

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: P331271-935

Luminaire Tested: **SA2XXDIP-C290D925U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331271-935  
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-C290D925U935-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

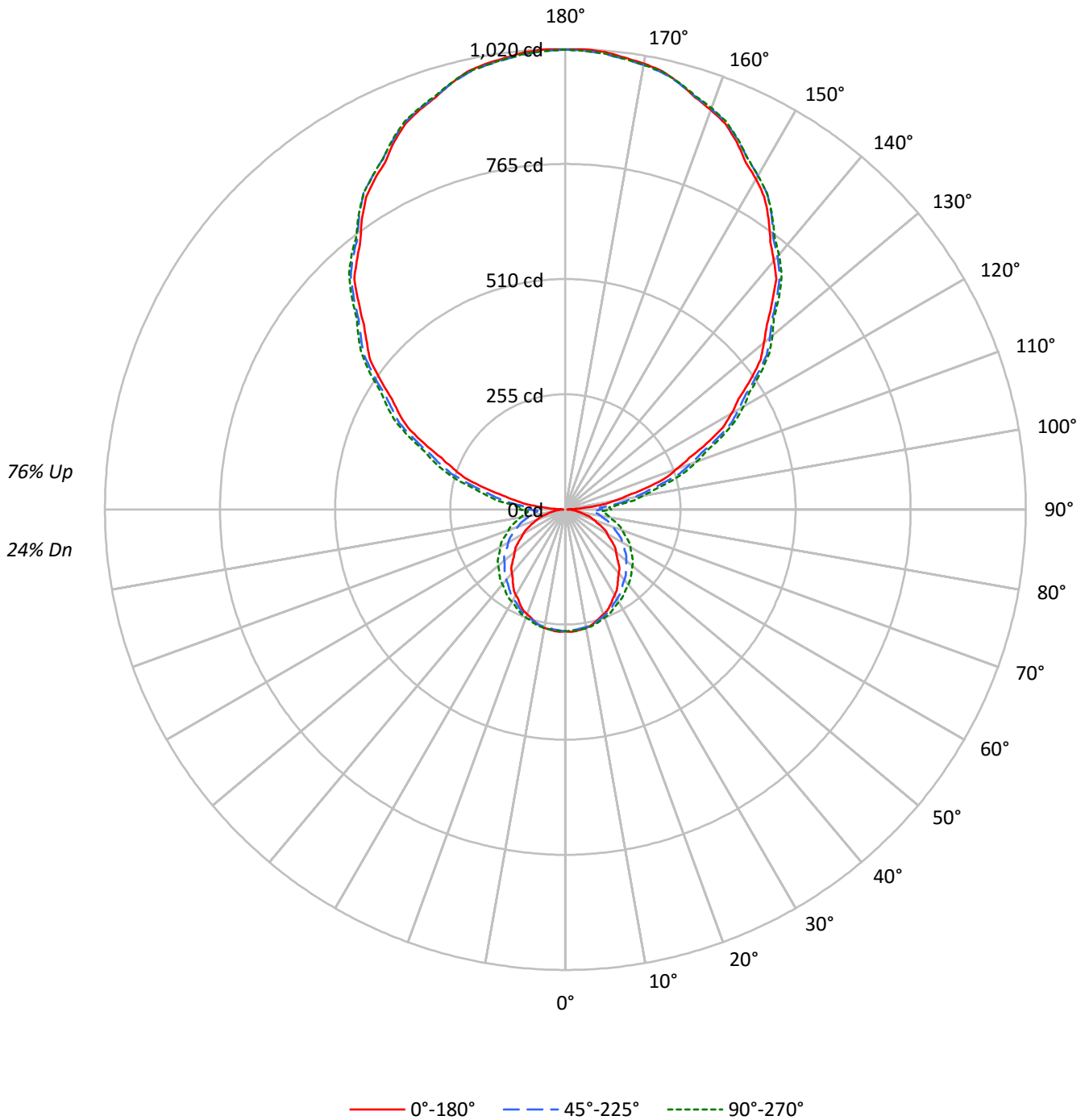
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3880.8 lumens  
Efficiency: N/A  
Efficacy: 104.0 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: Semi-Indirect  
  
