

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: P332692-930

Luminaire Tested: **SA4XXDIP-C1195D810U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332692-930
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-C1195D810U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

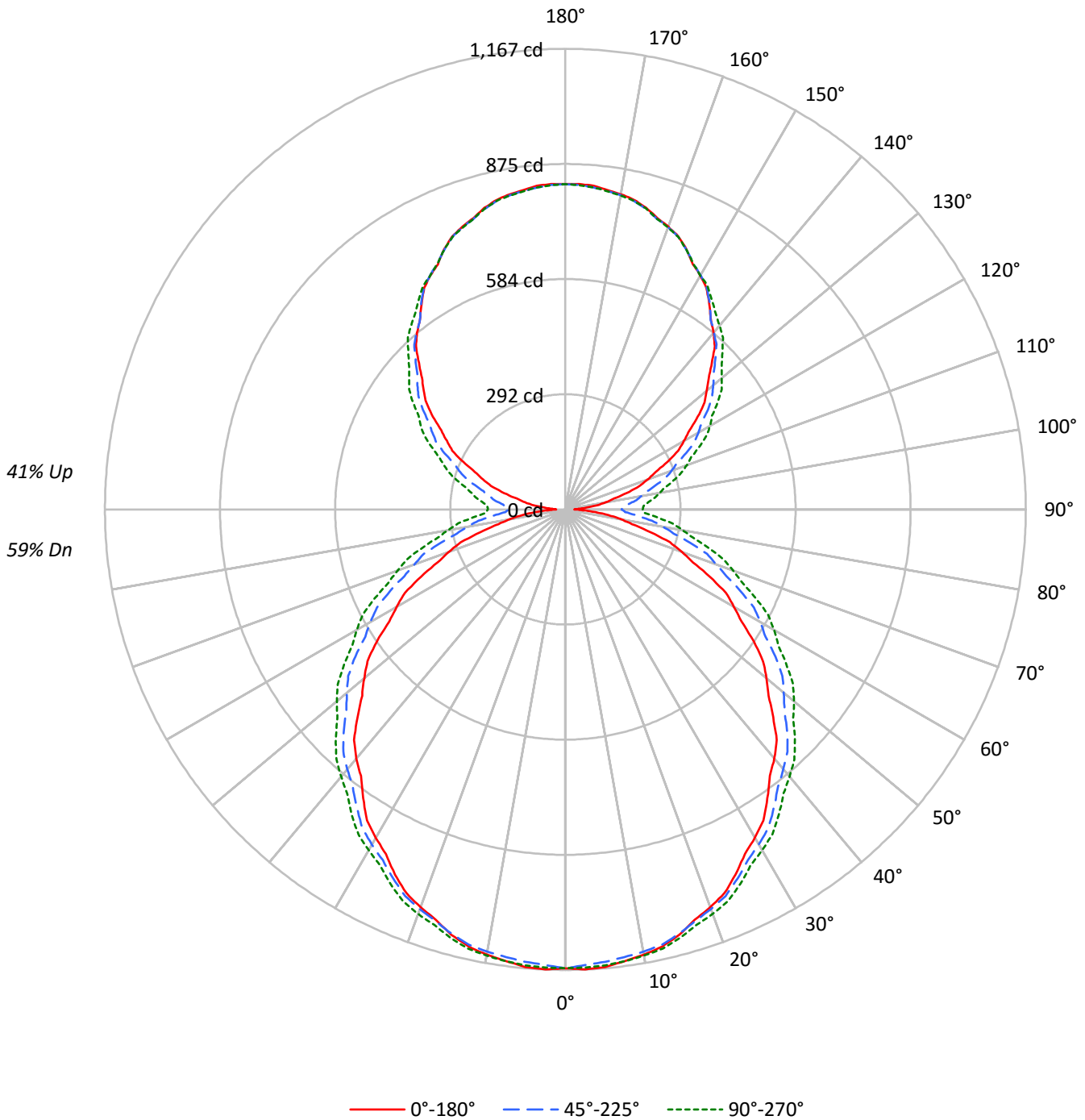
Lumens per Lamp: N/A
Luminaire Lumens: 6252.1 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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	76	76	76	64	64	64	59
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47
2	89	81	74	69	83	76	70	65	65	61	57	56	53	50	47	45	43	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	38	36	32
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20
7	58	45	36	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18
8	54	41	33	27	50	38	31	26	34	27	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9386	9386	9386
5°	9414	9173	9199
10°	9357	9022	9016
15°	9273	8849	8800
20°	9147	8658	8591
25°	9004	8442	8360
30°	8849	8228	8124
35°	8675	8010	7917
40°	8536	7801	7700
45°	8329	7610	7515
50°	8153	7388	7319
55°	7973	7179	7089
60°	7689	6913	6880
65°	7380	6628	6622
70°	7004	6302	6322
75°	6483	5945	6051
80°	5900	5600	5784
85°	5162	5295	5626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	1.8
10°-20°	315.4	5.0
20°-30°	477.0	7.6
30°-40°	577.1	9.2
40°-50°	610.1	9.8
50°-60°	574.2	9.2
60°-70°	476.4	7.6
70°-80°	334.6	5.4
80°-90°	191.6	3.1
90°-100°	166.7	2.7
100°-110°	244.2	3.9
110°-120°	329.1	5.3
120°-130°	391.9	6.3
130°-140°	418.3	6.7
140°-150°	400.5	6.4
150°-160°	334.5	5.4
160°-170°	222.6	3.6
170°-180°	77.9	1.2
0°-30°	902.5	14.4
0°-40°	1479.6	23.7
0°-60°	2663.8	42.6
0°-90°	3666.4	58.6
90°-120°	740.0	11.8
90°-150°	1950.6	31.2
90°-180°	2586.0	41.4
0°-180°	6252.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1163	1163	1163	1163	1163	
5°	1164	1160	1151	1161	1160	110
15°	1116	1117	1113	1124	1124	314
25°	1021	1028	1032	1046	1048	470
35°	893	908	922	939	944	559
45°	745	769	794	815	823	575
55°	583	611	650	675	684	520
65°	404	445	490	521	532	400
75°	224	272	327	362	375	238
85°	69	124	182	220	234	73
90°	23	82	143	183	196	16
95°	55	104	162	197	210	56
105°	160	188	238	271	284	171
115°	286	299	338	365	374	282
125°	410	410	441	463	471	366
135°	525	529	538	556	563	406
145°	636	637	637	644	648	398
155°	727	727	726	728	726	334
165°	791	789	788	791	789	223
