

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: P331971-840

Luminaire Tested: **S123DIP-S775D585U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331971-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D585U840-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5233.8 lumens
Efficiency: N/A
Efficacy: 129.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

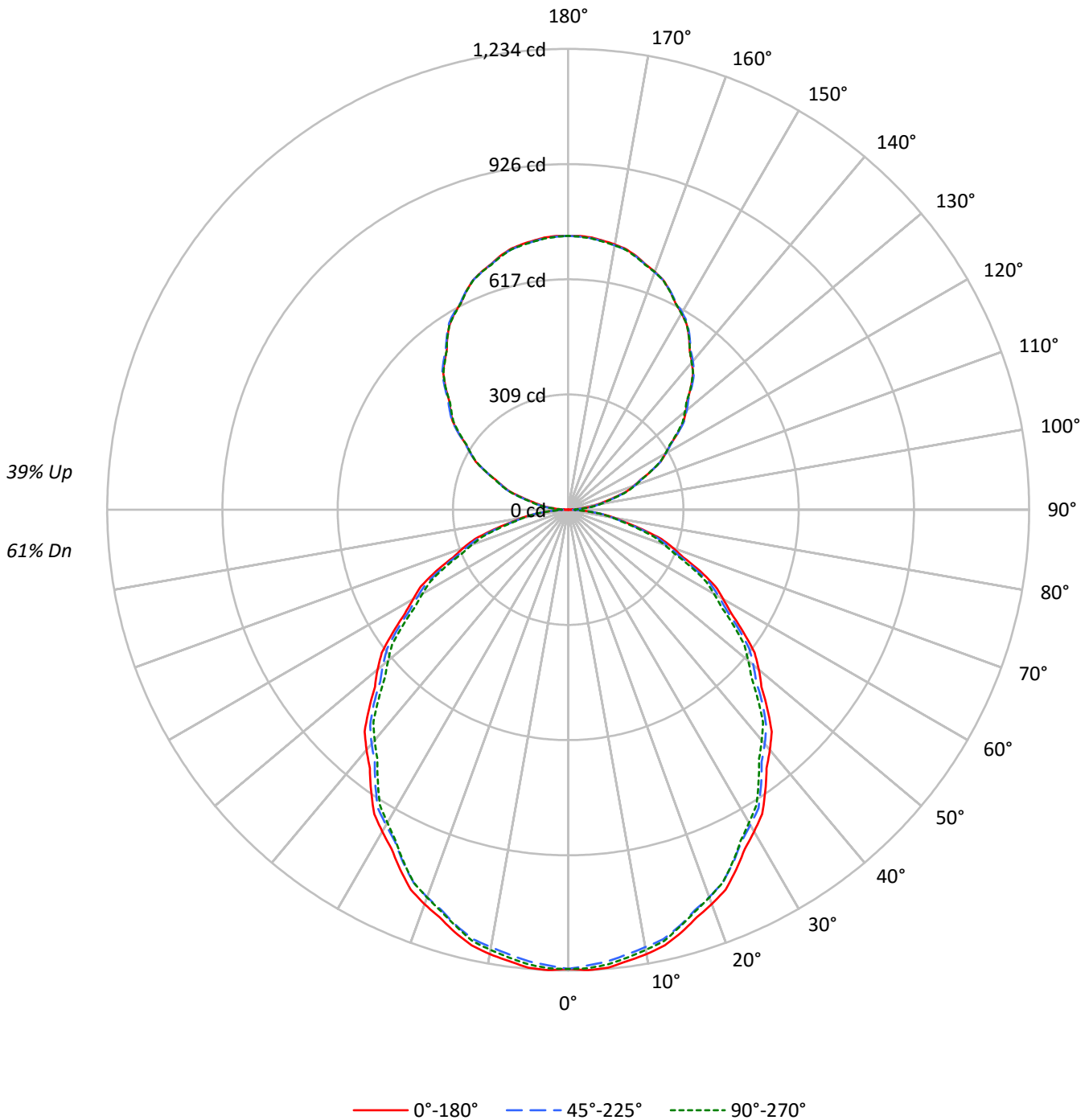
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	77	77	77	66	66	66	61
1	100	96	92	88	94	90	86	83	78	76	73	68	66	64	59	57	56	51
2	91	84	77	72	85	78	73	68	69	64	61	60	57	54	52	49	47	43
3	83	73	66	60	78	69	62	57	61	55	51	53	49	45	46	43	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	27
6	64	52	44	38	60	49	42	36	44	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	27	24	21
8	55	43	35	29	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	25	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	22	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13237	13237	13237
5°	13299	13116	13207
10°	13210	13002	13083
15°	13056	12856	12880
20°	12875	12645	12657
25°	12634	12396	12371
30°	12367	12117	12026
35°	12089	11825	11671
40°	11797	11500	11323
45°	11478	11204	10930
50°	11156	10836	10535
55°	10736	10457	10141
60°	10312	10015	9698
65°	9938	9536	9235
70°	9385	8985	8585
75°	8576	8268	7918
80°	7736	7407	7345
85°	6780	6533	6274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.8	2.2
10°-20°	327.1	6.2
20°-30°	483.2	9.2
30°-40°	564.4	10.8
40°-50°	567.4	10.8
50°-60°	498.4	9.5
60°-70°	371.3	7.1
70°-80°	211.6	4.0
80°-90°	62.9	1.2
90°-100°	47.8	0.9
100°-110°	143.0	2.7
110°-120°	243.2	4.6
120°-130°	319.9	6.1
130°-140°	359.5	6.9
140°-150°	353.4	6.8
150°-160°	297.5	5.7
160°-170°	198.0	3.8
170°-180°	69.3	1.3
0°-30°	926.1	17.7
0°-40°	1490.5	28.5
0°-60°	2556.3	48.8
0°-90°	3202.1	61.2
90°-120°	433.9	8.3
90°-150°	1466.7	28.0
90°-180°	2032.0	38.8
0°-180°	5233.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1230	1230	1230	1230	1230	
5°	1231	1225	1214	1224	1222	117
15°	1172	1167	1154	1161	1156	330
25°	1064	1057	1044	1044	1042	490
35°	920	913	900	894	888	575
45°	754	749	736	724	718	582
55°	572	570	557	546	540	512
65°	390	385	374	366	363	385
75°	206	202	199	194	190	221
85°	55	53	53	51	51	60
90°	1	6	14	16	17	5
95°	34	38	43	45	45	38
105°	130	131	136	136	137	139
115°	245	246	245	246	245	242
125°	358	360	359	357	354	319
