

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: P332701-927

Luminaire Tested: **S124DIP-S1195D1035U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332701-927  
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: S124DIP-S1195D1035U927-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6690.3 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

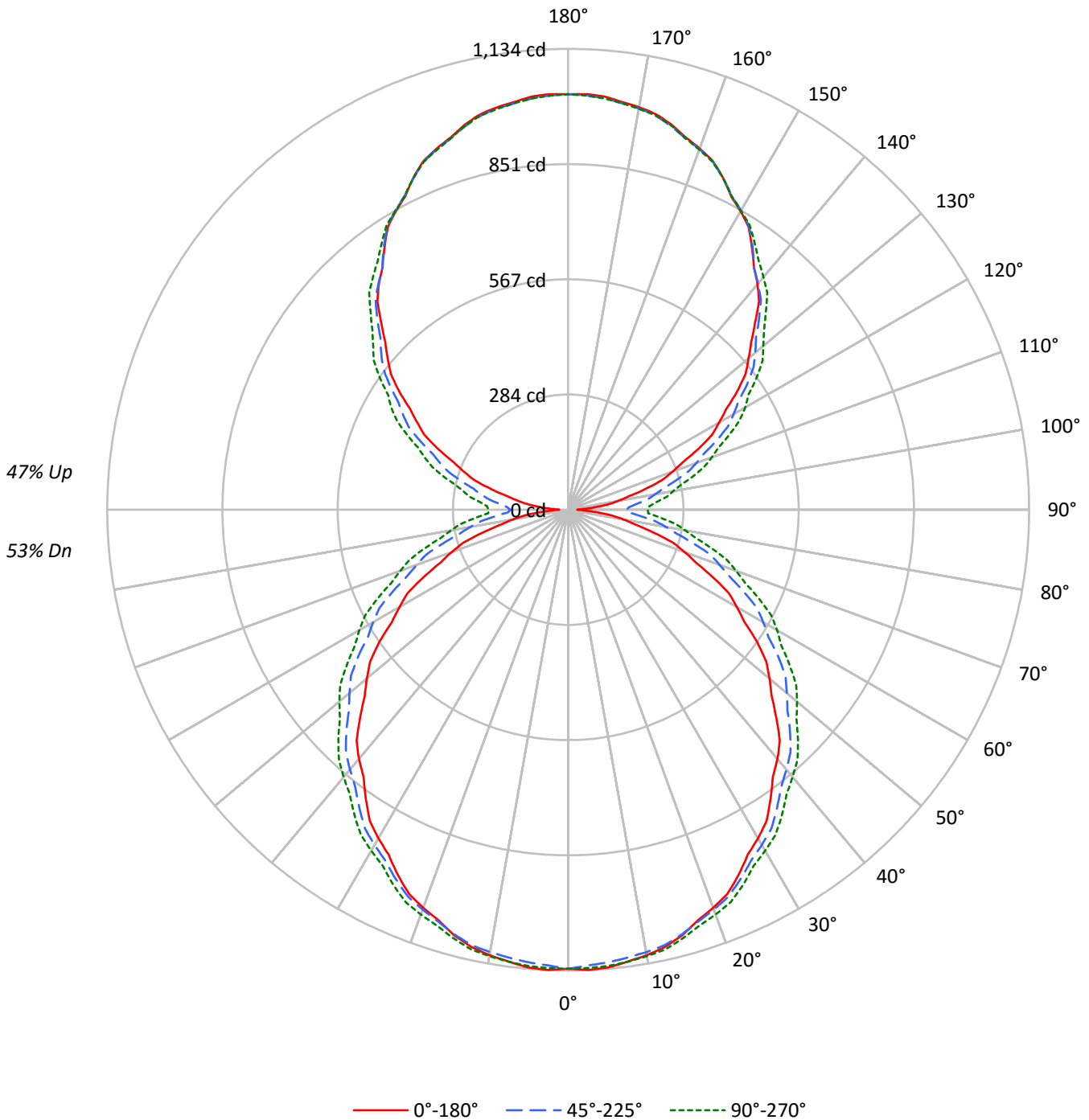
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	108	108	108	108	100	100	100	100	85	85	85		72	72	72		59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68		61	59	57		51	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55		53	50	47		44	41	39	35
3	80	70	62	56	74	65	58	53	56	50	46		47	43	39		38	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39		41	37	33		34	31	28	25
5	67	55	46	40	62	51	43	38	44	38	33		37	32	29		31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29		33	29	25		28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25		30	26	22		25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22		28	23	20		23	19	17	14
9	49	37	29	24	45	34	27	22	30	24	20		25	21	17		21	18	15	13
10	46	34	26	21	42	31	25	20	27	22	18		23	19	16		20	16	14	12