175°	823	820	819	823	819	78
180°	824	824	824	824	824	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1166.8	1166.0	1165.4	1164.7	1164.0	1162.7	1160.8	1159.0	1157.2	1155.3	1156.9
5°	1163.8	1163.0	1162.1	1161.3	1160.4	1158.9	1156.9	1154.9	1152.9	1150.9	1153.2
7.5°	1154.0	1153.5	1152.9	1152.4	1151.9	1150.8	1149.2	1147.5	1145.7	1144.1	1146.7
10°	1145.7	1145.3	1145.1	1144.8	1144.5	1143.6	1142.2	1140.8	1139.3	1137.8	1140.4
12.5°	1134.2	1134.2	1134.1	1134.0	1134.0	1133.4	1132.5	1131.5	1130.5	1129.5	1131.9
15°	1115.7	1116.0	1116.3	1116.6	1116.9	1116.6	1115.7	1114.8	1113.9	1113.1	1115.7
17.5°	1090.5	1091.4	1092.2	1093.1	1093.9	1094.3	1094.1	1093.9	1093.7	1093.6	1096.3
20°	1072.8	1073.6	1074.5	1075.4	1076.2	1076.8	1077.1	1077.4	1077.7	1078.0	1080.8
22.5°	1053.0	1054.0	1055.2	1056.2	1057.4	1058.2	1058.7	1059.2	1059.7	1060.2	1063.2
25°	1020.7	1022.4	1024.2	1025.9	1027.6	1028.9	1029.8	1030.6	1031.5	1032.4	1035.6
27.5°	984.7	987.3	989.9	992.4	994.9	996.9	998.2	999.6	1000.9	1002.2	1005.1
30°	960.7	963.1	965.4	967.8	970.0	972.2	974.2	976.2	978.3	980.3	983.5
32.5°	934.7	937.5	940.3	943.1	945.8	948.4	950.6	952.9	955.1	957.4	961.1
35°	893.1	896.6	900.0	903.5	906.9	910.1	913.1	915.9	918.8	921.7	925.8
37.5°	851.2	855.2	859.2	863.2	867.2	870.9	874.5	878.1	881.7	885.3	889.4
40°	824.1	827.9	831.6	835.4	839.1	843.0	847.1	851.2	855.2	859.2	863.6
42.5°	792.9	797.0	801.3	805.5	809.8	814.2	819.0	823.7	828.4	833.2	838.0
45°	744.7	750.2	755.7	761.2	766.6	772.2	777.6	783.2	788.6	794.2	799.1
47.5°	698.5	704.3	710.0	715.6	721.3	727.3	733.7	740.0	746.4	752.8	757.8
50°	665.3	671.6	678.0	684.4	690.7	697.1	703.4	709.8	716.2	722.5	728.3
52.5°	631.9	638.3	644.7	651.0	657.4	664.2	671.5	678.8	686.1	693.4	699.2
55°	583.3	589.3	595.4	601.4	607.6	614.9	623.6	632.3	641.0	649.6	655.4
57.5°	528.8	536.4	543.9	551.4	558.9	567.0	575.6	584.2	592.9	601.4	608.4
60°	493.4	500.9	508.4	516.0	523.5	532.1	541.6	551.1	560.7	570.2	576.9
62.5°	459.0	467.2	475.5	483.7	491.9	500.8	510.4	519.9	529.5	539.0	545.6
65°	403.6	412.9	422.1	431.4	440.6	450.1	460.0	469.9	479.6	489.5	496.8
67.5°	350.2	360.0	369.9	379.7	389.6	399.7	410.3	420.8	431.3	441.9	449.2
70°	313.7	323.6	333.5	343.2	353.1	363.5	374.5	385.5	396.5	407.5	415.3
72.5°	278.3	288.4	298.5	308.5	318.6	329.5	341.2	352.9	364.5	376.3	383.8
75°	224.0	234.6	245.3	256.0	266.8	278.2	290.3	302.5	314.6	326.8	334.8
