

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: P332929-940

Luminaire Tested: **SA4XXRDIP-C795D365U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332929-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D365U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

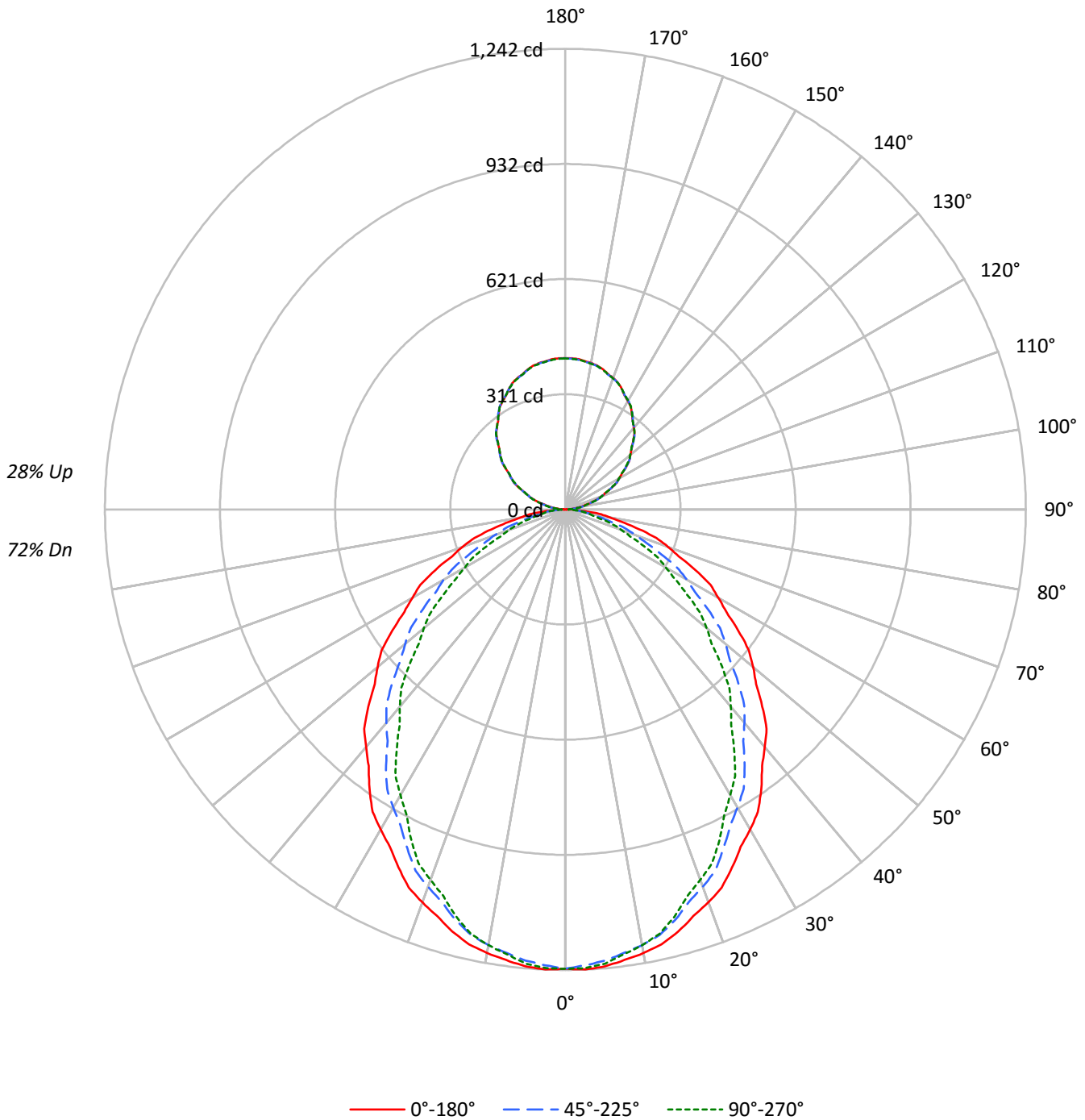
Lumens per Lamp: N/A
Luminaire Lumens: 3993.6 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): 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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	76	76	76	72	
1	103	99	95	91	98	94	90	87	84	82	79	76	74	72	68	66	65	65	65	65	61	
2	94	87	81	75	89	82	77	72	74	70	66	67	64	61	60	58	55	55	55	55	52	
3	86	77	69	63	81	73	66	61	66	61	56	60	55	52	54	50	48	48	48	48	44	
4	79	68	60	54	75	65	58	52	59	53	48	53	49	45	48	44	41	41	41	41	38	
5	73	61	53	47	69	58	51	45	53	47	42	48	43	39	44	39	36	36	36	36	33	
6	67	55	47	41	64	53	45	39	48	42	37	44	38	34	40	35	32	32	32	32	30	
7	62	50	42	36	59	48	40	35	44	37	33	40	35	31	36	32	29	29	29	29	26	
8	58	45	38	32	55	44	36	31	40	34	29	37	31	28	33	29	26	26	26	26	24	
9	54	42	34	29	51	40	33	28	37	31	26	34	29	25	31	27	23	23	23	23	21	
10	51	38	31	26	48	37	30	25	34	28	24	31	26	23	29	24	21	21	21	21	20	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10001	10001	10001
5°	10023	9900	9961
10°	9960	9781	9781
15°	9845	9576	9504
20°	9688	9306	9135
25°	9487	8989	8761
30°	9292	8655	8294
35°	9077	8310	7824
40°	8816	7917	7317
45°	8576	7526	6801
50°	8303	7076	6253
55°	8010	6608	5661
60°	7689	6095	5054
65°	7393	5454	4458
70°	6963	4747	3784
75°	6419	3936	3075
80°	5602	2999	2822
85°	4742	2723	2547



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.4	2.9
10°-20°	324.5	8.1
20°-30°	468.6	11.7
30°-40°	531.1	13.3
40°-50°	512.9	12.8
50°-60°	426.5	10.7
60°-70°	294.5	7.4
70°-80°	149.3	3.7
80°-90°	39.5	1.0
90°-100°	26.9	0.7
100°-110°	79.6	2.0
110°-120°	135.1	3.4
120°-130°	178.2	4.5
130°-140°	200.1	5.0
140°-150°	196.6	4.9
150°-160°	165.4	4.1
160°-170°	110.0	2.8
170°-180°	38.5	1.0
0°-30°	909.4	22.8
0°-40°	1440.5	36.1
0°-60°	2379.9	59.6
0°-90°	2863.2	71.7
90°-120°	241.6	6.0
90°-150°	816.5	20.4
90°-180°	1130.0	28.3
0°-180°	3993.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1233	1222	1230	1229	117
15°	1178	1169	1146	1144	1137	332
25°	1065	1047	1009	993	984	491
35°	921	890	843	812	794	575
45°	751	715	659	614	596	579
55°	569	530	470	422	402	509
