

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: P332849-927

Luminaire Tested: **S124DIW-S1195D1050U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332849-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S1195D1050U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7173.2 lumens
Efficiency: N/A
Efficacy: 106.4 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

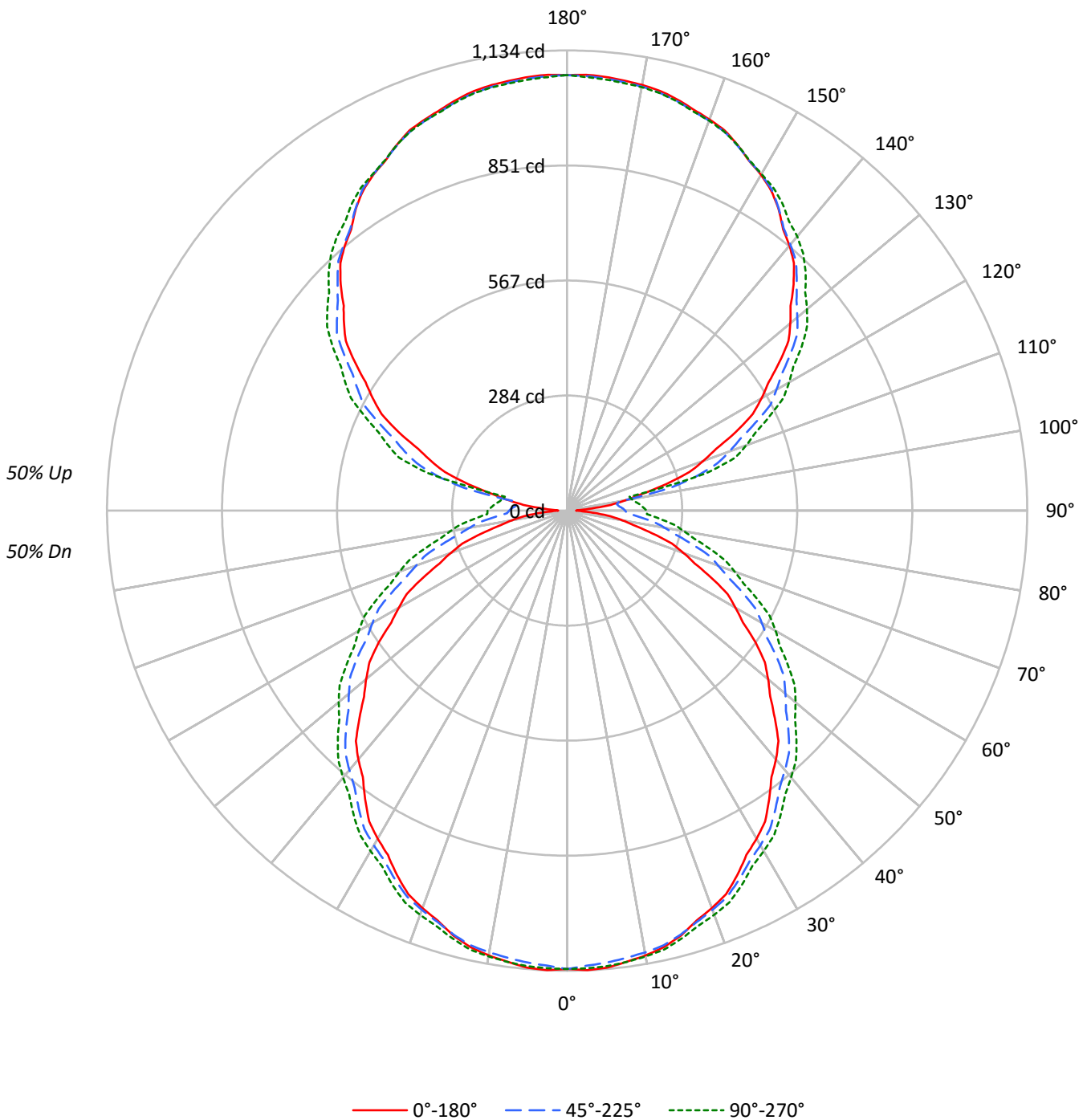
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332849-927

