

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: P332693-927

Luminaire Tested: **S124DIP-S1195D810U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332693-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D810U927-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6145.5 lumens
Efficiency: N/A
Efficacy: 101.2 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

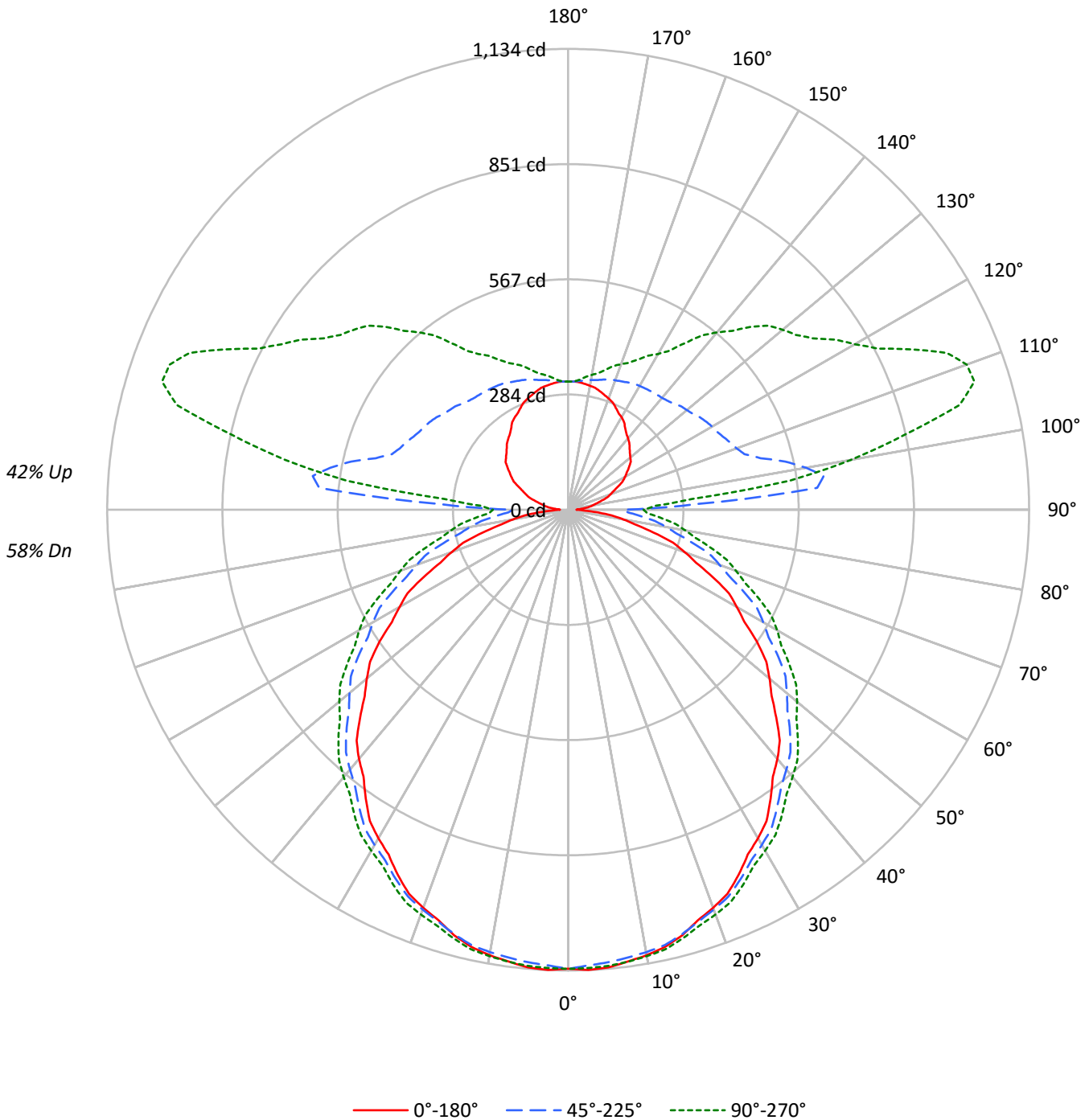
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	98	94	89	85	91	87	83	80	75	72	70	64	62	60	54	53	51	46
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	44	42	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	35	32
4	74	62	54	48	68	58	51	45	51	45	40	43	39	35	37	33	30	27
5	68	55	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23
6	62	50	41	35	58	46	39	33	41	34	30	35	30	26	30	26	23	20
7	58	45	36	31	53	42	34	29	37	31	26	32	27	23	27	23	20	18
8	53	41	33	27	50	38	31	26	33	27	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	18	23	19	16	14
10	46	34	26	22	43	32	25	21	28	22	19	25	20	17	21	17	15	13

