

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: P332691-927

Luminaire Tested: **SA4XXDIP-C1195D810U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332691-927
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: SA4XXDIP-C1195D810U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6414.8 lumens
Efficiency: N/A
Efficacy: 105.7 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

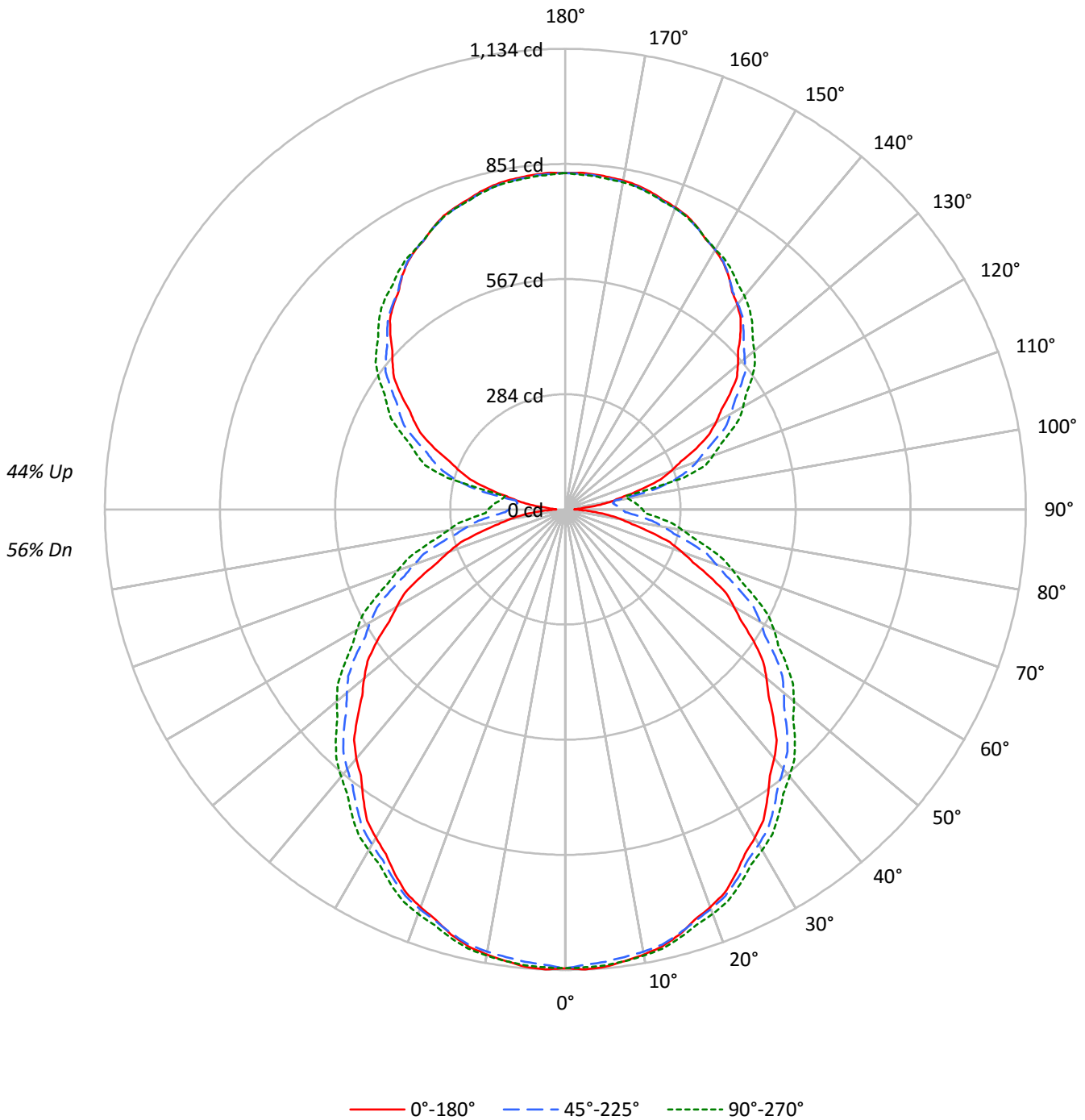
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332691-927

