

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: P331522-927

Luminaire Tested: **S122DIW-S485D1440U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331522-927
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-S485D1440U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5520.2 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

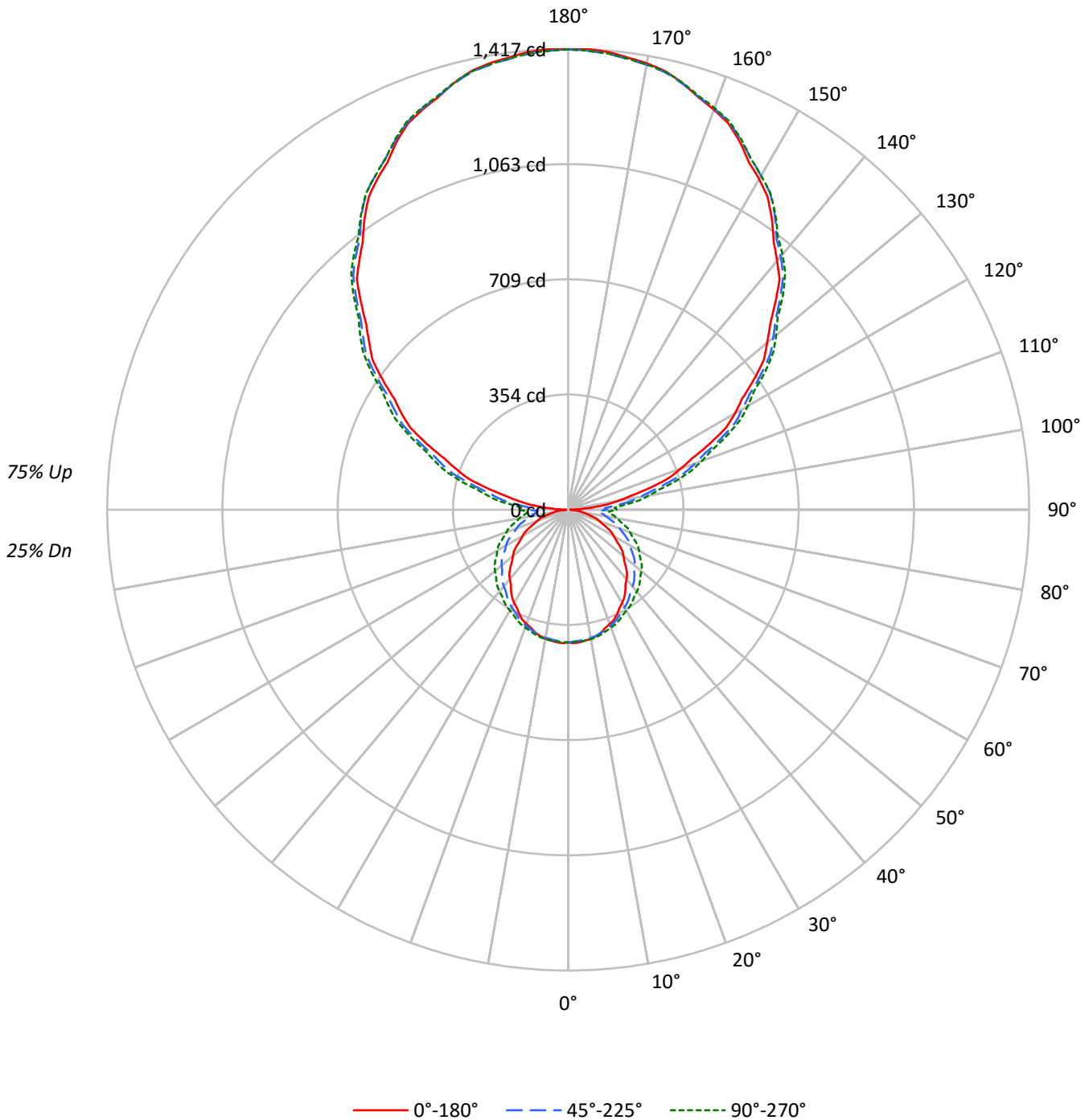
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25
1	91	87	83	79	81	77	74	71	60	57	55	43	42	40	28	27	27	20
2	83	75	69	64	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	75	66	59	53	67	59	53	48	45	41	37	33	30	28	21	20	18	13
4	69	58	50	44	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	51	43	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	32	51	41	34	29	32	27	23	23	20	17	15	13	12	8
7	53	41	33	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.7
10°-20°	110.9	2.0
20°-30°	168.1	3.0
30°-40°	204.7	3.7
40°-50°	220.3	4.0
50°-60°	213.9	3.9
60°-70°	186.8	3.4
70°-80°	143.8	2.6
80°-90°	102.1	1.9
90°-100°	156.1	2.8
100°-110°	327.1	5.9
110°-120°	508.1	9.2
120°-130°	644.0	11.7
130°-140°	710.2	12.9
140°-150°	690.3	12.5
150°-160°	577.9	10.5
160°-170°	383.3	6.9
170°-180°	134.0	2.4
0°-30°	317.7	5.8
0°-40°	522.4	9.5
0°-60°	956.6	17.3
0°-90°	1389.3	25.2
90°-120°	991.3	18.0
90°-150°	3035.8	55.0
90°-180°	4131.0	74.8
0°-180°	5520.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	57	120	140	150	7
95°	67	106	144	166	172	75
105°	260	281	314	336	343	275
115°	480	494	518	534	538	475
125°	696	707	722	734	739	622
135°	900	913	921	932	934	695
145°	1092	1100	1107	1111	1110	682
155°	1248	1252	1255	1261	1258	574
165°	1358	1357	1357	1364	1359	383
175°	1413	1409	1407	1414	1408	134
180°	1415	1415	1415	1415	1415	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.8	20.3	28.8	37.2	45.7	54.7	64.3	73.9	83.5	93.1	98.3
90°	7.1	17.9	28.8	39.5	50.4	62.9	77.2	91.4	105.7	119.9	124.6
92.5°	26.7	36.1	45.6	55.0	64.4	73.9	83.3	92.8	102.3	111.8	117.1
95°	66.9	75.7	84.5	93.3	102.2	110.8	119.2	127.6	136.0	144.5	149.5
97.5°	117.6	125.4	133.2	141.1	148.9	157.1	165.7	174.3	182.8	191.5	196.3
100°	155.8	162.8	169.8	176.8	183.8	191.3	199.5	207.6	215.8	223.9	228.9
102.5°	195.4	201.6	207.8	213.9	220.1	227.2	235.4	243.5	251.7	259.8	264.8
105°	259.8	264.4	268.9	273.5	278.1	284.2	291.5	298.9	306.3	313.6	318.8
