

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: P332604-930

Luminaire Tested: **SA4XXDIP-C795D810U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332604-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C795D810U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

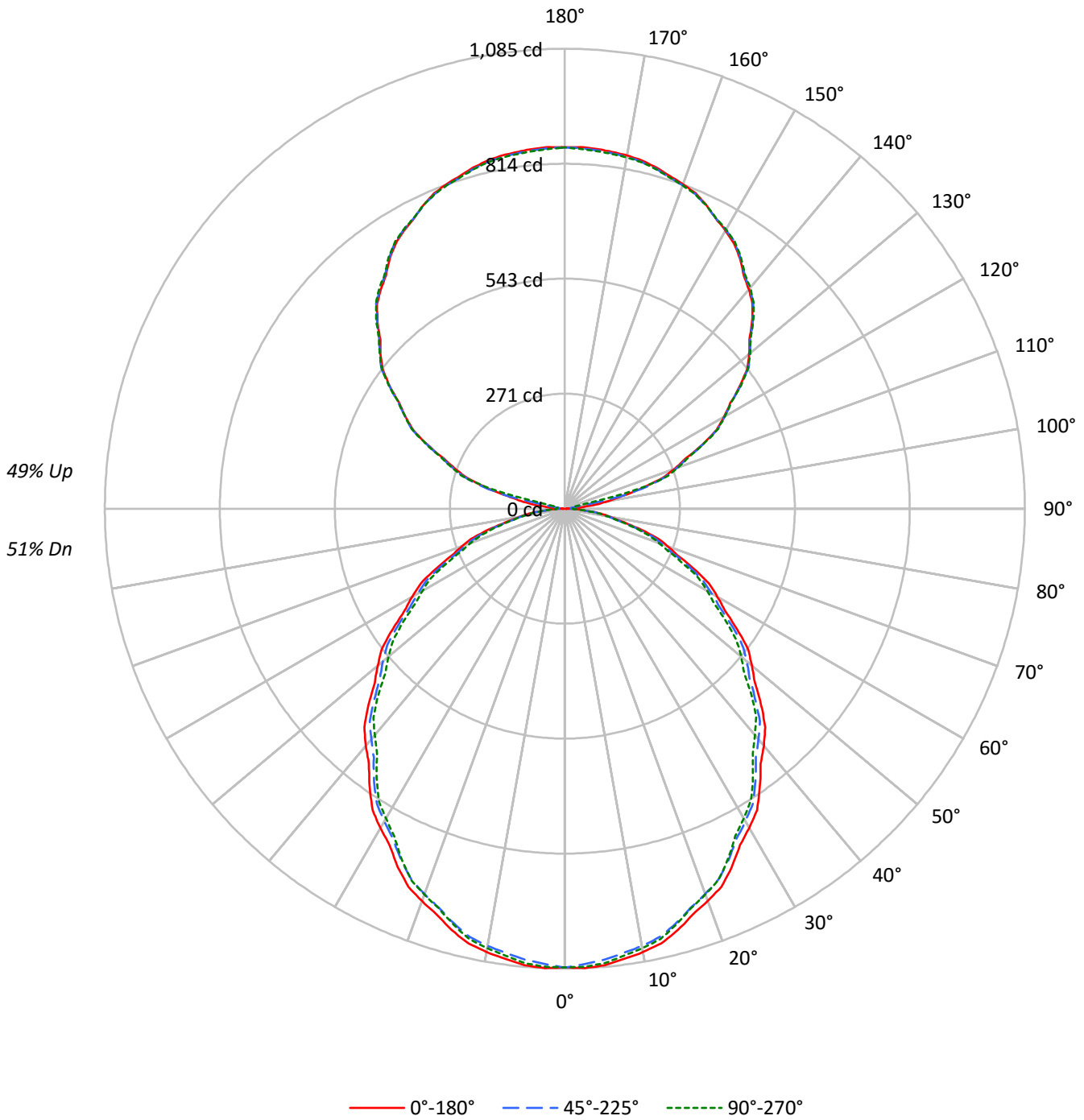
Lumens per Lamp: N/A  
Luminaire Lumens: 5416.2 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 45.9  
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	51	
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	43	43	43	
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	42	41	36	36	36	36	
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31	31	31	31	
4	74	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	26	26	26	
5	68	57	49	43	63	53	45	40	45	40	35	38	34	31	32	29	26	23	23	23	23	
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20	20	20	20	
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18	18	18	18	
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	16	
9	50	38	31	25	46	36	29	24	31	25	22	27	22	19	22	19	16	14	14	14	14	
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13	13	13	13	

