

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: P331452

Luminaire Tested: **SA2XXDIP-C1005D925U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331452  
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-C1005D925U835-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

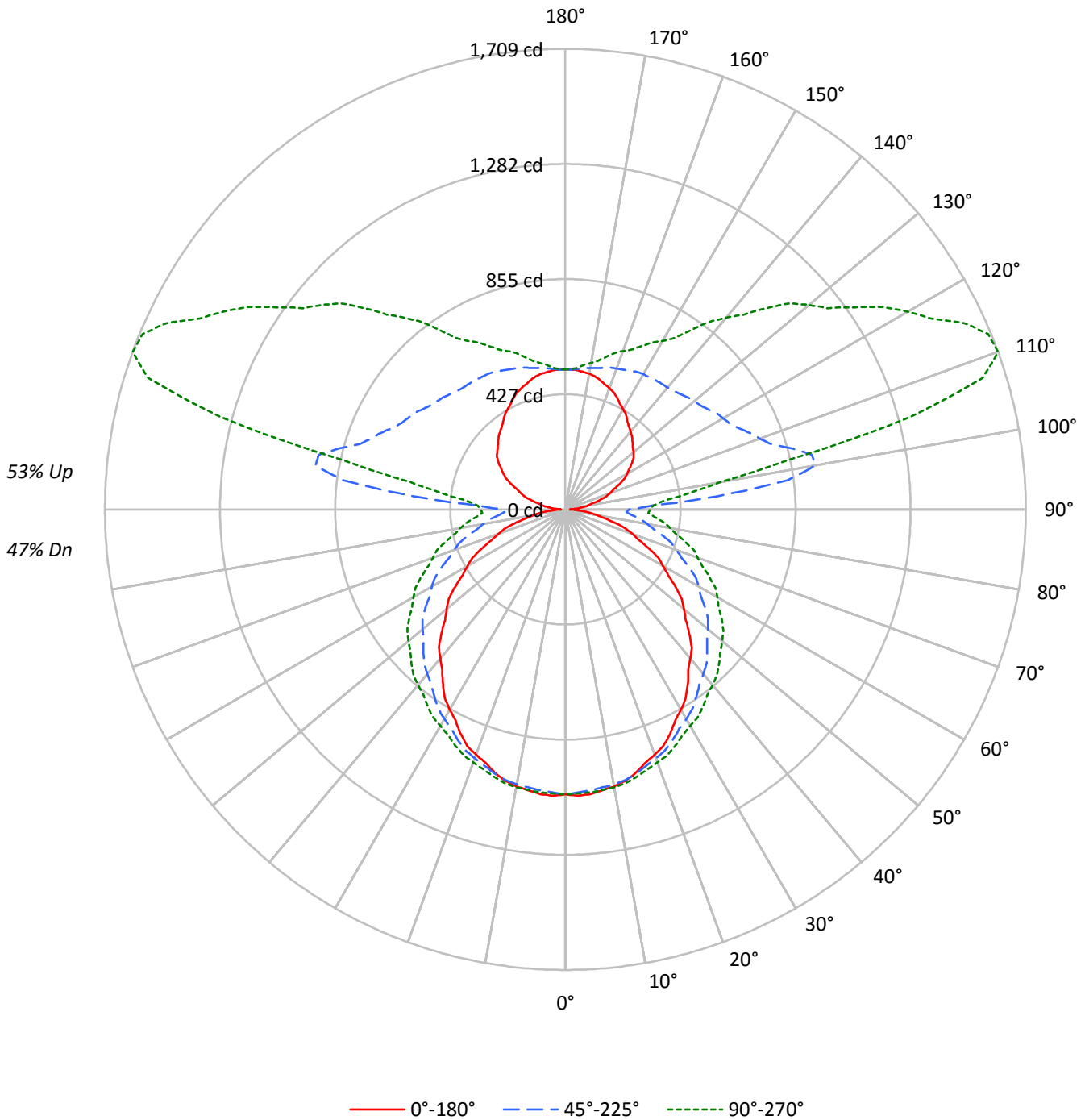
Lumens per Lamp: N/A  
Luminaire Lumens: 7650.3 lumens  
Efficiency: N/A  
Efficacy: 114.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 66.8  
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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	96	91	86	82	88	83	80	76	69	67	64	57	55	53	45	43	42	37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	36	34	30
3	79	68	61	54	72	63	56	51	52	47	43	43	39	36	34	31	29	24
4	72	60	52	46	65	55	48	42	46	41	36	38	34	30	30	27	24	21
5	66	53	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27	30	26	22	24	21	18	15
7	56	43	35	29	51	40	32	27	33	28	23	28	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	20	17	14	12
9	48	35	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11
10	45	32	25	20	41	30	23	19	26	20	16	21	17	14	17	14	12	10