Input Watts (W): 37.3  
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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	91	87	83	79	81	77	74	71	59	57	55	42	41	40	27	26	25	18				18
2	83	75	69	64	73	67	62	57	51	48	45	37	34	32	23	22	21	15				15
3	75	66	59	53	66	59	52	47	45	41	37	32	29	27	20	19	17	12				12
4	69	58	50	44	60	52	45	40	40	35	31	28	25	23	18	16	15	10				10
5	63	51	43	38	55	46	39	34	35	30	27	25	22	20	16	14	13	9				9
6	58	46	38	32	51	41	34	29	32	27	23	23	19	17	15	13	11	8				8
7	53	41	33	28	47	37	30	25	28	24	20	21	17	15	13	11	10	7				7
8	49	37	30	24	43	33	27	22	26	21	18	19	15	13	12	10	9	6				6
9	46	34	26	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5				5
10	42	31	24	19	38	28	21	17	21	17	14	16	13	10	10	8	7	5				5

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

	0°	45°	90°
0°	4358	4358	4358
5°	4379	4195	4179
10°	4352	4070	4026
15°	4290	3939	3863
20°	4215	3798	3707
25°	4141	3663	3565
30°	4034	3524	3423
35°	3928	3389	3323
40°	3818	3275	3223
45°	3709	3172	3137
50°	3596	3079	3053
55°	3474	2979	2968
60°	3329	2876	2878
65°	3174	2756	2769
70°	3001	2623	2653
75°	2784	2499	2544
80°	2445	2366	2436
85°	2110	2255	2350



