

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: P331363-935

Luminaire Tested: **SA2XXDIP-C675D925U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331363-935  
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-C675D925U935-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5513.0 lumens  
Efficiency: N/A  
Efficacy: 106.0 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: General Diffuse

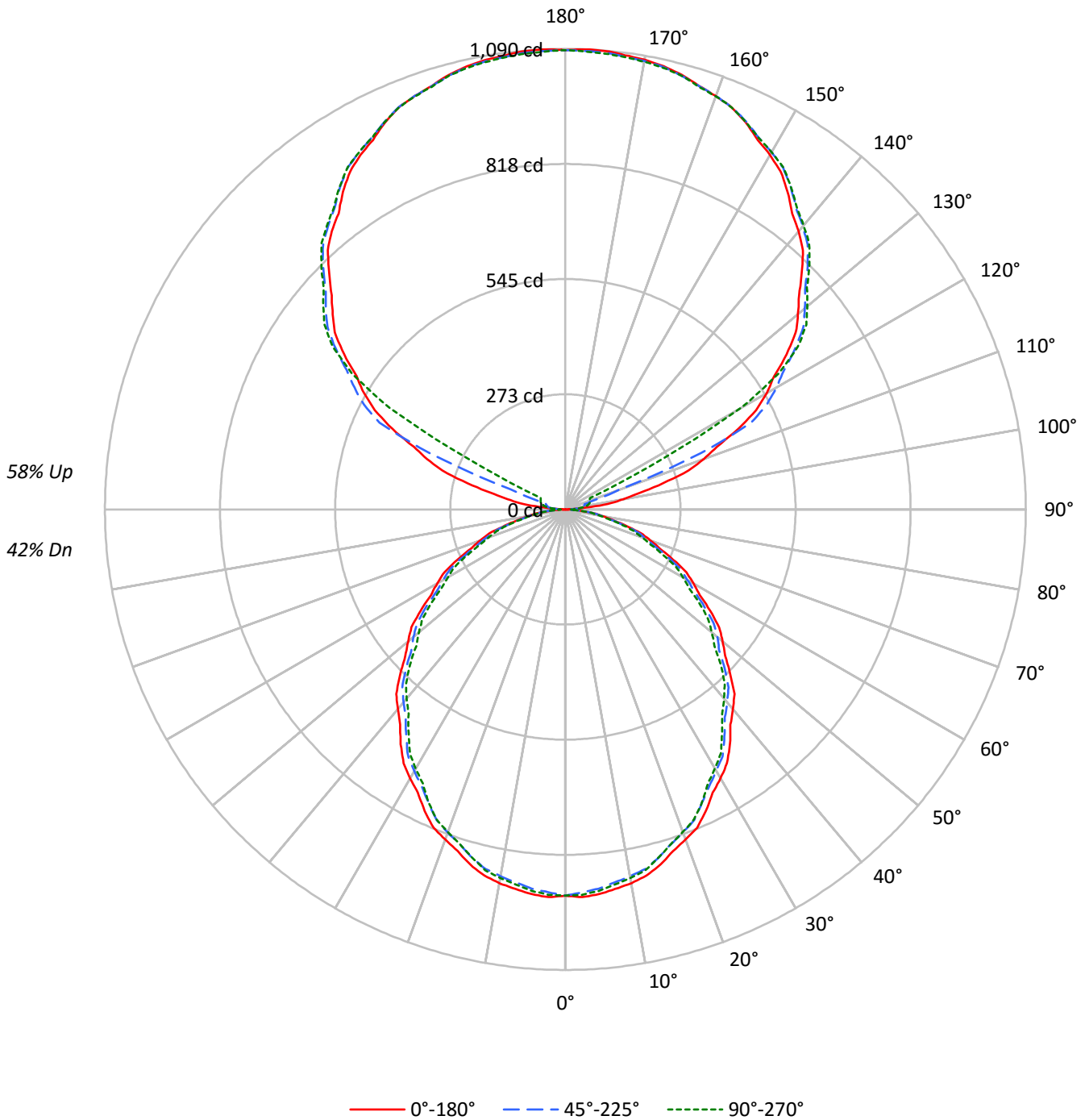
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	73	65	58	53	53	49	45	43	40	37	34	32	30	25
4	73	62	54	48	66	57	50	45	47	42	38	39	35	32	30	28	26	22
5	67	55	47	41	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	20	17	15
8	53	41	33	28	48	37	31	26	32	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