135°	465	468	468	465	464	358
145°	564	565	567	566	564	352
155°	646	646	646	648	645	297
165°	703	702	702	705	701	198
175°	732	729	729	732	729	69
180°	733	733	733	733	733	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8
2.5°	1234.0	1233.2	1232.5	1231.7	1231.0	1229.6	1227.5	1225.5	1223.4	1221.3	1223.1
5°	1230.8	1229.6	1228.5	1227.3	1226.1	1224.3	1221.6	1219.1	1216.5	1213.9	1216.3
7.5°	1218.8	1217.6	1216.4	1215.3	1214.1	1212.1	1209.4	1206.8	1204.1	1201.4	1203.6
10°	1208.6	1207.4	1206.3	1205.1	1204.0	1201.8	1198.7	1195.7	1192.7	1189.6	1191.7
12.5°	1195.1	1194.1	1193.2	1192.1	1191.1	1189.2	1186.4	1183.5	1180.6	1177.7	1179.3
15°	1171.6	1170.6	1169.7	1168.8	1167.8	1165.9	1162.8	1159.7	1156.7	1153.7	1155.5
17.5°	1144.3	1143.1	1141.9	1140.6	1139.4	1137.3	1134.3	1131.1	1128.1	1125.1	1126.4
20°	1124.0	1122.6	1121.3	1119.8	1118.4	1116.1	1113.1	1110.0	1107.0	1103.9	1104.9
22.5°	1101.2	1099.7	1098.3	1096.9	1095.5	1093.3	1090.3	1087.2	1084.2	1081.1	1081.9
25°	1063.8	1062.4	1061.0	1059.6	1058.1	1055.9	1052.8	1049.8	1046.7	1043.7	1043.9
27.5°	1023.8	1022.4	1021.1	1019.7	1018.3	1016.0	1012.7	1009.5	1006.1	1002.8	1003.0
30°	995.0	993.8	992.7	991.5	990.3	988.1	984.8	981.5	978.3	974.9	974.9
32.5°	966.2	964.7	963.1	961.6	960.1	958.1	955.4	952.9	950.4	947.9	946.5
35°	920.0	918.6	917.2	915.7	914.3	912.1	909.0	905.9	902.9	899.9	898.5
37.5°	872.5	870.8	869.0	867.2	865.5	863.0	859.9	856.8	853.6	850.6	848.9
40°	839.6	838.2	836.8	835.4	833.9	831.6	828.3	825.1	821.7	818.4	816.6
42.5°	806.6	805.0	803.3	801.8	800.2	797.8	794.5	791.1	787.9	784.6	782.7
45°	754.0	753.0	752.0	751.1	750.1	748.2	745.1	742.0	739.0	736.0	733.2
47.5°	701.7	700.3	698.9	697.6	696.2	694.1	691.3	688.4	685.5	682.7	679.8
50°	666.2	665.0	663.8	662.7	661.5	659.3	656.3	653.3	650.2	647.1	644.6
52.5°	628.9	628.1	627.3	626.5	625.7	623.7	620.5	617.2	614.0	610.8	608.5
55°	572.1	571.8	571.6	571.4	571.1	569.5	566.4	563.4	560.3	557.2	554.7
57.5°	518.0	517.2	516.3	515.5	514.7	513.1	510.7	508.2	505.7	503.3	501.0
60°	479.0	478.8	478.6	478.3	478.1	476.6	473.7	470.9	468.1	465.2	463.1
62.5°	444.3	443.7	443.1	442.5	441.9	440.2	437.4	434.5	431.7	428.9	426.8
65°	390.2	389.0	387.8	386.7	385.5	383.7	381.3	379.0	376.7	374.4	372.4
67.5°	332.9	331.8	330.8	329.7	328.7	327.3	325.6	323.8	321.9	320.2	318.5
70°	298.2	296.8	295.4	294.0	292.6	291.1	289.7	288.3	286.9	285.5	283.9
