

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: P331727-930

Luminaire Tested: **SA2XXRDIP-C865D925U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331727-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C865D925U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

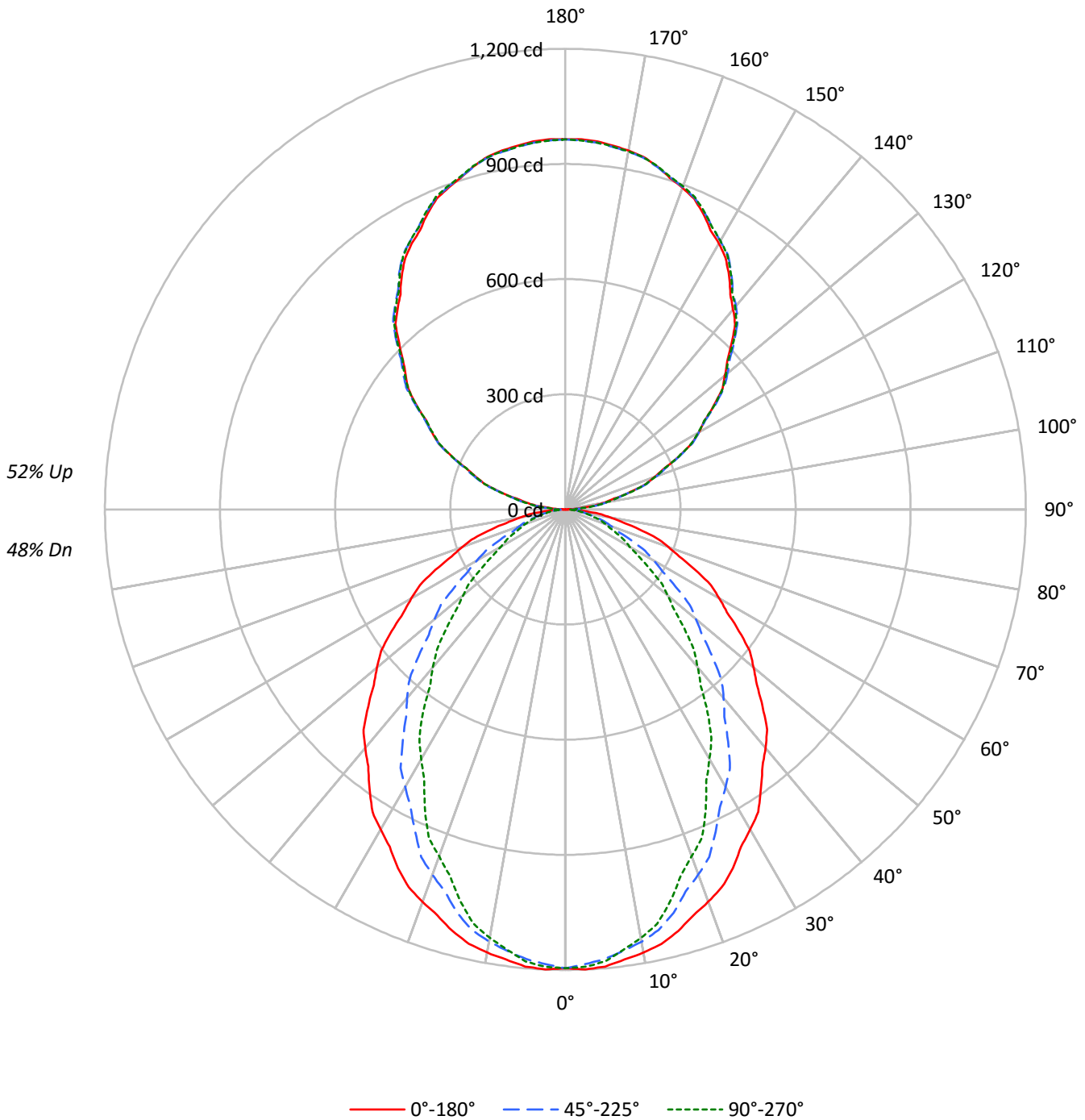
Lumens per Lamp: N/A
Luminaire Lumens: 5158.5 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 60.5
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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	48				48
1	98	94	90	87	90	86	83	80	73	70	68	60	58	57	48	47	46				41	
2	89	82	76	71	82	76	71	67	64	60	57	53	51	48	43	41	40				35	
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	39	36	34				30	
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	35	32	30				26	
5	69	58	50	44	63	54	47	42	46	40	36	38	34	31	32	29	26				23	
6	64	52	44	38	59	48	41	36	41	36	32	35	31	28	29	26	24				21	
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21				18	
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19				17	
9	51	39	32	27	47	37	30	26	32	26	23	27	23	20	23	20	17				15	
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16				14	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19302	19302	19302
5°	19376	19060	19164
10°	19226	18748	18589
15°	19005	18191	17668
20°	18699	17399	16526
25°	18387	16498	15419
30°	17952	15571	13998
35°	17527	14564	12751
40°	17102	13523	11310
45°	16600	12353	10003
50°	16088	11170	8721
55°	15564	9897	7491
60°	14951	8561	6219
65°	14258	7194	5662
70°	13430	5925	5207
75°	12420	5402	4860
80°	10962	4826	4426
85°	8633	3798	3798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	2.2
10°-20°	307.2	6.0
20°-30°	431.5	8.4
30°-40°	470.5	9.1
40°-50°	432.6	8.4
50°-60°	339.7	6.6
60°-70°	221.5	4.3
70°-80°	114.2	2.2
80°-90°	33.5	0.6
90°-100°	61.1	1.2
100°-110°	189.8	3.7
110°-120°	324.3	6.3
120°-130°	426.5	8.3
130°-140°	478.7	9.3
140°-150°	469.4	9.1
150°-160°	393.7	7.6
160°-170°	261.1	5.1
170°-180°	91.3	1.8
0°-30°	850.6	16.5
0°-40°	1321.1	25.6
0°-60°	2093.4	40.6
0°-90°	2462.6	47.7
90°-120°	575.2	11.2
90°-150°	1949.8	37.8
90°-180°	2696.0	52.3
0°-180°	5158.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1190	1176	1185	1182	113
15°	1137	1124	1088	1068	1057	320
25°	1032	995	926	883	866	474
35°	889	832	739	673	647	556
45°	727	652	541	467	438	561
55°	553	467	352	289	266	494
65°	373	285	188	153	148	370