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

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.0	1.6
10°-20°	241.9	4.4
20°-30°	355.5	6.4
30°-40°	412.9	7.5
40°-50°	412.5	7.5
50°-60°	359.7	6.5
60°-70°	266.0	4.8
70°-80°	150.6	2.7
80°-90°	43.2	0.8
90°-100°	36.2	0.7
100°-110°	132.9	2.4
110°-120°	355.3	6.4
120°-130°	586.6	10.6
130°-140°	623.8	11.3
140°-150°	579.8	10.5
150°-160°	466.2	8.5
160°-170°	300.4	5.4
170°-180°	103.4	1.9
0°-30°	683.3	12.4
0°-40°	1096.3	19.9
0°-60°	1868.5	33.9
0°-90°	2328.3	42.2
90°-120°	524.5	9.5
90°-150°	2314.7	42.0
90°-180°	3185.0	57.8
0°-180°	5513.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	9	16	20	21	4
95°	51	27	31	34	34	63
105°	239	249	48	56	60	255
115°	452	466	485	138	64	445
125°	639	650	664	670	672	570
135°	791	803	811	818	817	611
145°	918	918	930	935	932	574
155°	1010	1004	1013	1017	1011	465
165°	1065	1060	1062	1067	1062	301
175°	1089	1084	1085	1090	1083	104
180°	1087	1087	1087	1087	1087	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.8	12.9	12.9	13.0	13.1	13.1	13.1	13.1	13.0	13.0	12.7
90°	0.8	2.7	4.6	6.5	8.4	10.2	11.5	12.9	14.3	15.8	16.6
92.5°	15.8	15.7	15.5	15.3	15.2	15.4	16.2	16.9	17.6	18.3	18.7
95°	51.1	45.4	39.6	33.8	28.1	25.7	27.0	28.2	29.4	30.7	31.5
97.5°	101.4	85.2	69.0	52.7	36.4	29.7	32.5	35.4	38.2	41.1	41.8
100°	139.2	115.2	91.3	67.3	43.4	33.0	35.9	38.9	41.8	44.9	46.2
102.5°	180.7	175.6	170.6	165.5	160.4	145.5	120.6	95.7	70.9	46.1	47.9
105°	239.0	244.3	249.5	254.8	260.0	238.8	191.1	143.4	95.7	48.0	49.9
107.5°	305.6	309.8	314.0	318.2	322.5	296.0	238.8	181.6	124.3	67.2	65.2
110°	348.4	352.1	355.7	359.4	363.0	339.6	289.1	238.6	188.1	137.6	120.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	388.6	391.8	395.1	398.4	401.6	397.0	384.5	372.0	359.6	347.1	283.4
115°	452.1	455.1	458.1	461.1	464.0	467.7	472.1	476.5	480.8	485.2	404.2
117.5°	508.9	512.2	515.6	518.9	522.2	525.4	528.4	531.4	534.4	537.4	517.8
120°	550.4	553.0	555.7	558.3	560.9	563.8	567.0	570.1	573.3	576.4	578.5
122.5°	585.7	588.4	591.2	593.9	596.7	599.8	603.2	606.7	610.1	613.5	614.8
125°	639.3	641.5	643.9	646.1	648.4	651.2	654.5	657.8	661.2	664.4	665.7
127.5°	687.9	690.4	692.9	695.4	697.9	700.4	702.9	705.4	707.9	710.4	712.1
130°	718.8	721.5	724.3	727.1	729.9	732.3	734.2	736.1	738.0	739.9	741.8
132.5°	750.2	752.5	754.9	757.3	759.7	761.8	763.8	765.7	767.6	769.5	771.2
135°	791.1	793.8	796.7	799.4	802.3	804.4	806.0	807.6	809.2	810.7	812.4
137.5°	832.4	834.4	836.4	838.3	840.2	842.1	843.9	845.7	847.5	849.3	850.9
140°	859.5	860.9	862.3	863.7	865.0	866.8	868.7	870.6	872.5	874.4	876.0
142.5°	882.1	883.4	884.7	885.9	887.2	888.9	891.0	893.3	895.5	897.7	899.1
145°	917.7	917.5	917.3	917.1	917.0	918.3	921.4	924.3	927.3	930.2	931.4
147.5°	948.6	948.0	947.4	946.7	946.0	947.1	950.0	953.0	956.0	958.9	959.8
150°	968.8	967.6	966.3	965.1	963.9	964.7	967.5	970.3	973.1	975.9	976.9
152.5°	985.8	984.4	983.0	981.7	980.3	980.9	983.6	986.3	988.9	991.6	992.6
155°	1010.5	1008.9	1007.3	1005.7	1004.2	1004.4	1006.5	1008.7	1010.7	1012.8	1013.8
157.5°	1029.8	1028.5	1027.2	1025.8	1024.5	1024.6	1026.1	1027.5	1029.0	1030.4	1031.7
160°	1041.1	1040.1	1039.1	1037.9	1036.9	1036.9	1037.9	1039.1	1040.1	1041.1	1042.2
162.5°	1051.2	1050.2	1049.1	1048.0	1047.0	1046.9	1047.8	1048.7	1049.6	1050.6	1051.7
165°	1064.7	1063.7	1062.6	1061.5	1060.5	1060.2	1060.8	1061.3	1061.9	1062.4	1063.6
167.5°	1074.8	1073.8	1072.7	1071.6	1070.6	1070.3	1070.8	1071.3	1071.8	1072.3	1073.5
170°	1080.5	1079.3	1078.3	1077.3	1076.2	1075.9	1076.2	1076.6	1076.9	1077.3	1078.5
172.5°	1084.2	1083.1	1082.1	1081.1	1080.0	1079.7	1080.0	1080.4	1080.7	1081.1	1082.3
175°	1089.1	1087.9	1086.7	1085.4	1084.2	1083.7	1084.1	1084.4	1084.8	1085.1	1086.4
177.5°	1089.9	1088.9	1088.0	1086.9	1086.0	1085.5	1085.7	1085.8	1086.0	1086.1	1087.1
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	12.4	12.1	11.8	11.6	11.5	11.5	11.4	11.3
90°	17.5	18.3	19.2	19.8	20.1	20.5	20.9	21.3
92.5°	19.1	19.6	20.1	20.4	20.6	20.8	21.0	21.3
95°	32.4	33.3	34.2	34.5	34.4	34.2	34.0	33.8
97.5°	42.4	43.1	43.8	44.3	44.5	44.7	44.9	45.1
100°	47.6	49.0	50.5	51.3	51.7	52.0	52.3	52.7
102.5°	49.7	51.6	53.4	54.5	55.0	55.4	56.0	56.5
105°	51.8	53.7	55.6	57.0	57.7	58.4	59.1	59.8
107.5°	63.2	61.3	59.3	58.7	59.4	60.1	60.8	61.5
110°	102.6	85.2	67.7	59.3	60.0	60.7	61.4	62.2





