

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: P331518-930

Luminaire Tested: **S122DIW-S485D1240U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331518-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D1240U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5118.9 lumens
Efficiency: N/A
Efficacy: 95.1 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: Semi-Indirect

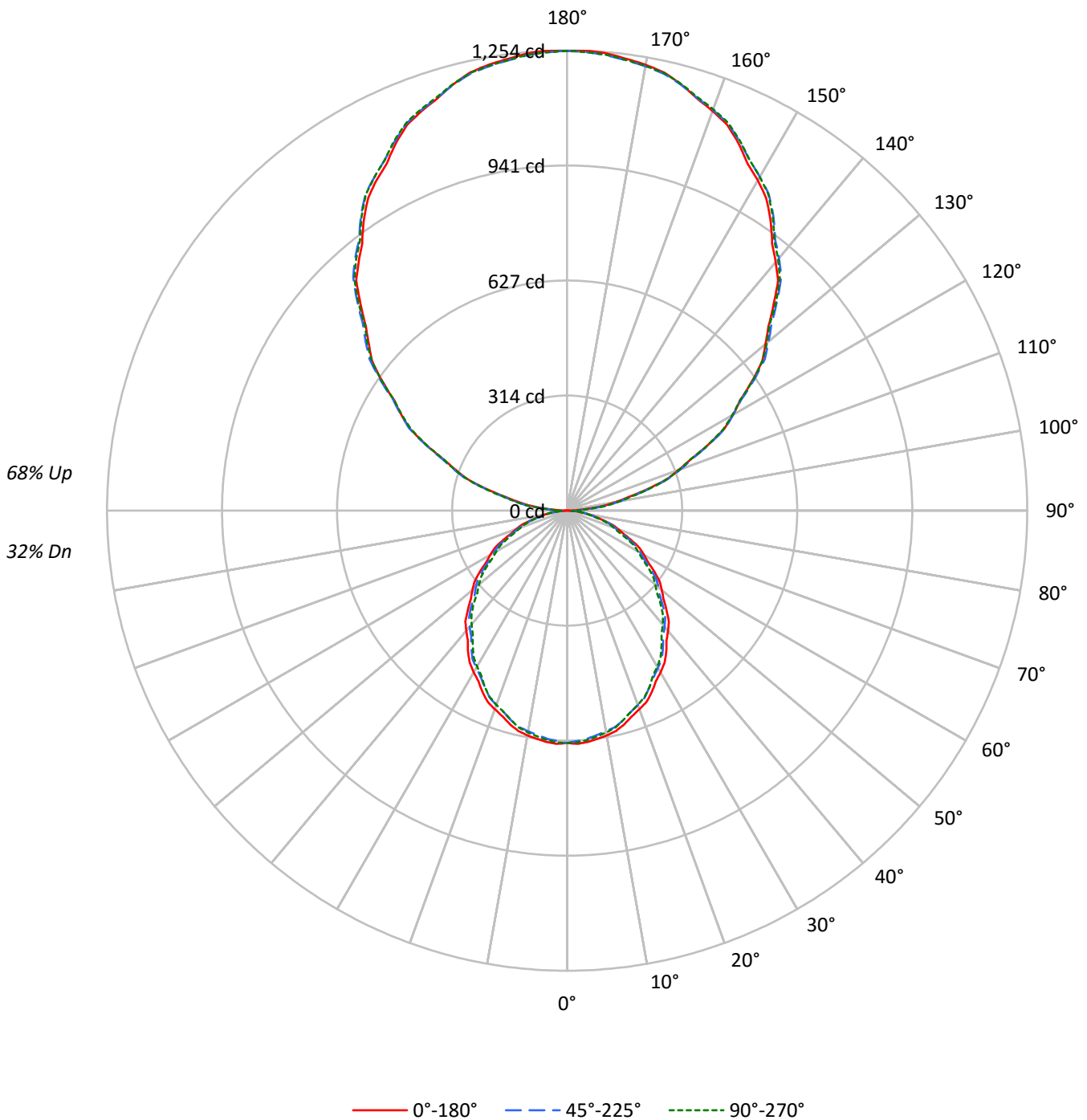
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	32
1	94	89	86	82	84	81	77	74	64	62	60	49	47	46	35	34	33	27
2	85	78	72	67	76	70	65	61	56	52	49	43	40	38	30	29	28	22
3	78	69	61	56	70	62	56	51	49	45	42	38	35	32	27	25	24	19
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	16
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	19	18	14
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	17	16	12
7	55	43	36	30	50	39	33	28	32	27	23	25	21	18	18	16	14	11
8	51	39	32	27	46	36	29	25	29	24	20	22	19	16	16	14	12	10
9	48	36	28	24	43	33	26	22	26	22	18	21	17	15	15	13	11	9
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.2
10°-20°	167.6	3.3
20°-30°	246.3	4.8
30°-40°	286.1	5.6
40°-50°	285.8	5.6
50°-60°	249.2	4.9
60°-70°	184.3	3.6
70°-80°	104.4	2.0
80°-90°	33.1	0.6
90°-100°	79.4	1.6
100°-110°	246.5	4.8
110°-120°	421.4	8.2
120°-130°	554.2	10.8
130°-140°	622.0	12.2
140°-150°	609.9	11.9
150°-160°	511.5	10.0
160°-170°	339.3	6.6
170°-180°	118.6	2.3
0°-30°	473.4	9.2
0°-40°	759.4	14.8
0°-60°	1294.4	25.3
0°-90°	1616.1	31.6
90°-120°	747.3	14.6
90°-150°	2533.4	49.5
90°-180°	3503.0	68.4
0°-180°	5118.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	1	14	37	35	36	4
95°	55	65	68	68	66	63
105°	227	230	233	235	235	240
115°	423	429	427	426	423	418
125°	615	624	622	619	617	550
135°	796	807	810	809	806	615
145°	966	974	980	981	977	603
155°	1105	1108	1111	1116	1113	508
165°	1202	1201	1201	1208	1203	339
175°	1251	1248	1245	1252	1246	119
180°	1253	1253	1253	1253	1253	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	9.0	9.3	9.7	10.0	10.4	10.9	11.7	12.6	13.4	14.2	13.8
90°	1.1	3.9	6.7	9.5	12.3	16.3	21.5	26.7	31.8	37.0	36.5
92.5°	18.8	20.9	23.0	25.0	27.1	28.7	29.9	31.1	32.4	33.6	33.7
95°	55.0	57.3	59.7	62.0	64.4	65.8	66.3	66.7	67.2	67.7	67.7
97.5°	100.4	102.5	104.6	106.6	108.7	110.1	111.0	111.9	112.8	113.7	113.7
100°	134.3	136.2	138.0	139.9	141.8	143.1	143.7	144.5	145.2	145.9	145.9
