

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: P332928-940

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

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332928-940
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-C795D365U940-4F0-1E-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

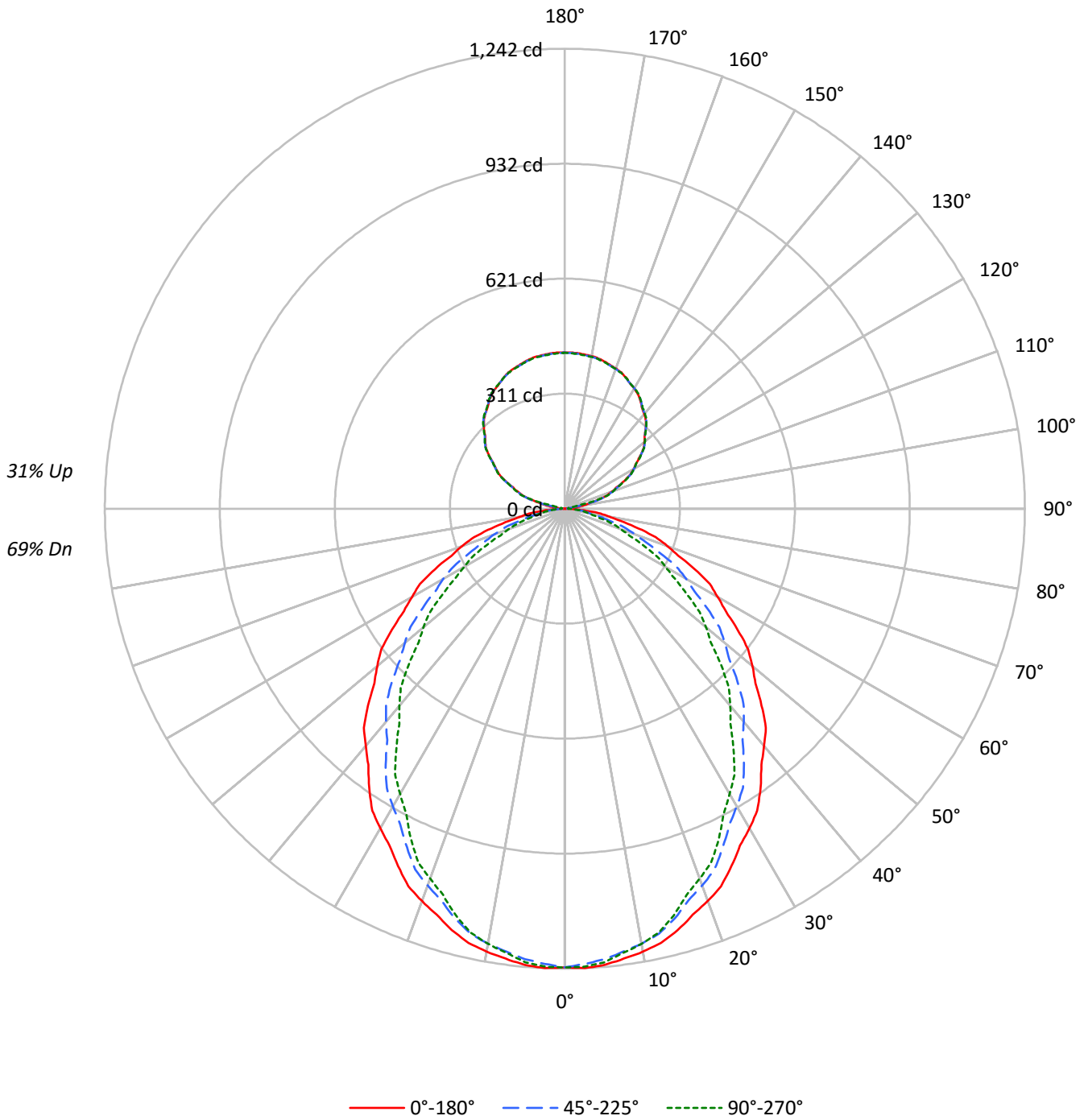
Lumens per Lamp: N/A
Luminaire Lumens: 4166.5 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69				
1	102	98	94	91	97	93	89	86	83	80	78	74	72	70	65	64	63	59				
2	94	86	80	75	88	82	76	71	73	69	65	65	62	59	58	56	53	50				
3	86	76	69	63	81	72	66	60	65	60	55	58	54	50	52	49	46	42				
4	79	68	60	53	74	64	57	51	58	52	47	52	47	44	46	43	40	37				
5	72	60	52	46	68	58	50	45	52	46	41	47	42	38	42	38	35	32				
6	67	54	46	40	63	52	44	39	47	41	36	43	37	34	38	34	31	28				
7	62	49	41	36	58	47	40	34	43	37	32	39	34	30	35	31	28	25				
8	58	45	37	32	54	43	36	31	39	33	29	36	31	27	32	28	25	23				
9	54	41	34	29	51	40	32	28	36	30	26	33	28	24	30	26	23	21				
10	50	38	31	26	48	36	30	25	33	28	24	30	26	22	28	24	21	19				

