

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: P331442-840

Luminaire Tested: **SA2XXDIP-C1005D725U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331442-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C1005D725U840-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

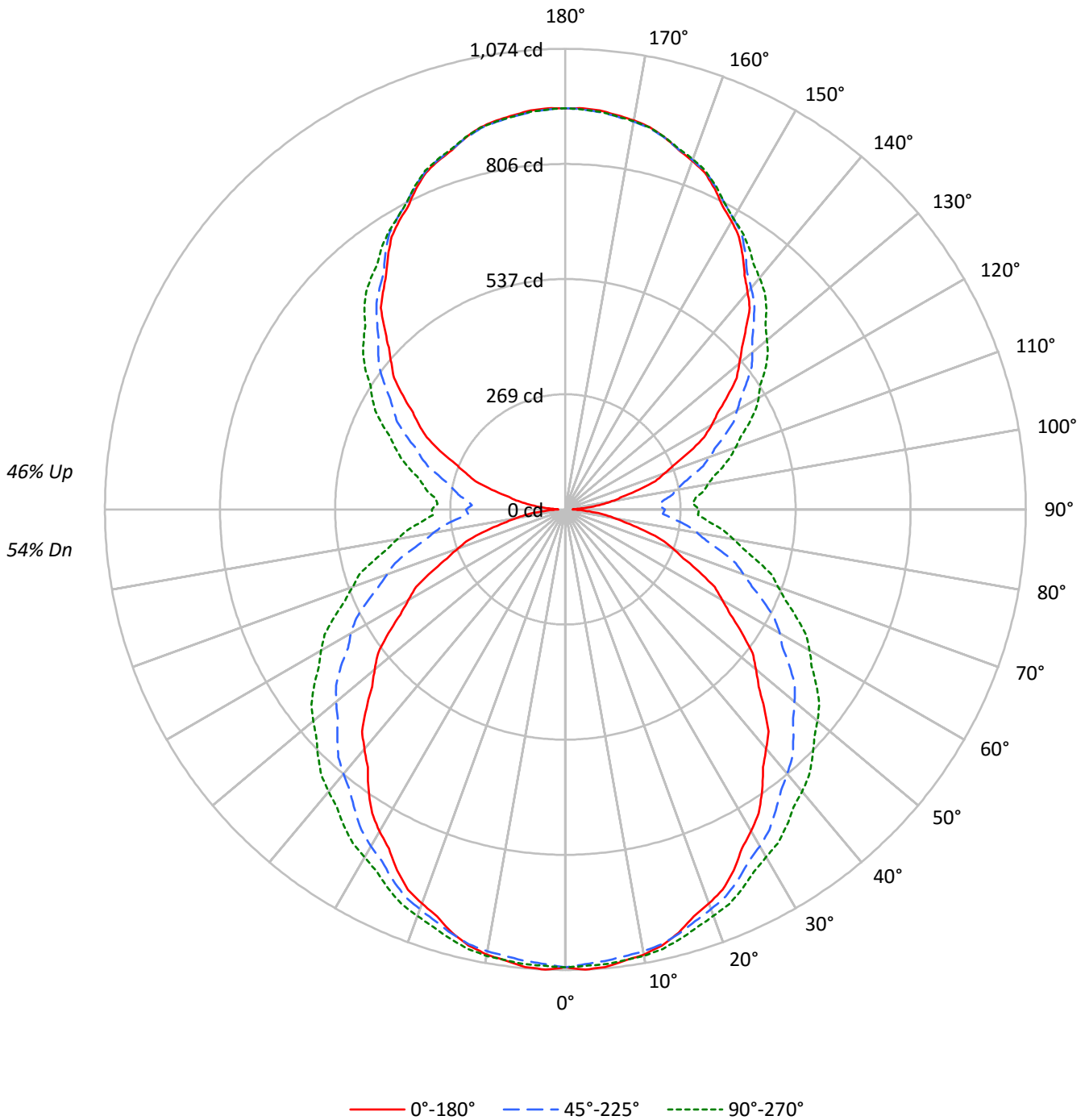
Lumens per Lamp: N/A  
Luminaire Lumens: 6693.3 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

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	86	86	86	72	72	72	60	60	60	54
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	39	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	34	30	27	24
5	67	54	45	39	61	50	43	37	43	37	32	36	32	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	33	28	33	28	24	27	23	20	18
7	57	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