102.5°	169.7	171.3	172.8	174.3	175.8	177.0	177.9	178.8	179.7	180.6	180.8
105°	227.3	228.0	228.7	229.4	230.1	230.7	231.1	231.6	232.1	232.6	233.0
107.5°	285.2	286.3	287.3	288.3	289.3	289.8	289.8	289.8	289.8	289.8	290.1
110°	322.5	323.8	325.2	326.7	328.1	328.8	328.8	328.8	328.8	328.8	328.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.1	364.4	365.8	367.3	368.7	369.2	369.1	368.9	368.7	368.5	367.9
115°	422.9	424.3	425.7	427.1	428.5	428.9	428.5	428.0	427.5	427.1	426.9
117.5°	482.5	484.4	486.2	488.1	490.0	490.3	488.9	487.6	486.3	485.0	484.5
120°	522.2	524.1	526.0	527.9	529.8	529.8	527.9	526.0	524.1	522.2	522.2
122.5°	558.6	560.8	563.1	565.3	567.6	568.1	566.8	565.5	564.1	562.8	562.2
125°	615.2	617.3	619.5	621.6	623.7	624.4	623.7	623.1	622.3	621.6	620.9
127.5°	670.4	673.1	675.8	678.5	681.2	682.1	681.3	680.4	679.6	678.7	677.8
130°	705.2	708.2	711.3	714.3	717.3	718.6	718.2	717.7	717.2	716.7	716.2
132.5°	744.0	746.5	749.0	751.5	754.0	755.3	755.4	755.5	755.5	755.6	754.6
135°	796.1	798.6	801.2	803.8	806.4	807.9	808.4	808.9	809.3	809.8	809.5
137.5°	850.8	852.9	855.0	857.1	859.2	860.6	861.2	861.9	862.4	863.1	862.9
140°	883.8	885.9	888.0	890.1	892.3	893.9	895.0	896.3	897.4	898.5	898.5
142.5°	917.6	919.7	921.9	924.0	926.1	927.5	928.3	929.1	929.9	930.7	930.9
145°	966.2	967.9	969.6	971.2	972.8	974.4	975.8	977.1	978.6	980.0	980.2
147.5°	1009.6	1011.5	1013.5	1015.5	1017.5	1019.0	1019.9	1020.8	1021.7	1022.7	1023.2
150°	1039.2	1040.6	1042.0	1043.4	1044.8	1046.0	1046.9	1047.9	1048.8	1049.8	1050.4
152.5°	1065.4	1066.8	1068.2	1069.6	1071.1	1072.3	1073.4	1074.6	1075.7	1076.8	1077.7
155°	1104.7	1105.5	1106.1	1106.9	1107.6	1108.2	1109.0	1109.6	1110.4	1111.1	1112.2
157.5°	1138.3	1138.8	1139.3	1139.8	1140.2	1140.7	1141.1	1141.5	1141.9	1142.4	1143.9
160°	1158.6	1159.1	1159.6	1160.1	1160.5	1160.9	1161.1	1161.3	1161.6	1161.8	1163.2
162.5°	1177.2	1177.4	1177.5	1177.5	1177.6	1177.8	1178.0	1178.3	1178.5	1178.8	1180.3
165°	1202.0	1201.8	1201.5	1201.3	1201.0	1200.9	1200.9	1200.9	1200.9	1200.9	1202.6
167.5°	1222.7	1222.0	1221.3	1220.6	1219.9	1219.5	1219.4	1219.4	1219.4	1219.3	1221.0
170°	1233.7	1233.0	1232.3	1231.6	1230.9	1230.4	1230.2	1230.0	1229.7	1229.5	1231.1
172.5°	1241.3	1240.6	1239.9	1239.2	1238.5	1238.0	1237.8	1237.5	1237.3	1237.1	1238.8
175°	1250.6	1249.9	1249.2	1248.5	1247.8	1247.2	1246.8	1246.3	1245.8	1245.3	1247.0
