

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: P332605-830

Luminaire Tested: **SA4XXDIP-C795D810U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332605-830  
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: SA4XXDIP-C795D810U830-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5857.0 lumens  
Efficiency: N/A  
Efficacy: 127.6 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

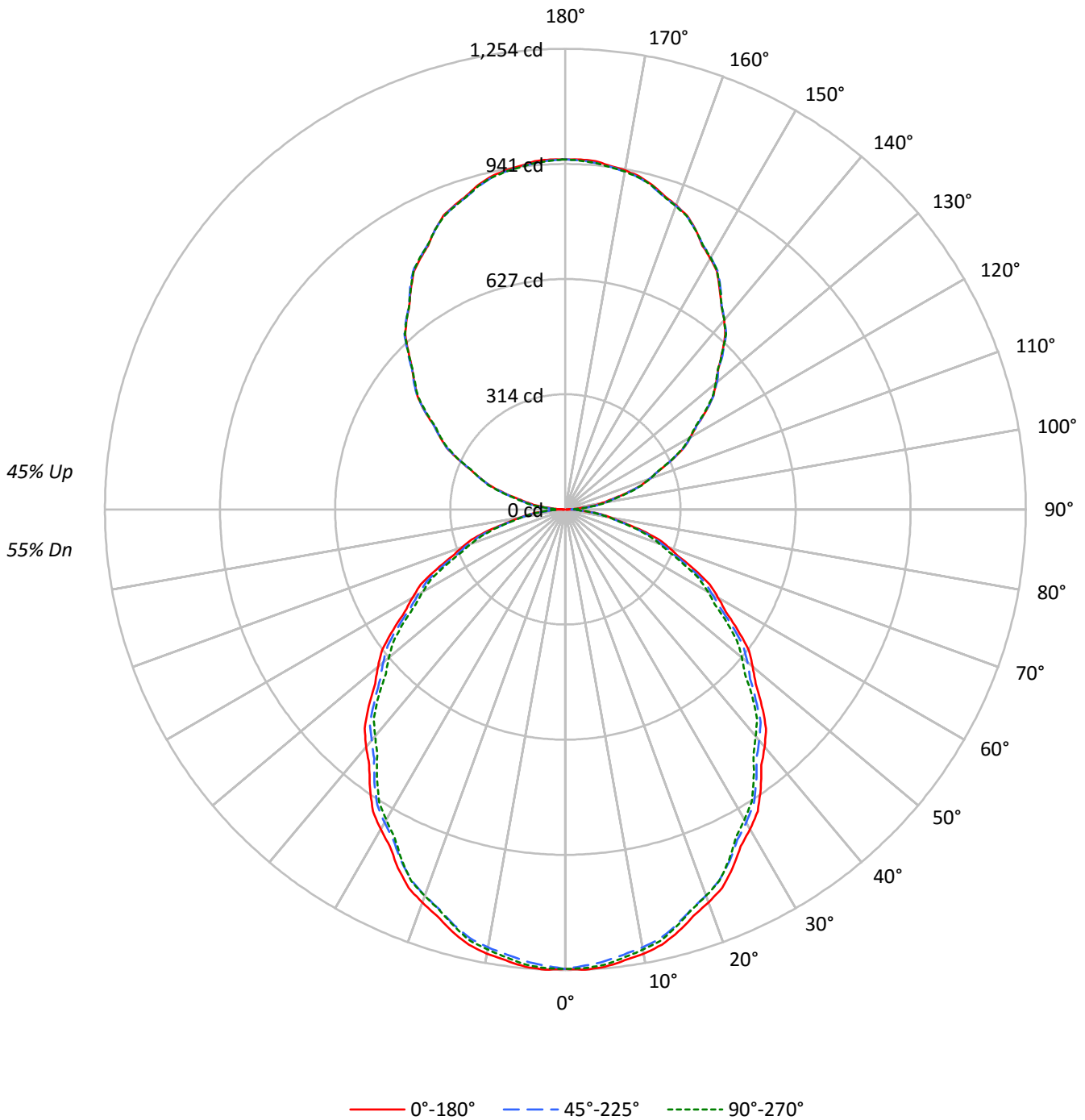
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	53	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39				
3	82	72	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28				
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	27	24				
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	30	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19				
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17				
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15				
10	48	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14				

