

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: P331899

Luminaire Tested: **S123DIP-S340D1025U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331899
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-S340D1025U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4934.6 lumens
Efficiency: N/A
Efficacy: 132.3 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-Indirect

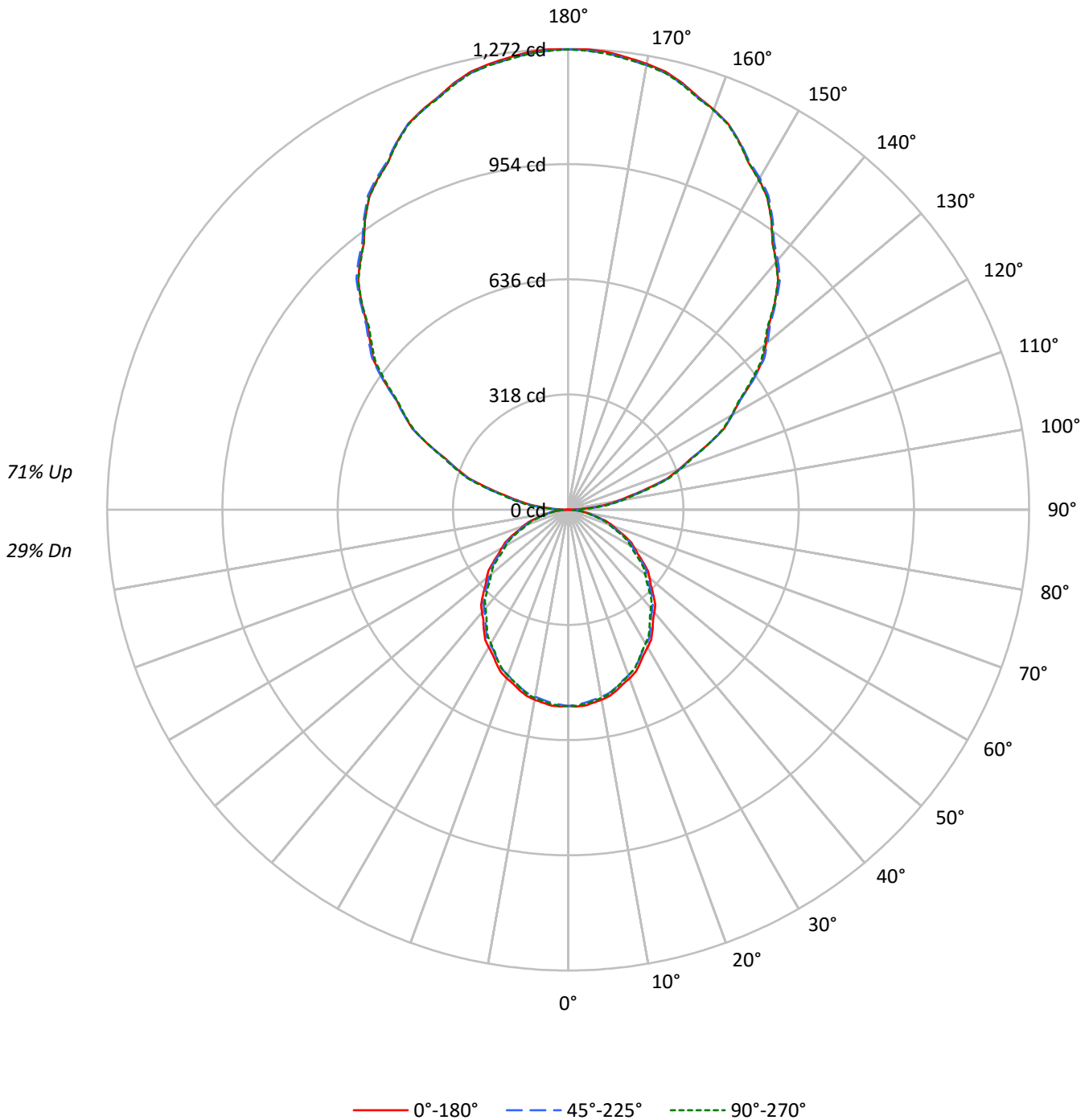
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	71	67	75	69	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	47	42	43	38	34	32	29	26	22	20	19	15
5	65	53	45	40	58	48	41	36	38	33	29	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5833	5833	5833
5°	5861	5780	5820
10°	5821	5729	5766
15°	5753	5665	5675
20°	5674	5573	5577
25°	5567	5462	5451
30°	5450	5340	5299
35°	5327	5210	5143
40°	5199	5067	4990
45°	5057	4937	4816
50°	4915	4776	4642
55°	4731	4609	4468
60°	4545	4413	4273
65°	4378	4200	4070
70°	4135	3959	3783
75°	3780	3643	3489
80°	3409	3267	3236
85°	2989	2878	2766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	1.0
10°-20°	144.1	2.9
20°-30°	212.9	4.3
30°-40°	248.7	5.0
40°-50°	250.0	5.1
50°-60°	219.6	4.5
60°-70°	163.6	3.3
70°-80°	93.2	1.9
80°-90°	30.5	0.6
90°-100°	82.8	1.7
100°-110°	247.8	5.0
110°-120°	421.4	8.5
120°-130°	554.3	11.2
130°-140°	623.0	12.6
140°-150°	612.4	12.4
150°-160°	515.6	10.4
160°-170°	343.2	7.0
170°-180°	120.2	2.4
0°-30°	408.1	8.3
0°-40°	656.8	13.3
0°-60°	1126.5	22.8
0°-90°	1413.8	28.7
90°-120°	752.0	15.2
90°-150°	2541.8	51.5
90°-180°	3521.0	71.4
0°-180°	4934.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	540	535	539	539	51
15°	516	514	508	512	509	145
25°	469	466	460	460	459	216
35°	405	402	396	394	391	254
45°	332	330	324	319	316	256
55°	252	251	246	241	238	226
65°	172	170	165	161	160	170
75°	91	89	88	85	84	97
85°	24	23	23	22	22	27
90°	1	11	24	28	30	5
95°	59	66	74	78	78	66
105°	225	227	236	236	238	241
115°	424	427	425	426	425	420
125°	621	624	622	618	614	553
135°	806	811	810	807	805	621
145°	977	979	982	981	977	610
155°	1119	1119	1120	1123	1117	515
165°	1219	1216	1216	1221	1215	344
175°	1268	1264	1264	1269	1263	120
180°	1271	1271	1271	1271	1271	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	543.8	543.4	543.1	542.8	542.4	541.8	540.9	540.0	539.1	538.2	539.0
