

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: P331400-940

Luminaire Tested: **SA2XXDIP-C865D725U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331400-940
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: SA2XXDIP-C865D725U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5443.6 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

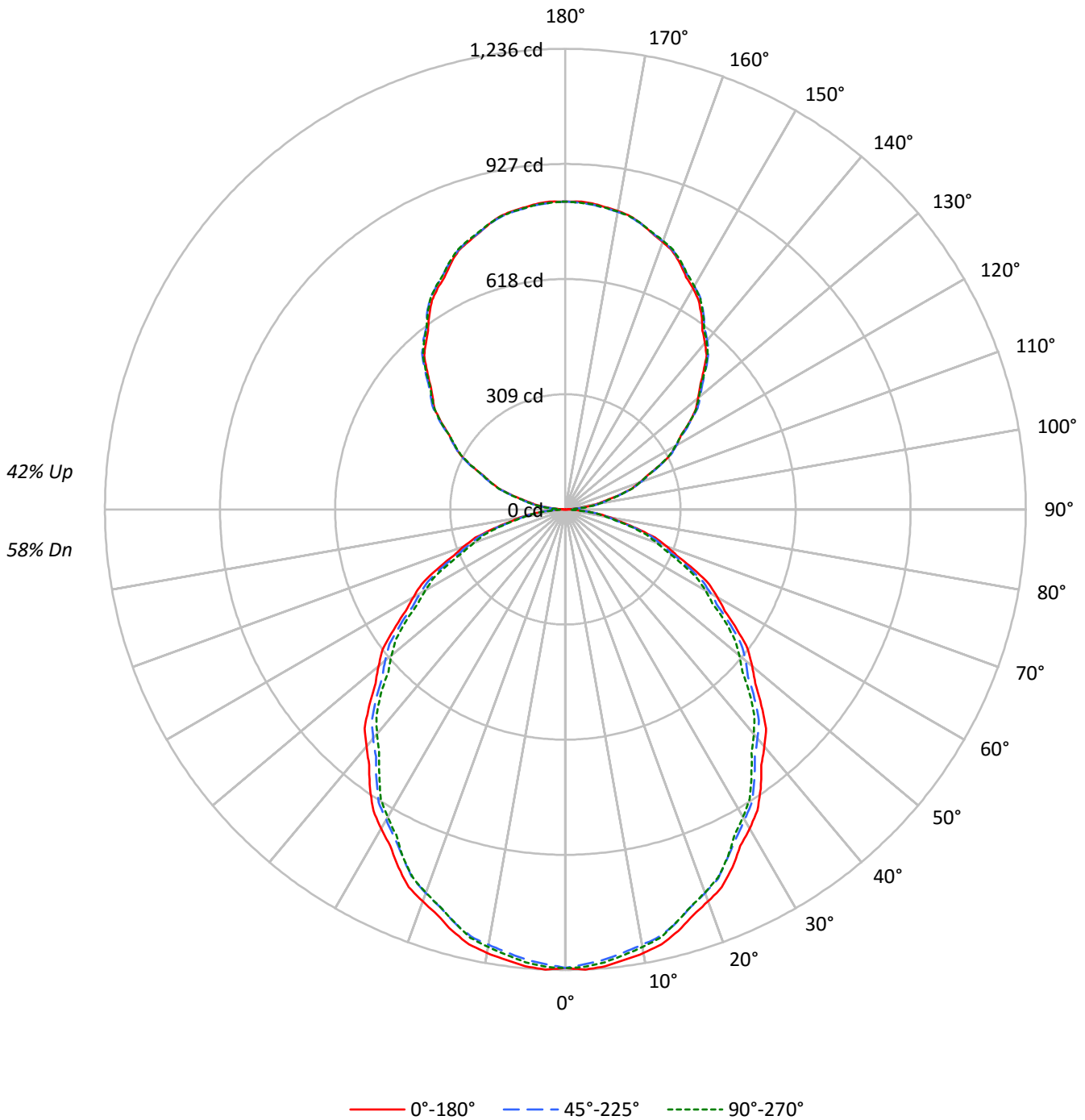
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	88	88	88	75	75	75	63	63	63	58
1	99	95	91	88	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	91	83	77	72	84	78	72	67	67	63	60	58	55	52	49	47	45	41
3	83	73	66	60	77	68	62	56	59	54	50	51	47	44	43	41	38	34
4	76	65	57	51	70	61	53	48	53	47	43	46	41	38	39	36	33	30
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	32	29	26
6	64	52	44	38	59	49	41	36	43	37	32	37	32	29	32	28	25	23
7	59	47	39	33	55	44	37	32	39	33	28	34	29	25	29	25	23	20
8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16
10	48	36	28	24	45	34	27	23	30	24	21	26	22	19	23	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19869	19869	19869
5°	19945	19656	19772
10°	19825	19457	19556
15°	19580	19206	19184
20°	19234	18826	18806
25°	18887	18360	18360
30°	18442	17935	17780
35°	18027	17422	17164
40°	17506	16910	16583
45°	16993	16401	15995
50°	16435	15872	15307
55°	15854	15254	14688
60°	15206	14518	13986
65°	14514	13788	13154
70°	13629	12902	12288
75°	12402	11884	11584
80°	11000	10674	10126
85°	8985	8559	7669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.7	2.1
10°-20°	325.6	6.0
20°-30°	478.6	8.8
30°-40°	555.9	10.2
40°-50°	555.3	10.2
50°-60°	484.3	8.9
60°-70°	358.1	6.6
70°-80°	202.8	3.7
80°-90°	57.8	1.1
90°-100°	52.3	1.0
100°-110°	162.5	3.0
110°-120°	277.9	5.1
120°-130°	365.4	6.7
130°-140°	410.1	7.5
140°-150°	402.1	7.4
150°-160°	337.3	6.2
160°-170°	223.7	4.1
170°-180°	78.2	1.4
0°-30°	919.9	16.9
0°-40°	1475.8	27.1
0°-60°	2515.4	46.2
0°-90°	3134.1	57.6
90°-120°	492.7	9.1
90°-150°	1670.3	30.7
90°-180°	2309.0	42.4
0°-180°	5443.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1231	1225	1213	1222	1220	117
15°	1171	1164	1149	1153	1148	330
25°	1060	1050	1031	1033	1031	488
35°	915	902	884	877	871	571
45°	744	735	718	706	700	574
55°	563	556	542	528	522	503
65°	380	372	361	350	344	376
75°	199	196	190	184	186	212
85°	48	47	46	43	41	56
90°	1	9	24	23	24	4
95°	36	43	45	45	43	42
105°	150	152	153	155	155	158