77.5°	173.2	184.5	195.8	207.2	218.5	230.6	243.3	256.0	268.7	281.4	289.7
80°	141.9	153.4	165.0	176.6	188.2	200.3	213.0	225.8	238.6	251.3	259.9
82.5°	110.6	122.7	134.8	146.8	158.8	171.2	183.9	196.7	209.4	222.1	231.0
85°	69.0	81.1	93.3	105.4	117.6	130.2	143.2	156.2	169.3	182.3	190.9
87.5°	38.9	51.0	63.2	75.3	87.4	99.9	112.8	125.7	138.6	151.5	160.0
90°	22.7	35.9	49.0	62.1	75.3	88.6	102.2	115.8	129.3	142.9	152.1
92.5°	33.4	45.7	57.8	70.0	82.3	95.0	108.2	121.4	134.6	147.9	156.5
95°	55.2	66.0	76.8	87.6	98.5	110.3	123.1	136.0	148.9	161.7	169.9
97.5°	82.2	91.4	100.6	109.9	119.1	130.2	143.1	156.0	168.9	181.8	189.9
100°	103.5	111.6	119.8	127.8	135.9	146.3	158.8	171.4	183.9	196.5	204.6
102.5°	127.0	133.9	140.6	147.5	154.3	163.8	176.0	188.3	200.5	212.7	220.6
105°	160.2	166.2	172.1	178.0	183.9	192.6	203.8	215.1	226.3	237.7	245.2
107.5°	197.5	202.5	207.4	212.3	217.2	224.8	235.0	245.2	255.4	265.6	273.1
110°	222.0	226.3	230.7	235.1	239.4	246.5	256.5	266.5	276.5	286.5	292.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	247.5	251.1	254.8	258.4	262.1	268.6	278.0	287.4	296.9	306.2	312.6
115°	285.7	288.3	290.9	293.5	296.1	301.9	310.9	319.8	328.8	337.8	344.1
117.5°	322.9	324.6	326.3	328.0	329.6	334.7	343.1	351.6	360.0	368.4	373.9
120°	346.9	348.3	349.8	351.1	352.6	357.3	365.3	373.2	381.2	389.1	394.3
122.5°	372.9	373.2	373.7	374.1	374.5	378.5	386.3	394.0	401.7	409.4	414.7
125°	409.9	409.7	409.4	409.1	408.8	412.2	419.3	426.4	433.5	440.6	445.8
127.5°	444.5	444.7	444.7	444.9	445.1	447.8	453.1	458.4	463.7	469.0	474.0
130°	467.9	468.1	468.2	468.3	468.5	470.8	475.5	480.1	484.8	489.3	494.3
132.5°	492.9	492.9	492.9	493.0	493.0	494.8	498.4	502.0	505.6	509.2	513.9
135°	524.6	525.5	526.4	527.2	528.0	529.5	531.5	533.5	535.6	537.5	541.9
137.5°	560.6	560.7	560.8	560.9	561.0	561.7	562.9	564.1	565.3	566.5	570.4
140°	584.6	584.6	584.5	584.5	584.5	584.7	585.0	585.2	585.5	585.8	589.5
142.5°	605.4	605.7	605.8	606.1	606.3	606.3	606.0	605.7	605.4	605.1	608.5
145°	635.5	635.8	636.1	636.3	636.6	636.8	637.0	637.1	637.2	637.4	639.0
147.5°	665.6	666.0	666.3	666.8	667.2	667.3	667.2	667.1	666.9	666.8	666.9
150°	684.0	684.2	684.5	684.8	685.1	685.2	685.2	685.2	685.2	685.2	685.2
152.5°	700.3	700.5	700.8	701.1	701.4	701.6	701.6	701.8	701.9	702.1	702.4
155°	726.6	726.6	726.6	726.6	726.6	726.5	726.4	726.3	726.1	726.0	726.5