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

	0°	45°	90°
0°	10101	10101	10101
5°	10131	10009	10083
10°	10067	9928	9977
15°	9947	9787	9812
20°	9784	9613	9620
25°	9600	9413	9386
30°	9374	9177	9093
35°	9140	8932	8814
40°	8896	8652	8495
45°	8643	8379	8218
50°	8361	8133	7882
55°	8058	7817	7562
60°	7753	7463	7237
65°	7412	7125	6837
70°	7027	6675	6413
75°	6441	6129	5973
80°	5732	5500	5360
85°	5011	4826	4733



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	2.0
10°-20°	332.0	5.7
20°-30°	488.6	8.3
30°-40°	568.1	9.7
40°-50°	568.1	9.7
50°-60°	496.9	8.5
60°-70°	369.0	6.3
70°-80°	209.7	3.6
80°-90°	63.4	1.1
90°-100°	62.8	1.1
100°-110°	186.2	3.2
110°-120°	316.0	5.4
120°-130°	416.6	7.1
130°-140°	467.9	8.0
140°-150°	459.8	7.9
150°-160°	386.7	6.6
160°-170°	257.3	4.4
170°-180°	90.1	1.5
0°-30°	938.5	16.0
0°-40°	1506.5	25.7
0°-60°	2571.5	43.9
0°-90°	3213.6	54.9
90°-120°	565.0	9.6
90°-150°	1909.3	32.6
90°-180°	2643.0	45.1
0°-180°	5857.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1250	1246	1235	1245	1244	119
15°	1190	1185	1171	1176	1174	335
25°	1078	1070	1057	1057	1054	496
35°	927	920	906	899	894	580
45°	757	749	734	723	720	583
55°	572	569	555	544	537	513
65°	388	383	373	363	358	384
75°	206	202	196	193	192	219
85°	54	54	52	52	51	60
90°	2	10	16	20	22	6
95°	44	51	56	58	58	49
105°	172	173	175	178	180	182
115°	321	321	320	319	318	317
125°	468	468	467	466	464	417
135°	604	608	608	606	604	467
145°	733	736	737	736	734	459
155°	840	840	839	842	839	386
165°	914	912	911	915	912	258
175°	951	948	947	952	947	90
180°	953	953	953	953	953	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1254.4	1253.9	1253.3	1252.8	1252.3	1251.0	1249.1	1247.1	1245.1	1243.2	1244.9
5°	1250.2	1249.3	1248.4	1247.5	1246.6	1244.9	1242.5	1240.0	1237.6	1235.1	1237.6
7.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1233.2	1230.5	1227.8	1225.0	1222.3	1224.3
10°	1228.1	1227.3	1226.3	1225.5	1224.6	1222.7	1219.7	1216.9	1214.0	1211.1	1212.9
12.5°	1214.5	1213.6	1212.7	1211.8	1211.0	1208.9	1205.9	1202.8	1199.8	1196.7	1198.6
15°	1190.1	1189.1	1188.3	1187.3	1186.5	1184.4	1181.0	1177.7	1174.3	1171.0	1172.3
17.5°	1160.6	1159.4	1158.3	1157.3	1156.1	1154.0	1150.8	1147.6	1144.4	1141.3	1142.2
20°	1138.9	1137.7	1136.7	1135.6	1134.4	1132.2	1128.9	1125.5	1122.2	1118.9	1119.6
22.5°	1115.7	1114.2	1112.7	1111.3	1109.7	1107.4	1104.0	1100.7	1097.3	1094.0	1095.2
25°	1077.7	1076.2	1074.6	1073.1	1071.5	1069.1	1066.0	1062.9	1059.8	1056.7	1056.9
27.5°	1034.4	1032.8	1031.2	1029.6	1028.0	1025.8	1022.8	1020.0	1017.1	1014.2	1013.6
30°	1005.6	1003.8	1002.0	1000.2	998.4	996.1	993.2	990.3	987.4	984.5	983.6
32.5°	975.1	973.5	971.9	970.3	968.7	966.3	963.3	960.2	957.2	954.0	953.0
35°	927.4	925.8	924.3	922.7	921.1	918.8	915.7	912.6	909.5	906.3	904.7
37.5°	877.0	875.6	874.2	872.8	871.3	868.9	865.6	862.2	858.9	855.5	853.8
40°	844.1	842.4	840.6	838.8	837.0	834.4	831.1	827.7	824.4	821.0	818.9
42.5°	808.9	807.8	806.7	805.7	804.6	802.2	798.5	794.8	791.1	787.4	784.9
45°	757.0	755.4	753.8	752.2	750.7	748.1	744.6	741.0	737.4	733.9	731.4
47.5°	702.6	701.5	700.5	699.4	698.3	696.2	692.9	689.6	686.3	683.0	680.1