65°	387	345	286	246	233	382
75°	206	170	126	105	99	217
85°	51	33	29	28	28	58
90°	1	4	7	9	10	4
95°	19	22	24	25	25	21
105°	73	74	75	76	77	78
115°	137	137	137	136	136	135
125°	200	200	200	199	198	178
135°	258	260	260	259	258	200
145°	314	315	315	315	314	196
155°	359	359	359	360	359	165
165°	391	390	390	391	390	110
175°	407	405	405	407	405	39
180°	407	407	407	407	407	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1241.8	1241.1	1240.4	1239.7	1239.0	1237.8	1235.9	1234.1	1232.3	1230.4	1232.3
5°	1236.8	1236.0	1235.1	1234.3	1233.4	1231.8	1229.2	1226.7	1224.1	1221.6	1223.8
7.5°	1225.7	1224.8	1223.9	1223.0	1222.1	1220.0	1216.7	1213.4	1210.1	1206.8	1208.2
10°	1215.0	1214.0	1212.9	1211.8	1210.8	1208.4	1204.6	1200.8	1197.0	1193.2	1194.0
12.5°	1201.3	1200.2	1198.9	1197.7	1196.5	1193.6	1189.2	1184.6	1180.2	1175.7	1176.3
15°	1178.0	1176.2	1174.2	1172.3	1170.5	1166.9	1161.5	1156.3	1151.0	1145.8	1145.3
17.5°	1149.8	1147.0	1144.2	1141.6	1138.8	1134.3	1127.9	1121.6	1115.3	1108.9	1107.8
20°	1127.7	1125.0	1122.3	1119.5	1116.8	1111.9	1104.7	1097.5	1090.3	1083.2	1081.5
22.5°	1103.5	1100.4	1097.3	1094.2	1091.2	1085.7	1078.1	1070.4	1062.7	1055.1	1052.6
25°	1065.1	1061.3	1057.6	1053.7	1050.0	1043.7	1035.1	1026.4	1017.8	1009.1	1005.6
27.5°	1024.9	1020.2	1015.4	1010.7	1005.8	998.9	989.6	980.4	971.2	962.0	957.5
30°	996.8	991.6	986.3	981.1	975.8	968.2	958.3	948.4	938.4	928.5	923.3
32.5°	967.2	961.4	955.4	949.4	943.5	935.4	925.1	914.9	904.6	894.4	888.3
35°	921.0	914.3	907.5	900.7	894.0	885.4	874.9	864.2	853.7	843.2	836.1
37.5°	871.5	864.5	857.6	850.6	843.6	834.4	822.7	811.0	799.3	787.6	779.6
40°	836.6	829.6	822.7	815.7	808.8	799.2	787.2	775.3	763.2	751.2	742.3
42.5°	803.2	795.9	788.6	781.3	774.0	764.1	751.6	739.0	726.6	714.0	705.0
45°	751.2	743.4	735.6	727.8	720.0	709.8	697.1	684.5	671.8	659.2	648.9
47.5°	697.5	689.5	681.4	673.3	665.3	654.7	641.6	628.4	615.3	602.1	591.4
50°	661.1	652.9	644.6	636.4	628.2	617.3	603.9	590.4	576.8	563.4	552.9
52.5°	623.9	615.9	607.8	599.8	591.7	580.8	566.9	553.1	539.3	525.5	514.8
55°	569.1	560.6	552.2	543.8	535.4	524.3	510.6	496.9	483.2	469.5	458.5
57.5°	514.9	506.0	497.3	488.6	479.7	468.6	455.1	441.7	428.2	414.6	403.6
60°	476.2	467.7	459.3	450.8	442.4	431.5	417.9	404.5	391.0	377.5	366.5
62.5°	441.2	432.5	423.7	414.9	406.2	394.8	381.0	367.2	353.4	339.6	329.4
65°	387.0	377.9	368.8	359.8	350.7	339.5	325.9	312.5	299.0	285.5	276.4