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

	0°	45°	90°
0°	9120	9120	9120
5°	9147	8912	8938
10°	9092	8767	8760
15°	9010	8598	8551
20°	8888	8412	8347
25°	8749	8203	8124
30°	8599	7995	7894
35°	8429	7783	7692
40°	8293	7580	7482
45°	8093	7394	7302
50°	7922	7178	7111
55°	7746	6976	6888
60°	7471	6718	6685
65°	7170	6440	6434
70°	6805	6123	6141
75°	6298	5775	5878
80°	5734	5442	5618
85°	5012	5144	5468



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	1.6
10°-20°	306.5	4.6
20°-30°	463.4	6.9
30°-40°	560.7	8.4
40°-50°	592.8	8.9
50°-60°	557.9	8.3
60°-70°	462.9	6.9
70°-80°	325.1	4.9
80°-90°	186.8	2.8
90°-100°	176.6	2.6
100°-110°	280.6	4.2
110°-120°	393.3	5.9
120°-130°	477.7	7.1
130°-140°	515.3	7.7
140°-150°	496.1	7.4
150°-160°	415.0	6.2
160°-170°	276.1	4.1
170°-180°	96.7	1.4
0°-30°	876.9	13.1
0°-40°	1437.6	21.5
0°-60°	2588.3	38.7
0°-90°	3563.1	53.3
90°-120°	850.4	12.7
90°-150°	2339.4	35.0
90°-180°	3127.0	46.7
0°-180°	6690.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1131	1127	1118	1128	1127	107
15°	1084	1085	1082	1092	1092	305
25°	992	999	1003	1016	1018	457
35°	868	883	896	912	917	543
45°	724	748	772	792	800	559
55°	567	594	631	656	664	505
65°	392	433	476	506	517	389
75°	218	265	318	352	364	231
85°	67	120	177	214	228	71
90°	23	82	143	182	196	16
95°	64	113	170	205	218	66
105°	196	223	272	304	318	208
115°	352	365	403	429	438	348
125°	507	508	537	558	565	452
135°	650	655	664	682	688	503
145°	788	790	791	797	800	493
155°	901	901	901	903	901	415
165°	981	979	977	982	979	276
175°	1021	1017	1016	1021	1016	97
180°	1022	1022	1022	1022	1022	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1133.7	1133.0	1132.3	1131.6	1131.0	1129.7	1127.9	1126.2	1124.3	1122.5	1124.1
5°	1130.8	1130.0	1129.2	1128.4	1127.5	1126.1	1124.1	1122.1	1120.2	1118.2	1120.5
7.5°	1121.3	1120.8	1120.2	1119.7	1119.3	1118.2	1116.6	1114.9	1113.3	1111.7	1114.2
10°	1113.2	1112.9	1112.6	1112.3	1112.1	1111.2	1109.8	1108.4	1107.0	1105.6	1108.1
12.5°	1102.0	1102.0	1101.9	1101.8	1101.8	1101.3	1100.3	1099.4	1098.4	1097.5	1099.8
15°	1084.1	1084.3	1084.7	1084.9	1085.2	1084.9	1084.1	1083.2	1082.4	1081.6	1084.1
17.5°	1059.5	1060.4	1061.2	1062.1	1062.9	1063.3	1063.1	1062.9	1062.7	1062.6	1065.2
20°	1042.4	1043.1	1044.0	1044.9	1045.7	1046.2	1046.6	1046.9	1047.1	1047.4	1050.2
22.5°	1023.1	1024.1	1025.2	1026.3	1027.4	1028.2	1028.6	1029.2	1029.7	1030.2	1033.0
25°	991.7	993.4	995.1	996.8	998.5	999.7	1000.6	1001.4	1002.3	1003.1	1006.2
27.5°	956.8	959.3	961.8	964.2	966.7	968.6	969.9	971.2	972.5	973.8	976.6
30°	933.5	935.8	938.0	940.3	942.5	944.7	946.6	948.6	950.5	952.5	955.6
32.5°	908.2	910.9	913.6	916.3	919.0	921.5	923.7	925.9	928.0	930.3	933.8
35°	867.8	871.2	874.5	877.9	881.2	884.3	887.2	889.9	892.8	895.6	899.5
37.5°	827.0	830.9	834.8	838.7	842.6	846.2	849.7	853.2	856.7	860.2	864.2
40°	800.7	804.4	808.0	811.7	815.3	819.1	823.1	827.0	830.9	834.9	839.1
42.5°	770.4	774.4	778.6	782.7	786.8	791.2	795.7	800.3	804.9	809.6	814.3
45°	723.6	728.9	734.3	739.6	744.9	750.3	755.6	761.0	766.3	771.7	776.4
47.5°	678.7	684.3	689.8	695.3	700.8	706.7	712.9	719.1	725.2	731.4	736.3
50°	646.4	652.6	658.8	665.0	671.1	677.3	683.5	689.7	695.9	702.0	707.7