50°	665.7	664.8	663.9	663.0	662.1	660.2	657.0	653.9	650.7	647.6	644.5
52.5°	629.6	628.6	627.5	626.4	625.3	623.1	619.8	616.5	613.2	609.9	607.2
55°	572.5	571.7	571.1	570.4	569.8	567.9	564.8	561.7	558.6	555.4	552.7
57.5°	517.9	517.2	516.4	515.7	514.9	512.9	509.9	506.8	503.8	500.7	498.1
60°	480.2	479.1	478.0	476.9	475.8	473.7	470.9	468.0	465.1	462.2	460.1
62.5°	443.4	442.4	441.5	440.5	439.6	437.6	434.5	431.4	428.4	425.3	423.5
65°	388.0	386.9	385.8	384.7	383.5	381.8	379.7	377.4	375.1	373.0	370.7
67.5°	332.2	331.2	330.2	329.1	328.2	326.6	324.4	322.3	320.2	318.0	315.8
70°	297.7	296.2	294.6	293.0	291.5	289.8	288.0	286.3	284.5	282.8	281.0
72.5°	260.9	259.3	257.8	256.2	254.6	253.2	251.8	250.2	248.8	247.4	246.0
75°	206.5	205.4	204.3	203.2	202.1	201.0	199.8	198.7	197.7	196.5	195.6
77.5°	154.6	154.1	153.6	153.2	152.6	151.9	150.9	150.0	148.9	148.0	147.7
80°	123.3	122.6	122.0	121.3	120.6	120.1	119.6	119.2	118.8	118.3	117.8
82.5°	92.8	92.6	92.2	91.9	91.6	91.4	91.3	91.2	91.1	91.0	90.8
85°	54.1	54.1	54.1	54.1	54.1	53.9	53.4	53.1	52.6	52.1	52.1
87.5°	21.3	21.5	21.7	21.9	22.1	22.1	22.2	22.3	22.4	22.5	22.7
90°	2.2	4.1	5.8	7.6	9.4	10.9	12.3	13.6	14.9	16.2	17.2
92.5°	15.7	17.8	19.9	22.0	24.0	25.5	26.4	27.3	28.3	29.2	29.8
95°	44.2	45.7	47.1	48.6	50.1	51.5	52.6	53.7	54.9	56.0	56.5
97.5°	77.2	78.4	79.6	80.8	81.9	83.2	84.5	85.9	87.2	88.6	89.2
100°	103.2	103.8	104.4	105.1	105.8	106.9	108.3	109.8	111.2	112.7	113.1
102.5°	130.3	130.5	130.8	131.1	131.3	132.1	133.5	134.8	136.2	137.5	138.0
105°	171.7	171.8	172.0	172.2	172.4	172.8	173.4	174.1	174.7	175.4	175.9
107.5°	215.2	215.4	215.6	215.7	215.9	216.1	216.2	216.3	216.4	216.5	217.0
110°	244.7	245.0	245.2	245.6	245.9	246.0	245.9	245.7	245.5	245.3	245.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.3	275.3	275.4	275.5	275.6	275.4	275.1	274.8	274.6	274.3	274.2
115°	321.3	321.3	321.3	321.3	321.3	321.1	320.7	320.5	320.1	319.8	319.6
117.5°	364.6	364.8	364.9	365.0	365.1	365.0	364.9	364.6	364.4	364.2	363.6
120°	393.5	394.2	394.8	395.5	396.2	396.2	395.7	395.2	394.7	394.3	393.4
122.5°	423.6	423.8	424.0	424.3	424.6	424.6	424.4	424.1	424.0	423.7	423.1
125°	467.9	467.9	467.9	467.9	467.9	467.8	467.7	467.5	467.3	467.2	466.8
127.5°	508.1	508.6	509.2	509.6	510.1	510.2	509.9	509.7	509.4	509.2	508.9
130°	536.4	537.0	537.4	537.9	538.4	538.7	538.7	538.7	538.7	538.7	538.3
132.5°	565.3	565.7	566.1	566.4	566.8	566.8	566.8	566.7	566.5	566.4	566.0
135°	603.5	604.5	605.5	606.4	607.5	607.9	607.9	607.9	607.9	607.9	607.6
137.5°	645.1	645.5	645.9	646.4	646.9	647.2	647.5	647.8	648.0	648.3	647.9
140°	672.8	673.1	673.4	673.7	674.1	674.2	674.2	674.2	674.2	674.2	674.1
142.5°	698.1	698.4	698.8	699.1	699.5	699.6	699.4	699.3	699.1	699.0	699.0
145°	733.2	733.9	734.5	735.2	735.8	736.2	736.4	736.5	736.7	736.9	736.7
147.5°	768.0	768.7	769.5	770.3	771.1	771.5	771.3	771.2	771.0	770.9	770.8
150°	789.2	789.9	790.5	791.2	791.8	792.1	792.1	792.1	792.1	792.1	792.1
152.5°	809.3	809.6	810.0	810.4	810.8	811.1	811.2	811.3	811.4	811.6	812.0
155°	840.0	840.0	840.0	840.0	840.0	839.9	839.8	839.6	839.4	839.3	839.9