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

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.9	1.9
10°-20°	287.2	5.3
20°-30°	422.7	7.8
30°-40°	491.4	9.1
40°-50°	491.4	9.1
50°-60°	429.8	7.9
60°-70°	319.2	5.9
70°-80°	181.4	3.3
80°-90°	54.8	1.0
90°-100°	29.1	0.5
100°-110°	185.9	3.4
110°-120°	355.6	6.6
120°-130°	451.4	8.3
130°-140°	482.9	8.9
140°-150°	451.6	8.3
150°-160°	364.2	6.7
160°-170°	234.9	4.3
170°-180°	81.0	1.5
0°-30°	811.8	15.0
0°-40°	1303.1	24.1
0°-60°	2224.4	41.1
0°-90°	2779.7	51.3
90°-120°	570.6	10.5
90°-150°	1956.4	36.1
90°-180°	2636.0	48.7
0°-180°	5416.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	2	9	14	18	19	4
95°	35	15	14	18	18	45
105°	192	196	199	203	182	201
115°	358	360	360	361	361	352
125°	504	506	505	507	507	449
135°	625	624	627	628	629	481
145°	720	722	722	723	724	450
155°	790	790	789	791	789	364
165°	833	830	830	834	829	235
175°	852	849	849	854	847	81
180°	852	852	852	852	852	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.4	18.6	18.8	18.9	19.1	19.2	19.2	19.3	19.4	19.5	19.6
90°	1.9	3.5	5.1	6.6	8.2	9.5	10.6	11.7	12.9	14.0	14.8
92.5°	8.1	8.2	8.2	8.3	8.4	9.0	10.1	11.3	12.4	13.5	14.3
95°	35.1	30.2	25.4	20.6	15.8	13.5	13.6	13.8	13.9	14.0	14.8
97.5°	74.4	77.5	80.5	83.5	86.5	80.1	64.2	48.4	32.6	16.8	16.9
100°	104.5	107.1	109.7	112.2	114.7	106.2	86.7	67.2	47.6	28.0	25.6
102.5°	138.2	140.1	141.9	143.8	145.7	145.4	142.8	140.2	137.7	135.2	109.2
105°	191.8	192.7	193.6	194.4	195.3	196.1	196.7	197.5	198.2	198.9	200.2
107.5°	241.7	242.1	242.6	243.0	243.4	244.1	245.1	246.1	247.0	248.0	248.6
110°	275.4	275.8	276.2	276.6	277.1	277.7	278.6	279.4	280.3	281.1	281.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.0	308.8	309.6	310.3	311.1	311.7	312.1	312.4	312.8	313.2	313.2
115°	358.2	358.7	359.1	359.5	360.0	360.1	360.0	359.8	359.7	359.5	359.8
117.5°	403.5	404.1	404.6	405.2	405.8	406.3	406.5	406.8	407.2	407.5	407.4
120°	434.1	434.7	435.3	435.9	436.3	436.6	436.4	436.3	436.2	436.0	436.3
122.5°	462.7	463.0	463.3	463.7	464.1	464.3	464.5	464.7	464.9	465.1	465.3
125°	503.6	504.2	504.8	505.3	505.9	506.0	505.7	505.5	505.2	504.9	505.3
127.5°	542.3	542.5	542.7	542.8	542.9	543.3	544.0	544.6	545.3	545.9	545.8
130°	567.4	567.5	567.6	567.8	567.9	568.2	568.6	569.1	569.5	569.9	570.1
132.5°	590.3	590.5	590.8	591.1	591.3	591.7	592.2	592.8	593.3	593.9	594.0
135°	624.8	624.6	624.4	624.3	624.2	624.4	624.9	625.5	626.1	626.6	626.9
137.5°	655.2	655.3	655.3	655.3	655.4	655.7	656.4	657.0	657.6	658.3	658.6
140°	675.1	675.4	675.6	676.0	676.2	676.5	676.8	677.1	677.4	677.6	678.1
142.5°	692.9	693.4	694.0	694.5	695.0	695.3	695.5	695.7	695.9	696.0	696.3
145°	720.3	720.8	721.2	721.6	722.0	722.3	722.3	722.3	722.3	722.3	722.4
147.5°	742.2	743.0	743.7	744.5	745.3	745.7	745.5	745.3	745.2	745.1	745.2
150°	758.0	758.6	759.1	759.7	760.2	760.4	760.3	760.2	760.0	759.9	759.9
152.5°	771.2	771.7	772.1	772.6	773.1	773.1	772.9	772.7	772.3	772.1	772.3
155°	789.9	789.9	790.1	790.3	790.4	790.3	789.9	789.4	789.0	788.6	789.1
157.5°	805.5	805.4	805.4	805.3	805.2	804.9	804.4	804.0	803.5	803.0	803.7
160°	814.7	814.2	813.8	813.4	813.0	812.7	812.6	812.4	812.3	812.1	813.0
162.5°	822.9	822.3	821.7	821.3	820.7	820.4	820.2	820.1	819.9	819.8	820.7
165°	833.2	832.5	831.8	831.0	830.4	830.0	830.0	830.0	830.0	830.0	831.1
167.5°	841.3	840.6	839.8	839.1	838.4	838.0	837.9	837.8	837.7	837.6	838.9
170°	846.0	845.1	844.2	843.3	842.5	842.2	842.3	842.4	842.6	842.8	843.8
172.5°	849.0	848.2	847.3	846.4	845.6	845.2	845.4	845.5	845.6	845.8	846.9
175°	852.3	851.4	850.6	849.8	848.9	848.6	848.7	848.8	849.0	849.1	850.4
177.5°	853.9	853.0	852.2	851.4	850.7	850.4	850.6	850.8	851.1	851.3	852.2
180°	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	19.8	20.0	20.1	20.2	20.3	20.4	20.4	20.5
90°	15.7	16.6	17.4	18.0	18.3	18.6	18.8	19.2
92.5°	15.2	16.1	16.9	17.4	17.4	17.4	17.5	17.6
95°	15.7	16.6	17.4	17.9	18.1	18.2	18.3	18.5
97.5°	17.0	17.1	17.2	17.3	17.4	17.5	17.7	17.9
100°	23.2	20.8	18.4	17.3	17.4	17.5	17.7	17.9
102.5°	83.2	57.2	31.2	18.3	18.3	18.3	18.3	18.3
105°	201.5	202.7	204.0	202.1	197.0	191.8	186.8	181.6
107.5°	249.2	249.8	250.5	251.0	251.6	252.1	252.7	253.2
110°	281.7	282.0	282.3	282.6	283.1	283.5	283.9	284.3