157.5°	749.1	748.8	748.5	748.3	748.0	747.9	747.9	747.9	747.8	747.8	748.2
160°	762.3	762.1	762.1	761.9	761.7	761.6	761.5	761.3	761.2	761.1	761.5
162.5°	774.5	774.2	773.8	773.5	773.1	772.8	772.7	772.6	772.4	772.3	773.1
165°	791.0	790.6	790.2	789.7	789.3	789.0	788.6	788.4	788.1	787.8	788.6
167.5°	803.6	803.0	802.4	801.8	801.3	801.0	801.0	801.0	801.0	801.0	801.9
170°	810.7	810.1	809.3	808.6	808.0	807.6	807.8	808.0	808.0	808.2	809.0
172.5°	815.9	815.3	814.6	814.1	813.5	813.2	813.3	813.3	813.3	813.3	814.2
175°	822.9	822.1	821.4	820.8	820.0	819.6	819.5	819.3	819.2	819.0	820.0
177.5°	825.2	824.6	824.0	823.5	822.9	822.6	822.6	822.6	822.6	822.6	823.4
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1158.5	1160.2	1161.8	1162.5	1162.2	1162.0	1161.8	1161.6
5°	1155.5	1157.8	1160.1	1161.1	1160.8	1160.6	1160.3	1160.0
7.5°	1149.3	1151.9	1154.5	1155.7	1155.4	1155.1	1154.8	1154.5
10°	1143.0	1145.7	1148.3	1149.4	1149.2	1148.8	1148.5	1148.3
12.5°	1134.2	1136.6	1139.0	1140.2	1140.1	1140.0	1140.0	1140.0
15°	1118.3	1121.0	1123.5	1124.7	1124.4	1124.1	1123.8	1123.5
17.5°	1098.9	1101.6	1104.2	1105.5	1105.2	1105.0	1104.7	1104.5
20°	1083.8	1086.6	1089.6	1091.0	1091.0	1091.0	1091.0	1091.0
22.5°	1066.0	1068.9	1071.8	1073.5	1074.0	1074.4	1074.9	1075.4
25°	1038.8	1042.0	1045.1	1046.8	1047.2	1047.4	1047.7	1048.0
27.5°	1008.1	1011.1	1014.0	1015.6	1016.0	1016.4	1016.7	1017.0
30°	986.7	989.9	993.0	994.9	995.5	996.1	996.6	997.3
32.5°	964.7	968.3	972.0	974.1	974.7	975.3	975.8	976.4
35°	929.8	933.8	937.9	940.4	941.3	942.2	943.0	943.9
37.5°	893.5	897.6	901.7	904.2	905.1	906.0	907.0	907.9
40°	867.9	872.3	876.6	879.4	880.5	881.7	882.8	883.9
42.5°	842.8	847.6	852.4	855.2	856.2	857.1	858.0	859.0
45°	804.0	808.9	813.8	817.0	818.5	819.9	821.3	822.8
47.5°	763.0	768.0	773.1	776.5	778.3	780.0	781.7	783.5
50°	734.1	739.9	745.7	749.4	751.2	752.9	754.6	756.4
52.5°	705.0	710.8	716.5	720.3	722.0	723.7	725.5	727.2
55°	661.2	667.0	672.8	676.5	678.2	680.0	681.8	683.5
57.5°	615.2	622.2	629.0	633.2	634.9	636.5	638.1	639.8
60°	583.5	590.2	596.8	601.3	603.6	605.9	608.3	610.6
62.5°	552.3	559.0	565.6	570.1	572.4	574.7	577.0	579.4
65°	503.9	511.2	518.4	523.2	525.5	527.8	530.2	532.5
67.5°	456.6	463.9	471.2	476.1	478.3	480.5	482.8	485.1
70°	423.1	430.9	438.7	443.7	445.6	447.7	449.7	451.8
72.5°	391.4	399.0	406.6	411.5	413.8	416.0	418.2	420.5
75°	343.0	351.1	359.1	364.5	367.1	369.7	372.3	375.0