72.5°	261.9	260.7	259.7	258.7	257.7	256.4	254.8	253.2	251.6	249.9	248.5
75°	206.2	205.2	204.3	203.4	202.5	201.6	200.9	200.2	199.4	198.8	197.6
77.5°	156.9	156.4	155.9	155.4	154.8	154.2	153.3	152.5	151.7	150.8	150.0
80°	124.8	124.1	123.4	122.7	122.0	121.4	120.9	120.5	120.0	119.5	119.3
82.5°	93.5	93.3	93.2	93.0	92.9	92.8	92.7	92.6	92.5	92.4	92.0
85°	54.9	54.5	54.0	53.6	53.1	52.9	52.9	52.9	52.9	52.9	52.4
87.5°	22.1	21.8	21.5	21.2	20.9	20.8	20.9	21.1	21.2	21.4	21.3
90°	0.6	1.8	3.1	4.4	5.7	7.2	8.8	10.5	12.1	13.8	14.3
92.5°	13.9	14.8	15.7	16.6	17.5	18.4	19.3	20.2	21.2	22.1	22.5
95°	34.0	34.8	35.7	36.7	37.6	38.6	39.6	40.6	41.6	42.6	43.1
97.5°	60.4	61.0	61.7	62.4	63.0	63.7	64.4	65.2	65.9	66.8	67.3
100°	78.4	79.1	79.9	80.7	81.4	82.1	82.7	83.4	84.0	84.6	85.0
102.5°	99.1	99.6	100.0	100.5	100.9	101.6	102.4	103.3	104.1	104.9	105.3
105°	129.6	129.9	130.1	130.4	130.7	131.3	132.5	133.6	134.8	135.9	135.9
107.5°	165.1	165.2	165.4	165.5	165.7	166.0	166.4	166.9	167.4	167.8	168.2
110°	187.2	187.4	187.7	187.9	188.2	188.4	188.7	189.0	189.2	189.6	190.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.3	210.4	210.6	210.7	210.9	211.0	211.1	211.1	211.2	211.2	211.8
115°	244.8	245.2	245.6	246.0	246.3	246.4	246.1	245.9	245.6	245.4	245.5
117.5°	279.6	279.8	280.1	280.3	280.6	280.5	280.2	279.9	279.6	279.2	279.2
120°	301.2	302.1	302.8	303.6	304.4	304.4	303.8	303.2	302.5	301.8	301.7
122.5°	323.9	324.4	325.0	325.5	326.1	326.2	325.9	325.6	325.2	324.9	324.6
125°	358.3	358.7	359.0	359.4	359.8	359.9	359.6	359.4	359.1	358.9	358.3
127.5°	390.1	390.9	391.7	392.5	393.3	393.6	393.3	393.0	392.7	392.5	391.8
130°	411.3	412.3	413.3	414.3	415.4	415.7	415.4	415.0	414.5	414.1	413.6
132.5°	432.4	433.5	434.5	435.6	436.6	437.0	436.7	436.4	436.1	435.9	435.2
135°	464.8	465.6	466.4	467.2	467.9	468.3	468.1	468.0	467.9	467.8	467.3
137.5°	494.8	495.4	496.0	496.8	497.4	497.9	498.2	498.5	498.9	499.2	498.7
140°	515.5	516.1	516.8	517.5	518.1	518.5	518.6	518.8	518.9	519.0	518.9
142.5°	534.4	535.0	535.7	536.3	536.9	537.5	537.7	537.9	538.2	538.4	538.3
145°	563.9	564.2	564.4	564.7	564.9	565.2	565.6	566.0	566.4	566.8	566.6
147.5°	589.8	590.2	590.7	591.1	591.6	592.0	592.4	592.7	593.1	593.4	593.4
150°	607.7	607.9	608.2	608.4	608.7	608.9	609.3	609.5	609.8	610.0	610.0
152.5°	622.5	622.8	623.2	623.5	623.9	624.1	624.3	624.4	624.6	624.7	624.9
155°	645.7	645.7	645.7	645.7	645.7	645.8	645.9	646.0	646.2	646.3	646.8