107.5°	325.0	329.2	333.5	337.7	341.9	347.3	353.9	360.4	366.9	373.5	378.1
110°	366.6	370.8	375.1	379.3	383.5	388.8	395.3	401.7	408.1	414.6	418.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	412.5	416.3	420.1	423.9	427.7	432.5	438.5	444.3	450.3	456.2	459.8
115°	480.1	483.1	486.2	489.2	492.3	496.5	501.8	507.2	512.6	518.0	521.7
117.5°	546.8	549.9	552.9	556.0	559.1	562.6	566.6	570.6	574.6	578.6	581.9
120°	591.8	594.4	597.1	599.7	602.4	605.2	608.4	611.5	614.7	617.7	621.5
122.5°	632.8	635.6	638.3	641.1	643.9	647.0	650.4	653.9	657.4	660.8	663.8
125°	696.2	698.6	701.0	703.4	705.8	708.7	712.1	715.5	718.9	722.3	725.1
127.5°	758.6	761.4	764.4	767.2	770.2	772.9	775.2	777.7	780.1	782.6	784.9
130°	797.7	801.1	804.4	807.7	811.0	813.8	816.0	818.2	820.5	822.8	825.4
132.5°	841.7	844.4	847.1	849.8	852.5	854.9	857.1	859.4	861.6	863.8	865.7
135°	899.8	902.8	905.7	908.6	911.6	913.9	915.8	917.6	919.5	921.3	923.8
137.5°	961.7	964.1	966.5	968.8	971.2	973.0	974.3	975.6	976.8	978.1	980.2
140°	999.0	1001.2	1003.5	1005.8	1008.1	1010.0	1011.5	1013.1	1014.7	1016.3	1018.4
142.5°	1037.2	1039.5	1041.7	1044.0	1046.2	1047.8	1048.8	1049.7	1050.7	1051.7	1053.5
145°	1091.5	1093.4	1095.3	1097.1	1099.0	1100.7	1102.3	1103.9	1105.5	1107.1	1108.1
147.5°	1140.5	1142.7	1144.9	1147.2	1149.5	1151.1	1152.1	1153.2	1154.3	1155.3	1156.0
150°	1173.9	1175.5	1177.2	1178.8	1180.4	1181.6	1182.7	1183.8	1184.9	1185.9	1186.7
152.5°	1203.6	1205.1	1206.7	1208.3	1210.0	1211.4	1212.7	1213.9	1215.2	1216.5	1217.5
155°	1248.0	1248.8	1249.6	1250.4	1251.2	1252.0	1252.8	1253.5	1254.3	1255.1	1256.5
157.5°	1285.9	1286.5	1287.1	1287.6	1288.1	1288.6	1289.1	1289.6	1290.1	1290.5	1292.3
160°	1308.9	1309.5	1310.0	1310.5	1311.1	1311.5	1311.7	1311.9	1312.2	1312.5	1314.1
162.5°	1329.9	1330.1	1330.2	1330.2	1330.4	1330.5	1330.8	1331.1	1331.3	1331.6	1333.4
165°	1357.9	1357.6	1357.3	1357.1	1356.8	1356.7	1356.7	1356.7	1356.7	1356.7	1358.5
167.5°	1381.2	1380.5	1379.7	1378.9	1378.1	1377.7	1377.6	1377.6	1377.5	1377.4	1379.3
170°	1393.7	1392.9	1392.1	1391.3	1390.5	1390.0	1389.7	1389.5	1389.2	1388.9	1390.8
172.5°	1402.3	1401.5	1400.7	1399.9	1399.2	1398.6	1398.4	1398.0	1397.8	1397.5	1399.4
175°	1412.8	1412.0	1411.2	1410.4	1409.6	1409.0	1408.4	1407.9	1407.4	1406.8	1408.7
177.5°	1417.1	1416.5	1415.9	1415.2	1414.6	1414.0	1413.6	1413.2	1412.8	1412.3	1413.6
