

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: P333062-940

Luminaire Tested: **S124RDIW-S795D770U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333062-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S795D770U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5238.7 lumens
Efficiency: N/A
Efficacy: 116.4 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: General Diffuse

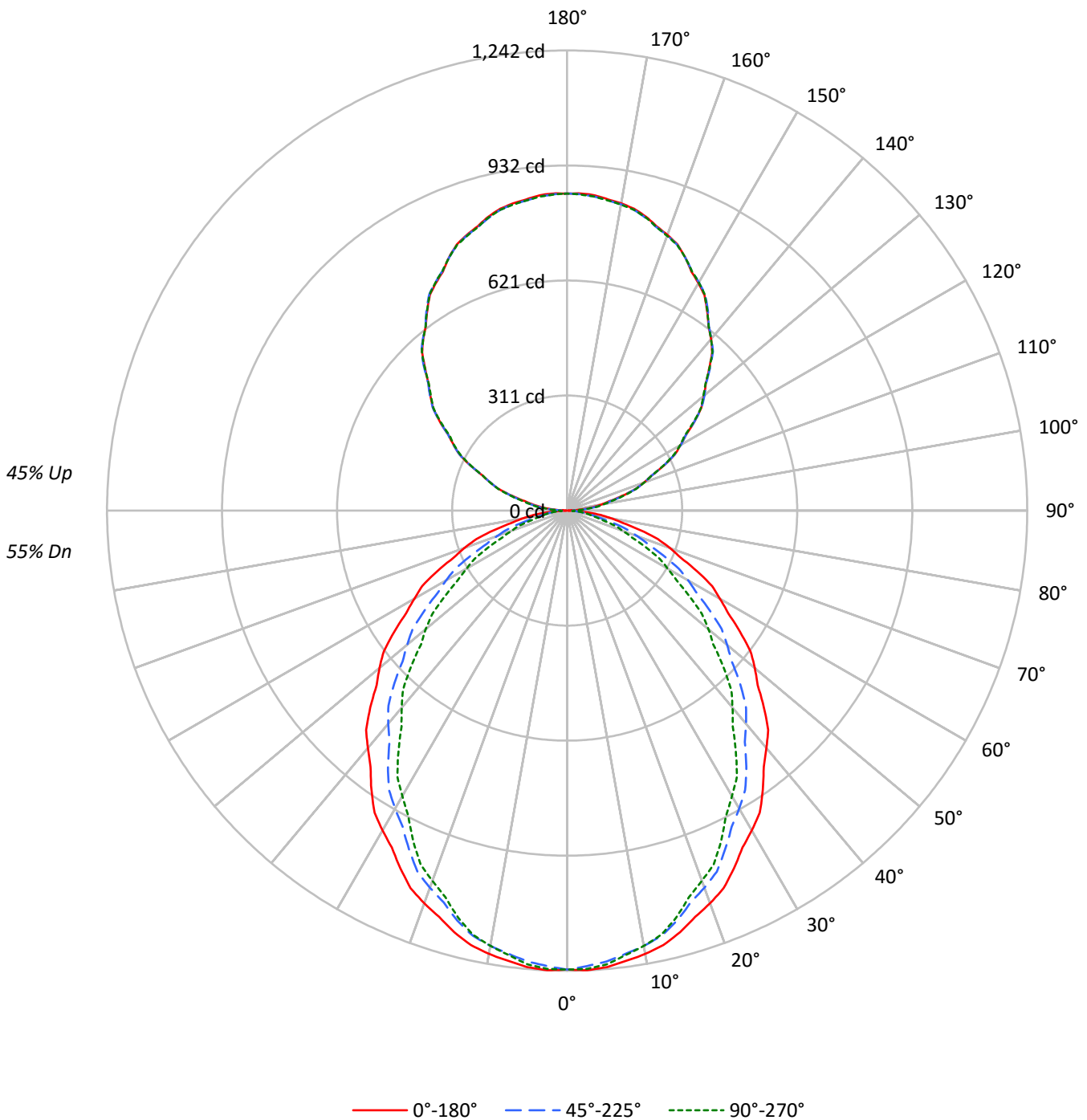
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60	55
1	99	95	91	88	92	88	85	82	76	73	71	64	63	61	54	53	52	47
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	40
3	83	73	66	60	77	68	62	57	59	54	50	51	47	44	43	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	54	47	42	47	42	37	41	36	33	35	31	29	26
6	64	52	44	38	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	39	34	55	44	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	35	30	51	40	33	29	35	30	26	31	26	23	26	23	20	18
9	52	39	32	27	48	37	30	26	33	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

