

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: P332928-935

Luminaire Tested: **SA4XXRDIP-C795D365U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332928-935  
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: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4023.0 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct

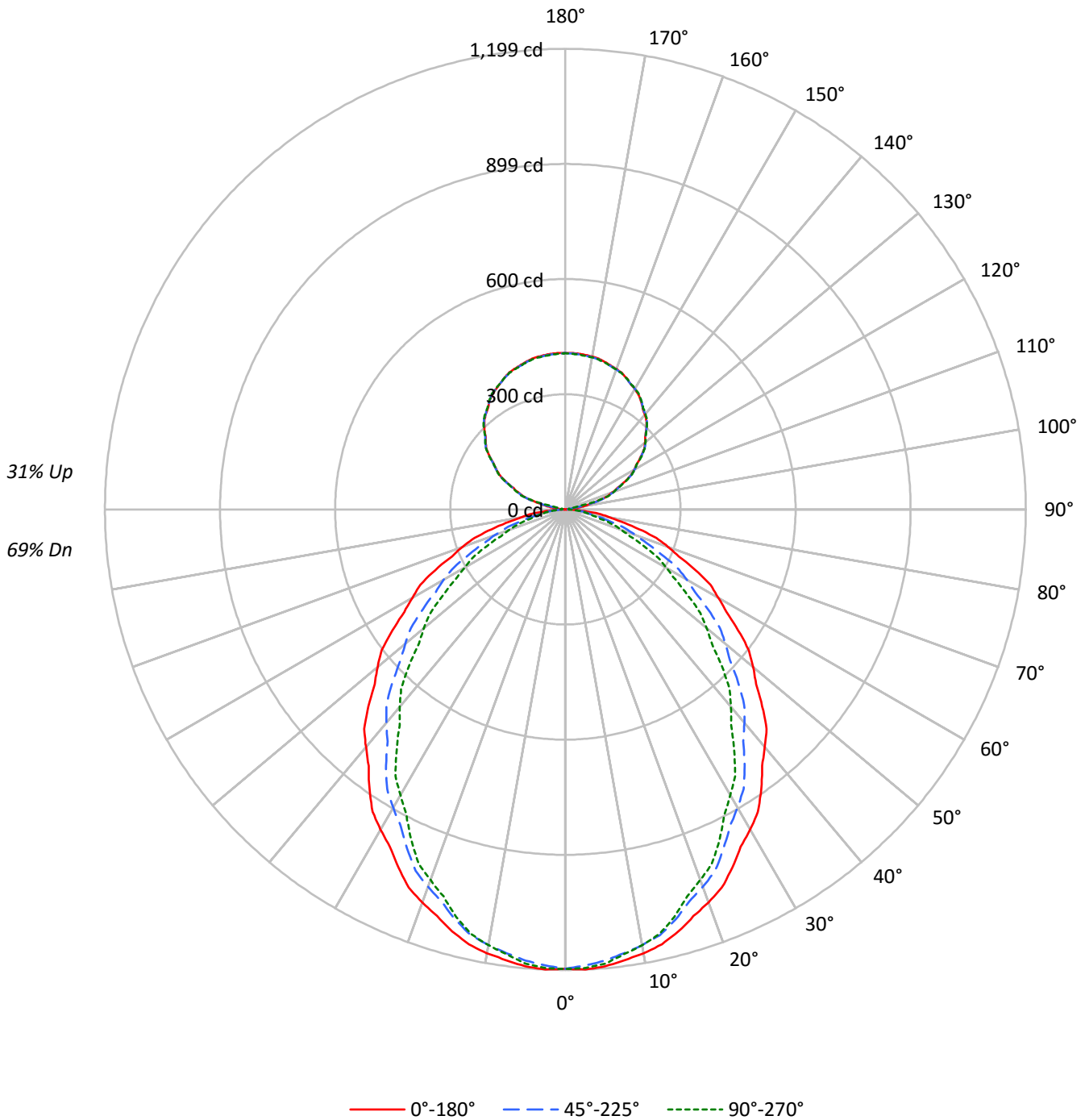
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR	0	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69	69	69	69	69	69	69	69	69	69	69	69																
	1	102	98	94	91	97	93	89	86	83	80	78	74	72	70	65	64	63	59	59	59	59	59	59	59	59	59	59	59	59																
	2	94	86	80	75	88	82	76	71	73	69	65	65	62	59	58	56	53	50	50	50	50	50	50	50	50	50	50	50	50																
	3	86	76	69	63	81	72	66	60	65	60	55	58	54	50	52	49	46	42	42	42	42	42	42	42	42	42	42	42	42																
	4	79	68	60	53	74	64	57	51	58	52	47	52	47	44	46	43	40	37	37	37	37	37	37	37	37	37	37	37	37																
	5	72	60	52	46	68	58	50	45	52	46	41	47	42	38	42	38	35	32	32	32	32	32	32	32	32	32	32	32	32																
	6	67	54	46	40	63	52	44	39	47	41	36	43	37	34	38	34	31	28	28	28	28	28	28	28	28	28	28	28	28	28															
	7	62	49	41	36	58	47	40	34	43	37	32	39	34	30	35	31	28	25	25	25	25	25	25	25	25	25	25	25	25	25															
	8	58	45	37	32	54	43	36	31	39	33	29	36	31	27	32	28	25	23	23	23	23	23	23	23	23	23	23	23	23	23															
	9	54	41	34	29	51	40	32	28	36	30	26	33	28	24	30	26	23	21	21	21	21	21	21	21	21	21	21	21	21	21															
	10	50	38	31	26	48	36	30	25	33	28	24	30	26	22	28	24	21	19	19	19	19	19	19	19	19	19	19	19	19	19															