75°	199	126	87	79	78	211
85°	47	25	20	20	20	55
90°	1	11	28	27	28	4
95°	42	50	52	52	50	49
105°	175	177	179	180	181	185
115°	326	330	329	328	326	322
125°	474	480	478	476	475	423
135°	613	621	623	622	620	473
145°	744	749	754	755	752	464
155°	850	853	855	859	857	391
165°	925	924	924	929	926	261
175°	962	960	958	964	959	91
180°	964	964	964	964	964	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1199.8	1198.8	1197.8	1196.9	1196.0	1194.4	1192.3	1190.2	1188.1	1185.9	1187.9
5°	1195.5	1194.3	1193.0	1191.8	1190.7	1188.5	1185.4	1182.3	1179.1	1176.0	1178.1
7.5°	1183.1	1181.6	1180.1	1178.7	1177.1	1174.6	1170.9	1167.3	1163.6	1159.9	1160.6
10°	1172.7	1171.0	1169.4	1167.7	1166.0	1162.8	1158.0	1153.2	1148.3	1143.5	1142.8
12.5°	1159.8	1157.6	1155.6	1153.6	1151.4	1147.4	1141.2	1135.1	1128.9	1122.7	1121.4
15°	1137.0	1134.4	1131.7	1129.1	1126.4	1121.0	1112.9	1104.7	1096.5	1088.3	1083.8
17.5°	1109.1	1105.1	1101.1	1097.0	1093.0	1085.7	1075.2	1064.7	1054.3	1043.7	1038.4
20°	1088.3	1083.5	1078.7	1073.9	1069.1	1060.7	1048.6	1036.7	1024.7	1012.6	1006.6
22.5°	1065.8	1060.5	1055.1	1049.7	1044.3	1034.9	1021.2	1007.7	994.2	980.6	972.8
25°	1032.1	1024.4	1016.7	1009.0	1001.4	989.5	973.6	957.8	941.9	926.1	916.2
27.5°	991.4	983.0	974.7	966.3	958.0	944.9	926.9	909.1	891.1	873.3	861.8
30°	962.9	953.7	944.6	935.5	926.3	912.2	892.9	873.7	854.4	835.2	823.0
32.5°	935.1	924.5	913.8	903.1	892.4	877.3	857.7	838.0	818.5	798.8	784.9
35°	889.2	877.0	864.8	852.5	840.2	823.5	802.3	781.2	760.1	738.9	723.7
37.5°	843.4	830.0	816.5	803.0	789.5	771.5	749.0	726.4	703.9	681.3	664.6
40°	811.4	797.0	782.5	768.1	753.7	734.8	711.5	688.2	664.9	641.6	624.4
42.5°	778.5	763.3	748.1	733.0	717.7	698.1	674.0	649.9	625.8	601.7	584.1
45°	727.0	710.9	694.8	678.7	662.6	641.9	616.7	591.4	566.1	541.0	523.8
47.5°	676.8	659.7	642.7	625.6	608.5	586.9	560.9	534.8	508.7	482.7	465.8
50°	640.5	623.4	606.3	589.2	572.2	550.4	524.0	497.5	471.1	444.7	428.0
52.5°	605.0	587.1	569.3	551.5	533.6	511.8	485.9	460.0	434.1	408.3	392.2
55°	552.9	534.1	515.4	496.6	477.8	455.4	429.5	403.5	377.6	351.6	337.2
57.5°	499.4	480.1	460.9	441.6	422.5	400.4	375.4	350.4	325.5	300.5	287.3
60°	463.0	443.8	424.6	405.4	386.1	364.1	339.3	314.5	289.8	265.1	252.8
62.5°	427.5	408.3	389.1	369.8	350.6	329.2	305.6	282.0	258.4	234.7	223.1
65°	373.2	353.8	334.3	314.8	295.4	274.8	253.2	231.5	209.9	188.3	180.1