5°	542.4	541.8	541.3	540.8	540.3	539.5	538.3	537.2	536.0	534.9	535.9
7.5°	537.1	536.5	536.0	535.5	535.0	534.1	533.0	531.8	530.6	529.4	530.3
10°	532.6	532.1	531.5	531.0	530.5	529.6	528.2	526.9	525.5	524.2	525.1
12.5°	526.6	526.2	525.7	525.3	524.9	524.0	522.8	521.5	520.2	519.0	519.7
15°	516.3	515.9	515.4	515.0	514.6	513.7	512.4	511.0	509.7	508.4	509.2
17.5°	504.2	503.7	503.2	502.6	502.1	501.2	499.8	498.5	497.1	495.8	496.3
20°	495.3	494.7	494.1	493.4	492.8	491.8	490.5	489.1	487.8	486.5	486.9
22.5°	485.2	484.6	484.0	483.4	482.8	481.8	480.4	479.1	477.7	476.4	476.7
25°	468.7	468.1	467.5	466.9	466.3	465.3	463.9	462.6	461.2	459.9	460.0
27.5°	451.1	450.5	449.9	449.3	448.7	447.7	446.3	444.8	443.4	441.9	442.0
30°	438.5	437.9	437.4	436.9	436.4	435.4	434.0	432.5	431.1	429.6	429.6
32.5°	425.8	425.1	424.4	423.7	423.1	422.1	421.0	419.9	418.8	417.7	417.1
35°	405.4	404.8	404.1	403.5	402.9	401.9	400.6	399.2	397.9	396.5	395.9
37.5°	384.5	383.7	382.9	382.1	381.4	380.3	378.9	377.5	376.2	374.8	374.1
40°	370.0	369.3	368.7	368.1	367.5	366.4	365.0	363.5	362.1	360.6	359.8
42.5°	355.4	354.7	354.0	353.3	352.6	351.5	350.1	348.6	347.2	345.7	344.9
45°	332.2	331.8	331.4	331.0	330.6	329.7	328.3	327.0	325.6	324.3	323.1
47.5°	309.2	308.6	308.0	307.4	306.8	305.9	304.6	303.3	302.1	300.8	299.6
50°	293.5	293.0	292.5	292.0	291.5	290.5	289.2	287.9	286.5	285.2	284.0
52.5°	277.1	276.8	276.4	276.1	275.7	274.8	273.4	272.0	270.6	269.1	268.2
55°	252.1	252.0	251.9	251.8	251.7	250.9	249.6	248.2	246.9	245.6	244.4
57.5°	228.2	227.9	227.5	227.2	226.8	226.1	225.0	223.9	222.9	221.8	220.8
60°	211.1	211.0	210.9	210.8	210.7	210.0	208.7	207.5	206.3	205.0	204.1
62.5°	195.8	195.5	195.3	195.0	194.7	194.0	192.7	191.5	190.2	189.0	188.1
65°	171.9	171.4	170.9	170.4	169.9	169.1	168.1	167.0	166.0	164.9	164.1
67.5°	146.7	146.2	145.8	145.3	144.9	144.2	143.5	142.7	141.9	141.1	140.4
70°	131.4	130.8	130.2	129.5	128.9	128.3	127.7	127.0	126.4	125.8	125.1
72.5°	115.4	114.9	114.5	114.0	113.5	113.0	112.3	111.6	110.9	110.2	109.5
75°	90.9	90.4	90.0	89.6	89.2	88.8	88.5	88.2	87.9	87.6	87.1
77.5°	69.1	68.9	68.7	68.5	68.2	67.9	67.6	67.2	66.8	66.4	66.1
80°	55.0	54.7	54.4	54.1	53.7	53.5	53.3	53.1	52.9	52.7	52.5
82.5°	41.2	41.1	41.1	41.0	40.9	40.9	40.8	40.8	40.8	40.7	40.5
85°	24.2	24.0	23.8	23.6	23.4	23.3	23.3	23.3	23.3	23.3	23.1