115°	279	283	282	281	279	276
125°	406	412	410	408	407	362
135°	525	532	534	533	531	405
145°	637	642	646	647	644	398
155°	728	730	732	736	734	335
165°	792	792	792	796	793	223
175°	825	822	821	825	822	78
180°	826	826	826	826	826	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1236.3	1235.2	1234.1	1233.1	1232.1	1230.4	1228.1	1225.7	1223.4	1221.1	1223.2
5°	1230.6	1229.5	1228.5	1227.4	1226.4	1224.4	1221.6	1218.6	1215.8	1212.8	1215.0
7.5°	1219.7	1218.1	1216.5	1214.8	1213.2	1210.9	1207.9	1205.0	1202.0	1199.1	1201.2
10°	1209.2	1207.5	1205.6	1203.7	1201.9	1199.4	1196.2	1193.1	1190.0	1186.8	1188.9
12.5°	1195.1	1193.5	1191.9	1190.2	1188.6	1186.2	1183.0	1179.8	1176.7	1173.6	1175.0
15°	1171.4	1169.8	1168.2	1166.7	1165.1	1162.6	1159.2	1155.7	1152.4	1149.0	1150.0
17.5°	1141.1	1139.5	1138.0	1136.4	1134.8	1132.3	1128.8	1125.3	1121.9	1118.4	1119.6
20°	1119.4	1117.8	1116.2	1114.6	1113.0	1110.4	1106.7	1103.0	1099.4	1095.7	1096.4
22.5°	1097.6	1095.4	1093.1	1090.9	1088.8	1085.9	1082.4	1079.0	1075.5	1072.0	1072.2
25°	1060.2	1058.1	1056.0	1053.9	1051.8	1048.5	1044.0	1039.6	1035.1	1030.6	1031.2
27.5°	1017.6	1015.7	1013.8	1011.9	1010.0	1007.3	1003.8	1000.2	996.8	993.2	992.5
30°	989.2	987.1	985.0	982.9	980.8	977.8	973.8	969.9	965.9	962.0	961.2
32.5°	958.9	957.3	955.6	953.9	952.2	949.2	945.1	940.9	936.8	932.6	931.2
35°	914.6	912.0	909.4	906.8	904.1	900.7	896.5	892.3	888.1	883.9	882.3
37.5°	864.7	862.4	860.1	857.7	855.5	852.2	848.0	843.8	839.5	835.4	833.4
40°	830.6	828.6	826.4	824.3	822.2	819.0	814.8	810.7	806.5	802.3	799.9
42.5°	797.5	795.4	793.3	791.2	789.1	786.0	781.8	777.6	773.3	769.1	766.5
45°	744.2	742.4	740.6	738.8	736.9	734.0	730.0	726.1	722.2	718.3	715.3
47.5°	691.3	689.6	687.8	686.1	684.3	681.4	677.3	673.2	669.1	664.9	661.9
50°	654.3	653.0	651.8	650.4	649.1	646.6	642.9	639.2	635.5	631.9	628.2
52.5°	618.4	616.6	614.9	613.1	611.4	608.9	605.4	601.9	598.4	594.9	591.9
55°	563.2	561.7	560.1	558.5	556.9	554.6	551.4	548.2	545.1	541.9	538.8
57.5°	507.8	506.6	505.3	504.1	502.8	500.4	497.0	493.5	490.0	486.5	483.5
60°	470.9	469.8	468.9	467.8	466.7	464.4	460.7	457.0	453.3	449.6	446.7
62.5°	435.0	433.3	431.6	429.9	428.2	426.0	423.1	420.3	417.4	414.6	412.0
65°	379.9	378.3	376.7	375.1	373.5	371.4	368.8	366.1	363.6	360.9	358.6
67.5°	323.8	322.4	321.2	319.9	318.7	316.9	314.5	312.1	309.8	307.4	305.6
70°	288.7	287.7	286.6	285.5	284.5	282.8	280.4	278.0	275.7	273.3	271.5