67.5°	320.9	301.6	282.3	262.9	243.5	224.1	204.7	185.2	165.8	146.3	142.5
70°	284.5	265.8	247.0	228.3	209.5	191.8	175.3	158.7	142.1	125.5	123.1
72.5°	249.9	232.0	213.9	196.0	178.0	162.3	149.0	135.7	122.4	109.1	107.0
75°	199.1	182.2	165.4	148.5	131.8	119.3	111.0	102.9	94.7	86.6	84.9
77.5°	149.1	134.3	119.5	104.8	90.0	80.7	76.7	72.8	68.9	64.9	63.9
80°	117.9	105.7	93.4	81.1	68.9	61.6	59.1	56.7	54.3	51.9	51.0
82.5°	89.4	79.8	70.2	60.7	51.1	45.5	43.9	42.2	40.6	39.0	38.4
85°	46.6	41.5	36.4	31.4	26.3	23.5	22.7	22.0	21.3	20.5	20.5
87.5°	14.0	12.9	11.8	10.7	9.6	9.5	10.3	11.0	11.8	12.6	12.4
90°	0.8	3.0	5.1	7.3	9.5	12.6	16.6	20.5	24.5	28.5	28.1
92.5°	14.5	16.1	17.7	19.2	20.9	22.1	23.1	24.0	24.9	25.8	25.9
95°	42.3	44.1	45.9	47.7	49.6	50.6	51.0	51.4	51.7	52.1	52.1
97.5°	77.3	78.9	80.5	82.1	83.6	84.8	85.5	86.2	86.8	87.6	87.6
100°	103.3	104.8	106.2	107.7	109.1	110.1	110.6	111.2	111.8	112.3	112.3
102.5°	130.7	131.8	133.0	134.1	135.3	136.2	136.9	137.6	138.3	139.0	139.1
105°	175.0	175.5	176.0	176.6	177.1	177.6	177.9	178.3	178.6	179.0	179.4
107.5°	219.5	220.3	221.1	221.9	222.7	223.1	223.1	223.1	223.1	223.1	223.2
110°	248.2	249.2	250.3	251.4	252.5	253.1	253.1	253.1	253.1	253.1	253.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	279.4	280.5	281.6	282.7	283.7	284.2	284.1	283.9	283.8	283.6	283.2
115°	325.5	326.5	327.6	328.7	329.8	330.1	329.8	329.5	329.1	328.7	328.6
117.5°	371.4	372.8	374.2	375.7	377.2	377.3	376.3	375.3	374.3	373.3	372.8
120°	401.9	403.4	404.8	406.3	407.7	407.7	406.3	404.8	403.4	401.9	401.9
122.5°	429.9	431.6	433.4	435.1	436.8	437.2	436.2	435.2	434.2	433.2	432.8
125°	473.5	475.2	476.8	478.4	480.0	480.6	480.0	479.5	479.0	478.4	477.8
127.5°	516.0	518.0	520.2	522.2	524.2	525.0	524.3	523.7	523.0	522.4	521.7
130°	542.7	545.0	547.4	549.8	552.1	553.1	552.7	552.4	552.0	551.6	551.3
132.5°	572.7	574.5	576.5	578.4	580.3	581.3	581.4	581.5	581.5	581.6	580.8
135°	612.7	614.7	616.6	618.6	620.6	621.8	622.2	622.5	622.9	623.2	623.1
137.5°	654.8	656.4	658.0	659.7	661.3	662.3	662.8	663.3	663.8	664.2	664.1
140°	680.2	681.8	683.5	685.1	686.7	687.9	688.8	689.7	690.7	691.6	691.6
142.5°	706.2	707.8	709.5	711.1	712.7	713.9	714.4	715.1	715.7	716.3	716.5
145°	743.6	744.9	746.2	747.5	748.7	749.9	751.0	752.0	753.2	754.2	754.4
147.5°	777.0	778.5	780.1	781.5	783.1	784.2	785.0	785.6	786.4	787.1	787.5
150°	799.8	800.9	801.9	803.1	804.1	805.0	805.8	806.5	807.2	808.0	808.5