CATALOG NUMBER: S124DIW-S1195D1050U927-4F0-1E-UDD-D

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

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	1.5
10°-20°	306.5	4.3
20°-30°	463.4	6.5
30°-40°	560.7	7.8
40°-50°	592.8	8.3
50°-60°	557.9	7.8
60°-70°	462.9	6.5
70°-80°	325.1	4.5
80°-90°	186.9	2.6
90°-100°	145.8	2.0
100°-110°	314.8	4.4
110°-120°	501.9	7.0
120°-130°	598.9	8.3
130°-140°	621.2	8.7
140°-150°	571.2	8.0
150°-160°	458.5	6.4
160°-170°	295.7	4.1
170°-180°	101.9	1.4
0°-30°	876.9	12.2
0°-40°	1437.6	20.0
0°-60°	2588.3	36.1
0°-90°	3563.2	49.7
90°-120°	962.5	13.4
90°-150°	2753.9	38.4
90°-180°	3610.0	50.3
0°-180°	7173.2	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	183	196	15
95°	61	77	128	165	179	70
105°	253	284	334	370	354	266
115°	459	474	512	540	550	452
125°	639	643	671	697	706	571
135°	789	789	800	822	831	608
145°	908	909	909	918	924	567
155°	994	995	993	996	994	458
165°	1049	1045	1045	1051	1044	296
175°	1073	1069	1069	1075	1067	102
180°	1073	1073	1073	1073	1073	



TEST NUMBER: P332849-927

CATALOG NUMBER: S124DIW-S1195D1050U927-4F0-1E-UDD-D

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	85.4	97.6	110.2	122.8	135.4	148.0	156.4
90°	22.7	35.9	49.0	62.3	75.5	88.8	102.3	115.9	129.4	142.9	152.1
92.5°	29.3	39.5	49.8	60.0	70.3	82.1	95.6	109.2	122.6	136.2	145.2
95°	60.6	63.8	67.0	70.2	73.4	80.9	92.6	104.3	116.0	127.7	136.3
97.5°	108.7	120.4	132.2	143.9	155.7	157.4	148.9	140.4	131.9	123.4	130.9
100°	145.5	156.1	166.6	177.1	187.6	186.1	172.4	158.8	145.1	131.4	136.0
102.5°	187.9	196.7	205.4	214.2	223.0	231.2	238.7	246.2	253.7	261.3	235.9
105°	252.9	259.7	266.3	273.1	279.7	288.8	300.0	311.3	322.6	333.9	342.5
107.5°	315.4	320.6	325.7	330.9	336.0	344.2	355.2	366.3	377.3	388.4	396.1
110°	356.9	361.3	365.8	370.3	374.7	382.4	393.3	404.3	415.2	426.0	432.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	397.0	401.4	405.8	410.3	414.7	421.9	431.8	441.6	451.5	461.4	467.6
115°	458.7	461.8	464.8	467.9	471.0	476.9	485.7	494.5	503.4	512.1	518.6
117.5°	515.4	517.6	519.8	522.1	524.3	529.8	538.6	547.4	556.1	564.9	570.7
120°	552.9	554.4	556.0	557.6	559.1	563.9	571.9	579.9	587.8	595.8	601.7
122.5°	588.8	589.5	590.1	590.7	591.3	595.6	603.5	611.4	619.4	627.3	633.2
125°	639.1	639.5	640.0	640.4	640.9	644.4	651.1	657.7	664.4	671.1	677.0
127.5°	687.7	687.5	687.5	687.4	687.3	690.3	696.6	702.7	709.0	715.2	720.2
130°	718.1	718.0	718.0	717.8	717.7	720.2	725.2	730.2	735.3	740.3	745.5
132.5°	747.0	747.0	747.1	747.1	747.2	749.3	753.6	757.9	762.2	766.4	771.4
135°	789.1	788.9	788.8	788.5	788.4	789.6	792.3	795.0	797.6	800.3	805.3
137.5°	827.4	827.3	827.0	826.8	826.6	827.4	829.1	830.8	832.6	834.3	838.8
140°	852.5	852.5	852.6	852.7	852.8	853.2	853.8	854.4	855.1	855.7	859.9
142.5°	873.9	874.6	875.1	875.8	876.3	876.6	876.7	876.7	876.8	876.8	880.4
145°	908.2	908.5	908.7	908.9	909.3	909.3	909.3	909.3	909.3	909.3	911.2
147.5°	935.6	936.4	937.1	937.9	938.6	938.8	938.7	938.5	938.3	938.1	938.5
150°	955.6	956.0	956.5	956.9	957.3	957.4	957.3	957.1	956.9	956.7	956.7
152.5°	971.3	971.8	972.3	972.8	973.4	973.4	973.1	972.8	972.5	972.2	972.4
155°	994.4	994.7	994.8	995.0	995.1	995.0	994.4	994.0	993.4	992.8	993.6
157.5°	1014.2	1014.1	1014.0	1013.8	1013.8	1013.4	1012.8	1012.2	1011.6	1011.0	1011.9
160°	1025.7	1025.2	1024.7	1024.1	1023.6	1023.3	1023.1	1022.9	1022.7	1022.5	1023.6
162.5°	1036.0	1035.4	1034.7	1034.0	1033.3	1032.8	1032.7	1032.5	1032.4	1032.1	1033.2
165°	1049.0	1048.1	1047.3	1046.3	1045.4	1045.0	1045.0	1045.0	1045.0	1045.0	1046.5
167.5°	1059.3	1058.4	1057.5	1056.5	1055.6	1055.1	1054.9	1054.9	1054.8	1054.6	1056.2
170°	1065.1	1064.0	1063.0	1061.8	1060.8	1060.3	1060.5	1060.7	1060.9	1061.0	1062.5
172.5°	1068.9	1067.9	1066.8	1065.7	1064.6	1064.2	1064.4	1064.5	1064.8	1064.9	1066.4
175°	1073.1	1072.1	1071.0	1069.9	1068.8	1068.4	1068.6	1068.7	1068.9	1069.1	1070.7
177.5°	1075.0	1074.0	1073.0	1072.1	1071.0	1070.7	1071.0	1071.3	1071.5	1071.8	1072.9
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1