52.5°	614.0	620.2	626.4	632.6	638.7	645.4	652.4	659.6	666.6	673.8	679.4
55°	566.7	572.6	578.5	584.4	590.3	597.5	605.9	614.3	622.8	631.2	636.8
57.5°	513.8	521.2	528.5	535.8	543.0	550.9	559.3	567.7	576.1	584.4	591.1
60°	479.4	486.7	494.0	501.4	508.7	517.0	526.2	535.5	544.8	554.1	560.5
62.5°	446.0	454.0	462.0	470.0	477.9	486.6	495.9	505.2	514.4	523.7	530.1
65°	392.1	401.2	410.1	419.1	428.1	437.4	446.9	456.5	466.0	475.6	482.7
67.5°	340.2	349.8	359.4	368.9	378.5	388.4	398.6	408.8	419.1	429.4	436.5
70°	304.8	314.4	324.0	333.5	343.1	353.2	363.8	374.5	385.2	395.9	403.5
72.5°	270.5	280.2	290.0	299.8	309.6	320.1	331.5	342.9	354.2	365.6	373.0
75°	217.6	228.0	238.4	248.7	259.2	270.3	282.1	293.9	305.7	317.5	325.3
77.5°	168.3	179.3	190.3	201.3	212.3	224.0	236.4	248.7	261.1	273.5	281.5
80°	137.9	149.1	160.3	171.6	182.8	194.6	207.0	219.4	231.8	244.2	252.5
82.5°	107.5	119.2	130.9	142.6	154.3	166.4	178.7	191.1	203.4	215.8	224.4
85°	67.0	78.8	90.6	102.4	114.2	126.5	139.1	151.8	164.5	177.1	185.5
87.5°	37.9	49.7	61.6	73.5	85.3	97.6	110.2	122.8	135.4	147.9	156.3
90°	22.6	35.8	49.0	62.1	75.3	88.6	102.1	115.7	129.1	142.6	151.9
92.5°	36.1	48.5	60.8	73.1	85.5	98.2	111.2	124.3	137.4	150.4	159.1
95°	63.8	74.8	85.6	96.5	107.3	119.1	131.9	144.7	157.4	170.2	178.2
97.5°	97.8	107.0	116.3	125.6	134.8	145.8	158.7	171.5	184.4	197.3	205.3
100°	124.6	132.6	140.6	148.6	156.7	166.9	179.5	192.0	204.5	217.1	225.1
102.5°	153.7	160.4	167.1	173.8	180.5	189.9	202.1	214.3	226.4	238.6	246.4
105°	195.6	201.5	207.2	213.0	218.8	227.3	238.4	249.5	260.5	271.6	279.2
107.5°	242.0	246.8	251.7	256.5	261.3	268.7	278.6	288.6	298.5	308.5	315.8
110°	272.7	276.9	281.2	285.5	289.8	296.8	306.4	316.1	325.7	335.4	341.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	304.5	308.1	311.6	315.2	318.8	325.0	334.1	343.2	352.3	361.3	367.5
115°	352.4	354.9	357.4	359.9	362.4	368.0	376.7	385.3	394.0	402.6	408.6
117.5°	398.5	400.2	401.9	403.5	405.2	410.1	418.3	426.4	434.5	442.6	447.9
120°	428.6	430.1	431.7	433.2	434.7	439.3	446.9	454.6	462.2	469.8	474.6
122.5°	460.8	461.3	461.7	462.2	462.6	466.6	474.0	481.5	488.9	496.4	501.5
125°	507.2	506.8	506.6	506.3	506.0	509.3	516.2	523.0	529.9	536.7	541.7
127.5°	550.1	550.3	550.6	550.8	551.0	553.7	558.9	564.0	569.1	574.2	578.9
130°	579.4	579.6	580.0	580.2	580.4	582.8	587.2	591.8	596.3	600.8	605.5
132.5°	610.5	610.5	610.6	610.8	610.9	612.6	616.1	619.6	623.0	626.5	631.0
135°	650.1	651.2	652.2	653.3	654.3	655.8	657.8	659.8	661.7	663.7	667.9
137.5°	694.7	694.9	695.1	695.4	695.5	696.2	697.5	698.8	700.0	701.2	704.9
140°	724.5	724.5	724.6	724.7	724.7	724.9	725.2	725.5	725.7	726.0	729.5
142.5°	750.7	750.9	751.2	751.5	751.8	751.8	751.5	751.2	750.9	750.6	753.8
145°	788.0	788.5	788.9	789.3	789.7	790.0	790.2	790.4	790.5	790.7	792.2
147.5°	825.4	825.9	826.5	827.0	827.6	827.8	827.7	827.5	827.4	827.3	827.4
150°	848.1	848.5	849.0	849.4	849.8	850.0	850.0	850.0	850.0	850.0	850.0
152.5°	868.6	868.9	869.3	869.7	870.1	870.3	870.4	870.6	870.8	870.8	871.3
155°	901.4	901.4	901.4	901.4	901.4	901.3	901.1	900.9	900.8	900.6	901.3
157.5°	929.2	928.9	928.6	928.3	928.0	927.8	927.7	927.7	927.7	927.6	928.2