152.5°	819.9	821.1	822.1	823.2	824.3	825.3	826.1	827.0	827.9	828.8	829.5
155°	850.3	850.8	851.3	851.9	852.4	853.0	853.5	854.0	854.6	855.1	856.1
157.5°	876.1	876.4	876.9	877.2	877.6	877.9	878.2	878.6	878.9	879.2	880.4
160°	891.8	892.1	892.4	892.8	893.2	893.5	893.6	893.8	894.0	894.1	895.3
162.5°	906.0	906.1	906.2	906.3	906.4	906.4	906.7	906.9	907.0	907.2	908.4
165°	925.1	925.0	924.7	924.5	924.4	924.3	924.3	924.3	924.3	924.3	925.5
167.5°	941.0	940.5	940.0	939.4	938.9	938.6	938.6	938.5	938.5	938.4	939.7
170°	949.5	948.9	948.4	947.9	947.3	947.0	946.8	946.6	946.4	946.2	947.5
172.5°	955.4	954.8	954.3	953.7	953.2	952.8	952.7	952.4	952.3	952.1	953.4
175°	962.5	962.0	961.4	960.9	960.3	959.9	959.5	959.2	958.8	958.5	959.7
177.5°	965.5	965.0	964.6	964.2	963.7	963.4	963.0	962.8	962.5	962.2	963.0
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1189.8	1191.7	1193.6	1194.4	1194.0	1193.6	1193.3	1192.9
5°	1180.3	1182.4	1184.6	1185.4	1184.6	1183.9	1183.2	1182.4
7.5°	1161.2	1161.8	1162.5	1162.1	1160.9	1159.7	1158.4	1157.2
10°	1142.1	1141.3	1140.6	1139.5	1138.1	1136.7	1135.2	1133.8
12.5°	1120.1	1118.8	1117.5	1115.7	1113.3	1110.9	1108.5	1106.1
15°	1079.2	1074.6	1070.1	1066.6	1064.2	1061.8	1059.4	1057.0
17.5°	1032.9	1027.4	1022.1	1017.2	1013.1	1009.0	1004.9	1000.7
20°	1000.6	994.6	988.6	982.9	977.6	972.3	967.0	961.8
22.5°	965.2	957.4	949.7	943.8	939.9	935.9	932.0	928.1
25°	906.4	896.5	886.6	879.9	876.3	872.7	869.1	865.5
27.5°	850.3	838.8	827.3	818.7	813.0	807.2	801.5	795.8
30°	810.7	798.4	786.1	776.7	770.3	763.8	757.3	750.8
32.5°	770.9	756.8	742.9	732.8	726.8	720.6	714.5	708.4
35°	708.6	693.5	678.3	668.1	662.8	657.5	652.2	646.9
37.5°	648.0	631.3	614.7	603.2	597.2	591.1	585.1	579.0
40°	607.4	590.4	573.2	561.6	555.4	549.1	542.8	536.6
42.5°	566.5	548.8	531.2	519.3	513.2	507.2	501.1	495.0
45°	506.8	489.8	472.6	461.2	455.4	449.7	443.9	438.1
47.5°	448.7	431.8	414.8	403.7	398.5	393.2	388.0	382.8
50°	411.5	394.8	378.3	367.5	362.4	357.3	352.3	347.2
52.5°	376.3	360.3	344.2	333.9	329.2	324.6	319.9	315.3
55°	322.8	308.3	293.9	284.4	279.8	275.2	270.7	266.1
57.5°	274.1	260.9	247.7	239.1	235.3	231.4	227.6	223.7
60°	240.5	228.3	216.0	208.0	204.1	200.2	196.4	192.6
62.5°	211.4	199.7	188.0	181.0	178.7	176.4	174.1	171.8
65°	171.9	163.7	155.6	151.1	150.3	149.7	149.0	148.2
67.5°	138.8	135.0	131.3	129.0	128.2	127.4	126.7	126.0
70°	120.7	118.3	115.9	114.2	113.2	112.3	111.3	110.3