67.5°	330.6	322.0	313.3	304.6	295.9	285.3	272.8	260.3	247.7	235.2	227.4
70°	295.0	286.1	277.2	268.4	259.6	249.1	237.1	225.1	213.1	201.1	194.1
72.5°	257.1	249.1	241.0	233.0	225.0	215.3	204.0	192.6	181.3	170.0	164.0
75°	205.8	198.0	190.2	182.4	174.6	165.8	155.9	146.0	136.1	126.2	121.3
77.5°	153.8	147.2	140.6	134.0	127.3	120.0	112.1	104.1	96.0	88.0	85.2
80°	120.5	114.3	108.3	102.1	96.0	89.8	83.5	77.1	70.8	64.5	63.8
82.5°	91.7	86.1	80.4	74.8	69.2	64.6	61.0	57.3	53.7	50.1	49.6
85°	51.2	47.0	42.8	38.6	34.3	31.9	31.3	30.7	30.1	29.4	29.0
87.5°	17.7	16.4	15.2	14.1	12.8	12.2	12.2	12.1	12.0	12.0	11.9
90°	1.0	1.7	2.5	3.3	4.0	4.7	5.3	5.8	6.3	7.0	7.3
92.5°	6.8	7.7	8.5	9.4	10.3	10.9	11.3	11.7	12.1	12.5	12.8
95°	18.9	19.5	20.2	20.8	21.4	22.0	22.5	23.0	23.5	24.0	24.2
97.5°	33.0	33.5	34.1	34.5	35.0	35.6	36.1	36.7	37.3	37.9	38.2
100°	44.1	44.4	44.7	44.9	45.2	45.7	46.3	47.0	47.6	48.2	48.3
102.5°	55.7	55.8	55.9	56.1	56.2	56.5	57.1	57.7	58.2	58.8	59.0
105°	73.4	73.5	73.6	73.7	73.7	73.8	74.2	74.5	74.7	75.0	75.2
107.5°	92.0	92.1	92.2	92.3	92.4	92.4	92.5	92.5	92.6	92.6	92.7
110°	104.6	104.8	104.9	105.0	105.1	105.2	105.1	105.0	105.0	105.0	104.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.7	117.7	117.8	117.8	117.8	117.8	117.6	117.5	117.4	117.3	117.3
115°	137.4	137.4	137.4	137.4	137.4	137.3	137.1	137.1	136.9	136.8	136.7
117.5°	155.9	156.0	156.0	156.0	156.1	156.1	156.0	156.0	155.8	155.7	155.5
120°	168.3	168.5	168.8	169.1	169.4	169.4	169.2	169.0	168.8	168.6	168.3
122.5°	181.1	181.2	181.4	181.5	181.6	181.6	181.5	181.4	181.3	181.2	180.9
125°	200.1	200.1	200.1	200.1	200.1	200.0	200.0	199.9	199.8	199.7	199.7
127.5°	217.3	217.5	217.8	217.9	218.1	218.2	218.1	217.9	217.8	217.8	217.6
130°	229.4	229.6	229.8	230.1	230.2	230.3	230.3	230.3	230.3	230.3	230.2
132.5°	241.7	241.9	242.0	242.2	242.4	242.4	242.4	242.3	242.3	242.2	242.0
135°	258.1	258.5	258.9	259.3	259.8	259.9	259.9	259.9	259.9	259.9	259.8
137.5°	275.8	276.1	276.3	276.4	276.6	276.8	276.9	277.0	277.1	277.2	277.1
140°	287.7	287.8	287.9	288.1	288.3	288.3	288.3	288.3	288.3	288.3	288.3
142.5°	298.5	298.6	298.8	298.9	299.1	299.2	299.1	299.0	299.0	298.9	298.9
145°	313.5	313.8	314.1	314.3	314.7	314.9	314.9	315.0	315.0	315.1	315.0
147.5°	328.4	328.8	329.0	329.4	329.8	329.8	329.8	329.8	329.8	329.7	329.6
150°	337.5	337.8	338.0	338.3	338.6	338.8	338.8	338.8	338.8	338.8	338.8
152.5°	346.1	346.3	346.3	346.5	346.7	346.8	346.9	347.0	347.0	347.1	347.2