157.5°	665.5	665.4	665.2	665.1	664.9	664.9	665.0	665.1	665.2	665.3	665.8
160°	677.9	677.7	677.4	677.2	676.9	676.8	676.8	676.8	676.8	676.8	677.4
162.5°	689.0	688.6	688.3	687.9	687.6	687.5	687.6	687.7	687.8	687.9	688.5
165°	703.3	703.0	702.6	702.2	701.8	701.6	701.6	701.6	701.6	701.6	702.4
167.5°	714.7	714.2	713.7	713.2	712.7	712.5	712.6	712.7	712.8	712.9	713.7
170°	721.1	720.6	720.1	719.6	719.1	718.8	718.8	718.8	718.8	718.8	719.7
172.5°	726.2	725.7	725.2	724.7	724.2	724.0	724.0	724.0	724.0	724.0	724.8
175°	731.5	731.0	730.5	730.0	729.5	729.2	729.2	729.2	729.2	729.2	730.0
177.5°	733.8	733.4	733.0	732.5	732.1	731.8	731.8	731.8	731.8	731.8	732.5
180°	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8
2.5°	1225.1	1227.0	1228.8	1229.7	1229.5	1229.3	1229.1	1228.9
5°	1218.6	1220.9	1223.4	1224.3	1223.8	1223.4	1222.8	1222.3
7.5°	1205.7	1207.8	1209.9	1210.8	1210.5	1210.2	1209.9	1209.7
10°	1193.9	1195.9	1198.0	1198.9	1198.4	1197.9	1197.5	1197.0
12.5°	1180.8	1182.3	1184.0	1184.6	1184.3	1184.0	1183.8	1183.5
15°	1157.4	1159.2	1161.1	1161.3	1159.9	1158.5	1157.2	1155.8
17.5°	1127.7	1129.0	1130.3	1130.7	1130.2	1129.7	1129.2	1128.7
20°	1105.8	1106.7	1107.7	1107.8	1107.1	1106.4	1105.7	1105.0
22.5°	1082.6	1083.4	1084.1	1084.0	1083.2	1082.3	1081.4	1080.5
25°	1044.1	1044.4	1044.6	1044.4	1043.7	1043.0	1042.3	1041.6
27.5°	1003.2	1003.4	1003.6	1003.2	1002.4	1001.5	1000.6	999.7
30°	974.9	974.9	974.9	974.1	972.5	970.8	969.2	967.6
32.5°	945.2	943.9	942.6	941.5	940.6	939.7	938.8	938.0
35°	897.1	895.6	894.2	892.9	891.7	890.6	889.4	888.2
37.5°	847.2	845.5	843.8	842.6	841.8	841.1	840.3	839.6
40°	814.7	812.8	810.9	809.5	808.6	807.6	806.7	805.8
42.5°	780.8	778.9	777.1	775.7	774.8	773.8	772.8	771.9
45°	730.3	727.5	724.7	722.7	721.5	720.3	719.1	718.0
47.5°	677.1	674.4	671.6	669.6	668.6	667.6	666.6	665.5
50°	642.0	639.3	636.8	634.8	633.4	632.0	630.6	629.1
52.5°	606.3	604.1	601.9	600.2	598.7	597.3	595.9	594.5
55°	552.1	549.5	546.9	545.0	543.8	542.7	541.5	540.4
57.5°	498.7	496.4	494.1	492.3	490.9	489.6	488.2	486.9
60°	461.0	458.9	456.8	455.1	453.9	452.8	451.6	450.5
62.5°	424.6	422.5	420.4	419.0	418.2	417.4	416.6	415.8
65°	370.5	368.7	366.8	365.5	364.8	364.1	363.3	362.6
67.5°	316.9	315.3	313.6	312.3	311.3	310.3	309.3	308.3
70°	282.3	280.5	278.9	277.5	276.3	275.2	274.0	272.8
72.5°	247.0	245.6	244.2	243.1	242.5	241.9	241.3	240.7