177.5°	1254.4	1253.8	1253.3	1252.7	1252.1	1251.7	1251.3	1250.9	1250.6	1250.2	1251.3
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	13.4	13.0	12.6	12.3	12.2	12.1	12.1	12.1
90°	36.0	35.6	35.1	35.0	35.2	35.5	35.7	36.0
92.5°	33.8	33.9	34.0	34.1	34.1	34.2	34.2	34.2
95°	67.7	67.7	67.7	67.4	66.9	66.4	66.0	65.6
97.5°	113.7	113.7	113.7	113.7	113.7	113.7	113.6	113.6
100°	145.9	145.9	145.9	145.8	145.5	145.3	145.0	144.8
102.5°	180.9	181.2	181.3	181.3	181.1	180.8	180.6	180.3
105°	233.5	234.0	234.5	234.7	234.7	234.7	234.7	234.7
107.5°	290.2	290.4	290.7	290.2	289.1	288.0	286.9	285.8
110°	328.8	328.8	328.8	328.4	327.8	327.0	326.3	325.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	367.4	366.8	366.2	365.7	365.2	364.7	364.2	363.6
115°	426.6	426.4	426.2	425.7	425.0	424.3	423.5	422.9
117.5°	483.9	483.3	482.7	482.2	481.4	480.7	480.0	479.3
120°	522.2	522.2	522.2	521.9	521.1	520.5	519.8	519.1
122.5°	561.7	561.2	560.6	560.0	559.5	559.0	558.5	558.0
125°	620.2	619.5	618.8	618.3	618.1	617.8	617.6	617.3
127.5°	677.0	676.1	675.3	674.5	673.8	673.0	672.3	671.5
130°	715.8	715.3	714.9	714.2	713.2	712.3	711.3	710.4
132.5°	753.6	752.5	751.5	750.6	749.9	749.1	748.4	747.6
135°	809.3	809.1	808.9	808.4	807.6	807.0	806.2	805.5
137.5°	862.7	862.5	862.3	861.8	860.8	859.9	858.9	858.0
140°	898.5	898.5	898.5	898.1	897.2	896.3	895.3	894.4
142.5°	931.1	931.3	931.5	931.1	930.2	929.2	928.3	927.3
145°	980.5	980.7	980.9	980.6	979.7	978.7	977.8	976.8
147.5°	1023.7	1024.3	1024.7	1024.6	1023.7	1022.8	1021.9	1021.0
150°	1051.2	1051.9	1052.6	1052.6	1051.9	1051.2	1050.4	1049.8
152.5°	1078.6	1079.5	1080.4	1080.4	1079.5	1078.6	1077.7	1076.8
155°	1113.5	1114.6	1115.7	1116.0	1115.3	1114.6	1113.9	1113.2
157.5°	1145.6	1147.1	1148.8	1149.0	1147.9	1146.7	1145.6	1144.4
160°	1164.7	1166.0	1167.4	1167.7	1166.8	1165.8	1164.9	1163.9
162.5°	1181.9	1183.5	1185.1	1185.4	1184.2	1183.1	1181.9	1180.9
165°	1204.2	1205.8	1207.5	1207.7	1206.6	1205.4	1204.2	1203.1
167.5°	1222.6	1224.3	1225.9	1226.1	1224.9	1223.7	1222.5	1221.2
170°	1232.7	1234.4	1236.1	1236.2	1234.8	1233.4	1231.9	1230.5
172.5°	1240.4	1242.0	1243.7	1243.7	1242.4	1241.0	1239.6	1238.1
175°	1248.6	1250.3	1251.9	1252.1	1250.6	1249.2	1247.8	1246.3
177.5°	1252.5	1253.6	1254.7	1254.7	1253.6	1252.5	1251.3	1250.2
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7

(END OF REPORT)