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.6	0.7
10°-20°	73.3	1.9
20°-30°	111.1	2.9
30°-40°	135.3	3.5
40°-50°	145.6	3.8
50°-60°	141.4	3.6
60°-70°	123.5	3.2
70°-80°	95.1	2.4
80°-90°	67.9	1.7
90°-100°	108.5	2.8
100°-110°	232.5	6.0
110°-120°	363.7	9.4
120°-130°	462.3	11.9
130°-140°	510.5	13.2
140°-150°	496.6	12.8
150°-160°	415.8	10.7
160°-170°	275.8	7.1
170°-180°	96.4	2.5
0°-30°	210.0	5.4
0°-40°	345.4	8.9
0°-60°	632.4	16.3
0°-90°	918.8	23.7
90°-120°	704.7	18.2
90°-150°	2174.0	56.0
90°-180°	2962.0	76.3
0°-180°	3880.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	271	269	267	269	269	26
15°	258	259	259	262	262	73
25°	235	237	241	245	247	108
35°	202	209	216	225	228	126
45°	166	177	190	202	206	128
55°	127	142	162	175	181	114
65°	87	106	129	145	150	86
75°	48	70	95	111	117	51
85°	14	38	63	79	85	15
90°	5	38	82	95	101	5
95°	48	75	100	114	118	54
105°	187	201	223	237	242	197
115°	345	355	371	381	383	341
125°	501	509	518	526	529	448
135°	647	657	662	669	670	500
145°	785	791	796	799	798	490
155°	898	900	903	907	905	413
165°	977	976	976	982	978	275
175°	1016	1014	1012	1018	1013	97
180°	1018	1018	1018	1018	1018	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9
2.5°	271.5	271.2	271.0	270.8	270.6	270.3	269.8	269.3	268.8	268.3	268.6
5°	270.7	270.4	270.2	269.9	269.6	269.2	268.7	268.2	267.7	267.2	267.7
7.5°	268.2	268.0	267.9	267.7	267.5	267.3	266.8	266.5	266.0	265.6	266.3
10°	266.4	266.2	266.0	265.9	265.7	265.4	265.2	264.9	264.7	264.4	265.1
12.5°	263.2	263.3	263.3	263.4	263.4	263.3	263.1	262.9	262.7	262.5	263.2
15°	258.1	258.3	258.5	258.6	258.8	258.9	258.9	258.9	258.9	258.9	259.7
17.5°	251.6	251.9	252.3	252.7	253.0	253.4	253.7	253.9	254.2	254.5	255.3
20°	247.2	247.6	248.1	248.5	248.9	249.3	249.7	250.0	250.4	250.7	251.7
22.5°	242.5	243.0	243.5	244.0	244.5	245.0	245.5	246.0	246.5	246.9	247.9
25°	234.7	235.3	235.9	236.5	237.1	237.8	238.6	239.4	240.1	240.9	241.9
27.5°	225.3	226.3	227.3	228.3	229.3	230.2	231.1	232.0	233.0	233.9	235.2
30°	219.0	220.2	221.3	222.4	223.5	224.7	225.8	227.0	228.1	229.2	230.6
32.5°	212.2	213.4	214.6	215.9	217.2	218.5	219.9	221.2	222.6	223.9	225.5
35°	202.2	203.7	205.2	206.6	208.1	209.7	211.4	213.0	214.6	216.3	218.2
37.5°	191.4	193.1	194.8	196.6	198.2	200.2	202.3	204.4	206.6	208.7	210.9
40°	184.3	186.1	188.0	189.9	191.8	194.0	196.3	198.7	201.0	203.4	205.6
42.5°	177.4	179.3	181.2	183.0	185.0	187.3	190.0	192.7	195.4	198.0	200.5
45°	165.8	168.2	170.6	172.9	175.2	177.9	181.0	184.0	187.0	190.1	192.8
47.5°	154.5	157.0	159.6	162.1	164.7	167.8	171.3	174.9	178.5	182.0	184.9
50°	146.7	149.4	152.1	154.7	157.5	160.7	164.7	168.6	172.5	176.4	179.3
52.5°	139.1	142.0	144.8	147.7	150.5	153.9	158.1	162.2	166.3	170.5	173.5
55°	127.1	130.3	133.4	136.5	139.7	143.4	148.0	152.5	157.0	161.5	164.7
57.5°	115.2	118.7	122.3	125.8	129.3	133.4	138.0	142.6	147.2	151.9	155.2
60°	106.8	110.6	114.3	118.0	121.7	126.1	131.0	136.0	140.9	145.9	149.2
62.5°	99.3	103.1	107.0	110.9	114.8	119.2	124.2	129.1	134.1	139.1	142.5
65°	86.8	91.1	95.3	99.6	103.8	108.6	113.7	118.8	124.0	129.1	132.7
67.5°	75.4	79.9	84.3	88.8	93.2	98.1	103.3	108.6	113.8	119.1	122.7
70°	67.2	71.8	76.3	80.8	85.3	90.3	95.7	101.1	106.5	111.8	115.6
72.5°	59.8	64.4	69.1	73.7	78.4	83.4	88.9	94.4	99.9	105.3	109.0
75°	48.1	53.0	57.9	62.7	67.6	72.8	78.4	83.9	89.5	95.1	98.8
77.5°	36.9	41.9	47.0	52.1	57.3	62.6	68.3	73.9	79.6	85.2	88.9
80°	29.4	34.6	40.0	45.2	50.5	56.1	61.6	67.3	72.9	78.6	82.2
82.5°	23.1	28.3	33.6	38.7	44.0	49.5	55.2	61.0	66.6	72.3	76.0
85°	14.1	19.5	24.9	30.2	35.6	41.1	46.7	52.3	57.8	63.4	67.0
87.5°	7.8	13.5	19.1	24.8	30.4	36.4	42.8	49.2	55.6	62.0	65.5
90°	4.7	12.1	19.5	26.8	34.1	42.6	52.4	62.2	72.0	81.7	84.8
92.5°	18.9	25.2	31.6	38.1	44.4	50.7	57.1	63.5	69.8	76.1	79.6
95°	47.8	53.8	59.8	65.8	71.8	77.6	83.2	88.8	94.4	100.0	103.2
97.5°	84.4	89.7	95.0	100.3	105.6	111.2	116.8	122.6	128.4	134.1	137.3
100°	111.8	116.6	121.3	126.1	130.9	136.0	141.4	146.8	152.2	157.6	160.9
102.5°	140.4	144.6	148.8	152.9	157.0	161.9	167.3	172.8	178.2	183.7	187.0
105°	186.7	189.8	192.9	196.0	199.1	203.0	207.9	212.8	217.7	222.7	226.1
107.5°	233.7	236.5	239.4	242.3	245.1	248.7	253.0	257.4	261.7	266.0	269.1
110°	263.6	266.5	269.4	272.2	275.2	278.7	283.0	287.2	291.5	295.8	298.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	296.6	299.2	301.9	304.4	307.0	310.3	314.2	318.1	322.0	325.9	328.2
