

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: P331400-927

Luminaire Tested: **SA2XXDIP-C865D725U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331400-927
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-C865D725U927-4F0-1E-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: 4836.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

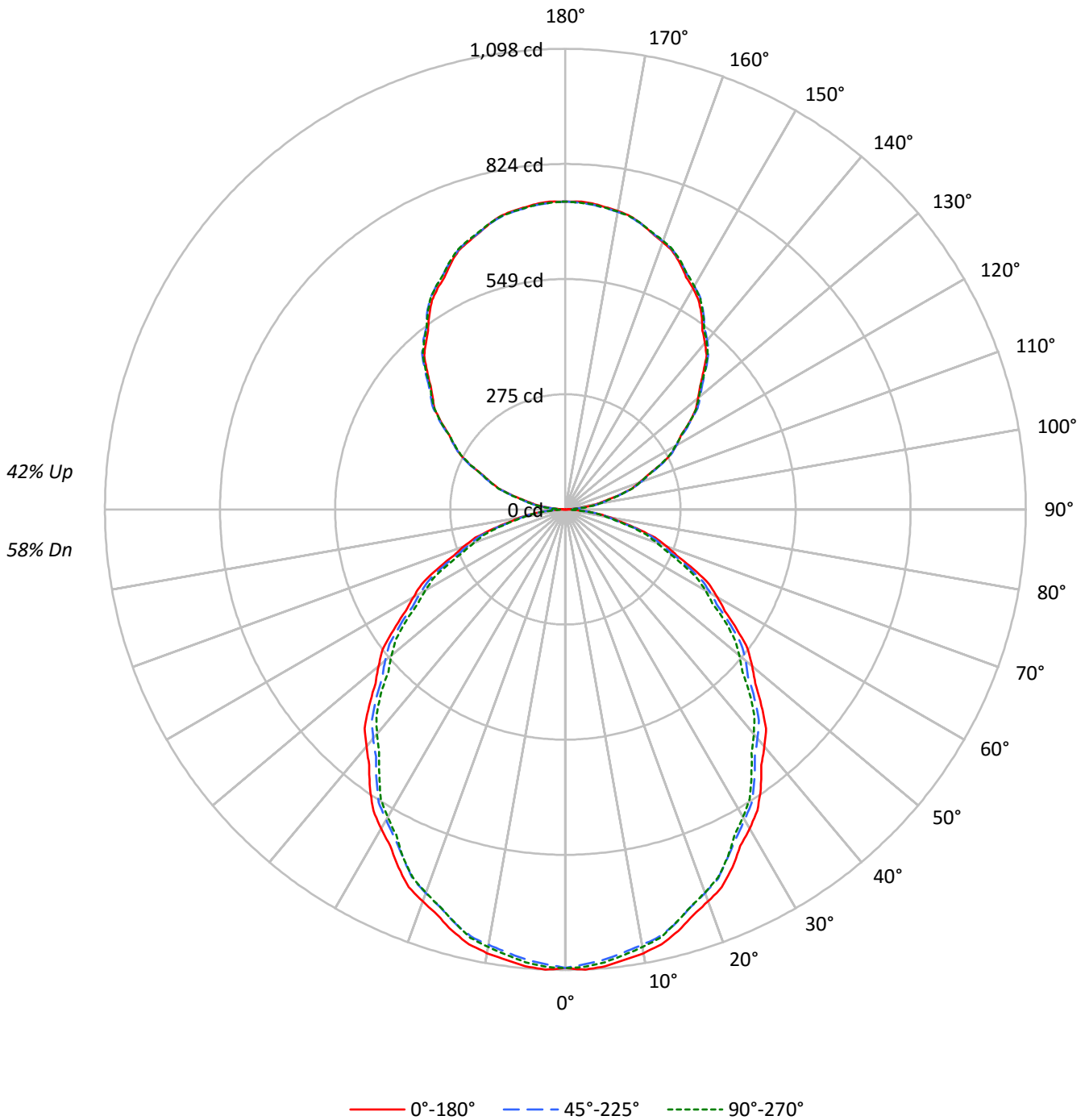
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									20
RC	80									50									30									10									0									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	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	58	58	48	48	48	40	40	40	32	32	32																
	1	99	95	91	88	92	89	85	82	77	74	72	66	64	62	56	54	53	48	48	48	40	40	40	32	32	32	25	25	25																
	2	91	83	77	72	84	78	72	67	67	63	60	58	55	52	49	47	45	41	41	41	33	33	33	26	26	26	20	20	20																
	3	83	73	66	60	77	68	62	56	59	54	50	51	47	44	43	41	38	34	34	34	26	26	26	20	20	20	15	15	15																
	4	76	65	57	51	70	61	53	48	53	47	43	46	41	38	39	36	33	30	30	30	23	23	23	17	17	17	13	13	13																
	5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	32	29	26	26	26	20	20	20	15	15	15	11	11	11																
	6	64	52	44	38	59	49	41	36	43	37	32	37	32	29	32	28	25	23	23	23	17	17	17	13	13	13	10	10	10																
	7	59	47	39	33	55	44	37	32	39	33	28	34	29	25	29	25	23	20	20	20	15	15	15	11	11	11	8	8	8																
	8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18	18	18	13	13	13	10	10	10	7	7	7																
	9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16	16	16	11	11	11	8	8	8	6	6	6																
	10	48	36	28	24	45	34	27	23	30	24	21	26	22	19	23	19	17	15	15	15	11	11	11	8	8	8	6	6	6																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	2.1
10°-20°	289.3	6.0
20°-30°	425.2	8.8
30°-40°	493.9	10.2
40°-50°	493.3	10.2
50°-60°	430.2	8.9
60°-70°	318.1	6.6
70°-80°	180.2	3.7
80°-90°	51.4	1.1
90°-100°	46.5	1.0
100°-110°	144.4	3.0
110°-120°	246.8	5.1
120°-130°	324.6	6.7
130°-140°	364.3	7.5
140°-150°	357.2	7.4
150°-160°	299.6	6.2
160°-170°	198.7	4.1
170°-180°	69.5	1.4
0°-30°	817.2	16.9
0°-40°	1311.1	27.1
0°-60°	2234.6	46.2
0°-90°	2784.2	57.6
90°-120°	437.7	9.1
90°-150°	1483.9	30.7
90°-180°	2052.0	42.4
0°-180°	4836.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	8	22	21	21	4
95°	32	38	40	40	38	37
105°	133	135	136	137	137	141
115°	248	251	250	249	248	245
125°	360	366	364	362	362	322
135°	466	473	474	474	472	360
145°	566	570	574	574	572	353
155°	647	649	651	654	652	298
165°	704	703	703	707	705	198
175°	732	731	729	733	730	70
180°	734	734	734	734	734	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.3	15.2	15.2	15.1	15.1	15.2	15.4	15.6	15.8	16.1	15.5
90°	0.6	2.3	4.0	5.5	7.2	9.6	12.6	15.6	18.6	21.7	21.4
92.5°	11.0	12.2	13.5	14.7	15.8	16.8	17.5	18.2	19.0	19.7	19.7
95°	32.2	33.6	34.9	36.4	37.7	38.5	38.8	39.1	39.4	39.6	39.6