87.5°	9.9	10.1	10.3	10.5	10.7	11.0	11.5	12.0	12.5	13.0	13.1
90°	1.0	3.2	5.4	7.7	9.9	12.4	15.3	18.2	21.1	24.0	24.8
92.5°	24.2	25.7	27.2	28.7	30.2	31.8	33.4	35.0	36.7	38.3	39.0
95°	58.9	60.4	62.0	63.6	65.1	66.8	68.5	70.3	72.1	73.9	74.8
97.5°	104.6	105.8	106.9	108.1	109.2	110.4	111.7	113.0	114.3	115.6	116.6
100°	135.8	137.1	138.4	139.7	141.1	142.3	143.4	144.5	145.6	146.7	147.4
102.5°	171.7	172.5	173.3	174.1	174.9	176.0	177.5	178.9	180.4	181.9	182.5
105°	224.6	225.0	225.5	225.9	226.4	227.6	229.6	231.6	233.6	235.6	235.6
107.5°	286.1	286.4	286.6	286.9	287.2	287.7	288.5	289.3	290.1	290.9	291.6
110°	324.4	324.9	325.3	325.7	326.2	326.6	327.1	327.5	328.0	328.4	329.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	364.3	364.6	364.9	365.1	365.4	365.6	365.7	365.8	365.9	365.9	367.0
115°	424.2	424.9	425.6	426.2	426.9	427.0	426.6	426.1	425.7	425.2	425.5
117.5°	484.5	485.0	485.4	485.9	486.3	486.2	485.7	485.1	484.5	483.9	483.9
120°	522.1	523.4	524.7	526.1	527.4	527.5	526.4	525.3	524.2	523.1	522.8
122.5°	561.2	562.2	563.1	564.1	565.1	565.3	564.7	564.1	563.6	563.0	562.4
125°	620.9	621.6	622.2	622.9	623.5	623.7	623.2	622.8	622.3	621.9	621.0
127.5°	676.0	677.4	678.8	680.2	681.7	682.1	681.6	681.2	680.7	680.2	678.9
130°	712.7	714.5	716.3	718.0	719.8	720.4	719.7	719.0	718.4	717.7	716.8
132.5°	749.5	751.2	753.0	754.8	756.6	757.2	756.7	756.2	755.7	755.2	754.2
135°	805.6	806.9	808.2	809.5	810.9	811.4	811.2	811.0	810.8	810.5	809.7
137.5°	857.5	858.6	859.7	860.8	861.9	862.7	863.3	863.9	864.5	865.0	864.1
140°	893.4	894.5	895.6	896.7	897.8	898.5	898.7	898.9	899.2	899.4	899.2
142.5°	926.1	927.2	928.4	929.5	930.6	931.3	931.7	932.1	932.5	932.9	932.7
145°	977.2	977.7	978.1	978.6	979.0	979.6	980.2	980.9	981.6	982.2	982.0
147.5°	1022.0	1022.8	1023.6	1024.4	1025.2	1025.9	1026.5	1027.1	1027.7	1028.4	1028.4
150°	1053.1	1053.6	1054.0	1054.4	1054.9	1055.3	1055.8	1056.2	1056.7	1057.1	1057.1
152.5°	1078.7	1079.3	1079.9	1080.5	1081.1	1081.6	1081.9	1082.1	1082.4	1082.7	1083.0
155°	1119.0	1119.0	1119.0	1119.0	1119.0	1119.1	1119.3	1119.5	1119.8	1120.0	1120.9
157.5°	1153.3	1153.1	1152.8	1152.5	1152.3	1152.2	1152.4	1152.6	1152.8	1152.9	1153.9
160°	1174.9	1174.4	1174.0	1173.6	1173.1	1172.9	1172.9	1172.9	1172.9	1172.9	1174.0
162.5°	1194.1	1193.4	1192.8	1192.2	1191.6	1191.4	1191.5	1191.7	1191.9	1192.1	1193.2