115°	345.3	347.3	349.5	351.5	353.7	356.5	360.0	363.5	367.0	370.6	373.0
117.5°	393.3	395.5	397.6	399.8	401.9	404.3	406.8	409.4	411.9	414.5	416.6
120°	425.7	427.5	429.4	431.3	433.2	435.1	437.0	438.9	440.9	442.8	445.3
122.5°	455.2	457.2	459.2	461.2	463.0	465.2	467.4	469.6	471.7	474.0	475.9
125°	500.8	502.6	504.3	506.0	507.7	509.7	511.9	514.1	516.3	518.5	520.3
127.5°	545.7	547.8	549.9	552.0	554.1	555.9	557.4	559.0	560.6	562.1	563.6
130°	573.9	576.3	578.7	581.1	583.5	585.4	586.9	588.3	589.7	591.2	592.9
132.5°	605.5	607.4	609.4	611.3	613.3	615.0	616.5	617.9	619.4	620.9	622.1
135°	647.4	649.5	651.6	653.7	655.8	657.5	658.8	660.0	661.2	662.5	664.1
137.5°	691.9	693.6	695.3	697.0	698.7	700.0	700.9	701.7	702.7	703.5	705.0
140°	718.7	720.3	721.9	723.6	725.2	726.6	727.7	728.8	730.0	731.2	732.5
142.5°	746.2	747.9	749.5	751.1	752.8	753.9	754.6	755.3	756.0	756.6	757.9
145°	785.3	786.7	788.0	789.4	790.7	791.9	793.1	794.2	795.4	796.5	797.2
147.5°	820.5	822.2	823.8	825.4	827.0	828.2	829.0	829.7	830.4	831.2	831.7
150°	844.6	845.8	846.9	848.1	849.2	850.2	850.9	851.7	852.5	853.3	853.8
152.5°	865.9	867.1	868.2	869.4	870.6	871.6	872.5	873.4	874.3	875.2	876.0
155°	897.9	898.5	899.1	899.7	900.2	900.8	901.4	901.9	902.5	903.0	904.0
157.5°	925.2	925.6	926.0	926.3	926.8	927.1	927.5	927.8	928.2	928.5	929.8
160°	941.8	942.1	942.5	942.9	943.2	943.6	943.7	943.9	944.1	944.3	945.5
162.5°	956.8	956.9	957.0	957.1	957.2	957.3	957.5	957.7	957.9	958.0	959.3
165°	977.0	976.8	976.5	976.4	976.2	976.1	976.1	976.1	976.1	976.1	977.4
167.5°	993.8	993.2	992.6	992.0	991.5	991.2	991.2	991.1	991.1	991.0	992.4
170°	1002.7	1002.1	1001.6	1001.0	1000.4	1000.1	999.9	999.7	999.4	999.3	1000.7
172.5°	1008.9	1008.3	1007.8	1007.2	1006.6	1006.3	1006.1	1005.8	1005.6	1005.5	1006.9
175°	1016.5	1015.9	1015.3	1014.8	1014.2	1013.7	1013.3	1013.0	1012.5	1012.2	1013.5
177.5°	1019.6	1019.1	1018.6	1018.2	1017.7	1017.4	1017.0	1016.8	1016.4	1016.2	1017.0
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9
2.5°	269.0	269.3	269.7	269.8	269.7	269.5	269.4	269.2
5°	268.2	268.7	269.2	269.4	269.3	269.2	269.1	269.1
7.5°	266.9	267.5	268.2	268.5	268.4	268.3	268.2	268.1
10°	265.8	266.5	267.2	267.5	267.4	267.3	267.3	267.2
12.5°	263.9	264.6	265.3	265.6	265.5	265.4	265.4	265.3
15°	260.5	261.3	262.1	262.4	262.3	262.3	262.2	262.1
17.5°	256.1	256.9	257.7	258.1	258.1	258.1	258.1	258.1
20°	252.6	253.6	254.5	255.0	255.0	255.0	255.0	255.0
22.5°	248.9	249.9	250.8	251.3	251.5	251.6	251.8	251.9
25°	243.1	244.1	245.1	245.7	246.0	246.2	246.5	246.8
27.5°	236.5	237.9	239.2	240.0	240.1	240.3	240.5	240.7
30°	232.0	233.4	234.8	235.6	235.8	236.1	236.3	236.6
32.5°	227.0	228.7	230.3	231.4	231.8	232.3	232.7	233.2
35°	220.2	222.1	223.9	225.2	225.8	226.4	227.0	227.6
37.5°	212.9	215.1	217.2	218.6	219.2	219.9	220.5	221.1
40°	207.9	210.2	212.4	214.0	214.7	215.5	216.3	217.1
42.5°	203.0	205.4	207.9	209.6	210.3	211.1	211.9	212.7
45°	195.4	198.2	200.9	202.7	203.5	204.4	205.3	206.1
47.5°	187.7	190.5	193.3	195.2	196.1	197.1	198.0	199.0
50°	182.3	185.3	188.2	190.2	191.1	192.1	193.0	194.0
52.5°	176.5	179.5	182.5	184.6	185.6	186.7	187.7	188.6
55°	167.8	170.9	174.1	176.2	177.3	178.5	179.6	180.7
57.5°	158.6	162.0	165.3	167.6	168.8	169.9	171.0	172.2
60°	152.5	155.8	159.1	161.4	162.6	163.8	165.1	166.3
62.5°	146.0	149.6	153.1	155.4	156.5	157.6	158.9	160.0
65°	136.2	139.7	143.4	145.7	146.8	147.9	149.0	150.2
67.5°	126.2	129.8	133.5	135.9	137.0	138.2	139.4	140.6
70°	119.3	123.0	126.8	129.2	130.3	131.3	132.3	133.4
72.5°	112.6	116.3	119.9	122.4	123.6	124.9	126.2	127.4
75°	102.5	106.2	110.0	112.4	113.6	114.7	115.8	116.9
77.5°	92.6	96.3	100.0	102.5	103.8	105.0	106.2	107.4
80°	85.9	89.5	93.2	95.7	96.9	98.1	99.3	100.5
82.5°	79.6	83.3	87.0	89.4	90.5	91.7	92.8	93.9
85°	70.7	74.3	78.0	80.4	81.6	82.8	84.0	85.2
87.5°	69.0	72.4	75.9	78.2	79.4	80.5	81.7	82.8
90°	87.9	91.0	94.1	96.3	97.5	98.8	100.0	101.2
92.5°	83.1	86.6	90.1	92.4	93.4	94.5	95.6	96.7
95°	106.6	109.9	113.2	115.2	115.8	116.5	117.2	117.8
97.5°	140.5	143.7	147.0	149.0	150.0	151.0	152.0	153.0
100°	164.1	167.4	170.6	172.5	173.3	174.1	174.9	175.6
102.5°	190.3	193.6	196.9	198.9	199.7	200.4	201.2	202.0
105°	229.5	232.9	236.3	238.6	239.5	240.5	241.4	242.4
107.5°	272.2	275.3	278.4	279.9	280.0	280.1	280.2	280.2
110°	301.4	304.1	306.9	308.5	308.8	309.3	309.6	310.0