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	2.2
10°-20°	324.5	6.2
20°-30°	468.6	8.9
30°-40°	531.1	10.1
40°-50°	512.9	9.8
50°-60°	426.5	8.1
60°-70°	294.5	5.6
70°-80°	149.3	2.8
80°-90°	40.9	0.8
90°-100°	56.4	1.1
100°-110°	167.2	3.2
110°-120°	283.8	5.4
120°-130°	374.2	7.1
130°-140°	420.2	8.0
140°-150°	413.0	7.9
150°-160°	347.3	6.6
160°-170°	231.1	4.4
170°-180°	80.9	1.5
0°-30°	909.4	17.4
0°-40°	1440.5	27.5
0°-60°	2379.9	45.4
0°-90°	2864.5	54.7
90°-120°	507.4	9.7
90°-150°	1714.8	32.7
90°-180°	2374.0	45.3
0°-180°	5238.7	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°	2	9	14	18	20	5
95°	40	46	50	52	52	44
105°	154	155	158	160	162	164
115°	289	288	287	287	286	284
125°	420	420	420	418	417	374
135°	542	546	546	545	543	419
145°	658	661	662	661	659	412
155°	754	754	754	756	754	347
165°	821	819	818	822	819	231
175°	854	851	850	854	850	81
180°	856	856	856	856	856	



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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°	17.8	16.9	15.8	14.8	13.7	13.3	13.4	13.4	13.5	13.6	13.6
90°	2.0	3.6	5.3	6.9	8.5	9.9	11.1	12.2	13.4	14.5	15.4
92.5°	14.2	16.1	17.8	19.7	21.6	22.9	23.7	24.5	25.4	26.2	26.8
95°	39.7	41.0	42.4	43.7	45.0	46.2	47.2	48.2	49.3	50.3	50.7
97.5°	69.4	70.4	71.5	72.5	73.6	74.7	76.0	77.1	78.4	79.5	80.1
100°	92.6	93.3	93.8	94.4	95.0	95.9	97.3	98.6	100.0	101.3	101.6
102.5°	117.0	117.3	117.4	117.7	118.0	118.7	119.8	121.1	122.3	123.5	123.9
105°	154.2	154.4	154.5	154.6	154.8	155.2	155.8	156.3	156.9	157.5	157.9
107.5°	193.2	193.4	193.6	193.8	193.9	194.1	194.2	194.3	194.4	194.5	194.8
110°	219.7	220.0	220.3	220.6	220.9	221.0	220.8	220.7	220.5	220.3	220.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	247.3	247.3	247.4	247.4	247.4	247.4	247.1	246.8	246.6	246.3	246.3
115°	288.6	288.6	288.6	288.6	288.6	288.4	288.1	287.8	287.5	287.2	287.0
117.5°	327.4	327.6	327.7	327.8	328.0	327.9	327.7	327.5	327.3	327.1	326.5
120°	353.4	354.0	354.5	355.2	355.8	355.8	355.4	355.0	354.5	354.1	353.3
122.5°	380.4	380.7	380.8	381.1	381.4	381.4	381.2	380.9	380.8	380.6	380.0
125°	420.3	420.3	420.3	420.3	420.3	420.2	420.0	419.9	419.7	419.5	419.3
127.5°	456.4	456.8	457.3	457.7	458.2	458.3	458.0	457.8	457.5	457.4	457.0
130°	481.8	482.2	482.7	483.1	483.6	483.8	483.8	483.8	483.8	483.8	483.5
132.5°	507.7	508.1	508.4	508.7	509.1	509.2	509.0	508.9	508.8	508.6	508.4
135°	542.1	542.9	543.8	544.7	545.5	546.0	546.0	546.0	546.0	546.0	545.7
137.5°	579.3	579.8	580.1	580.6	581.0	581.3	581.6	581.8	582.0	582.3	581.8
140°	604.2	604.5	604.8	605.1	605.4	605.6	605.6	605.6	605.6	605.6	605.4
142.5°	627.0	627.3	627.6	627.9	628.2	628.3	628.1	628.0	627.9	627.8	627.8
145°	658.5	659.1	659.7	660.3	660.8	661.2	661.4	661.6	661.6	661.8	661.6
147.5°	689.7	690.5	691.2	691.9	692.6	692.9	692.8	692.6	692.5	692.4	692.2
150°	708.8	709.4	710.0	710.6	711.1	711.5	711.5	711.5	711.5	711.5	711.5
152.5°	726.8	727.2	727.5	727.9	728.3	728.4	728.5	728.7	728.8	728.9	729.2
155°	754.5	754.5	754.5	754.5	754.5	754.4	754.2	754.1	753.9	753.9	754.4
157.5°	777.8	777.5	777.2	776.9	776.7	776.6	776.5	776.5	776.5	776.4	776.9
160°	791.6	791.4	791.2	791.1	790.9	790.8	790.7	790.5	790.3	790.2	790.7
162.5°	804.2	803.9	803.4	803.1	802.7	802.5	802.3	802.2	802.0	801.8	802.6
165°	821.4	820.9	820.5	820.0	819.6	819.2	818.9	818.6	818.3	818.0	818.9
167.5°	834.4	833.8	833.2	832.6	832.0	831.6	831.7	831.7	831.7	831.8	832.7
170°	841.9	841.1	840.3	839.6	838.9	838.6	838.7	838.9	839.0	839.2	840.1
172.5°	847.1	846.5	845.9	845.3	844.6	844.4	844.4	844.5	844.5	844.5	845.5
175°	854.4	853.6	852.9	852.2	851.5	851.0	850.9	850.7	850.6	850.4	851.5
177.5°	856.8	856.2	855.6	855.1	854.4	854.2	854.2	854.2	854.2	854.2	855.0
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7