72.5°	105.0	103.0	100.9	99.7	99.1	98.5	97.9	97.3
75°	83.2	81.5	79.8	78.8	78.6	78.4	78.1	77.9
77.5°	63.0	62.0	61.1	60.4	60.0	59.6	59.3	58.9
80°	50.0	49.1	48.1	47.6	47.6	47.6	47.6	47.6
82.5°	37.8	37.2	36.6	36.4	36.4	36.4	36.4	36.4
85°	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
87.5°	12.1	11.8	11.6	11.4	11.5	11.5	11.6	11.6
90°	27.7	27.4	27.1	26.9	27.1	27.3	27.5	27.6
92.5°	26.0	26.1	26.2	26.3	26.3	26.3	26.3	26.3
95°	52.1	52.1	52.1	51.9	51.5	51.2	50.8	50.5
97.5°	87.6	87.6	87.6	87.6	87.5	87.5	87.4	87.4
100°	112.3	112.3	112.3	112.2	112.0	111.9	111.6	111.5
102.5°	139.3	139.4	139.6	139.5	139.3	139.2	139.0	138.8
105°	179.7	180.1	180.4	180.6	180.6	180.6	180.6	180.6
107.5°	223.4	223.6	223.6	223.3	222.5	221.7	220.9	220.0
110°	253.1	253.1	253.1	252.7	252.3	251.7	251.1	250.6



TEST NUMBER: P331727-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	282.7	282.3	281.9	281.4	281.1	280.7	280.3	279.9
115°	328.3	328.2	328.0	327.6	327.1	326.5	326.0	325.5
117.5°	372.4	372.0	371.5	371.0	370.6	370.0	369.4	368.9
120°	401.9	401.9	401.9	401.7	401.1	400.6	400.1	399.5
122.5°	432.3	431.9	431.5	431.0	430.6	430.2	429.8	429.4
125°	477.4	476.8	476.2	475.9	475.7	475.5	475.3	475.2
127.5°	521.1	520.4	519.8	519.1	518.5	518.0	517.4	516.8
130°	550.9	550.6	550.2	549.7	548.9	548.2	547.5	546.7
132.5°	580.0	579.2	578.4	577.7	577.2	576.6	576.0	575.4
135°	622.9	622.7	622.5	622.2	621.6	621.1	620.5	620.0
137.5°	664.0	663.8	663.7	663.2	662.5	661.8	661.0	660.3
140°	691.6	691.6	691.6	691.2	690.5	689.7	689.1	688.4
142.5°	716.6	716.7	716.9	716.6	715.9	715.2	714.4	713.7
145°	754.6	754.8	755.0	754.7	754.0	753.3	752.5	751.8
147.5°	787.9	788.3	788.7	788.6	787.9	787.2	786.5	785.8
150°	809.0	809.6	810.1	810.1	809.6	809.0	808.5	808.0
152.5°	830.1	830.8	831.5	831.5	830.8	830.1	829.5	828.8
155°	857.0	857.9	858.8	858.9	858.3	857.9	857.3	856.7
157.5°	881.7	882.9	884.1	884.3	883.5	882.6	881.7	880.8
160°	896.3	897.4	898.5	898.7	898.0	897.2	896.5	895.8
162.5°	909.6	910.9	912.1	912.3	911.4	910.5	909.7	908.8
165°	926.8	928.1	929.4	929.5	928.6	927.7	926.8	925.9
167.5°	940.9	942.2	943.5	943.6	942.7	941.8	940.9	939.9
170°	948.8	950.1	951.3	951.4	950.3	949.3	948.1	947.1
172.5°	954.6	955.9	957.2	957.2	956.2	955.1	954.0	952.9
175°	961.0	962.2	963.5	963.6	962.5	961.4	960.3	959.3
177.5°	963.9	964.8	965.6	965.6	964.8	963.9	963.0	962.2
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2

(END OF REPORT)