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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	56				
1	98	93	89	85	91	86	83	79	74	71	69	63	61	59	52	51	49	44				
2	89	81	74	68	82	75	69	64	64	60	56	54	51	48	45	43	41	36				
3	81	70	63	56	74	66	59	53	56	51	46	48	44	40	40	37	34	30				
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	26				
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	32	28	25	22				
6	62	49	41	35	57	46	38	33	40	34	29	34	29	26	29	25	22	19				
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	19	17				
8	53	40	32	27	49	38	31	25	33	27	23	28	23	20	24	20	17	15				
9	49	37	29	24	46	35	27	23	30	24	20	26	21	18	22	18	16	13				
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	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	1.7
10°-20°	306.5	4.8
20°-30°	463.4	7.2
30°-40°	560.7	8.7
40°-50°	592.8	9.2
50°-60°	557.9	8.7
60°-70°	462.9	7.2
70°-80°	325.1	5.1
80°-90°	186.2	2.9
90°-100°	137.5	2.1
100°-110°	261.4	4.1
110°-120°	399.7	6.2
120°-130°	469.1	7.3
130°-140°	482.4	7.5
140°-150°	441.5	6.9
150°-160°	353.9	5.5
160°-170°	228.2	3.6
170°-180°	78.7	1.2
0°-30°	876.9	13.7
0°-40°	1437.6	22.4
0°-60°	2588.3	40.3
0°-90°	3562.4	55.5
90°-120°	798.5	12.4
90°-150°	2191.6	34.2
90°-180°	2852.0	44.5
0°-180°	6414.8	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°	22	80	139	178	191	15
95°	50	73	124	160	174	57
105°	198	228	277	311	302	208
115°	356	370	409	437	447	350
125°	494	497	526	551	560	442
135°	610	610	620	641	650	470
145°	701	702	702	710	716	438
155°	768	768	766	768	767	354
165°	810	807	806	811	806	229
175°	828	825	825	830	823	79
180°	828	828	828	828	828	



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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°	37.8	49.6	61.4	73.1	84.9	97.0	109.6	122.2	134.7	147.2	155.5
90°	22.1	34.9	47.6	60.4	73.1	86.1	99.3	112.5	125.6	138.9	147.8
92.5°	27.0	37.2	47.5	57.7	67.8	79.5	92.8	105.9	119.1	132.3	141.0
95°	50.5	55.1	59.7	64.3	68.9	77.0	88.7	100.4	112.0	123.7	132.1
97.5°	87.3	98.2	109.1	120.0	130.9	134.4	130.4	126.4	122.5	118.6	126.0
100°	115.5	125.2	135.1	144.9	154.6	155.5	147.5	139.4	131.4	123.4	128.7
102.5°	148.2	156.5	164.6	172.9	181.1	189.3	197.6	205.9	214.1	222.4	204.5
105°	197.8	204.3	210.7	217.1	223.6	232.3	243.4	254.5	265.6	276.7	285.0
107.5°	246.0	251.0	256.0	261.1	266.1	274.0	284.8	295.6	306.3	317.1	324.6
110°	277.7	282.0	286.4	290.7	295.1	302.6	313.2	323.9	334.6	345.2	352.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.4	312.6	316.9	321.1	325.3	332.3	342.1	351.9	361.6	371.5	377.6
115°	355.7	358.6	361.6	364.5	367.5	373.4	382.2	391.1	400.0	408.8	415.3
117.5°	399.4	401.5	403.5	405.6	407.7	413.0	421.8	430.4	439.1	447.8	453.6
120°	428.2	429.5	430.9	432.3	433.7	438.4	446.4	454.5	462.5	470.5	476.3
122.5°	455.9	456.4	456.9	457.4	457.9	462.1	470.0	477.8	485.8	493.7	499.5
125°	494.4	494.6	495.0	495.2	495.4	499.0	505.7	512.5	519.2	526.0	531.7
127.5°	531.8	531.6	531.5	531.4	531.2	534.2	540.2	546.2	552.2	558.3	563.2
130°	555.1	554.9	554.8	554.6	554.4	556.9	561.8	566.7	571.6	576.6	581.7
132.5°	577.3	577.3	577.3	577.3	577.3	579.2	583.4	587.5	591.6	595.7	600.7
135°	609.5	609.4	609.3	609.1	609.0	610.2	612.7	615.2	617.7	620.3	625.0
137.5°	639.1	638.9	638.7	638.5	638.3	638.9	640.5	642.1	643.6	645.2	649.6
140°	658.5	658.5	658.5	658.5	658.5	658.7	659.3	659.8	660.4	660.9	665.0
142.5°	674.8	675.3	675.7	676.1	676.5	676.8	676.8	676.8	676.8	676.8	680.2
145°	701.2	701.3	701.5	701.6	701.7	701.8	701.8	701.8	701.8	701.8	703.6
147.5°	722.4	722.9	723.3	723.8	724.3	724.5	724.4	724.2	724.1	724.0	724.3
150°	737.8	738.0	738.2	738.6	738.8	738.9	738.7	738.6	738.5	738.3	738.3
152.5°	749.6	750.0	750.4	750.8	751.1	751.2	751.0	750.8	750.4	750.2	750.4
155°	767.5	767.5	767.7	767.9	768.0	767.9	767.5	767.0	766.6	766.2	766.8
157.5°	782.7	782.6	782.5	782.4	782.4	782.0	781.6	781.2	780.7	780.2	780.9
160°	791.6	791.2	790.8	790.4	790.0	789.6	789.6	789.4	789.3	789.1	790.0
162.5°	799.5	799.0	798.4	798.0	797.4	797.1	796.9	796.9	796.7	796.5	797.4
165°	809.5	808.9	808.2	807.5	806.8	806.4	806.4	806.4	806.4	806.4	807.6
167.5°	817.5	816.7	816.0	815.3	814.6	814.2	814.1	814.0	814.0	813.9	815.1
170°	822.0	821.1	820.3	819.4	818.6	818.3	818.4	818.6	818.7	818.9	819.9
172.5°	824.9	824.1	823.2	822.4	821.7	821.3	821.4	821.6	821.7	821.8	822.9
175°	828.1	827.3	826.5	825.7	824.8	824.5	824.7	824.7	824.9	825.1	826.2
177.5°	829.7	828.9	828.1	827.3	826.6	826.2	826.5	826.7	827.0	827.1	828.0
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1