TEST NUMBER: P331271-935

CATALOG NUMBER: SA2XXDIP-C290D925U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	330.5	332.9	335.2	336.7	337.2	337.7	338.2	338.7
115°	375.4	377.8	380.3	381.7	382.0	382.5	382.8	383.2
117.5°	418.7	420.9	422.9	424.1	424.5	424.8	425.1	425.4
120°	447.7	450.1	452.5	454.0	454.3	454.8	455.1	455.6
122.5°	477.8	479.7	481.6	482.8	483.1	483.5	484.0	484.3
125°	522.1	523.8	525.6	526.8	527.4	528.0	528.6	529.2
127.5°	565.1	566.5	568.0	568.8	568.9	569.1	569.3	569.4
130°	594.6	596.2	598.0	598.8	598.7	598.7	598.6	598.6
132.5°	623.3	624.4	625.6	626.2	626.3	626.4	626.5	626.5
135°	665.7	667.4	669.0	669.9	670.0	670.1	670.3	670.4
137.5°	706.5	707.8	709.3	710.0	709.8	709.6	709.4	709.2
140°	733.9	735.3	736.7	737.3	737.0	736.8	736.6	736.3
142.5°	759.1	760.4	761.7	762.2	761.8	761.6	761.2	761.0
145°	798.0	798.7	799.4	799.5	799.3	798.9	798.6	798.2
147.5°	832.2	832.7	833.2	833.2	832.7	832.2	831.6	831.1
150°	854.4	855.0	855.5	855.5	855.0	854.4	853.8	853.3
152.5°	876.7	877.4	878.1	878.1	877.4	876.7	876.0	875.2
155°	905.0	905.9	906.9	907.1	906.5	905.9	905.3	904.7
157.5°	931.1	932.4	933.7	933.8	933.0	932.0	931.1	930.2
160°	946.6	947.7	948.9	949.1	948.3	947.5	946.8	946.0
162.5°	960.6	961.9	963.2	963.5	962.5	961.6	960.7	959.8
165°	978.8	980.1	981.5	981.6	980.7	979.7	978.8	977.8
167.5°	993.7	995.1	996.3	996.5	995.6	994.5	993.6	992.6
170°	1001.9	1003.3	1004.6	1004.7	1003.6	1002.5	1001.3	1000.1
172.5°	1008.1	1009.5	1010.8	1010.9	1009.8	1008.7	1007.5	1006.3
175°	1014.9	1016.2	1017.5	1017.6	1016.5	1015.3	1014.2	1013.1
177.5°	1018.0	1018.9	1019.8	1019.8	1018.9	1018.0	1017.0	1016.2
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2

(END OF REPORT)