

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: P331434

Luminaire Tested: **SA2XXDIP-C1005D530U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331434  
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-C1005D530U835-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

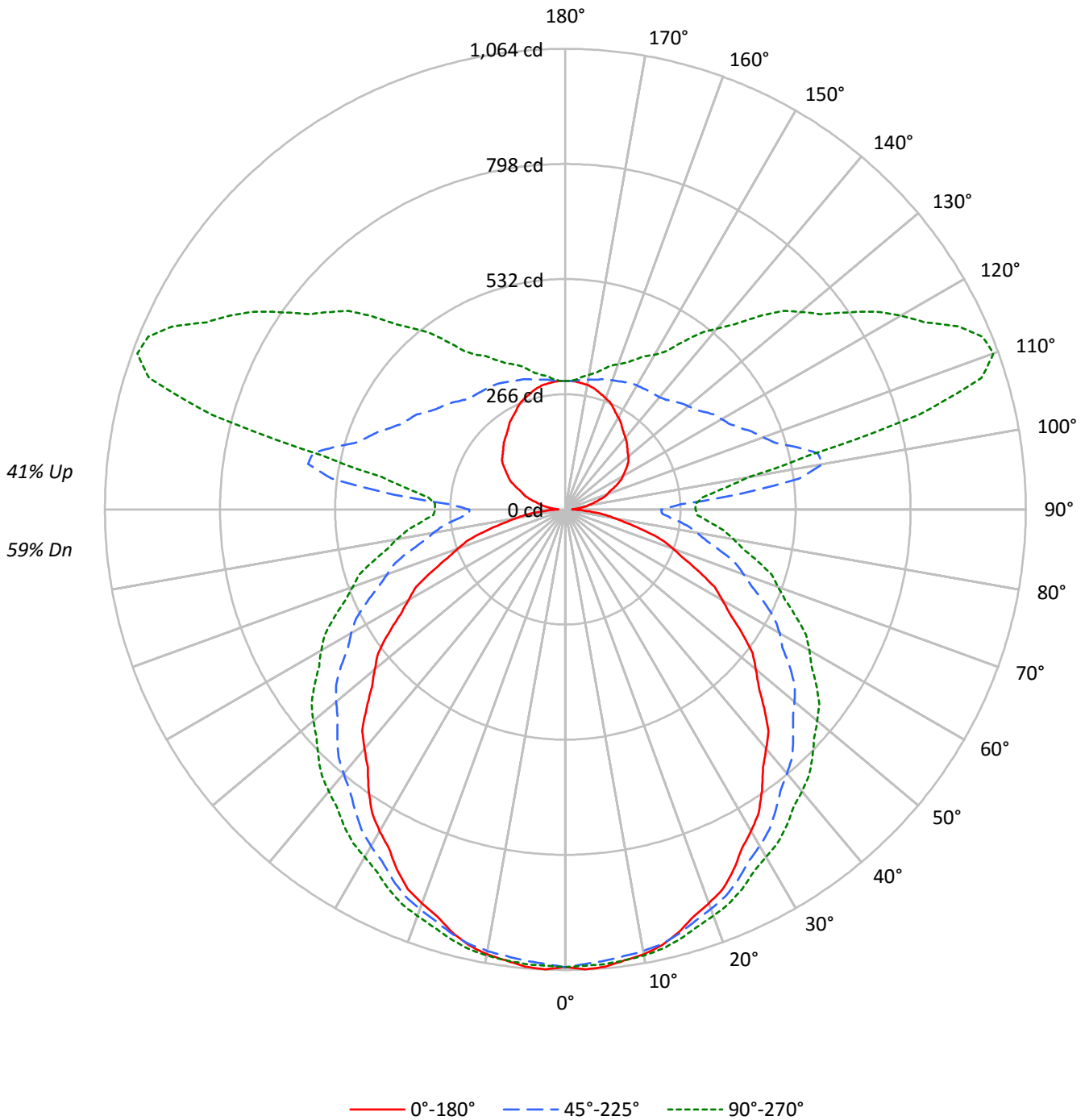
Lumens per Lamp: N/A  
Luminaire Lumens: 6100.5 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 55.1  
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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	98	93	88	84	91	87	82	79	75	72	69	64	62	60	54	52	51	46
2	89	80	73	67	82	75	69	63	65	60	56	55	52	48	46	44	41	37
3	80	70	62	55	74	65	58	52	56	51	46	48	44	40	41	37	34	31
4	73	61	53	46	68	57	50	44	50	44	39	43	38	34	36	32	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	22	19	17
8	53	40	32	26	49	37	30	25	33	27	22	28	23	20	24	20	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	22	18	16	13
10	46	33	26	21	43	31	24	20	28	22	18	24	19	16	21	17	14	12