165°	1218.8	1218.1	1217.5	1216.8	1216.2	1215.8	1215.8	1215.8	1215.8	1215.8	1217.1
167.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1234.7	1234.9	1235.0	1235.2	1235.4	1236.8
170°	1249.8	1248.9	1248.0	1247.1	1246.2	1245.8	1245.8	1245.8	1245.8	1245.8	1247.3
172.5°	1258.5	1257.7	1256.8	1255.9	1255.0	1254.5	1254.5	1254.5	1254.5	1254.5	1255.9
175°	1267.7	1266.8	1265.9	1265.1	1264.2	1263.7	1263.7	1263.7	1263.7	1263.7	1265.1
177.5°	1271.5	1270.8	1270.1	1269.4	1268.7	1268.3	1268.3	1268.3	1268.3	1268.3	1269.4
180°	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	539.8	540.7	541.5	541.9	541.8	541.7	541.6	541.5
5°	537.0	538.0	539.1	539.5	539.3	539.1	538.8	538.6
7.5°	531.3	532.2	533.1	533.5	533.4	533.3	533.2	533.0
10°	526.1	527.0	527.9	528.3	528.1	527.9	527.7	527.5
12.5°	520.3	521.0	521.7	522.0	521.9	521.7	521.6	521.5
15°	510.0	510.8	511.7	511.8	511.1	510.5	509.9	509.3
17.5°	496.9	497.5	498.1	498.3	498.0	497.8	497.6	497.4
20°	487.3	487.7	488.1	488.2	487.8	487.5	487.2	486.9
22.5°	477.0	477.4	477.7	477.7	477.3	476.9	476.5	476.1
25°	460.1	460.2	460.3	460.2	459.9	459.6	459.3	459.0
27.5°	442.1	442.2	442.2	442.1	441.7	441.3	440.9	440.5
30°	429.6	429.6	429.6	429.2	428.5	427.8	427.1	426.3
32.5°	416.5	415.9	415.4	414.9	414.5	414.1	413.7	413.3
35°	395.3	394.7	394.0	393.5	393.0	392.4	391.9	391.4
37.5°	373.3	372.6	371.8	371.3	371.0	370.6	370.3	370.0
40°	359.0	358.2	357.3	356.7	356.3	355.9	355.5	355.1
42.5°	344.1	343.2	342.4	341.8	341.4	341.0	340.6	340.1
45°	321.8	320.6	319.3	318.5	317.9	317.4	316.9	316.4
47.5°	298.4	297.2	295.9	295.1	294.6	294.2	293.7	293.3
50°	282.9	281.7	280.6	279.7	279.1	278.5	277.9	277.2
52.5°	267.2	266.2	265.2	264.4	263.8	263.2	262.6	262.0
55°	243.3	242.1	241.0	240.2	239.7	239.1	238.6	238.1
57.5°	219.8	218.7	217.7	216.9	216.3	215.7	215.1	214.5
60°	203.2	202.2	201.3	200.6	200.0	199.5	199.0	198.5
62.5°	187.1	186.2	185.3	184.6	184.3	183.9	183.6	183.2
65°	163.3	162.5	161.6	161.1	160.8	160.4	160.1	159.8
67.5°	139.6	138.9	138.2	137.6	137.2	136.7	136.3	135.9
70°	124.4	123.6	122.9	122.3	121.8	121.3	120.7	120.2
72.5°	108.9	108.2	107.6	107.1	106.9	106.6	106.3	106.0
75°	86.6	86.0	85.5	85.1	84.8	84.5	84.2	83.9
77.5°	65.7	65.4	65.0	64.9	64.9	64.9	64.9	64.9
80°	52.4	52.3	52.2	52.2	52.2	52.2	52.2	52.2