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

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	1.5
10°-20°	290.2	4.3
20°-30°	439.7	6.6
30°-40°	535.6	8.0
40°-50°	576.2	8.6
50°-60°	559.5	8.4
60°-70°	488.6	7.3
70°-80°	376.1	5.6
80°-90°	256.2	3.8
90°-100°	233.2	3.5
100°-110°	311.1	4.6
110°-120°	398.5	6.0
120°-130°	460.6	6.9
130°-140°	484.1	7.2
140°-150°	458.8	6.9
150°-160°	382.0	5.7
160°-170°	253.3	3.8
170°-180°	88.5	1.3
0°-30°	831.1	12.4
0°-40°	1366.6	20.4
0°-60°	2502.3	37.4
0°-90°	3623.2	54.1
90°-120°	942.8	14.1
90°-150°	2346.3	35.1
90°-180°	3070.0	45.9
0°-180°	6693.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	116	232	290	312	13
95°	53	135	228	285	304	57
105°	177	227	307	360	380	188
115°	322	346	412	456	472	318
125°	462	472	517	555	569	414
135°	596	605	622	652	663	461
145°	721	727	732	742	746	451
155°	825	827	830	833	831	380
165°	898	897	897	902	898	253
175°	934	932	930	935	931	89
180°	935	935	935	935	935	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.5	51.4	72.3	93.2	114.2	136.0	158.8	181.6	204.4	227.1	241.2
90°	16.3	38.3	60.4	82.4	104.5	128.5	154.3	180.2	206.0	232.0	245.3
92.5°	28.3	48.4	68.6	88.7	108.8	129.9	152.0	174.1	196.1	218.2	231.8
95°	53.4	71.3	89.3	107.1	125.1	144.5	165.5	186.5	207.5	228.5	241.6
97.5°	85.8	101.7	117.6	133.6	149.5	167.7	188.1	208.6	229.1	249.6	262.4
100°	111.1	125.2	139.4	153.5	167.6	184.5	204.3	224.1	243.9	263.7	276.4
102.5°	136.3	149.2	161.9	174.6	187.3	203.4	222.8	242.2	261.6	280.9	293.5
105°	177.4	187.9	198.4	208.9	219.4	233.8	252.1	270.2	288.5	306.8	319.1
107.5°	220.4	229.1	237.9	246.6	255.4	268.3	285.5	302.6	319.7	336.9	348.5
110°	246.9	254.9	262.8	270.7	278.6	291.0	307.9	324.8	341.6	358.5	369.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	277.2	284.1	290.9	297.7	304.6	315.9	331.8	347.7	363.6	379.5	390.1
115°	321.9	326.8	331.6	336.5	341.2	351.2	366.4	381.5	396.7	411.7	421.9
117.5°	364.9	368.8	372.6	376.6	380.4	389.0	402.3	415.7	429.0	442.3	452.1
120°	394.6	397.4	400.1	402.9	405.7	413.2	425.7	438.0	450.3	462.7	472.3
122.5°	421.7	423.9	426.2	428.5	430.7	437.8	449.7	461.7	473.6	485.5	494.5
125°	462.5	464.0	465.6	467.3	468.8	474.8	485.3	495.8	506.2	516.7	525.5
127.5°	503.7	505.3	507.1	508.7	510.3	515.2	523.5	531.8	540.0	548.3	556.1
130°	529.6	531.5	533.5	535.4	537.3	541.8	548.7	555.5	562.4	569.3	577.1
132.5°	558.7	560.2	561.7	563.2	564.7	568.3	573.9	579.6	585.2	590.9	598.0
135°	595.9	597.8	599.8	601.7	603.7	606.5	610.3	614.1	617.8	621.7	628.7
137.5°	636.8	638.3	639.9	641.4	642.9	644.6	646.6	648.5	650.6	652.5	658.6
140°	661.5	662.7	663.9	665.2	666.4	667.8	669.3	671.0	672.5	674.1	679.5
142.5°	686.7	687.9	689.1	690.4	691.7	692.7	693.4	694.1	694.8	695.6	700.1
145°	721.4	722.7	724.0	725.2	726.4	727.5	728.6	729.6	730.6	731.7	734.0
147.5°	753.9	755.3	756.8	758.2	759.7	760.8	761.5	762.2	763.0	763.7	764.3
150°	776.0	777.0	778.0	779.1	780.1	781.0	781.7	782.4	783.2	783.9	784.4
152.5°	795.5	796.6	797.6	798.7	799.7	800.6	801.5	802.3	803.1	804.1	804.7
155°	824.9	825.4	826.0	826.5	827.0	827.5	828.0	828.6	829.1	829.6	830.5
157.5°	850.0	850.3	850.7	851.0	851.4	851.7	852.0	852.3	852.6	852.9	854.1
160°	865.2	865.5	865.9	866.2	866.6	866.8	867.0	867.2	867.4	867.5	868.6
162.5°	879.0	879.1	879.2	879.2	879.3	879.4	879.6	879.8	880.0	880.1	881.3
165°	897.5	897.4	897.2	897.0	896.8	896.7	896.7	896.7	896.7	896.7	898.0
167.5°	912.9	912.4	911.9	911.4	910.9	910.6	910.6	910.5	910.5	910.4	911.7
170°	921.2	920.7	920.1	919.6	919.1	918.7	918.6	918.4	918.2	918.0	919.3
172.5°	926.9	926.3	925.8	925.2	924.7	924.4	924.2	924.0	923.9	923.7	924.9
175°	933.8	933.3	932.7	932.2	931.7	931.3	930.9	930.6	930.2	929.9	931.1
177.5°	936.6	936.2	935.8	935.3	934.9	934.6	934.3	934.0	933.7	933.5	934.3
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	255.1	269.0	283.0	292.2	296.6	301.0	305.5	309.9
90°	258.7	272.2	285.6	294.4	298.7	303.0	307.3	311.6
92.5°	245.4	258.9	272.5	281.3	285.5	289.6	293.8	298.0
95°	254.6	267.7	280.7	289.2	293.0	296.8	300.5	304.3
97.5°	275.1	287.8	300.5	308.9	312.9	316.9	320.9	325.0
100°	289.1	301.8	314.6	322.8	326.4	330.0	333.6	337.2
102.5°	306.1	318.7	331.2	339.4	343.0	346.6	350.2	353.9
105°	331.5	344.0	356.3	364.4	368.2	371.9	375.8	379.5
107.5°	360.2	371.9	383.6	390.9	393.9	396.9	399.9	402.8
110°	380.5	391.5	402.5	409.6	412.8	416.2	419.4	422.6





