

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: P331443

Luminaire Tested: **SA2XXDIP-C1005D725U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331443  
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: SA2XXDIP-C1005D725U835-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

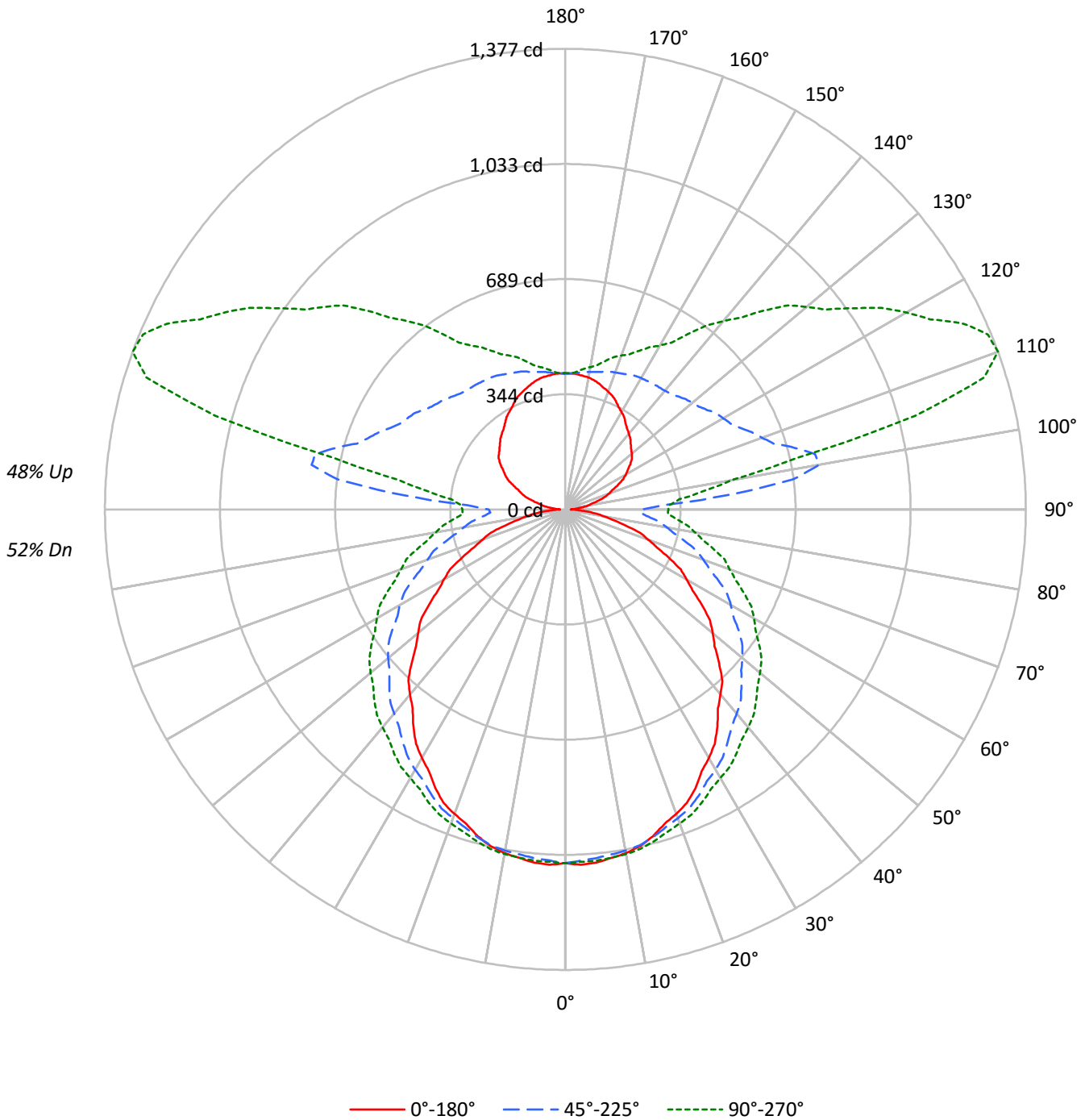
Lumens per Lamp: N/A  
Luminaire Lumens: 6866.5 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 60.7  
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	38	33
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	27	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12
10	45	33	25	20	42	31	24	19	27	21	17	23	18	15	19	15	13	11