155°	359.2	359.2	359.2	359.2	359.2	359.2	359.1	359.0	359.0	358.9	359.2
157.5°	370.3	370.1	370.1	370.0	369.8	369.7	369.7	369.7	369.7	369.7	369.9
160°	376.8	376.7	376.7	376.7	376.6	376.5	376.5	376.4	376.3	376.2	376.5
162.5°	382.9	382.7	382.5	382.4	382.2	382.1	382.0	381.9	381.8	381.7	382.2
165°	391.0	390.8	390.7	390.4	390.2	390.0	389.9	389.8	389.6	389.5	389.9
167.5°	397.3	397.0	396.7	396.4	396.1	395.9	396.0	396.0	396.0	396.0	396.5
170°	400.8	400.5	400.1	399.8	399.4	399.3	399.3	399.4	399.5	399.6	399.9
172.5°	403.3	403.1	402.7	402.4	402.2	402.0	402.0	402.1	402.1	402.1	402.5
175°	406.8	406.4	406.1	405.7	405.4	405.2	405.1	405.0	405.0	404.9	405.4
177.5°	408.0	407.7	407.3	407.1	406.8	406.7	406.7	406.7	406.7	406.7	407.1
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1234.1	1235.9	1237.8	1238.7	1238.5	1238.3	1238.1	1238.0
5°	1225.8	1228.0	1230.1	1230.9	1230.5	1230.1	1229.7	1229.2
7.5°	1209.5	1210.9	1212.3	1212.5	1211.9	1211.2	1210.6	1209.9
10°	1194.9	1195.7	1196.6	1196.6	1195.7	1194.9	1194.0	1193.2
12.5°	1176.8	1177.2	1177.8	1177.4	1176.3	1175.1	1173.8	1172.7
15°	1145.0	1144.5	1144.1	1143.2	1141.7	1140.1	1138.7	1137.2
17.5°	1106.6	1105.5	1104.2	1102.5	1100.3	1098.1	1095.8	1093.6
20°	1079.8	1078.1	1076.4	1074.2	1071.5	1068.7	1066.0	1063.3
22.5°	1050.1	1047.5	1045.0	1042.6	1040.4	1038.1	1035.9	1033.7
25°	1002.0	998.4	994.9	992.0	989.9	987.8	985.7	983.6
27.5°	953.1	948.7	944.2	940.5	937.5	934.4	931.4	928.4
30°	918.0	912.8	907.5	903.1	899.8	896.4	893.0	889.7
32.5°	882.2	876.1	870.0	865.3	862.1	858.9	855.7	852.5
35°	828.8	821.7	814.6	809.0	805.3	801.5	797.6	793.9
37.5°	771.6	763.6	755.5	749.7	745.9	742.1	738.3	734.5
40°	733.5	724.6	715.8	709.4	705.7	701.9	698.1	694.3
42.5°	696.0	687.0	678.0	671.5	667.4	663.5	659.6	655.6
45°	638.6	628.2	617.9	610.8	607.0	603.2	599.4	595.7
47.5°	580.7	570.0	559.3	551.8	547.7	543.5	539.3	535.1
50°	542.3	531.8	521.2	514.0	510.0	506.0	501.9	497.9
52.5°	504.1	493.4	482.6	475.2	471.0	466.8	462.7	458.5
55°	447.5	436.6	425.7	418.2	414.2	410.2	406.2	402.2
57.5°	392.4	381.3	370.1	363.1	360.1	357.0	354.0	351.0
60°	355.6	344.6	333.7	326.5	323.2	319.8	316.4	313.0
62.5°	319.3	309.2	299.1	292.7	290.0	287.3	284.5	281.9
65°	267.3	258.3	249.2	243.4	240.9	238.4	235.9	233.4
67.5°	219.6	211.9	204.0	198.8	196.0	193.1	190.4	187.6
70°	187.2	180.2	173.3	168.7	166.7	164.5	162.4	160.3
72.5°	158.1	152.1	146.2	142.2	140.4	138.4	136.4	134.5