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	5.0
20°-30°	463.4	7.5
30°-40°	560.7	9.1
40°-50°	592.8	9.6
50°-60°	557.9	9.1
60°-70°	462.9	7.5
70°-80°	325.1	5.3
80°-90°	185.5	3.0
90°-100°	336.9	5.5
100°-110°	554.7	9.0
110°-120°	478.7	7.8
120°-130°	387.7	6.3
130°-140°	311.0	5.1
140°-150°	230.1	3.7
150°-160°	159.9	2.6
160°-170°	94.0	1.5
170°-180°	30.6	0.5
0°-30°	876.9	14.3
0°-40°	1437.6	23.4
0°-60°	2588.3	42.1
0°-90°	3561.8	58.0
90°-120°	1370.3	22.3
90°-150°	2299.1	37.4
90°-180°	2584.0	42.0
0°-180°	6145.5	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°	21	76	136	173	185	14
95°	37	123	615	393	307	36
105°	84	143	490	989	997	90
115°	135	181	422	782	933	135
125°	183	217	396	651	735	163
135°	214	255	369	557	636	166
145°	245	279	356	451	500	154
155°	277	299	346	392	408	128
165°	302	311	331	351	356	85
175°	315	315	318	322	321	30
180°	315	315	315	315	315	



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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°	37.5	49.3	61.2	72.7	84.3	96.2	109.2	121.6	134.1	146.7	154.7
90°	20.8	33.4	46.4	58.3	70.2	81.8	97.7	109.7	123.0	136.4	143.9
92.5°	26.3	39.6	55.6	73.3	92.4	116.4	159.9	220.1	279.0	315.6	290.7
95°	36.9	48.0	63.5	80.8	105.0	141.4	206.8	319.9	479.5	614.9	636.8
97.5°	51.6	59.6	72.9	88.3	109.1	140.5	193.5	288.8	447.3	633.9	761.7
100°	61.0	68.3	79.9	94.7	113.8	142.8	190.2	271.2	408.5	594.1	760.3
102.5°	70.9	78.3	88.6	101.9	119.6	146.9	190.8	263.1	381.4	547.0	717.9
105°	83.9	91.3	100.1	113.1	129.9	155.8	196.0	257.8	354.9	489.8	642.5
107.5°	100.7	106.5	114.2	126.8	142.0	167.0	204.1	260.8	344.7	454.7	580.4
110°	111.1	116.3	123.3	134.7	149.7	173.3	210.5	263.6	341.6	441.2	548.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.0	125.7	132.8	143.2	157.8	181.0	216.7	266.9	340.0	431.7	528.1
115°	135.2	139.6	146.5	155.2	169.4	191.9	225.7	271.9	338.5	421.8	506.0
117.5°	151.3	154.6	159.9	168.3	180.8	203.0	235.0	277.6	337.6	413.6	491.7
120°	161.2	163.3	168.4	176.1	187.5	209.3	241.0	281.4	337.2	408.5	482.9
122.5°	171.1	172.5	177.0	183.5	195.2	215.9	247.2	285.1	337.1	403.0	473.9
125°	182.8	185.1	188.5	195.0	206.5	227.2	256.5	292.1	338.1	395.9	460.7
127.5°	194.1	195.8	199.9	207.5	219.5	239.5	266.5	298.0	337.5	387.0	444.1
130°	199.6	201.8	206.4	215.4	226.9	247.0	272.5	301.2	337.3	381.4	433.6
132.5°	206.0	207.7	213.8	222.4	234.8	253.5	278.1	305.4	337.6	376.8	424.3
135°	213.7	216.3	222.4	233.0	246.0	263.1	285.4	309.7	337.1	368.8	409.2
137.5°	222.8	224.9	231.4	241.1	254.4	270.1	290.1	311.9	335.4	362.8	396.6
140°	229.3	230.8	237.3	247.6	260.3	275.2	294.1	314.2	335.5	359.3	389.6
142.5°	235.2	236.9	243.2	253.2	265.7	280.0	297.9	316.0	335.9	357.3	384.1
145°	244.7	246.3	252.2	260.5	272.0	285.6	301.7	318.4	336.4	355.5	377.1
147.5°	255.7	256.0	261.3	269.9	279.4	291.5	306.7	321.2	337.0	353.3	371.0
150°	262.7	263.0	267.7	274.8	283.8	295.5	309.1	322.7	337.0	351.8	367.3
152.5°	268.1	268.2	273.1	280.0	288.2	299.0	311.1	323.7	336.0	349.4	363.4
155°	276.9	277.5	281.2	287.4	294.2	303.5	314.0	324.6	334.5	345.6	357.4
157.5°	285.7	285.7	289.1	294.0	299.9	307.2	316.2	324.6	332.9	341.8	351.3
160°	291.1	291.1	293.6	297.9	302.9	309.7	317.1	324.6	331.4	338.8	346.9
162.5°	296.1	295.6	297.5	301.4	305.9	311.2	318.1	324.6	329.9	335.9	342.9
165°	301.7	301.7	302.9	306.0	309.1	312.8	318.4	323.4	327.1	331.4	336.4
167.5°	307.2	306.7	307.2	309.6	311.3	314.2	318.3	321.9	324.1	326.9	330.4
170°	309.7	309.1	309.7	311.6	312.8	314.7	317.7	320.8	322.1	323.9	326.5
172.5°	312.2	311.6	311.7	313.1	313.8	315.1	317.3	319.9	320.1	321.0	323.0
175°	314.7	314.0	314.0	314.7	315.3	315.3	316.6	318.4	317.7	317.7	319.0
177.5°	315.8	315.3	314.8	315.3	315.3	315.3	315.8	316.8	315.8	315.8	316.2
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3