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

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	1.5
10°-20°	287.3	4.2
20°-30°	435.4	6.3
30°-40°	530.3	7.7
40°-50°	570.5	8.3
50°-60°	554.1	8.1
60°-70°	483.8	7.0
70°-80°	372.4	5.4
80°-90°	253.6	3.7
90°-100°	334.7	4.9
100°-110°	677.3	9.9
110°-120°	669.0	9.7
120°-130°	528.7	7.7
130°-140°	406.8	5.9
140°-150°	296.1	4.3
150°-160°	205.7	3.0
160°-170°	121.1	1.8
170°-180°	39.4	0.6
0°-30°	822.9	12.0
0°-40°	1353.3	19.7
0°-60°	2477.9	36.1
0°-90°	3587.7	52.2
90°-120°	1681.0	24.5
90°-150°	2912.6	42.4
90°-180°	3279.0	47.8
0°-180°	6866.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	16	115	229	287	308	12
95°	40	153	483	348	342	39
105°	103	198	711	1219	1083	110
115°	174	238	577	1136	1314	172
125°	238	283	518	902	1048	211
135°	277	331	477	729	841	214
145°	314	361	458	578	639	198
155°	357	386	445	503	523	164
165°	389	401	426	452	459	110
175°	406	406	410	415	414	39
180°	406	406	406	406	406	



TEST NUMBER: P331443

CATALOG NUMBER: SA2XXDIP-C1005D725U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.2	51.0	71.9	92.5	113.1	134.6	157.2	180.1	202.8	224.8	238.5
90°	16.1	38.2	61.1	82.4	103.7	126.8	152.5	179.8	206.3	228.9	241.7
92.5°	23.6	46.2	70.3	92.1	115.8	142.8	181.5	227.3	270.5	292.9	290.4
95°	39.6	58.8	82.6	105.6	134.1	171.1	227.5	315.9	427.1	482.7	457.3
97.5°	55.3	73.7	96.3	121.1	149.7	187.9	252.7	367.1	537.4	686.2	724.4
100°	70.9	85.9	105.5	130.6	158.8	196.6	257.1	371.5	559.4	770.8	896.0
102.5°	84.1	97.3	115.9	139.9	167.6	204.5	261.4	364.6	539.5	765.3	954.6
105°	103.0	116.0	131.4	153.0	180.1	215.7	270.2	357.5	504.2	711.0	930.9
107.5°	125.2	135.6	148.9	167.5	192.5	227.0	279.6	357.2	480.8	654.1	849.2
110°	139.0	149.0	160.5	177.4	200.7	235.1	286.2	359.1	471.2	625.5	798.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.8	161.6	172.7	187.9	209.4	243.5	292.5	361.6	464.0	603.1	759.6
115°	174.2	181.9	190.3	203.4	222.8	253.4	302.4	365.4	456.5	576.6	710.3
117.5°	194.9	200.4	207.6	218.3	235.8	266.0	311.3	370.1	450.8	556.7	674.2
120°	208.6	213.1	219.2	227.6	244.6	273.9	318.0	373.9	447.7	545.0	653.8
122.5°	221.8	224.8	230.0	238.2	254.4	283.6	325.0	376.9	445.5	535.1	635.5
125°	237.6	239.9	244.6	254.0	269.6	297.0	336.0	382.1	441.4	518.0	607.7
127.5°	251.3	254.1	260.3	270.3	285.0	311.7	347.9	388.2	439.2	504.3	581.9
130°	259.5	262.2	269.7	280.3	295.6	320.9	355.4	392.3	438.5	495.7	564.8
132.5°	267.0	270.4	278.5	289.7	305.6	330.1	361.7	396.3	437.8	487.7	549.7
135°	276.7	279.8	289.2	300.9	318.9	342.5	370.9	401.7	436.4	477.3	529.0
137.5°	287.3	291.0	300.3	312.8	330.5	351.6	377.8	404.7	434.7	468.2	511.9
140°	295.5	298.2	307.3	319.4	336.3	356.8	380.9	405.8	433.1	462.7	501.8
142.5°	303.6	305.7	314.2	326.3	342.6	361.5	384.5	408.2	433.1	460.3	493.8
145°	314.2	317.4	325.2	336.9	352.5	369.7	390.9	412.7	434.6	458.1	485.1
147.5°	327.4	329.7	337.2	348.0	361.0	376.3	396.2	415.4	435.3	455.3	477.4
150°	336.1	338.5	344.7	354.9	366.6	380.7	398.7	416.6	434.6	453.4	472.1
152.5°	344.9	346.0	352.2	361.1	372.2	385.1	401.2	417.3	433.4	450.3	467.8
155°	357.2	358.0	362.7	371.3	379.9	391.6	404.9	418.2	431.5	444.8	459.6
157.5°	367.6	368.3	372.1	379.6	386.5	396.3	407.6	418.2	427.9	439.2	452.0
160°	374.4	375.2	378.3	384.6	390.9	399.4	408.8	418.2	426.0	435.4	446.4
162.5°	381.3	380.8	384.0	389.0	394.6	401.3	409.5	417.6	424.2	432.3	441.3
165°	389.3	388.5	390.1	394.8	398.7	403.4	410.4	415.9	420.6	426.0	433.1
167.5°	395.9	394.9	396.3	399.3	402.1	405.1	410.2	414.8	417.0	420.6	424.9
170°	400.2	398.7	399.4	401.8	403.4	405.7	409.6	413.5	415.1	417.4	420.6
172.5°	402.7	401.8	401.3	403.7	404.6	406.3	409.0	411.6	412.6	413.7	416.2
175°	405.7	404.9	404.1	405.7	405.7	406.5	408.0	409.6	408.8	409.6	410.4
177.5°	407.1	405.9	405.2	406.5	406.5	406.5	407.1	408.4	407.1	406.5	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	252.3	265.8	280.0	289.3	293.7	298.0	302.4	306.8
90°	254.6	266.6	281.8	291.4	295.5	299.6	303.7	307.8
92.5°	286.1	289.8	296.6	300.4	303.9	305.5	310.2	313.0
95°	406.9	372.2	352.3	343.6	337.5	335.4	337.1	342.0
97.5°	666.2	591.9	519.9	471.8	438.4	423.2	415.8	413.3
100°	892.1	807.8	713.3	626.9	565.8	535.9	517.0	506.7
102.5°	1037.5	1027.9	961.9	869.8	803.0	749.4	724.8	709.5
105°	1105.4	1205.7	1227.7	1209.8	1165.1	1120.3	1090.5	1083.3
107.5°	1033.1	1177.6	1270.3	1315.8	1325.6	1326.7	1323.7	1312.9
110°	974.0	1124.8	1235.8	1307.2	1344.6	1363.2	1373.9	1376.9