160°	945.7	945.5	945.3	945.2	945.0	944.8	944.6	944.4	944.3	944.1	944.6
162.5°	960.8	960.4	960.0	959.5	959.0	958.7	958.5	958.4	958.2	958.0	958.9
165°	981.3	980.7	980.2	979.7	979.1	978.7	978.3	978.0	977.6	977.3	978.3
167.5°	997.0	996.2	995.5	994.7	994.0	993.6	993.6	993.7	993.7	993.8	994.8
170°	1005.8	1004.9	1004.0	1003.1	1002.3	1001.9	1002.1	1002.3	1002.4	1002.6	1003.7
172.5°	1012.1	1011.4	1010.7	1009.9	1009.2	1008.8	1008.8	1008.8	1008.9	1008.9	1010.1
175°	1020.8	1019.9	1019.1	1018.2	1017.3	1016.8	1016.6	1016.4	1016.2	1016.1	1017.3
177.5°	1023.7	1022.9	1022.2	1021.5	1020.8	1020.5	1020.5	1020.5	1020.5	1020.5	1021.4
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1125.7	1127.3	1128.9	1129.5	1129.3	1129.0	1128.9	1128.6
5°	1122.8	1125.0	1127.2	1128.2	1127.9	1127.7	1127.4	1127.1
7.5°	1116.7	1119.3	1121.8	1122.9	1122.6	1122.4	1122.0	1121.8
10°	1110.6	1113.2	1115.7	1116.8	1116.6	1116.3	1115.9	1115.7
12.5°	1102.1	1104.4	1106.7	1107.9	1107.8	1107.7	1107.6	1107.6
15°	1086.6	1089.2	1091.6	1092.8	1092.5	1092.3	1091.9	1091.6
17.5°	1067.8	1070.3	1072.9	1074.1	1073.9	1073.6	1073.4	1073.2
20°	1053.0	1055.8	1058.7	1060.0	1060.0	1060.0	1060.0	1060.0
22.5°	1035.8	1038.6	1041.4	1043.1	1043.5	1043.9	1044.4	1044.9
25°	1009.3	1012.4	1015.5	1017.2	1017.5	1017.7	1018.0	1018.3
27.5°	979.5	982.4	985.2	986.8	987.2	987.5	987.9	988.2
30°	958.7	961.8	964.9	966.7	967.3	967.8	968.4	969.0
32.5°	937.3	940.9	944.4	946.5	947.1	947.6	948.2	948.7
35°	903.5	907.4	911.3	913.7	914.6	915.4	916.2	917.1
37.5°	868.2	872.1	876.2	878.6	879.5	880.4	881.3	882.2
40°	843.3	847.6	851.8	854.4	855.6	856.7	857.8	858.9
42.5°	818.9	823.6	828.2	831.0	831.9	832.8	833.7	834.6
45°	781.2	786.0	790.8	793.8	795.3	796.6	798.0	799.5
47.5°	741.3	746.2	751.2	754.5	756.2	757.9	759.5	761.3
50°	713.3	718.9	724.5	728.2	729.9	731.6	733.2	734.9
52.5°	685.0	690.6	696.2	699.9	701.6	703.2	704.9	706.6
55°	642.5	648.1	653.7	657.4	659.0	660.8	662.4	664.1
57.5°	597.8	604.5	611.2	615.3	616.9	618.5	620.0	621.6
60°	567.0	573.5	579.9	584.2	586.5	588.7	591.0	593.3
62.5°	536.6	543.1	549.5	553.9	556.2	558.4	560.6	562.9
65°	489.6	496.7	503.7	508.3	510.6	512.9	515.2	517.4
67.5°	443.6	450.8	457.9	462.6	464.8	466.9	469.1	471.3
70°	411.1	418.7	426.3	431.1	433.0	435.0	437.0	438.9
72.5°	380.3	387.7	395.1	399.8	402.0	404.2	406.4	408.6
75°	333.3	341.1	349.0	354.2	356.7	359.3	361.8	364.3
77.5°	289.5	297.5	305.4	310.8	313.5	316.2	318.9	321.5
80°	261.0	269.4	277.9	283.2	285.4	287.7	289.9	292.2
82.5°	233.1	241.8	250.4	256.0	258.5	260.9	263.4	265.9
85°	193.9	202.4	210.8	216.4	219.3	222.0	224.9	227.7
87.5°	164.7	173.0	181.4	186.9	189.4	191.9	194.5	197.0
90°	161.1	170.2	179.4	185.4	188.0	190.5	193.1	195.7
92.5°	167.6	176.2	184.7	190.2	192.7	195.1	197.6	200.0
95°	186.4	194.5	202.6	207.9	210.5	213.0	215.6	218.1
97.5°	213.3	221.3	229.3	234.5	236.9	239.3	241.7	244.2
100°	233.0	240.9	248.9	253.8	255.8	257.8	259.8	261.7
102.5°	254.4	262.2	270.1	275.1	277.5	279.8	282.2	284.5
105°	286.8	294.4	301.9	307.0	309.8	312.6	315.4	318.1
107.5°	323.3	330.7	338.1	342.8	344.8	346.7	348.7	350.8
110°	347.6	353.8	359.9	364.3	367.1	369.9	372.6	375.4