**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	1.6
10°-20°	287.3	4.7
20°-30°	435.4	7.1
30°-40°	530.3	8.7
40°-50°	570.5	9.4
50°-60°	554.1	9.1
60°-70°	483.8	7.9
70°-80°	372.4	6.1
80°-90°	252.6	4.1
90°-100°	290.8	4.8
100°-110°	528.1	8.7
110°-120°	510.5	8.4
120°-130°	398.2	6.5
130°-140°	302.0	5.0
140°-150°	216.9	3.6
150°-160°	150.1	2.5
160°-170°	88.3	1.4
170°-180°	28.8	0.5
0°-30°	822.9	13.5
0°-40°	1353.3	22.2
0°-60°	2477.9	40.6
0°-90°	3586.7	58.8
90°-120°	1329.4	21.8
90°-150°	2246.6	36.8
90°-180°	2514.0	41.2
0°-180°	6100.5	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	112	222	280	301	11
95°	32	134	400	317	318	31
105°	77	159	554	939	845	83
115°	129	181	446	866	1000	127
125°	174	208	392	683	793	155
135°	202	242	353	545	630	157
145°	229	263	334	424	471	144
155°	261	281	324	367	382	120
165°	284	293	311	330	335	80
175°	296	296	299	303	302	28
180°	296	296	296	296	296	



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**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	50.8	71.5	92.1	112.6	134.0	156.4	178.9	201.4	223.3	237.1
90°	15.9	37.4	59.4	80.3	101.2	123.7	148.3	174.1	199.3	221.7	234.7
92.5°	21.1	42.5	65.0	85.9	108.2	133.2	167.1	206.2	243.4	265.4	267.2
95°	32.2	50.5	72.2	93.4	118.5	150.4	197.1	267.1	353.7	399.8	384.8
97.5°	43.2	60.5	80.8	102.8	127.6	160.0	212.6	301.3	430.9	544.7	576.0
100°	54.6	69.0	86.7	108.4	132.4	164.2	213.5	302.2	444.4	603.8	698.5
102.5°	63.9	76.7	93.3	114.0	137.3	168.3	214.8	295.1	427.7	597.5	738.9
105°	77.2	89.4	103.3	121.7	144.1	173.9	218.4	286.9	398.7	554.4	718.0
107.5°	93.4	103.1	114.9	130.6	151.0	179.5	222.4	283.7	378.4	509.4	654.9
110°	103.1	112.2	122.4	136.6	155.4	183.7	225.5	283.2	369.5	486.6	615.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	113.1	121.1	130.7	143.4	160.6	188.4	228.5	283.1	362.2	467.9	585.0
115°	128.7	135.3	142.5	153.1	168.2	193.2	233.0	283.1	353.8	445.5	545.9
117.5°	143.4	148.1	154.0	162.5	175.9	200.2	237.1	283.8	346.5	427.6	516.0
120°	153.4	157.1	161.9	168.4	181.1	204.6	240.5	284.9	342.4	417.1	499.0
122.5°	163.0	165.4	169.4	175.5	187.4	210.5	244.2	285.5	339.1	407.9	483.6
125°	174.2	175.9	179.3	186.1	197.5	219.0	250.4	286.9	333.2	392.0	459.9
127.5°	184.2	186.1	190.6	197.8	208.4	229.0	257.8	289.6	329.2	379.0	437.9
130°	190.1	192.1	197.4	205.1	216.1	235.5	262.6	291.4	327.1	370.8	423.4
132.5°	195.6	198.0	203.8	211.9	223.4	242.0	266.6	293.3	325.0	362.9	410.3
135°	202.3	204.6	211.4	220.0	233.1	250.7	272.4	295.8	322.0	352.8	392.4
137.5°	210.0	212.7	219.5	228.5	241.5	257.0	276.5	296.6	318.9	343.8	377.3
140°	216.0	217.9	224.4	233.2	245.4	260.4	278.2	296.5	316.6	338.4	368.4
142.5°	221.9	223.4	229.4	238.2	250.0	263.8	280.6	297.9	316.1	335.9	361.6
145°	229.3	231.5	237.2	245.8	257.2	269.7	285.1	301.1	317.1	334.2	354.5
147.5°	238.8	240.5	246.0	253.9	263.4	274.5	289.0	303.1	317.5	332.1	348.4
150°	245.2	246.9	251.5	258.9	267.5	277.7	290.8	304.0	317.1	330.8	344.5
152.5°	251.6	252.4	257.0	263.5	271.6	280.9	292.7	304.4	316.2	328.5	341.3
155°	260.6	261.2	264.6	270.9	277.2	285.7	295.4	305.1	314.8	324.5	335.3
157.5°	268.1	268.7	271.5	276.9	282.0	289.1	297.3	305.1	312.2	320.4	329.7
160°	273.2	273.7	276.0	280.6	285.1	291.4	298.3	305.1	310.8	317.7	325.6
162.5°	278.2	277.8	280.1	283.8	287.9	292.8	298.7	304.6	309.4	315.4	322.0
165°	284.0	283.4	284.6	288.0	290.8	294.3	299.4	303.4	306.8	310.8	315.9
167.5°	288.8	288.1	289.1	291.3	293.4	295.5	299.3	302.6	304.2	306.8	310.0
170°	292.0	290.8	291.4	293.1	294.3	296.0	298.8	301.7	302.8	304.5	306.8
172.5°	293.8	293.1	292.8	294.5	295.2	296.4	298.4	300.3	301.0	301.8	303.6
175°	296.0	295.4	294.8	296.0	296.0	296.5	297.7	298.8	298.3	298.8	299.4
177.5°	297.0	296.1	295.6	296.5	296.5	296.5	297.0	297.9	297.0	296.5	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5