77.5°	297.9	306.1	314.3	319.8	322.6	325.4	328.2	330.9
80°	268.6	277.3	286.0	291.5	293.8	296.1	298.4	300.8
82.5°	239.9	248.8	257.7	263.5	266.0	268.6	271.1	273.6
85°	199.6	208.3	217.0	222.7	225.7	228.5	231.5	234.3
87.5°	168.6	177.2	185.7	191.3	193.9	196.5	199.1	201.7
90°	161.3	170.6	179.9	185.8	188.4	190.9	193.6	196.2
92.5°	165.2	173.9	182.5	188.1	190.6	193.1	195.6	198.0
95°	178.1	186.4	194.6	200.1	202.7	205.3	207.9	210.5
97.5°	198.0	206.1	214.2	219.5	221.9	224.5	226.9	229.4
100°	212.6	220.8	228.9	233.9	235.9	238.0	239.9	242.0
102.5°	228.6	236.6	244.6	249.7	252.1	254.5	256.9	259.3
105°	252.9	260.6	268.2	273.5	276.2	278.9	281.7	284.4
107.5°	280.6	288.2	295.7	300.4	302.6	304.6	306.6	308.7
110°	299.2	305.6	311.9	316.5	319.3	322.0	324.7	327.4



TEST NUMBER: P332692-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	318.9	325.3	331.7	336.1	338.5	340.9	343.2	345.7
115°	350.3	356.4	362.7	366.7	368.7	370.6	372.4	374.3
117.5°	379.4	385.0	390.5	394.3	396.3	398.4	400.4	402.4
120°	399.3	404.4	409.5	413.4	415.9	418.5	421.1	423.7
122.5°	420.0	425.3	430.6	434.1	435.7	437.2	438.9	440.4
125°	451.0	456.2	461.4	464.7	466.2	467.7	469.1	470.6
127.5°	478.9	483.9	488.8	492.1	493.8	495.6	497.3	499.0
130°	499.2	504.1	509.1	512.1	513.3	514.5	515.6	516.8
132.5°	518.5	523.3	527.9	531.0	532.6	534.0	535.6	537.0
135°	546.3	550.6	555.0	557.7	559.1	560.4	561.7	563.0
137.5°	574.2	578.0	582.0	584.7	586.1	587.7	589.2	590.8
140°	593.0	596.6	600.3	602.8	604.1	605.4	606.7	608.0
142.5°	611.7	615.0	618.2	620.4	621.7	622.8	624.0	625.2
145°	640.6	642.2	643.8	644.9	645.6	646.4	647.1	647.8
147.5°	667.1	667.2	667.3	667.7	668.5	669.4	670.1	670.9
150°	685.2	685.2	685.2	685.1	685.0	684.9	684.7	684.5
152.5°	702.7	703.0	703.4	703.4	703.0	702.6	702.3	701.9
155°	727.1	727.7	728.2	728.2	727.7	727.1	726.5	726.0
157.5°	748.6	749.1	749.5	749.4	749.0	748.5	748.0	747.5
160°	761.9	762.3	762.7	762.6	761.9	761.2	760.5	759.8
162.5°	773.8	774.5	775.3	775.3	774.6	774.0	773.2	772.5
165°	789.5	790.4	791.2	791.3	790.8	790.2	789.6	789.1
167.5°	802.7	803.6	804.5	804.5	803.6	802.7	801.8	801.0
170°	809.9	810.7	811.6	811.5	810.6	809.6	808.5	807.6
172.5°	815.2	816.2	817.2	817.2	816.2	815.1	814.2	813.2
175°	821.0	822.0	823.0	823.0	822.0	821.0	820.0	819.0
177.5°	824.2	825.0	825.8	825.7	824.8	823.9	823.0	822.1
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1

(END OF REPORT)