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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°	13.6	13.6	13.6	13.6	13.9	14.2	14.4	14.6
90°	16.3	17.2	18.1	18.6	19.0	19.3	19.5	19.9
92.5°	27.3	27.8	28.4	28.7	28.9	29.1	29.2	29.4
95°	51.2	51.6	52.1	52.3	52.3	52.3	52.3	52.3
97.5°	80.6	81.1	81.7	81.9	81.9	81.9	81.9	81.9
100°	101.8	102.1	102.5	102.5	102.5	102.5	102.5	102.5
102.5°	124.3	124.8	125.1	125.4	125.6	125.6	125.7	125.9
105°	158.4	158.8	159.3	159.7	160.2	160.6	161.0	161.5
107.5°	195.3	195.6	196.1	196.3	196.3	196.3	196.2	196.2
110°	219.8	219.5	219.2	219.3	219.7	220.2	220.6	221.1



TEST NUMBER: P333062-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.2	246.1	246.1	246.1	246.2	246.3	246.4	246.5
115°	287.0	286.8	286.6	286.5	286.3	286.2	286.1	285.9
117.5°	326.1	325.6	325.0	324.7	324.4	324.0	323.8	323.5
120°	352.6	351.9	351.2	350.9	351.2	351.5	351.8	352.0
122.5°	379.5	379.1	378.5	378.0	377.5	376.9	376.5	375.9
125°	419.0	418.7	418.4	418.1	417.9	417.5	417.2	417.0
127.5°	456.7	456.5	456.1	455.8	455.7	455.4	455.1	455.0
130°	483.2	482.9	482.6	482.1	481.6	481.0	480.4	479.8
132.5°	508.1	507.8	507.5	507.2	507.0	506.8	506.5	506.3
135°	545.4	545.1	544.8	544.5	544.0	543.6	543.1	542.7
137.5°	581.5	581.1	580.8	580.6	580.7	580.8	580.9	580.9
140°	605.3	605.1	604.9	604.8	604.7	604.5	604.4	604.2
142.5°	627.8	627.7	627.7	627.7	627.6	627.6	627.6	627.5
145°	661.6	661.4	661.2	660.9	660.5	660.0	659.6	659.2
147.5°	692.1	692.1	691.9	691.8	691.6	691.5	691.3	691.2
150°	711.5	711.5	711.5	711.4	711.2	711.1	711.0	710.8
152.5°	729.6	730.0	730.3	730.3	730.0	729.6	729.2	728.8
155°	755.0	755.5	756.2	756.2	755.5	755.0	754.4	753.9
157.5°	777.3	777.8	778.2	778.2	777.7	777.2	776.7	776.1
160°	791.1	791.6	792.0	791.8	791.1	790.3	789.6	788.9
162.5°	803.4	804.2	805.0	805.0	804.3	803.6	802.9	802.1
165°	819.7	820.6	821.5	821.7	821.1	820.5	819.9	819.3
167.5°	833.6	834.4	835.3	835.3	834.4	833.5	832.6	831.6
170°	841.0	841.9	842.8	842.7	841.6	840.6	839.5	838.6
172.5°	846.5	847.5	848.5	848.5	847.4	846.4	845.3	844.4
175°	852.5	853.5	854.5	854.5	853.5	852.5	851.5	850.4
177.5°	855.8	856.6	857.5	857.4	856.4	855.5	854.5	853.6
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7

(END OF REPORT)