.0
157.5°	1130.6	1131.9	1133.2	1133.1	1131.6	1130.1	1128.6	1127.2
160°	1142.0	1143.2	1144.3	1144.2	1142.8	1141.5	1140.2	1138.9
162.5°	1152.6	1154.0	1155.3	1155.1	1153.5	1151.8	1150.2	1148.5
165°	1165.6	1167.0	1168.3	1168.3	1167.0	1165.6	1164.3	1163.0
167.5°	1176.5	1177.8	1179.2	1178.9	1177.2	1175.5	1173.8	1172.1
170°	1182.0	1183.4	1184.7	1184.5	1182.8	1181.0	1179.3	1177.6
172.5°	1186.1	1187.5	1188.8	1188.6	1186.8	1185.2	1183.5	1181.8
175°	1190.6	1191.9	1193.3	1193.0	1191.1	1189.2	1187.2	1185.3
177.5°	1191.1	1192.2	1193.3	1193.1	1191.8	1190.3	1188.9	1187.6
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7

(END OF REPORT)