**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	1.3
10°-20°	287.3	3.8
20°-30°	435.4	5.7
30°-40°	530.3	6.9
40°-50°	570.5	7.5
50°-60°	554.1	7.2
60°-70°	483.8	6.3
70°-80°	372.4	4.9
80°-90°	254.6	3.3
90°-100°	379.7	5.0
100°-110°	829.9	10.8
110°-120°	831.1	10.9
120°-130°	662.2	8.7
130°-140°	514.0	6.7
140°-150°	377.1	4.9
150°-160°	262.6	3.4
160°-170°	154.6	2.0
170°-180°	50.3	0.7
0°-30°	822.9	10.8
0°-40°	1353.3	17.7
0°-60°	2477.9	32.4
0°-90°	3588.7	46.9
90°-120°	2040.8	26.7
90°-150°	3594.0	47.0
90°-180°	4062.0	53.1
0°-180°	7650.3	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	118	236	294	315	12
95°	47	171	568	380	367	47
105°	129	238	871	1505	1327	138
115°	221	297	711	1413	1635	218
125°	302	360	647	1126	1308	269
135°	353	422	605	917	1056	273
145°	401	461	585	735	811	252
155°	456	492	568	642	668	210
165°	497	512	544	577	586	140
175°	518	518	523	530	528	49
180°	519	519	519	519	519	



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CATALOG NUMBER: SA2XXDIP-C1005D925U835-4F0-1E-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	51.1	72.2	92.9	113.6	135.3	158.1	181.3	204.2	226.2	239.9
90°	16.3	39.1	62.8	84.6	106.3	130.1	156.9	185.6	213.4	236.2	248.9
92.5°	26.3	50.1	75.6	98.4	123.6	152.7	196.2	248.9	298.2	321.0	314.2
95°	47.2	67.2	93.2	118.2	150.1	192.3	258.7	365.9	502.1	567.5	531.5
97.5°	67.6	87.2	112.1	139.9	172.5	216.5	293.8	434.4	646.5	830.9	876.3
100°	87.6	103.2	124.8	153.3	185.9	229.7	301.6	442.5	677.1	941.7	1098.0
102.5°	104.7	118.4	138.9	166.4	198.7	241.6	309.1	435.8	653.9	937.1	1175.4
105°	129.4	143.3	160.2	185.0	216.8	258.6	323.2	429.7	612.1	871.3	1148.7
107.5°	157.9	169.0	183.6	205.3	235.0	275.5	338.0	432.4	585.5	802.1	1048.1
110°	175.8	186.6	199.4	219.2	247.0	287.6	348.2	436.8	575.2	767.6	985.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	193.4	203.1	215.6	233.5	259.4	299.9	358.1	441.8	568.3	741.4	938.2
115°	220.7	229.4	239.2	254.9	278.6	315.1	373.3	449.5	561.7	710.7	878.6
117.5°	247.5	254.0	262.4	275.4	297.0	333.3	387.2	458.4	557.4	688.8	836.0
120°	265.1	270.4	277.8	288.1	309.5	344.9	397.4	465.0	555.4	675.8	812.1
122.5°	281.8	285.6	292.1	302.4	323.0	358.4	407.7	470.4	554.5	665.3	790.9
125°	302.5	305.5	311.5	323.4	343.4	376.8	423.6	479.4	552.2	646.9	758.9
127.5°	320.0	323.7	331.7	344.6	363.4	396.4	440.1	489.2	551.9	632.5	729.2
130°	330.4	334.1	343.7	357.3	377.0	408.3	450.4	495.5	552.5	623.6	709.6
132.5°	340.0	344.4	354.9	369.3	389.7	420.3	459.1	501.8	553.2	615.4	692.4
135°	352.8	356.8	368.8	383.8	406.7	436.4	471.7	510.1	553.4	604.7	668.7
137.5°	366.4	371.1	383.0	398.9	421.6	448.3	481.3	515.4	553.2	595.6	649.6
140°	376.8	380.4	392.1	407.7	429.3	455.4	486.1	517.7	552.3	589.9	638.3
142.5°	387.2	390.0	400.9	416.5	437.3	461.6	490.8	521.1	552.8	587.5	629.1
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	618.8
147.5°	418.0	421.0	430.5	444.3	460.9	480.5	505.8	530.4	555.7	581.3	609.5
150°	429.2	432.1	440.1	453.1	468.1	486.0	509.0	531.9	554.9	578.9	602.8
152.5°	440.3	441.7	449.7	461.1	475.3	491.6	512.2	532.7	553.3	574.9	597.2
155°	456.1	457.1	463.1	474.1	485.0	500.0	517.0	533.9	550.9	567.9	586.8
157.5°	469.3	470.3	475.1	484.6	493.4	506.0	520.4	533.9	546.3	560.7	577.1
160°	478.1	479.1	483.0	491.0	499.0	510.0	522.0	533.9	543.9	555.9	569.9
162.5°	486.8	486.2	490.2	496.6	503.8	512.4	522.8	533.1	541.5	551.9	563.5
165°	497.0	496.0	498.0	504.0	509.0	515.0	524.0	531.0	536.9	543.9	552.9
167.5°	505.4	504.2	506.0	509.8	513.4	517.2	523.8	529.6	532.3	536.9	542.5
170°	511.0	509.0	510.0	513.0	515.0	518.0	523.0	528.0	530.0	532.9	536.9
172.5°	514.2	513.0	512.4	515.4	516.6	518.8	522.2	525.6	526.8	528.2	531.4
175°	518.0	517.0	516.0	518.0	518.0	519.0	521.0	523.0	522.0	523.0	524.0
177.5°	519.8	518.2	517.4	519.0	519.0	519.0	519.8	521.4	519.8	519.0	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0