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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°	250.9	264.6	278.7	287.9	292.3	296.6	301.0	305.4
90°	247.8	260.3	275.0	284.5	288.5	292.6	296.7	300.8
92.5°	267.7	274.0	282.5	287.7	291.3	293.6	298.1	301.3
95°	351.5	329.7	318.7	314.7	311.3	310.8	313.2	317.9
97.5°	536.9	486.1	437.0	404.2	380.9	370.9	366.6	365.8
100°	699.1	641.0	575.5	514.7	471.1	450.3	437.5	431.0
102.5°	802.7	799.0	754.2	689.2	641.5	603.4	586.5	576.3
105°	848.5	924.9	944.2	933.2	901.6	870.0	849.2	845.0
107.5°	792.1	900.6	971.4	1006.6	1014.8	1016.6	1015.4	1008.6
110°	746.7	859.7	943.6	997.7	1026.0	1040.5	1049.4	1052.6





TEST NUMBER: P331434

CATALOG NUMBER: SA2XXDIP-C1005D530U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	704.4	813.3	902.2	963.1	1001.0	1022.8	1036.3	1043.1
115°	650.2	748.2	833.1	898.9	943.1	973.1	991.6	1000.5
117.5°	606.1	693.3	771.1	833.0	877.7	908.9	928.0	935.8
120°	582.1	662.4	732.4	790.9	834.6	865.1	885.4	894.8
122.5°	561.9	635.9	702.5	755.6	794.6	824.1	842.1	850.0
125°	531.3	599.2	658.6	707.5	743.6	768.4	785.7	793.3
127.5°	501.1	562.7	618.5	663.6	695.5	718.8	734.1	740.8
130°	481.8	539.0	592.2	635.3	666.0	688.1	702.2	709.5
132.5°	462.9	516.2	565.5	606.2	636.4	658.5	671.7	678.6
135°	436.6	481.4	526.2	563.1	590.3	611.9	624.9	629.9
137.5°	413.8	451.5	487.7	519.8	544.5	563.0	574.3	580.0
140°	399.5	432.3	464.0	492.8	513.1	530.0	540.6	546.0
142.5°	388.5	416.1	443.0	467.1	486.2	501.4	510.8	513.3
145°	374.2	395.1	414.8	433.2	448.6	460.0	467.4	470.8
147.5°	363.7	378.8	392.9	405.5	417.6	426.2	430.9	432.7
150°	358.1	370.7	382.7	392.9	401.5	408.3	411.7	412.3
152.5°	353.1	364.8	374.9	383.8	390.5	396.5	399.0	399.1
155°	346.2	355.3	363.8	370.1	376.4	380.4	382.7	381.5
157.5°	338.1	345.7	352.9	357.8	362.2	365.6	366.6	366.6
160°	333.0	339.3	345.6	349.6	353.6	356.4	357.0	357.0
162.5°	328.0	333.4	338.8	341.8	345.8	347.8	348.3	347.9
165°	320.5	324.5	328.5	330.8	333.0	335.3	335.3	334.8
167.5°	313.3	316.4	319.1	321.2	322.2	323.5	323.4	322.7
170°	309.7	311.4	313.7	314.8	315.4	317.1	316.5	315.4
172.5°	305.6	306.8	308.6	309.3	309.9	310.7	310.1	309.4
175°	301.1	301.7	302.3	302.8	302.8	303.4	302.8	301.7
177.5°	297.9	297.9	298.4	298.4	298.4	298.4	297.9	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5

(END OF REPORT)