157.5°	866.0	865.6	865.3	865.1	864.8	864.6	864.6	864.6	864.5	864.5	865.0
160°	881.3	881.1	881.0	880.8	880.6	880.4	880.3	880.1	880.0	879.9	880.3
162.5°	895.4	895.0	894.6	894.2	893.7	893.4	893.2	893.2	893.0	892.8	893.7
165°	914.5	914.0	913.5	912.9	912.5	912.1	911.7	911.4	911.1	910.8	911.7
167.5°	929.1	928.3	927.7	927.0	926.3	926.0	926.0	926.0	926.0	926.0	927.1
170°	937.3	936.5	935.7	934.8	934.1	933.7	933.9	934.1	934.2	934.3	935.3
172.5°	943.2	942.5	941.8	941.1	940.5	940.1	940.2	940.2	940.2	940.3	941.3
175°	951.3	950.5	949.6	948.9	948.0	947.5	947.3	947.2	947.1	946.9	948.0
177.5°	953.9	953.3	952.6	952.0	951.3	951.0	951.0	951.0	951.0	951.0	951.9
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1246.7	1248.5	1250.3	1251.1	1250.9	1250.8	1250.6	1250.4
5°	1240.0	1242.5	1244.9	1245.9	1245.5	1245.1	1244.6	1244.2
7.5°	1226.2	1228.2	1230.1	1231.0	1230.8	1230.5	1230.2	1229.9
10°	1214.7	1216.4	1218.2	1218.9	1218.4	1218.0	1217.6	1217.1
12.5°	1200.6	1202.5	1204.5	1205.1	1204.6	1203.9	1203.2	1202.7
15°	1173.7	1175.0	1176.3	1176.7	1176.0	1175.4	1174.7	1174.0
17.5°	1143.0	1143.9	1144.7	1144.9	1144.4	1144.0	1143.6	1143.1
20°	1120.2	1120.9	1121.5	1121.6	1121.2	1120.8	1120.3	1119.8
22.5°	1096.4	1097.6	1098.8	1099.0	1098.2	1097.4	1096.6	1095.8
25°	1057.2	1057.3	1057.6	1057.2	1056.4	1055.5	1054.6	1053.7
27.5°	1013.1	1012.6	1012.0	1011.3	1010.1	1009.0	1007.9	1006.7
30°	982.7	981.8	980.9	980.0	978.8	977.7	976.6	975.5
32.5°	951.9	950.8	949.8	948.7	947.5	946.4	945.3	944.2
35°	903.2	901.6	900.0	898.7	897.6	896.5	895.4	894.3
37.5°	852.2	850.5	848.9	847.3	845.7	844.3	842.8	841.3
40°	816.6	814.5	812.2	810.5	809.4	808.3	807.2	806.1
42.5°	782.2	779.7	777.0	775.4	774.7	773.9	773.2	772.4
45°	729.0	726.5	724.1	722.6	721.8	721.1	720.5	719.8
47.5°	677.4	674.7	671.8	669.7	668.0	666.3	664.6	662.9
50°	641.4	638.3	635.2	632.9	631.6	630.3	629.0	627.6
52.5°	604.5	601.6	598.9	596.7	595.0	593.3	591.6	589.9
55°	550.1	547.4	544.7	542.7	541.4	540.1	538.7	537.3
57.5°	495.6	493.0	490.5	488.6	487.3	486.0	484.7	483.4
60°	458.2	456.2	454.1	452.6	451.5	450.3	449.2	448.2
62.5°	421.6	419.8	418.0	416.5	415.4	414.2	413.2	412.1
65°	368.5	366.3	364.0	362.4	361.3	360.1	359.0	357.9
67.5°	313.8	311.6	309.4	308.2	307.9	307.6	307.3	307.0
70°	279.2	277.4	275.6	274.4	273.7	273.1	272.4	271.7
72.5°	244.6	243.2	241.8	240.7	240.0	239.3	238.7	238.0
75°	194.7	193.8	192.9	192.4	192.2	191.9	191.7	191.5
77.5°	147.4	147.1	146.9	146.5	145.9	145.3	144.8	144.2
80°	117.4	117.0	116.5	116.2	115.9	115.7	115.6	115.3
82.5°	90.5	90.2	89.9	89.7	89.5	89.3	89.1	88.8
85°	52.1	52.1	52.1	52.0	51.8	51.6	51.4	51.1
87.5°	22.9	23.1	23.3	23.4	23.5	23.6	23.6	23.7
90°	18.2	19.1	20.2	20.8	21.1	21.5	21.8	22.1
92.5°	30.3	30.9	31.6	32.0	32.1	32.3	32.5	32.7
95°	57.0	57.5	58.0	58.2	58.2	58.2	58.2	58.2
97.5°	89.7	90.3	91.0	91.2	91.2	91.2	91.2	91.2
100°	113.4	113.8	114.0	114.2	114.2	114.2	114.2	114.2
102.5°	138.5	138.8	139.3	139.6	139.8	139.9	140.1	140.2
105°	176.3	176.8	177.3	177.9	178.3	178.8	179.3	179.8
107.5°	217.4	217.8	218.3	218.6	218.5	218.5	218.5	218.4
110°	244.7	244.4	244.0	244.1	244.7	245.2	245.6	246.1