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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°	253.6	267.1	281.4	290.8	295.1	299.5	303.8	308.2
90°	261.5	273.1	288.7	298.6	302.7	306.7	310.8	314.9
92.5°	305.0	306.0	310.9	313.5	316.7	317.6	322.5	325.0
95°	463.6	415.7	386.7	373.3	364.4	360.5	361.6	366.6
97.5°	798.5	700.1	604.7	540.9	497.3	476.7	466.2	461.8
100°	1089.7	978.5	854.4	741.8	662.7	623.5	598.3	584.1
102.5°	1277.7	1262.1	1174.4	1054.5	968.3	898.8	866.4	845.8
105°	1368.2	1492.9	1517.8	1492.7	1434.6	1376.5	1337.3	1327.1
107.5°	1279.7	1461.0	1576.2	1632.1	1643.6	1644.0	1639.2	1624.3
110°	1206.6	1396.1	1534.7	1623.9	1670.6	1693.3	1706.0	1708.7





TEST NUMBER: P331452

CATALOG NUMBER: SA2XXDIP-C1005D925U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1138.9	1321.2	1468.7	1569.8	1633.2	1668.7	1689.4	1698.6
115°	1053.5	1217.4	1358.4	1468.2	1542.8	1592.4	1622.1	1634.9
117.5°	986.0	1131.0	1259.7	1362.8	1438.6	1490.6	1521.4	1532.4
120°	950.4	1083.7	1199.0	1296.5	1370.1	1420.7	1453.4	1467.2
122.5°	920.9	1043.6	1153.0	1241.3	1307.2	1356.5	1385.5	1397.0
125°	876.9	988.9	1085.9	1166.9	1227.8	1268.8	1296.9	1307.9
127.5°	833.4	934.9	1026.2	1101.0	1154.5	1193.0	1217.5	1226.9
130°	805.6	899.6	986.6	1057.9	1109.5	1146.2	1168.9	1179.6
132.5°	778.5	865.9	946.2	1013.4	1064.2	1100.9	1122.0	1131.9
135°	740.8	813.8	886.8	947.6	993.3	1028.9	1049.6	1056.3
137.5°	708.7	770.1	828.7	881.7	923.1	953.8	971.8	980.1
140°	688.6	742.0	793.3	841.0	875.0	903.0	920.0	928.0
142.5°	672.8	717.9	761.8	801.6	833.7	859.0	874.2	877.1
145°	651.8	686.8	719.8	750.6	776.2	794.9	806.6	811.3
147.5°	636.1	662.3	686.7	708.4	729.0	743.4	751.0	753.6
150°	626.8	648.7	669.7	687.6	702.6	714.6	720.6	721.6
152.5°	618.0	638.3	656.1	671.7	683.4	693.8	698.2	698.4
155°	605.8	621.8	636.7	647.7	658.7	665.7	669.7	667.7
157.5°	591.6	605.0	617.6	626.2	633.9	639.7	641.5	641.5
160°	582.8	593.8	604.8	611.8	618.8	623.8	624.8	624.8
162.5°	574.1	583.4	592.8	598.2	605.2	608.6	609.6	608.8
165°	560.9	567.9	574.9	578.9	582.8	586.8	586.8	585.8
167.5°	548.3	553.7	558.5	562.1	563.9	566.1	565.9	564.7
170°	541.9	544.9	548.9	550.9	551.9	554.9	553.9	551.9
172.5°	534.7	536.9	540.1	541.3	542.3	543.7	542.7	541.5
175°	527.0	528.0	529.0	530.0	530.0	531.0	530.0	528.0
177.5°	521.4	521.4	522.2	522.2	522.2	522.2	521.4	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0

(END OF REPORT)