75°	116.5	111.6	106.7	103.7	102.5	101.2	99.9	98.6
77.5°	82.4	79.5	76.7	75.1	74.7	74.4	74.0	73.6
80°	63.2	62.6	62.0	61.5	61.3	61.1	60.9	60.7
82.5°	49.1	48.7	48.2	47.9	47.7	47.4	47.3	47.1
85°	28.5	28.2	27.7	27.5	27.5	27.5	27.5	27.5
87.5°	11.9	11.8	11.7	11.8	11.9	12.1	12.3	12.5
90°	7.8	8.2	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	13.0	13.2	13.5	13.6	13.7	13.8	13.9	14.0
95°	24.3	24.6	24.8	24.9	24.9	24.9	24.9	24.9
97.5°	38.3	38.6	38.9	39.0	39.0	39.0	39.0	39.0
100°	48.5	48.6	48.8	48.9	48.9	48.9	48.9	48.9
102.5°	59.2	59.4	59.6	59.7	59.7	59.8	59.8	59.9
105°	75.4	75.6	75.8	76.1	76.2	76.5	76.7	76.9
107.5°	93.0	93.2	93.4	93.5	93.5	93.5	93.5	93.4
110°	104.7	104.5	104.3	104.4	104.6	104.9	105.0	105.2



TEST NUMBER: P332929-940

CATALOG NUMBER: SA4XXRDIP-C795D365U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	117.3	117.2	117.2	117.2	117.3	117.3	117.3	117.3
115°	136.6	136.5	136.4	136.4	136.3	136.3	136.2	136.2
117.5°	155.2	155.0	154.8	154.6	154.4	154.3	154.2	154.0
120°	167.9	167.6	167.2	167.1	167.2	167.4	167.5	167.6
122.5°	180.7	180.5	180.2	179.9	179.8	179.5	179.2	179.0
125°	199.5	199.4	199.2	199.0	198.9	198.8	198.7	198.5
127.5°	217.5	217.3	217.1	217.0	217.0	216.9	216.7	216.6
130°	230.1	229.9	229.8	229.5	229.3	229.0	228.7	228.5
132.5°	241.9	241.7	241.7	241.5	241.4	241.3	241.2	241.0
135°	259.7	259.6	259.4	259.2	259.0	258.8	258.6	258.4
137.5°	276.9	276.7	276.5	276.4	276.4	276.5	276.5	276.6
140°	288.2	288.1	288.0	287.9	287.9	287.8	287.8	287.7
142.5°	298.9	298.9	298.8	298.8	298.8	298.8	298.8	298.8
145°	315.0	314.9	314.9	314.7	314.5	314.2	314.1	313.9
147.5°	329.6	329.5	329.4	329.4	329.3	329.2	329.1	329.1
150°	338.8	338.8	338.8	338.7	338.7	338.6	338.5	338.4
152.5°	347.4	347.6	347.8	347.7	347.5	347.3	347.1	347.0
155°	359.4	359.7	360.0	360.0	359.7	359.4	359.2	358.9
157.5°	370.1	370.3	370.5	370.5	370.2	370.1	369.8	369.5
160°	376.7	376.8	377.1	377.0	376.7	376.3	375.9	375.6
162.5°	382.5	382.9	383.3	383.3	383.0	382.6	382.3	381.9
165°	390.3	390.7	391.1	391.2	390.9	390.7	390.4	390.1
167.5°	396.9	397.3	397.7	397.7	397.3	396.8	396.4	395.9
170°	400.4	400.8	401.3	401.2	400.7	400.2	399.8	399.2
172.5°	403.1	403.5	403.9	403.9	403.5	403.0	402.5	402.0
175°	405.9	406.4	406.9	406.9	406.4	405.9	405.4	404.9
177.5°	407.4	407.9	408.2	408.2	407.8	407.3	406.9	406.4
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4

(END OF REPORT)