TEST NUMBER: P332605-830

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.1	274.1	274.0	274.0	274.1	274.2	274.3	274.4
115°	319.4	319.3	319.1	319.0	318.9	318.7	318.5	318.3
117.5°	363.1	362.5	361.9	361.5	361.2	360.8	360.5	360.1
120°	392.6	391.7	391.0	390.7	391.1	391.3	391.7	392.0
122.5°	422.5	422.1	421.5	420.9	420.3	419.7	419.1	418.6
125°	466.6	466.2	465.9	465.5	465.2	464.9	464.6	464.2
127.5°	508.5	508.2	507.8	507.6	507.3	507.1	506.8	506.5
130°	538.0	537.6	537.3	536.9	536.2	535.6	534.9	534.2
132.5°	565.7	565.3	565.1	564.8	564.5	564.2	563.9	563.7
135°	607.3	606.9	606.6	606.1	605.7	605.2	604.7	604.3
137.5°	647.4	647.1	646.6	646.4	646.5	646.6	646.7	646.9
140°	673.9	673.7	673.5	673.4	673.3	673.1	672.9	672.8
142.5°	698.9	698.9	698.9	698.8	698.8	698.8	698.7	698.7
145°	736.5	736.4	736.2	735.8	735.4	734.9	734.4	734.0
147.5°	770.6	770.5	770.3	770.2	770.1	769.9	769.8	769.6
150°	792.1	792.1	792.1	792.0	791.9	791.7	791.5	791.4
152.5°	812.4	812.8	813.1	813.1	812.8	812.3	811.9	811.4
155°	840.6	841.2	841.9	841.9	841.2	840.6	839.9	839.3
157.5°	865.4	866.0	866.5	866.4	865.9	865.3	864.8	864.2
160°	880.8	881.3	881.7	881.7	880.8	880.0	879.2	878.4
162.5°	894.6	895.4	896.4	896.4	895.5	894.8	893.9	893.1
165°	912.8	913.7	914.7	914.8	914.2	913.5	912.9	912.3
167.5°	928.0	929.1	930.0	930.0	929.0	927.9	927.0	926.0
170°	936.3	937.3	938.3	938.2	937.1	935.9	934.7	933.6
172.5°	942.4	943.6	944.7	944.7	943.6	942.4	941.2	940.1
175°	949.1	950.3	951.5	951.5	950.3	949.1	948.0	946.9
177.5°	952.8	953.8	954.7	954.6	953.6	952.5	951.5	950.4
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7

(END OF REPORT)