97.5°	58.9	60.0	61.2	62.4	63.7	64.6	65.0	65.6	66.1	66.6	66.6
100°	78.7	79.8	80.8	81.9	83.0	83.8	84.2	84.6	85.0	85.5	85.5
102.5°	99.4	100.3	101.2	102.1	103.0	103.7	104.2	104.7	105.2	105.8	105.8
105°	133.2	133.6	134.0	134.4	134.8	135.1	135.4	135.7	135.9	136.3	136.5
107.5°	167.1	167.7	168.3	168.9	169.4	169.8	169.8	169.8	169.8	169.8	169.9
110°	188.9	189.6	190.5	191.3	192.2	192.6	192.6	192.6	192.6	192.6	192.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.6	213.5	214.3	215.1	215.9	216.3	216.2	216.1	215.9	215.9	215.6
115°	247.7	248.5	249.3	250.2	251.0	251.3	251.0	250.7	250.4	250.2	250.0
117.5°	282.6	283.7	284.8	285.9	287.0	287.2	286.4	285.7	284.9	284.1	283.8
120°	305.9	307.0	308.1	309.2	310.3	310.3	309.2	308.1	307.0	305.9	305.9
122.5°	327.2	328.5	329.9	331.1	332.5	332.7	332.0	331.2	330.4	329.6	329.3
125°	360.4	361.6	362.8	364.1	365.4	365.8	365.4	364.9	364.5	364.1	363.7
127.5°	392.7	394.3	395.9	397.4	398.9	399.5	399.0	398.5	398.0	397.5	397.0
130°	413.0	414.8	416.6	418.4	420.2	420.9	420.6	420.3	420.1	419.9	419.5
132.5°	435.8	437.3	438.7	440.1	441.6	442.4	442.4	442.5	442.5	442.6	442.0
135°	466.3	467.8	469.3	470.8	472.3	473.2	473.5	473.7	474.0	474.3	474.2
137.5°	498.4	499.6	500.8	502.1	503.3	504.1	504.5	504.8	505.2	505.5	505.4
140°	517.7	518.9	520.1	521.3	522.6	523.6	524.3	525.0	525.6	526.3	526.3
142.5°	537.5	538.7	540.0	541.2	542.4	543.3	543.8	544.2	544.7	545.2	545.3
145°	565.9	566.9	567.9	568.9	569.8	570.7	571.6	572.4	573.1	574.0	574.2
147.5°	591.4	592.5	593.7	594.8	596.0	596.8	597.4	597.9	598.5	599.0	599.3
150°	608.7	609.5	610.3	611.2	612.0	612.7	613.2	613.8	614.3	614.9	615.3
152.5°	624.0	624.9	625.7	626.5	627.3	628.0	628.8	629.4	630.0	630.7	631.2
155°	647.1	647.5	647.9	648.3	648.7	649.1	649.5	650.0	650.4	650.8	651.5
157.5°	666.8	667.0	667.3	667.6	667.9	668.1	668.4	668.6	668.8	669.1	670.0
160°	678.7	678.9	679.2	679.5	679.8	679.9	680.1	680.2	680.4	680.5	681.4
162.5°	689.5	689.6	689.7	689.7	689.8	689.8	690.0	690.1	690.3	690.4	691.3
165°	704.0	703.9	703.8	703.6	703.5	703.4	703.4	703.4	703.4	703.4	704.4
167.5°	716.1	715.7	715.3	714.9	714.5	714.3	714.3	714.2	714.2	714.2	715.2
170°	722.6	722.2	721.8	721.4	721.0	720.6	720.6	720.4	720.3	720.1	721.1
172.5°	727.1	726.7	726.3	725.8	725.4	725.2	725.0	724.8	724.8	724.6	725.6
175°	732.5	732.1	731.7	731.3	730.9	730.6	730.2	730.0	729.7	729.4	730.4
177.5°	734.7	734.4	734.1	733.7	733.4	733.2	732.9	732.7	732.5	732.3	732.9
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	14.9	14.3	13.6	13.2	13.1	12.9	12.8	12.6
90°	21.2	20.8	20.6	20.5	20.7	20.8	20.9	21.1
92.5°	19.8	19.9	19.9	20.0	20.0	20.0	20.0	20.0
95°	39.6	39.6	39.6	39.5	39.2	39.0	38.7	38.4
97.5°	66.6	66.6	66.6	66.6	66.6	66.5	66.5	66.5
100°	85.5	85.5	85.5	85.4	85.2	85.1	85.0	84.8
102.5°	106.0	106.1	106.2	106.2	106.1	105.9	105.8	105.6
105°	136.8	137.0	137.4	137.4	137.4	137.4	137.4	137.4
107.5°	170.0	170.1	170.2	170.0	169.4	168.7	168.1	167.5
110°	192.6	192.6	192.6	192.3	191.9	191.5	191.2	190.7