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

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.4	2.8
10°-20°	313.3	7.8
20°-30°	452.4	11.2
30°-40°	512.8	12.7
40°-50°	495.2	12.3
50°-60°	411.8	10.2
60°-70°	284.4	7.1
70°-80°	144.1	3.6
80°-90°	38.2	0.9
90°-100°	13.9	0.3
100°-110°	88.7	2.2
110°-120°	169.7	4.2
120°-130°	215.4	5.4
130°-140°	230.5	5.7
140°-150°	215.6	5.4
150°-160°	173.8	4.3
160°-170°	112.1	2.8
170°-180°	38.6	1.0
0°-30°	878.1	21.8
0°-40°	1390.9	34.6
0°-60°	2297.9	57.1
0°-90°	2764.6	68.7
90°-120°	272.4	6.8
90°-150°	933.9	23.2
90°-180°	1258.0	31.3
0°-180°	4023.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	1	4	7	8	9	3
95°	17	7	7	8	9	22
105°	92	93	95	97	87	96
115°	171	172	172	172	172	168
125°	240	242	241	242	242	215
135°	298	298	299	300	300	230
145°	344	345	345	345	346	215
155°	377	377	376	378	377	174
165°	398	396	396	398	396	112
175°	407	405	405	408	404	39
180°	407	407	407	407	407	



TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.0	15.8	14.7	13.6	12.4	11.8	11.8	11.7	11.6	11.6	11.5
90°	0.9	1.6	2.4	3.2	3.9	4.6	5.1	5.6	6.1	6.7	7.1
92.5°	3.9	3.9	3.9	4.0	4.0	4.3	4.8	5.3	5.9	6.5	6.9
95°	16.7	14.5	12.1	9.8	7.6	6.5	6.5	6.5	6.6	6.7	7.1
97.5°	35.6	36.9	38.4	39.9	41.2	38.2	30.7	23.2	15.6	8.0	8.1
100°	49.9	51.1	52.3	53.6	54.8	50.7	41.4	32.0	22.7	13.4	12.2
102.5°	66.0	66.9	67.8	68.6	69.6	69.4	68.2	67.0	65.7	64.5	52.1
105°	91.6	92.0	92.4	92.8	93.2	93.6	93.9	94.3	94.6	95.0	95.6
107.5°	115.4	115.5	115.8	116.0	116.2	116.5	117.0	117.4	117.9	118.4	118.6
110°	131.5	131.6	131.8	132.1	132.2	132.6	132.9	133.4	133.8	134.2	134.3



TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.1	147.4	147.7	148.1	148.5	148.8	149.0	149.1	149.3	149.6	149.5
115°	171.0	171.3	171.4	171.6	171.9	171.9	171.9	171.8	171.7	171.6	171.8
117.5°	192.6	192.9	193.1	193.5	193.7	193.9	194.1	194.2	194.3	194.5	194.5
120°	207.2	207.5	207.8	208.0	208.3	208.4	208.4	208.3	208.2	208.1	208.3
122.5°	220.8	221.0	221.2	221.4	221.5	221.6	221.7	221.8	221.9	222.1	222.1
125°	240.4	240.6	240.9	241.2	241.5	241.5	241.4	241.3	241.2	241.0	241.2
127.5°	258.9	259.0	259.0	259.1	259.2	259.3	259.7	259.9	260.3	260.6	260.5
130°	270.8	270.9	271.0	271.0	271.1	271.2	271.4	271.6	271.8	272.1	272.1
132.5°	281.8	281.9	282.0	282.1	282.2	282.4	282.7	282.9	283.2	283.4	283.5
135°	298.2	298.2	298.1	298.0	297.9	298.0	298.3	298.6	298.9	299.1	299.3
137.5°	312.7	312.8	312.8	312.8	312.9	313.1	313.3	313.6	313.9	314.2	314.4
140°	322.3	322.4	322.5	322.6	322.8	322.9	323.0	323.2	323.3	323.5	323.6
142.5°	330.8	331.0	331.2	331.5	331.7	331.9	332.0	332.1	332.2	332.3	332.3
145°	343.9	344.1	344.2	344.5	344.7	344.7	344.7	344.7	344.7	344.7	344.8
147.5°	354.2	354.6	355.0	355.4	355.8	355.9	355.9	355.8	355.7	355.7	355.7
150°	361.8	362.1	362.3	362.7	362.9	363.0	362.9	362.8	362.7	362.7	362.7
152.5°	368.2	368.3	368.6	368.8	369.0	369.0	368.9	368.8	368.7	368.6	368.7
155°	377.0	377.1	377.1	377.2	377.3	377.2	377.0	376.8	376.6	376.4	376.7
157.5°	384.5	384.4	384.4	384.4	384.4	384.2	384.0	383.7	383.5	383.3	383.7
160°	388.9	388.7	388.5	388.3	388.1	388.0	387.9	387.8	387.7	387.6	388.1
162.5°	392.8	392.5	392.3	392.0	391.8	391.6	391.5	391.4	391.4	391.3	391.8
165°	397.7	397.4	397.0	396.7	396.3	396.1	396.1	396.1	396.1	396.1	396.7
167.5°	401.6	401.2	400.9	400.5	400.2	400.0	399.9	399.9	399.8	399.8	400.5
170°	403.8	403.4	402.9	402.6	402.2	402.0	402.1	402.2	402.2	402.3	402.8
172.5°	405.3	404.8	404.4	404.1	403.6	403.5	403.6	403.6	403.6	403.7	404.2
175°	406.8	406.4	406.0	405.6	405.2	405.0	405.1	405.2	405.3	405.3	406.0
177.5°	407.6	407.2	406.8	406.4	406.0	405.9	406.0	406.1	406.2	406.3	406.8
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8



TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	11.5	11.4	11.3	11.4	11.5	11.7	11.9	12.1
90°	7.5	7.9	8.4	8.6	8.7	8.9	9.0	9.1
92.5°	7.2	7.7	8.1	8.3	8.4	8.4	8.4	8.4
95°	7.5	7.9	8.4	8.5	8.6	8.7	8.8	8.8
97.5°	8.1	8.2	8.2	8.3	8.4	8.4	8.4	8.5
100°	11.1	9.9	8.8	8.3	8.4	8.4	8.4	8.5
102.5°	39.7	27.3	14.9	8.7	8.7	8.7	8.8	8.8
105°	96.2	96.8	97.4	96.4	94.0	91.6	89.1	86.7
107.5°	119.0	119.2	119.6	119.9	120.1	120.4	120.6	120.9
110°	134.5	134.6	134.7	134.9	135.1	135.3	135.5	135.7





TEST NUMBER: P332928-935

CATALOG NUMBER: SA4XXRDIP-C795D365U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	149.5	149.5	149.4	149.6	149.8	150.1	150.3	150.6
115°	171.9	172.0	172.2	172.2	172.2	172.2	172.2	172.2
117.5°	194.4	194.4	194.4	194.3	194.3	194.3	194.3	194.2
120°	208.4	208.5	208.7	208.7	208.5	208.4	208.3	208.1
122.5°	222.1	222.2	222.3	222.3	222.1	222.1	221.9	221.8
125°	241.4	241.6	241.8	241.9	242.0	242.1	242.1	242.2
127.5°	260.5	260.5	260.5	260.4	260.4	260.3	260.2	260.2
130°	272.2	272.2	272.3	272.3	272.3	272.3	272.3	272.3
132.5°	283.6	283.7	283.8	283.8	283.7	283.6	283.6	283.5
135°	299.4	299.5	299.6	299.8	299.9	300.1	300.2	300.3
137.5°	314.5	314.7	314.8	314.9	314.8	314.8	314.7	314.7
140°	323.8	324.1	324.3	324.4	324.5	324.5	324.6	324.7
142.5°	332.5	332.7	332.8	332.9	332.9	332.9	332.9	332.9
145°	344.9	345.0	345.0	345.1	345.3	345.4	345.5	345.7
147.5°	355.8	355.9	355.9	355.9	356.0	356.0	356.1	356.2
150°	362.7	362.7	362.7	362.7	362.8	362.9	362.9	363.0
152.5°	368.8	368.9	369.0	369.0	368.9	368.9	368.9	368.9
155°	376.9	377.2	377.5	377.5	377.3	377.1	376.9	376.7
157.5°	384.0	384.4	384.7	384.7	384.4	384.0	383.7	383.3
160°	388.5	388.9	389.3	389.3	388.9	388.5	388.1	387.6
162.5°	392.1	392.5	393.0	392.9	392.4	392.0	391.5	391.1
165°	397.3	397.8	398.4	398.3	397.7	397.1	396.5	395.9
167.5°	401.1	401.7	402.2	402.2	401.5	400.8	400.1	399.5
170°	403.4	403.9	404.4	404.3	403.7	403.0	402.3	401.7
172.5°	404.8	405.4	405.9	405.8	405.1	404.3	403.6	402.9
175°	406.6	407.2	407.8	407.7	406.8	406.0	405.2	404.4
177.5°	407.3	407.7	408.1	407.9	407.3	406.7	406.0	405.4
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8

(END OF REPORT)