TEST NUMBER: P332604-930

CATALOG NUMBER: SA4XXDIP-C795D810U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	313.2	313.1	313.0	313.2	313.8	314.4	314.9	315.4
115°	360.1	360.4	360.7	360.9	360.9	360.9	360.9	360.9
117.5°	407.3	407.3	407.2	407.2	407.2	407.1	407.0	407.0
120°	436.6	436.9	437.2	437.2	436.9	436.6	436.3	436.0
122.5°	465.5	465.6	465.8	465.7	465.5	465.1	464.9	464.6
125°	505.7	506.1	506.5	506.9	507.0	507.1	507.3	507.4
127.5°	545.8	545.7	545.6	545.5	545.4	545.3	545.2	545.0
130°	570.2	570.3	570.5	570.5	570.5	570.5	570.5	570.5
132.5°	594.2	594.3	594.4	594.4	594.4	594.2	594.1	594.0
135°	627.2	627.5	627.8	628.0	628.4	628.6	628.9	629.2
137.5°	658.8	659.2	659.5	659.6	659.5	659.4	659.3	659.3
140°	678.5	678.9	679.3	679.6	679.8	679.9	680.0	680.2
142.5°	696.6	696.9	697.2	697.4	697.4	697.5	697.5	697.5
145°	722.5	722.7	722.8	723.0	723.3	723.6	723.9	724.1
147.5°	745.3	745.4	745.5	745.7	745.8	745.9	746.1	746.2
150°	759.9	759.9	759.9	759.9	760.1	760.2	760.3	760.5
152.5°	772.6	772.8	773.0	773.1	773.0	772.9	772.8	772.7
155°	789.7	790.3	790.8	790.9	790.4	790.0	789.6	789.2
157.5°	804.5	805.2	805.9	805.9	805.2	804.5	803.7	803.0
160°	813.8	814.7	815.5	815.5	814.7	813.8	813.0	812.1
162.5°	821.5	822.3	823.2	823.1	822.1	821.2	820.3	819.3
165°	832.3	833.4	834.5	834.5	833.2	831.9	830.6	829.3
167.5°	840.2	841.4	842.6	842.5	841.1	839.7	838.3	836.9
170°	845.0	846.1	847.3	847.1	845.7	844.3	842.9	841.5
172.5°	848.1	849.2	850.4	850.1	848.6	847.1	845.5	844.0
175°	851.7	853.0	854.2	854.0	852.3	850.6	848.9	847.2
177.5°	853.1	854.0	854.9	854.7	853.3	852.0	850.6	849.2
180°	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3

(END OF REPORT)