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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	173.1	181.5	186.9	189.5	192.0	194.6	197.1
90°	161.4	170.6	179.7	185.7	188.3	190.9	193.5	196.1
92.5°	154.2	163.2	172.1	177.8	180.1	182.4	184.8	187.1
95°	145.0	153.7	162.3	168.0	170.7	173.5	176.2	178.9
97.5°	138.3	145.8	153.3	158.4	160.9	163.5	166.1	168.7
100°	140.5	145.1	149.7	153.0	155.2	157.3	159.5	161.6
102.5°	210.6	185.2	159.9	148.3	150.5	152.7	155.0	157.2
105°	351.2	359.8	368.4	370.7	366.5	362.3	358.1	353.9
107.5°	403.8	411.5	419.1	424.4	427.1	429.8	432.5	435.1
110°	439.7	446.6	453.4	458.1	461.0	463.7	466.5	469.3



TEST NUMBER: P332849-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	473.8	480.0	486.2	490.7	493.6	496.5	499.5	502.4
115°	525.2	531.8	538.3	542.6	544.5	546.4	548.4	550.4
117.5°	576.5	582.3	588.0	592.0	594.1	596.4	598.5	600.7
120°	607.8	613.7	619.7	623.7	625.5	627.4	629.3	631.2
122.5°	639.0	644.8	650.7	654.4	656.1	657.7	659.4	661.1
125°	682.9	688.7	694.6	698.5	700.4	702.2	704.1	705.9
127.5°	725.1	730.1	735.0	738.4	740.1	741.9	743.7	745.4
130°	750.8	756.1	761.3	764.7	766.4	768.1	769.8	771.5
132.5°	776.5	781.5	786.5	789.8	791.3	792.9	794.4	796.0
135°	810.1	814.9	819.8	823.2	825.3	827.3	829.3	831.4
137.5°	843.4	847.9	852.3	855.2	856.5	857.9	859.1	860.5
140°	864.1	868.3	872.5	875.4	876.9	878.5	880.1	881.7
142.5°	884.0	887.6	891.2	893.6	894.8	896.0	897.2	898.5
145°	913.1	915.0	916.8	918.5	920.0	921.5	923.0	924.4
147.5°	938.8	939.2	939.6	940.3	941.4	942.5	943.6	944.6
150°	956.7	956.7	956.7	956.8	957.0	957.2	957.4	957.5
152.5°	972.7	973.0	973.3	973.4	973.3	973.1	973.0	973.0
155°	994.3	995.0	995.7	995.8	995.2	994.7	994.2	993.6
157.5°	1012.8	1013.8	1014.7	1014.7	1013.8	1012.8	1011.9	1011.0
160°	1024.7	1025.7	1026.8	1026.8	1025.7	1024.7	1023.6	1022.5
162.5°	1034.3	1035.4	1036.4	1036.4	1035.1	1034.0	1032.8	1031.5
165°	1047.9	1049.3	1050.8	1050.6	1049.0	1047.4	1045.8	1044.2
167.5°	1057.8	1059.4	1060.9	1060.8	1059.1	1057.2	1055.5	1053.7
170°	1063.9	1065.3	1066.8	1066.6	1064.8	1063.0	1061.2	1059.5
172.5°	1067.8	1069.2	1070.6	1070.4	1068.4	1066.5	1064.6	1062.6
175°	1072.3	1073.9	1075.5	1075.2	1073.1	1071.0	1068.8	1066.7
177.5°	1074.1	1075.2	1076.4	1076.1	1074.4	1072.7	1071.0	1069.3
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1

(END OF REPORT)