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	2.8
10°-20°	324.5	7.8
20°-30°	468.6	11.2
30°-40°	531.1	12.7
40°-50°	512.9	12.3
50°-60°	426.5	10.2
60°-70°	294.5	7.1
70°-80°	149.3	3.6
80°-90°	39.5	0.9
90°-100°	14.4	0.3
100°-110°	91.9	2.2
110°-120°	175.8	4.2
120°-130°	223.1	5.4
130°-140°	238.7	5.7
140°-150°	223.2	5.4
150°-160°	180.0	4.3
160°-170°	116.1	2.8
170°-180°	40.0	1.0
0°-30°	909.4	21.8
0°-40°	1440.5	34.6
0°-60°	2379.9	57.1
0°-90°	2863.2	68.7
90°-120°	282.1	6.8
90°-150°	967.2	23.2
90°-180°	1303.0	31.3
0°-180°	4166.5	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	3
95°	17	7	7	9	9	22
105°	95	97	98	100	90	99
115°	177	178	178	178	178	174
125°	249	250	250	250	251	222
135°	309	309	310	310	311	238
145°	356	357	357	357	358	222
155°	390	391	390	391	390	180
165°	412	410	410	413	410	116
175°	421	420	420	422	419	40
180°	421	421	421	421	421	



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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°	4.0	4.0	4.0	4.1	4.1	4.5	5.0	5.5	6.2	6.7	7.1
95°	17.3	15.0	12.6	10.2	7.8	6.7	6.7	6.8	6.9	7.0	7.3
97.5°	36.8	38.3	39.8	41.3	42.7	39.6	31.7	24.0	16.1	8.3	8.4
100°	51.7	53.0	54.2	55.5	56.7	52.5	42.9	33.2	23.5	13.9	12.7
102.5°	68.3	69.3	70.2	71.1	72.1	71.9	70.6	69.4	68.0	66.8	53.9
105°	94.9	95.2	95.7	96.1	96.6	96.9	97.3	97.6	98.0	98.4	99.0
107.5°	119.5	119.7	119.9	120.1	120.4	120.6	121.2	121.6	122.1	122.6	122.9
110°	136.2	136.3	136.5	136.8	137.0	137.3	137.7	138.1	138.6	139.0	139.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.3	152.7	153.0	153.4	153.8	154.1	154.3	154.4	154.6	154.9	154.8
115°	177.1	177.4	177.5	177.7	178.0	178.0	178.0	177.9	177.8	177.7	177.9
117.5°	199.5	199.7	200.0	200.4	200.6	200.8	201.0	201.2	201.3	201.4	201.4
120°	214.6	214.9	215.2	215.4	215.7	215.8	215.8	215.7	215.6	215.5	215.7
122.5°	228.7	228.9	229.1	229.3	229.4	229.5	229.6	229.7	229.8	230.0	230.0
125°	249.0	249.2	249.5	249.8	250.1	250.1	250.0	249.9	249.8	249.6	249.8
127.5°	268.1	268.2	268.2	268.3	268.4	268.6	268.9	269.2	269.6	269.9	269.8
130°	280.4	280.5	280.6	280.7	280.8	280.9	281.1	281.3	281.5	281.8	281.8
132.5°	291.9	291.9	292.0	292.2	292.3	292.5	292.7	293.0	293.3	293.6	293.6
135°	308.8	308.8	308.7	308.6	308.5	308.6	309.0	309.2	309.5	309.8	310.0
137.5°	323.9	324.0	324.0	324.0	324.0	324.2	324.5	324.8	325.1	325.4	325.6
140°	333.8	333.9	334.0	334.1	334.3	334.4	334.6	334.7	334.8	335.0	335.2
142.5°	342.6	342.8	343.0	343.3	343.6	343.8	343.8	343.9	344.0	344.1	344.2
145°	356.1	356.3	356.5	356.8	357.0	357.0	357.0	357.0	357.0	357.0	357.1
147.5°	366.8	367.3	367.7	368.1	368.5	368.6	368.5	368.5	368.4	368.4	368.4
150°	374.7	375.0	375.2	375.6	375.9	375.9	375.9	375.8	375.7	375.7	375.7
152.5°	381.3	381.5	381.7	381.9	382.2	382.2	382.1	381.9	381.8	381.7	381.8
155°	390.5	390.6	390.6	390.7	390.7	390.7	390.5	390.2	390.0	389.9	390.1
157.5°	398.2	398.1	398.1	398.1	398.1	397.9	397.7	397.4	397.2	397.0	397.3
160°	402.8	402.5	402.3	402.2	401.9	401.8	401.7	401.6	401.5	401.4	401.9
162.5°	406.8	406.5	406.3	406.0	405.7	405.6	405.5	405.4	405.4	405.3	405.7
165°	411.9	411.5	411.2	410.8	410.5	410.3	410.3	410.3	410.3	410.3	410.9
167.5°	415.9	415.5	415.2	414.8	414.5	414.3	414.2	414.2	414.1	414.1	414.7
170°	418.2	417.8	417.3	417.0	416.5	416.3	416.4	416.5	416.5	416.6	417.1
172.5°	419.7	419.3	418.8	418.5	418.0	417.9	417.9	418.0	418.0	418.1	418.7
175°	421.3	420.9	420.5	420.1	419.6	419.5	419.5	419.6	419.7	419.7	420.4
177.5°	422.1	421.7	421.3	420.9	420.5	420.4	420.5	420.6	420.7	420.8	421.3
180°	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3