TEST NUMBER: P331363-935

CATALOG NUMBER: SA2XXDIP-C675D925U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	219.6	155.8	92.1	60.5	61.0	61.6	62.2	62.8
115°	323.4	242.5	161.5	114.8	102.2	89.6	77.1	64.5
117.5°	498.3	478.7	459.1	428.6	387.3	345.9	304.6	263.3
120°	580.6	582.7	584.8	574.0	550.4	526.8	503.3	479.7
122.5°	616.0	617.3	618.5	616.9	612.3	607.7	603.1	598.6
125°	666.9	668.1	669.3	670.2	670.7	671.2	671.8	672.4
127.5°	713.9	715.7	717.6	718.4	718.6	718.7	718.8	718.8
130°	743.8	745.7	747.6	748.6	748.4	748.1	748.0	747.8
132.5°	772.8	774.5	776.1	776.8	776.6	776.4	776.3	776.1
135°	814.2	816.0	817.7	818.4	818.0	817.7	817.3	817.0
137.5°	852.6	854.4	856.1	856.7	856.1	855.5	854.9	854.3
140°	877.5	879.2	880.7	881.1	880.2	879.3	878.5	877.5
142.5°	900.5	902.0	903.4	903.7	902.8	902.0	901.1	900.2
145°	932.7	933.9	935.1	935.3	934.4	933.6	932.7	931.9
147.5°	960.7	961.6	962.5	962.6	961.8	961.1	960.4	959.7
150°	977.9	979.0	980.1	980.2	979.3	978.4	977.5	976.6
152.5°	993.7	994.7	995.7	995.7	994.5	993.4	992.3	991.1
155°	1014.9	1016.0	1017.0	1016.8	1015.5	1014.0	1012.6	1011.2
157.5°	1032.8	1034.0	1035.2	1035.1	1033.7	1032.3	1031.0	1029.7
160°	1043.2	1044.3	1045.3	1045.3	1044.0	1042.8	1041.6	1040.3
162.5°	1052.9	1054.1	1055.3	1055.2	1053.7	1052.1	1050.7	1049.1
165°	1064.8	1066.0	1067.2	1067.2	1066.0	1064.8	1063.6	1062.4
167.5°	1074.7	1075.9	1077.2	1076.9	1075.4	1073.8	1072.3	1070.7
170°	1079.8	1081.0	1082.2	1082.0	1080.5	1078.8	1077.3	1075.7
172.5°	1083.5	1084.8	1086.0	1085.8	1084.2	1082.6	1081.1	1079.5
175°	1087.6	1088.8	1090.0	1089.8	1088.0	1086.3	1084.5	1082.8
177.5°	1088.0	1089.1	1090.0	1089.9	1088.6	1087.4	1086.1	1084.9
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8

(END OF REPORT)