TEST NUMBER: P331443

CATALOG NUMBER: SA2XXDIP-C1005D725U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	919.1	1064.3	1182.2	1263.0	1313.5	1342.1	1359.1	1367.1
115°	849.5	980.1	1092.7	1180.2	1239.5	1279.2	1303.3	1314.0
117.5°	793.9	909.6	1012.6	1094.9	1154.9	1196.4	1221.3	1230.7
120°	764.1	870.6	963.0	1040.8	1099.2	1139.7	1166.2	1177.7
122.5°	739.4	837.4	925.2	995.7	1048.0	1087.3	1110.6	1120.4
125°	702.1	791.8	869.8	934.6	983.0	1015.7	1038.3	1047.7
127.5°	665.3	746.6	820.0	879.8	922.3	953.2	973.0	981.0
130°	641.8	717.2	787.1	844.2	885.2	914.5	932.9	941.8
132.5°	618.9	689.0	753.7	807.5	847.9	877.2	894.3	902.6
135°	587.0	645.7	704.4	753.2	789.5	818.0	834.8	840.7
137.5°	559.6	609.0	656.2	698.6	731.6	756.1	770.8	777.8
140°	542.4	585.4	626.8	664.9	692.0	714.3	728.1	734.8
142.5°	529.0	565.3	600.6	632.4	657.9	678.2	690.4	693.1
145°	511.4	539.3	565.5	590.1	610.5	625.5	635.0	639.1
147.5°	498.3	518.9	538.1	555.2	571.5	583.0	589.1	591.3
150°	490.9	508.1	524.5	538.6	550.3	559.7	564.4	565.2
152.5°	484.0	500.0	513.9	526.1	535.3	543.4	546.9	547.0
155°	474.5	487.0	498.7	507.3	515.9	521.4	524.5	523.0
157.5°	463.4	473.9	483.7	490.4	496.5	501.1	502.5	502.5
160°	456.5	465.1	473.7	479.2	484.7	488.6	489.3	489.3
162.5°	449.6	457.0	464.3	468.6	474.0	476.7	477.5	476.8
165°	439.3	444.8	450.3	453.4	456.5	459.6	459.6	458.9
167.5°	429.5	433.7	437.4	440.3	441.7	443.4	443.2	442.3
170°	424.5	426.8	429.9	431.5	432.3	434.6	433.8	432.3
172.5°	418.8	420.6	423.1	424.0	424.8	425.9	425.1	424.2
175°	412.7	413.5	414.3	415.1	415.1	415.9	415.1	413.5
177.5°	408.4	408.4	409.0	409.0	409.0	409.0	408.4	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5

(END OF REPORT)