TEST NUMBER: P331442-840

CATALOG NUMBER: SA2XXDIP-C1005D725U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.6	411.2	421.8	428.8	432.2	435.6	439.0	442.4
115°	432.0	442.2	452.3	459.0	462.3	465.5	468.8	472.0
117.5°	461.8	471.6	481.4	487.8	490.7	493.7	496.7	499.7
120°	481.9	491.6	501.2	507.7	510.9	514.1	517.5	520.7
122.5°	503.4	512.4	521.3	527.1	530.1	532.9	535.7	538.6
125°	534.3	543.0	551.8	557.6	560.6	563.5	566.4	569.4
127.5°	564.0	571.9	579.9	585.0	587.4	590.0	592.4	594.9
130°	585.0	592.9	600.9	605.8	607.8	610.0	612.0	614.0
132.5°	605.3	612.5	619.7	624.4	626.5	628.7	631.0	633.2
135°	635.8	642.8	649.8	654.5	656.7	658.9	661.2	663.4
137.5°	664.9	671.1	677.2	681.2	682.8	684.4	686.0	687.7
140°	685.1	690.5	696.1	699.5	700.8	702.3	703.6	705.0
142.5°	704.7	709.2	713.8	716.6	717.6	718.7	719.8	720.9
145°	736.2	738.4	740.7	742.4	743.4	744.4	745.4	746.4
147.5°	765.0	765.6	766.3	766.7	766.8	767.0	767.2	767.3
150°	784.9	785.4	786.0	786.0	785.4	784.9	784.4	783.9
152.5°	805.4	806.1	806.7	806.7	806.1	805.4	804.7	804.1
155°	831.3	832.2	833.1	833.3	832.7	832.2	831.7	831.2
157.5°	855.4	856.6	857.8	857.9	857.1	856.3	855.4	854.5
160°	869.6	870.7	871.7	871.9	871.2	870.5	869.8	869.1
162.5°	882.5	883.7	884.9	885.0	884.2	883.4	882.5	881.7
165°	899.2	900.4	901.6	901.8	900.9	900.0	899.2	898.3
167.5°	912.9	914.1	915.3	915.5	914.6	913.7	912.8	911.9
170°	920.5	921.7	922.9	923.0	922.0	920.9	919.9	918.8
172.5°	926.1	927.4	928.6	928.7	927.7	926.6	925.5	924.5
175°	932.3	933.5	934.7	934.8	933.8	932.7	931.7	930.7
177.5°	935.1	936.0	936.9	936.9	936.0	935.1	934.3	933.5
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3

(END OF REPORT)