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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°	7.5	7.9	8.4	8.6	8.6	8.6	8.6	8.7
95°	7.8	8.2	8.6	8.8	8.9	9.0	9.1	9.1
97.5°	8.4	8.5	8.5	8.6	8.6	8.6	8.7	8.8
100°	11.5	10.3	9.1	8.6	8.6	8.6	8.7	8.8
102.5°	41.1	28.3	15.4	9.0	9.0	9.0	9.1	9.1
105°	99.6	100.2	100.9	99.9	97.4	94.9	92.3	89.8
107.5°	123.2	123.5	123.9	124.1	124.4	124.7	124.9	125.2
110°	139.3	139.4	139.6	139.7	139.9	140.2	140.4	140.5



TEST NUMBER: P332928-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	154.8	154.8	154.7	154.9	155.2	155.4	155.7	156.0
115°	178.0	178.2	178.3	178.3	178.3	178.3	178.3	178.3
117.5°	201.3	201.3	201.3	201.3	201.3	201.3	201.3	201.2
120°	215.8	216.0	216.2	216.2	216.0	215.8	215.7	215.5
122.5°	230.1	230.2	230.2	230.2	230.1	230.0	229.8	229.7
125°	250.0	250.2	250.4	250.6	250.7	250.7	250.7	250.8
127.5°	269.8	269.7	269.7	269.7	269.7	269.6	269.5	269.5
130°	281.9	282.0	282.0	282.0	282.0	282.0	282.0	282.0
132.5°	293.7	293.8	293.9	293.9	293.8	293.7	293.7	293.6
135°	310.0	310.2	310.3	310.5	310.6	310.8	310.9	311.0
137.5°	325.7	325.9	326.0	326.1	326.0	326.0	325.9	325.9
140°	335.4	335.6	335.8	336.0	336.1	336.1	336.2	336.3
142.5°	344.4	344.6	344.6	344.7	344.8	344.8	344.8	344.8
145°	357.2	357.3	357.3	357.4	357.6	357.8	357.8	358.0
147.5°	368.5	368.5	368.5	368.6	368.7	368.7	368.8	368.9
150°	375.7	375.7	375.7	375.7	375.8	375.9	375.9	375.9
152.5°	381.9	382.0	382.2	382.2	382.1	382.1	382.1	382.0
155°	390.4	390.7	390.9	391.0	390.7	390.6	390.4	390.1
157.5°	397.7	398.1	398.4	398.4	398.1	397.7	397.3	397.0
160°	402.3	402.8	403.1	403.1	402.8	402.3	401.9	401.4
162.5°	406.1	406.5	407.0	406.9	406.4	406.0	405.5	405.0
165°	411.4	412.0	412.6	412.5	411.9	411.3	410.6	410.0
167.5°	415.4	416.0	416.5	416.5	415.8	415.1	414.4	413.8
170°	417.8	418.3	418.8	418.7	418.1	417.4	416.7	416.0
172.5°	419.3	419.8	420.4	420.3	419.5	418.7	418.0	417.2
175°	421.1	421.7	422.3	422.2	421.3	420.5	419.6	418.8
177.5°	421.8	422.2	422.7	422.5	421.9	421.2	420.5	419.8
180°	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3

(END OF REPORT)