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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°	163.0	171.3	179.5	184.9	187.4	190.0	192.4	194.9
90°	152.7	161.4	170.2	175.4	178.3	181.2	182.8	185.1
92.5°	256.7	234.5	223.7	216.4	211.4	210.2	210.4	212.6
95°	584.2	495.8	420.4	365.4	337.5	320.8	312.3	306.7
97.5°	795.1	766.8	713.5	653.8	611.7	576.9	560.7	550.2
100°	858.3	878.3	855.6	814.5	762.6	726.7	710.1	707.2
102.5°	849.4	918.1	934.3	920.0	889.1	864.0	846.6	844.8
105°	791.3	905.5	973.8	1003.9	1007.3	1004.6	998.2	996.7
107.5°	713.0	834.0	927.2	987.0	1019.6	1035.8	1044.0	1047.6
110°	665.4	779.0	875.4	947.8	994.0	1022.3	1035.7	1043.5



TEST NUMBER: P332693-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	628.7	729.8	820.9	893.2	945.4	979.1	997.0	1008.2
115°	589.7	672.0	750.7	814.2	865.1	904.3	926.1	933.0
117.5°	566.0	634.9	697.8	752.3	796.2	829.7	852.0	858.1
120°	553.6	616.8	672.0	719.9	757.5	787.0	805.3	814.4
122.5°	542.6	603.8	654.6	696.9	728.8	754.1	769.8	778.6
125°	525.5	584.2	632.2	669.8	696.2	715.9	729.4	734.7
127.5°	505.0	560.9	608.6	644.4	671.3	689.2	701.0	706.6
130°	490.0	544.0	591.2	627.4	654.5	671.7	683.3	688.6
132.5°	475.2	525.9	571.9	608.0	634.5	653.7	664.8	670.2
135°	452.7	497.5	539.8	573.9	600.3	619.3	631.0	636.4
137.5°	433.1	471.3	507.2	538.0	562.5	581.1	590.7	596.5
140°	421.8	454.6	486.1	514.6	537.7	552.7	562.8	569.2
142.5°	411.9	440.8	467.9	492.6	513.0	526.8	535.7	540.3
145°	398.5	421.3	441.6	460.3	477.0	488.6	495.9	500.1
147.5°	387.6	404.6	419.6	433.8	446.2	456.1	461.7	463.7
150°	382.1	396.4	408.8	419.9	429.9	437.9	441.6	442.3
152.5°	376.8	389.0	400.4	409.6	418.0	424.5	426.7	427.4
155°	368.5	378.5	387.8	395.2	401.4	406.3	408.2	408.2
157.5°	359.7	368.0	375.9	381.8	386.5	390.2	391.3	391.3
160°	354.3	361.2	368.0	372.9	376.6	380.3	381.0	381.0
162.5°	348.9	354.7	360.0	364.5	367.2	370.9	371.5	371.1
165°	341.3	345.0	349.4	352.4	354.9	357.4	356.8	356.2
167.5°	334.0	336.8	340.3	342.1	343.4	345.0	344.9	344.4
170°	329.5	331.4	333.9	335.7	337.0	337.5	337.0	337.0
172.5°	325.6	326.9	328.4	329.8	330.5	331.1	330.5	329.5
175°	320.3	320.8	322.1	322.1	322.1	323.4	322.1	320.8
177.5°	316.8	317.3	317.3	317.7	317.3	317.7	316.8	315.8
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3

(END OF REPORT)