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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°	163.8	172.1	180.5	185.8	188.4	190.9	193.5	196.0
90°	156.9	165.8	174.8	180.5	183.1	185.6	188.1	190.6
92.5°	149.8	158.5	167.3	172.9	175.2	177.4	179.7	182.0
95°	140.5	148.9	157.3	162.9	165.6	168.2	170.9	173.6
97.5°	133.5	140.9	148.4	153.4	155.9	158.4	161.1	163.6
100°	133.9	139.1	144.4	148.1	150.2	152.3	154.4	156.5
102.5°	186.6	168.7	150.9	143.1	145.3	147.5	149.7	151.9
105°	293.3	301.5	309.8	312.6	309.9	307.2	304.4	301.7
107.5°	332.2	339.7	347.2	352.2	354.7	357.3	359.9	362.4
110°	358.8	365.5	372.2	376.9	379.6	382.2	384.9	387.5



TEST NUMBER: P332691-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	383.8	390.0	396.2	400.6	403.4	406.2	408.9	411.7
115°	421.7	428.2	434.7	438.9	440.8	442.8	444.7	446.7
117.5°	459.4	465.2	471.0	474.9	477.1	479.3	481.5	483.7
120°	482.3	488.1	494.1	498.0	499.9	501.9	503.9	505.9
122.5°	505.3	511.0	516.8	520.5	522.3	524.1	525.9	527.6
125°	537.5	543.3	549.0	552.8	554.6	556.4	558.3	560.1
127.5°	568.2	573.2	578.2	581.6	583.4	585.2	587.0	588.7
130°	586.9	592.1	597.3	600.7	602.5	604.1	605.8	607.5
132.5°	605.7	610.7	615.7	618.9	620.5	622.1	623.7	625.2
135°	629.8	634.5	639.4	642.7	644.7	646.7	648.6	650.5
137.5°	653.9	658.4	662.8	665.7	666.9	668.3	669.6	671.0
140°	669.1	673.1	677.2	680.0	681.6	683.1	684.7	686.2
142.5°	683.8	687.3	690.8	693.2	694.3	695.5	696.8	698.0
145°	705.4	707.3	709.1	710.7	712.1	713.5	714.9	716.3
147.5°	724.6	724.9	725.3	726.0	727.0	728.1	729.1	730.2
150°	738.3	738.3	738.3	738.4	738.6	738.6	738.8	738.9
152.5°	750.7	750.9	751.1	751.1	751.1	751.0	750.9	750.8
155°	767.3	767.9	768.4	768.5	768.0	767.6	767.2	766.8
157.5°	781.6	782.4	783.1	783.1	782.4	781.6	780.9	780.2
160°	790.8	791.6	792.4	792.4	791.6	790.8	790.0	789.1
162.5°	798.2	799.0	799.9	799.8	798.8	797.9	797.0	796.1
165°	808.7	809.8	810.9	810.8	809.5	808.3	807.1	805.8
167.5°	816.3	817.5	818.7	818.6	817.3	815.9	814.5	813.2
170°	821.0	822.1	823.2	823.1	821.7	820.4	819.0	817.6
172.5°	824.0	825.1	826.2	826.0	824.6	823.1	821.6	820.1
175°	827.5	828.8	830.0	829.8	828.1	826.5	824.8	823.2
177.5°	828.9	829.8	830.7	830.4	829.1	827.8	826.5	825.1
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1

(END OF REPORT)