TEST NUMBER: P331400-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.2	214.8	214.5	214.2	213.9	213.6	213.3	213.0
115°	249.9	249.8	249.6	249.3	248.9	248.5	248.1	247.7
117.5°	283.4	283.1	282.7	282.4	282.0	281.5	281.1	280.7
120°	305.9	305.9	305.9	305.7	305.2	304.8	304.4	304.0
122.5°	329.0	328.7	328.4	328.0	327.7	327.4	327.1	326.9
125°	363.3	362.8	362.4	362.2	362.0	361.9	361.8	361.6
127.5°	396.6	396.0	395.5	395.1	394.7	394.2	393.8	393.3
130°	419.3	419.0	418.7	418.3	417.7	417.2	416.7	416.1
132.5°	441.4	440.8	440.2	439.7	439.2	438.8	438.3	437.9
135°	474.0	473.9	473.7	473.5	473.1	472.7	472.2	471.8
137.5°	505.3	505.2	505.1	504.8	504.2	503.7	503.1	502.6
140°	526.3	526.3	526.3	526.0	525.5	525.0	524.4	523.9
142.5°	545.3	545.5	545.6	545.3	544.8	544.2	543.8	543.2
145°	574.3	574.4	574.6	574.3	573.8	573.2	572.7	572.1
147.5°	599.6	599.9	600.2	600.2	599.6	599.0	598.6	598.0
150°	615.7	616.1	616.6	616.6	616.1	615.7	615.3	614.9
152.5°	631.8	632.3	632.8	632.8	632.3	631.8	631.2	630.7
155°	652.1	652.8	653.6	653.7	653.2	652.8	652.4	652.0
157.5°	671.0	671.9	672.9	673.0	672.3	671.7	671.0	670.3
160°	682.1	683.0	683.8	684.0	683.4	682.9	682.3	681.8
162.5°	692.3	693.2	694.2	694.3	693.6	693.0	692.3	691.7
165°	705.4	706.3	707.3	707.4	706.7	706.0	705.4	704.6
167.5°	716.1	717.1	718.0	718.2	717.5	716.8	716.1	715.3
170°	722.1	723.0	724.0	724.1	723.3	722.4	721.6	720.7
172.5°	726.5	727.5	728.4	728.5	727.7	726.8	726.0	725.2
175°	731.3	732.3	733.2	733.3	732.5	731.7	730.9	730.1
177.5°	733.6	734.3	734.9	734.9	734.3	733.6	732.9	732.3
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7

(END OF REPORT)