72.5°	252.7	251.7	250.7	249.6	248.5	247.3	245.8	244.2	242.6	241.1	239.3
75°	198.8	198.2	197.7	197.2	196.7	195.7	194.5	193.1	191.8	190.5	189.0
77.5°	150.5	149.6	148.7	147.8	147.0	146.2	145.7	145.2	144.6	144.1	143.3
80°	118.3	118.1	117.8	117.5	117.3	116.9	116.4	115.8	115.3	114.8	114.0
82.5°	88.0	88.0	87.9	87.8	87.8	87.7	87.3	87.0	86.7	86.4	85.3
85°	48.5	48.2	48.0	47.7	47.4	47.2	46.9	46.6	46.4	46.2	45.4
87.5°	17.2	17.1	17.1	17.0	16.9	17.1	17.4	17.6	17.8	18.1	17.5
90°	0.7	2.6	4.5	6.2	8.1	10.8	14.2	17.6	21.0	24.4	24.1
92.5°	12.4	13.7	15.2	16.5	17.8	18.9	19.7	20.5	21.4	22.2	22.2
95°	36.2	37.8	39.3	40.9	42.4	43.3	43.7	44.0	44.3	44.6	44.6
97.5°	66.3	67.6	68.9	70.3	71.7	72.7	73.2	73.8	74.4	75.0	75.0
100°	88.5	89.8	91.0	92.2	93.5	94.3	94.8	95.2	95.7	96.2	96.2
102.5°	111.9	112.9	114.0	114.9	115.9	116.7	117.3	117.9	118.4	119.0	119.1
105°	149.9	150.3	150.8	151.2	151.7	152.1	152.4	152.8	153.0	153.4	153.6
107.5°	188.1	188.8	189.4	190.1	190.7	191.1	191.1	191.1	191.1	191.1	191.3
110°	212.6	213.5	214.5	215.3	216.3	216.8	216.8	216.8	216.8	216.8	216.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	239.3	240.3	241.2	242.1	243.1	243.4	243.3	243.3	243.1	243.0	242.6
115°	278.8	279.7	280.6	281.6	282.5	282.9	282.5	282.2	281.9	281.6	281.4
117.5°	318.1	319.3	320.6	321.8	323.1	323.2	322.4	321.6	320.7	319.8	319.4
120°	344.3	345.5	346.8	348.0	349.3	349.3	348.0	346.8	345.5	344.3	344.3
122.5°	368.3	369.8	371.3	372.7	374.3	374.5	373.7	372.8	371.9	371.0	370.7
125°	405.6	407.1	408.4	409.8	411.3	411.7	411.3	410.7	410.3	409.8	409.4
127.5°	442.0	443.8	445.6	447.4	449.1	449.7	449.2	448.6	448.0	447.5	446.9
130°	464.9	466.9	469.0	470.9	473.0	473.8	473.5	473.1	472.9	472.6	472.3
132.5°	490.5	492.2	493.8	495.4	497.1	497.9	498.0	498.1	498.1	498.2	497.6
135°	524.9	526.6	528.2	529.9	531.6	532.6	533.0	533.2	533.6	533.9	533.8
137.5°	561.0	562.3	563.7	565.2	566.5	567.4	567.8	568.2	568.6	569.0	568.9
140°	582.7	584.1	585.5	586.8	588.3	589.3	590.1	590.9	591.7	592.5	592.5
142.5°	605.0	606.4	607.8	609.2	610.6	611.5	612.1	612.6	613.1	613.7	613.8
145°	637.0	638.1	639.3	640.3	641.4	642.4	643.4	644.3	645.2	646.1	646.3
147.5°	665.7	666.9	668.2	669.5	670.8	671.8	672.4	673.1	673.7	674.3	674.6
150°	685.2	686.1	687.0	688.0	688.8	689.6	690.3	690.9	691.5	692.1	692.6
152.5°	702.4	703.4	704.3	705.3	706.1	706.9	707.8	708.5	709.2	710.0	710.5