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	103.6	108.8	114.1	117.6	119.4	121.0	122.8	124.5
90°	129.4	134.1	138.8	142.1	143.9	145.8	147.6	149.5
92.5°	122.3	127.6	132.8	136.3	137.9	139.6	141.2	142.8
95°	154.5	159.5	164.5	167.5	168.5	169.6	170.6	171.7
97.5°	201.2	206.0	210.9	214.1	215.6	217.1	218.6	220.1
100°	233.7	238.5	243.4	246.4	247.6	248.8	250.0	251.2
102.5°	269.7	274.7	279.7	282.8	284.0	285.2	286.4	287.5
105°	323.8	329.0	334.1	337.5	338.9	340.3	341.7	343.3
107.5°	382.8	387.4	392.1	394.4	394.7	394.9	395.1	395.4
110°	423.0	427.2	431.4	433.9	434.5	435.1	435.8	436.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	463.3	466.9	470.5	472.7	473.6	474.4	475.3	476.2
115°	525.4	529.0	532.7	534.9	535.5	536.1	536.8	537.5
117.5°	585.1	588.4	591.6	593.5	594.1	594.6	595.1	595.6
120°	625.1	628.8	632.5	634.7	635.3	636.0	636.6	637.2
122.5°	666.7	669.6	672.6	674.3	675.0	675.7	676.3	676.9
125°	727.9	730.6	733.3	735.2	736.1	737.0	737.9	738.9
127.5°	787.2	789.5	791.8	793.1	793.4	793.7	794.0	794.3
130°	828.0	830.6	833.2	834.6	834.5	834.5	834.5	834.5
132.5°	867.6	869.5	871.4	872.4	872.6	872.8	873.0	873.2
135°	926.3	928.8	931.3	932.6	933.0	933.2	933.4	933.7
137.5°	982.5	984.7	986.9	987.9	987.8	987.6	987.5	987.2
140°	1020.5	1022.6	1024.7	1025.6	1025.4	1025.1	1024.8	1024.5
142.5°	1055.4	1057.3	1059.2	1060.0	1059.6	1059.2	1058.9	1058.5
145°	1109.2	1110.2	1111.3	1111.6	1111.2	1110.8	1110.4	1110.0
147.5°	1156.7	1157.4	1158.1	1158.1	1157.4	1156.7	1156.0	1155.3
150°	1187.5	1188.3	1189.1	1189.1	1188.3	1187.5	1186.7	1185.9
152.5°	1218.5	1219.5	1220.5	1220.5	1219.5	1218.5	1217.5	1216.5
155°	1257.8	1259.2	1260.4	1260.8	1260.0	1259.2	1258.4	1257.6
157.5°	1294.1	1295.9	1297.8	1298.0	1296.7	1295.5	1294.2	1292.9
160°	1315.7	1317.2	1318.8	1319.1	1318.0	1317.0	1316.0	1314.9
162.5°	1335.2	1337.0	1338.8	1339.1	1337.8	1336.6	1335.3	1334.0
165°	1360.4	1362.2	1364.1	1364.4	1363.0	1361.8	1360.4	1359.1
167.5°	1381.2	1383.1	1384.9	1385.1	1383.8	1382.4	1381.0	1379.6
170°	1392.7	1394.5	1396.4	1396.5	1394.9	1393.3	1391.7	1390.1
172.5°	1401.2	1403.1	1404.9	1405.1	1403.5	1401.9	1400.3	1398.8
175°	1410.6	1412.4	1414.3	1414.4	1412.8	1411.2	1409.6	1408.0
177.5°	1414.9	1416.2	1417.5	1417.5	1416.2	1414.9	1413.6	1412.3
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2

(END OF REPORT)