75°	196.4	195.3	194.1	193.2	192.5	191.8	191.1	190.4
77.5°	149.2	148.3	147.5	147.2	147.2	147.2	147.2	147.2
80°	119.1	118.8	118.6	118.5	118.5	118.5	118.5	118.5
82.5°	91.6	91.2	90.7	90.4	90.3	90.1	89.9	89.7
85°	51.9	51.5	51.0	50.8	50.8	50.8	50.8	50.8
87.5°	21.2	21.1	21.0	21.0	21.1	21.1	21.2	21.2
90°	14.8	15.3	15.9	16.3	16.6	16.8	17.1	17.3
92.5°	22.9	23.3	23.7	23.9	23.7	23.5	23.4	23.2
95°	43.6	44.1	44.6	44.9	44.9	44.9	44.9	44.9
97.5°	67.9	68.5	69.1	69.3	69.3	69.2	69.2	69.1
100°	85.4	85.8	86.2	86.5	86.7	87.1	87.3	87.6
102.5°	105.7	106.1	106.4	106.6	106.6	106.5	106.5	106.4
105°	135.9	135.9	135.9	136.0	136.3	136.5	136.8	137.1
107.5°	168.6	169.1	169.5	169.7	169.5	169.4	169.2	169.1
110°	190.6	191.1	191.6	191.7	191.5	191.2	191.0	190.7



TEST NUMBER: P331971-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	212.4	213.0	213.6	213.9	213.9	213.8	213.8	213.7
115°	245.6	245.8	245.9	245.9	245.8	245.6	245.5	245.4
117.5°	279.2	279.1	279.1	278.9	278.6	278.2	277.9	277.5
120°	301.5	301.4	301.3	301.1	300.8	300.6	300.3	300.1
122.5°	324.2	323.9	323.6	323.2	322.9	322.4	322.1	321.7
125°	357.8	357.3	356.8	356.3	355.8	355.3	354.8	354.3
127.5°	391.0	390.3	389.6	389.0	388.4	387.8	387.2	386.6
130°	413.1	412.6	412.1	411.4	410.5	409.6	408.7	407.8
132.5°	434.5	433.9	433.3	432.7	432.0	431.3	430.6	429.9
135°	466.7	466.2	465.6	465.2	465.0	464.7	464.5	464.2
137.5°	498.1	497.6	497.1	496.6	496.0	495.5	495.0	494.5
140°	518.8	518.6	518.5	518.0	517.1	516.1	515.2	514.4
142.5°	538.1	538.0	537.9	537.5	536.7	536.0	535.3	534.6
145°	566.5	566.4	566.3	565.9	565.4	564.9	564.4	563.9
147.5°	593.4	593.4	593.4	593.0	592.3	591.5	590.8	590.0
150°	610.0	610.0	610.0	609.7	608.8	608.0	607.3	606.5
152.5°	625.2	625.4	625.6	625.3	624.7	624.0	623.4	622.7
155°	647.3	647.8	648.3	648.1	647.2	646.3	645.5	644.6
157.5°	666.4	666.9	667.4	667.3	666.6	665.9	665.2	664.5
160°	678.1	678.7	679.3	679.4	678.9	678.4	677.9	677.4
162.5°	689.1	689.8	690.4	690.3	689.5	688.7	687.9	687.1
165°	703.2	703.9	704.7	704.6	703.7	702.8	702.0	701.0
167.5°	714.5	715.3	716.1	716.1	715.3	714.5	713.7	712.9
170°	720.6	721.5	722.5	722.5	721.5	720.6	719.7	718.8
172.5°	725.5	726.3	727.1	727.1	726.2	725.3	724.4	723.5
175°	730.7	731.5	732.4	732.3	731.3	730.4	729.5	728.6
177.5°	733.2	733.8	734.4	734.3	733.6	732.9	732.2	731.4
180°	733.3	733.3	733.3	733.3	733.3	733.3	733.3	733.3

(END OF REPORT)