82.5°	40.4	40.2	40.0	39.8	39.8	39.7	39.6	39.5
85°	22.9	22.7	22.5	22.4	22.4	22.4	22.4	22.4
87.5°	13.2	13.3	13.4	13.5	13.6	13.6	13.7	13.8
90°	25.7	26.6	27.5	28.2	28.6	29.1	29.5	29.9
92.5°	39.8	40.5	41.2	41.4	41.1	40.9	40.6	40.3
95°	75.6	76.5	77.4	77.9	77.9	77.9	77.9	77.9
97.5°	117.6	118.7	119.7	120.1	120.1	120.0	119.9	119.8
100°	148.1	148.7	149.4	150.0	150.4	150.8	151.3	151.7
102.5°	183.2	183.9	184.5	184.8	184.7	184.6	184.6	184.5
105°	235.6	235.6	235.6	235.8	236.2	236.7	237.1	237.6
107.5°	292.3	293.0	293.7	293.9	293.7	293.4	293.1	292.9
110°	330.2	331.1	332.0	332.2	331.7	331.3	330.9	330.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	368.1	369.1	370.2	370.7	370.6	370.5	370.4	370.3
115°	425.7	425.9	426.1	426.1	425.9	425.7	425.5	425.2
117.5°	483.8	483.8	483.8	483.4	482.8	482.2	481.6	480.9
120°	522.6	522.4	522.2	521.8	521.4	521.0	520.5	520.1
122.5°	561.8	561.3	560.7	560.1	559.5	558.8	558.2	557.6
125°	620.1	619.2	618.3	617.4	616.6	615.7	614.8	613.9
127.5°	677.7	676.5	675.2	674.1	673.1	672.0	671.0	670.0
130°	715.9	715.0	714.2	712.9	711.4	709.8	708.3	706.7
132.5°	753.1	752.1	751.0	749.9	748.7	747.5	746.3	745.1
135°	808.8	807.9	807.0	806.3	805.9	805.4	805.0	804.6
137.5°	863.2	862.3	861.3	860.4	859.6	858.7	857.9	857.1
140°	898.9	898.7	898.5	897.6	896.1	894.5	893.0	891.4
142.5°	932.5	932.3	932.0	931.3	930.1	928.9	927.7	926.5
145°	981.8	981.6	981.3	980.8	979.9	979.0	978.1	977.2
147.5°	1028.4	1028.4	1028.4	1027.7	1026.4	1025.0	1023.7	1022.4
150°	1057.1	1057.1	1057.1	1056.4	1055.1	1053.8	1052.4	1051.1
152.5°	1083.4	1083.7	1084.1	1083.7	1082.5	1081.4	1080.2	1079.1
155°	1121.8	1122.7	1123.5	1123.2	1121.7	1120.1	1118.5	1117.0
157.5°	1154.8	1155.7	1156.7	1156.5	1155.3	1154.0	1152.8	1151.5
160°	1175.1	1176.2	1177.3	1177.4	1176.6	1175.7	1174.8	1173.9
162.5°	1194.3	1195.4	1196.5	1196.3	1194.9	1193.5	1192.1	1190.7
165°	1218.5	1219.8	1221.1	1221.0	1219.5	1217.9	1216.4	1214.8
167.5°	1238.1	1239.5	1240.9	1240.9	1239.5	1238.1	1236.8	1235.4
170°	1248.9	1250.4	1252.0	1252.0	1250.4	1248.9	1247.3	1245.8
172.5°	1257.3	1258.7	1260.0	1260.0	1258.4	1256.9	1255.3	1253.7
175°	1266.4	1267.7	1269.1	1268.9	1267.4	1265.8	1264.3	1262.7
177.5°	1270.5	1271.5	1272.6	1272.5	1271.3	1270.0	1268.8	1267.5
180°	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7

(END OF REPORT)