155°	728.3	728.8	729.3	729.8	730.2	730.7	731.1	731.6	732.1	732.5	733.3
157.5°	750.6	750.8	751.2	751.4	751.8	752.1	752.3	752.6	752.9	753.1	754.2
160°	763.9	764.2	764.6	764.8	765.2	765.4	765.5	765.7	765.9	766.0	767.0
162.5°	776.1	776.2	776.3	776.3	776.4	776.5	776.7	776.9	777.0	777.1	778.2
165°	792.5	792.4	792.2	792.0	791.8	791.8	791.8	791.8	791.8	791.8	792.9
167.5°	806.1	805.7	805.2	804.8	804.3	804.1	804.1	804.0	804.0	803.9	805.0
170°	813.4	813.0	812.4	812.0	811.5	811.2	811.1	810.9	810.7	810.6	811.7
172.5°	818.4	818.0	817.5	817.0	816.5	816.3	816.1	815.9	815.8	815.6	816.7
175°	824.6	824.1	823.6	823.1	822.7	822.3	822.0	821.7	821.4	821.1	822.2
177.5°	827.1	826.7	826.3	825.9	825.5	825.3	825.0	824.7	824.5	824.3	825.0
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1225.3	1227.4	1229.5	1230.4	1229.9	1229.5	1229.1	1228.7
5°	1217.0	1219.1	1221.3	1222.0	1221.6	1221.0	1220.5	1219.9
7.5°	1203.3	1205.4	1207.6	1208.3	1207.7	1207.1	1206.6	1205.9
10°	1191.0	1193.1	1195.2	1195.9	1195.1	1194.3	1193.5	1192.8
12.5°	1176.5	1177.9	1179.5	1179.9	1179.3	1178.8	1178.1	1177.6
15°	1151.0	1152.1	1153.2	1153.0	1151.7	1150.4	1149.1	1147.7
17.5°	1120.8	1122.0	1123.3	1123.2	1122.0	1120.7	1119.5	1118.2
20°	1097.3	1098.1	1098.9	1098.7	1097.7	1096.6	1095.6	1094.5
22.5°	1072.4	1072.5	1072.6	1072.5	1071.7	1071.1	1070.5	1069.9
25°	1031.7	1032.2	1032.7	1032.7	1032.2	1031.7	1031.2	1030.6
27.5°	991.7	990.9	990.1	989.1	987.7	986.5	985.3	984.0
30°	960.4	959.7	958.9	957.9	956.9	955.8	954.8	953.7
32.5°	929.8	928.4	926.9	925.7	924.7	923.6	922.6	921.5
35°	880.7	879.1	877.6	876.1	874.9	873.5	872.2	870.8
37.5°	831.5	829.6	827.6	826.0	824.7	823.5	822.2	820.9
40°	797.5	795.1	792.8	791.0	790.1	789.0	787.9	786.8
42.5°	763.9	761.3	758.8	756.8	755.3	753.9	752.3	750.9
45°	712.5	709.5	706.7	704.7	703.6	702.6	701.5	700.5
47.5°	658.9	655.9	652.8	650.5	649.0	647.5	646.0	644.4
50°	624.5	620.8	617.2	614.7	613.3	612.0	610.7	609.4
52.5°	588.8	585.8	582.7	580.3	578.6	576.8	575.2	573.4
55°	535.7	532.4	529.3	527.1	525.8	524.4	523.2	521.8
57.5°	480.4	477.2	474.1	472.1	471.1	470.1	469.1	468.1
60°	443.9	441.0	438.1	436.2	435.4	434.6	433.8	433.1
62.5°	409.2	406.5	403.9	402.1	401.0	400.0	399.0	398.1
65°	356.1	353.8	351.4	349.6	348.3	347.0	345.6	344.3
67.5°	303.7	301.8	300.1	298.6	297.6	296.5	295.4	294.4
70°	269.7	267.8	266.0	264.5	263.5	262.4	261.4	260.3
72.5°	237.5	235.6	233.8	232.5	231.6	230.8	229.9	229.1