TEST NUMBER: P332701-927

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	373.7	379.9	386.0	390.3	392.6	395.0	397.4	399.7
115°	414.6	420.6	426.7	430.6	432.4	434.1	435.9	437.8
117.5°	453.1	458.4	463.7	467.2	469.1	471.0	472.9	474.8
120°	479.3	484.0	488.8	492.5	495.1	497.6	500.3	502.9
122.5°	506.4	511.5	516.5	519.7	521.1	522.5	523.9	525.3
125°	546.7	551.7	556.7	559.8	561.2	562.5	563.9	565.2
127.5°	583.6	588.4	593.0	596.2	597.9	599.4	601.1	602.7
130°	610.2	614.9	619.6	622.4	623.4	624.4	625.4	626.4
132.5°	635.4	639.9	644.4	647.4	648.7	650.1	651.6	653.0
135°	672.0	676.1	680.3	682.9	684.1	685.2	686.4	687.6
137.5°	708.5	712.2	715.8	718.4	719.9	721.4	722.9	724.5
140°	733.0	736.5	740.0	742.3	743.5	744.7	746.0	747.2
142.5°	756.9	760.1	763.3	765.4	766.5	767.7	768.8	770.0
145°	793.8	795.3	796.8	797.8	798.4	799.0	799.6	800.2
147.5°	827.4	827.5	827.6	828.0	828.7	829.4	830.1	830.8
150°	850.0	850.0	850.0	849.9	849.8	849.5	849.4	849.2
152.5°	871.7	872.1	872.6	872.6	872.1	871.6	871.2	870.7
155°	902.1	902.7	903.4	903.4	902.7	902.1	901.3	900.6
157.5°	928.7	929.2	929.8	929.7	929.2	928.5	928.0	927.3
160°	945.2	945.7	946.2	946.0	945.2	944.3	943.4	942.5
162.5°	959.9	960.8	961.8	961.9	961.0	960.1	959.3	958.3
165°	979.5	980.5	981.5	981.7	981.0	980.3	979.6	978.9
167.5°	995.9	997.0	998.0	998.0	996.9	995.8	994.7	993.6
170°	1004.7	1005.8	1006.9	1006.7	1005.5	1004.2	1003.1	1001.8
172.5°	1011.3	1012.5	1013.8	1013.7	1012.5	1011.2	1010.0	1008.8
175°	1018.5	1019.8	1021.0	1021.0	1019.8	1018.5	1017.3	1016.1
177.5°	1022.5	1023.4	1024.5	1024.4	1023.3	1022.1	1021.0	1019.9
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4

(END OF REPORT)