75°	187.3	185.7	184.2	183.7	184.2	184.8	185.2	185.7
77.5°	142.6	141.8	141.0	140.2	139.5	138.8	138.0	137.2
80°	113.2	112.4	111.6	110.9	110.4	109.9	109.4	108.9
82.5°	84.4	83.4	82.4	81.9	81.7	81.6	81.5	81.4
85°	44.6	43.8	43.0	42.4	42.2	41.9	41.6	41.4
87.5°	16.8	16.1	15.3	14.9	14.7	14.5	14.4	14.2
90°	23.8	23.5	23.2	23.1	23.3	23.4	23.5	23.7
92.5°	22.3	22.4	22.4	22.5	22.5	22.6	22.6	22.6
95°	44.6	44.6	44.6	44.5	44.1	43.9	43.5	43.2
97.5°	75.0	75.0	75.0	75.0	75.0	74.9	74.9	74.8
100°	96.2	96.2	96.2	96.1	95.9	95.8	95.7	95.5
102.5°	119.3	119.4	119.6	119.5	119.4	119.2	119.0	118.9
105°	154.0	154.3	154.6	154.7	154.7	154.7	154.7	154.7
107.5°	191.4	191.5	191.6	191.4	190.6	189.9	189.2	188.5
110°	216.8	216.8	216.8	216.5	216.1	215.6	215.2	214.6



TEST NUMBER: P331400-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	242.2	241.8	241.5	241.1	240.8	240.4	240.1	239.8
115°	281.2	281.2	281.0	280.6	280.2	279.7	279.3	278.8
117.5°	319.1	318.7	318.3	317.9	317.4	316.9	316.5	316.0
120°	344.3	344.3	344.3	344.1	343.6	343.1	342.7	342.2
122.5°	370.3	370.0	369.6	369.3	368.9	368.5	368.2	367.9
125°	408.9	408.4	408.0	407.7	407.5	407.3	407.2	407.1
127.5°	446.4	445.8	445.2	444.7	444.3	443.7	443.3	442.7
130°	472.0	471.6	471.4	470.8	470.2	469.7	469.0	468.4
132.5°	496.9	496.1	495.5	494.9	494.4	493.9	493.4	492.9
135°	533.6	533.4	533.2	533.0	532.5	532.1	531.5	531.1
137.5°	568.8	568.6	568.6	568.2	567.6	566.9	566.3	565.7
140°	592.5	592.5	592.5	592.1	591.6	590.9	590.3	589.7
142.5°	613.9	614.0	614.1	613.9	613.2	612.6	612.1	611.4
145°	646.4	646.6	646.8	646.5	645.9	645.2	644.6	644.0
147.5°	674.9	675.3	675.6	675.6	674.9	674.3	673.8	673.2
150°	693.0	693.5	694.0	694.0	693.5	693.0	692.6	692.1
152.5°	711.1	711.8	712.3	712.3	711.8	711.1	710.5	710.0
155°	734.1	734.9	735.7	735.8	735.3	734.9	734.4	734.0
157.5°	755.3	756.3	757.4	757.5	756.8	756.1	755.3	754.6
160°	767.9	768.8	769.7	769.9	769.3	768.7	768.0	767.4
162.5°	779.3	780.3	781.4	781.5	780.8	780.1	779.3	778.6
165°	794.0	795.0	796.1	796.3	795.5	794.7	794.0	793.2
167.5°	806.1	807.2	808.2	808.4	807.6	806.8	806.0	805.2
170°	812.8	813.9	814.9	815.0	814.1	813.2	812.3	811.3
172.5°	817.8	818.9	819.9	820.0	819.1	818.1	817.3	816.4
175°	823.2	824.3	825.4	825.5	824.6	823.6	822.7	821.8
177.5°	825.7	826.5	827.2	827.2	826.5	825.7	825.0	824.3
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9

(END OF REPORT)