

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: P331516-927

Luminaire Tested: **S122DIW-S485D1240U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331516-927
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-S485D1240U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP 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: 4965.8 lumens
Efficiency: N/A
Efficacy: 92.3 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

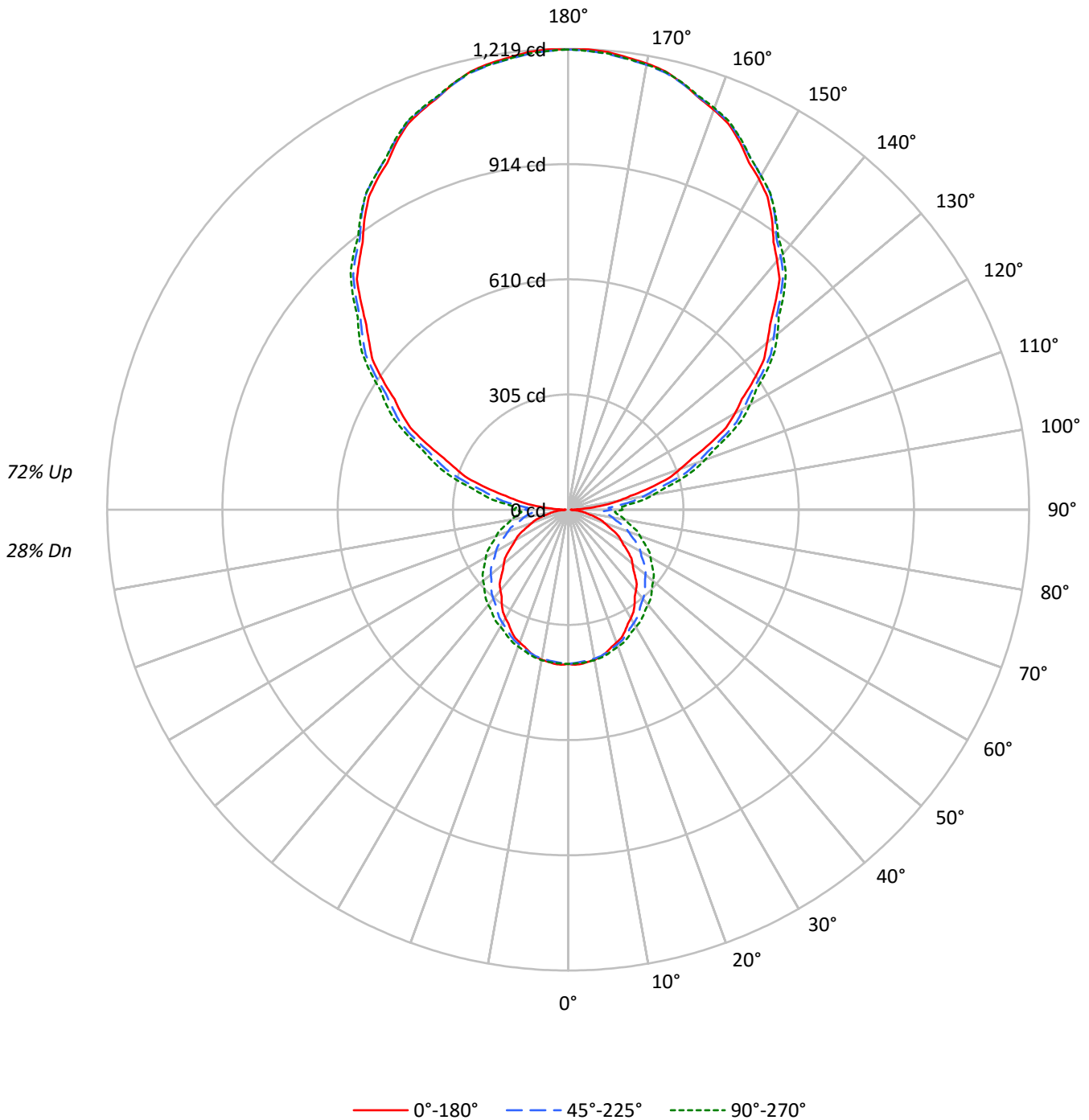
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	36	36	36	28
1	92	87	83	80	82	78	75	72	61	59	56	45	43	42	30	29	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	34	26	25	23	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	19	14
4	69	58	51	44	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	39	34	36	31	27	27	23	21	18	16	14	10
6	58	46	38	32	52	41	35	29	33	27	24	24	21	18	16	14	12	9
7	54	41	34	28	48	37	30	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	16	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6

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	0.8
10°-20°	110.9	2.2
20°-30°	168.1	3.4
30°-40°	204.7	4.1
40°-50°	220.3	4.4
50°-60°	213.9	4.3
60°-70°	186.8	3.8
70°-80°	143.8	2.9
80°-90°	101.4	2.0
90°-100°	143.6	2.9
100°-110°	288.1	5.8
110°-120°	441.5	8.9
120°-130°	556.4	11.2
130°-140°	611.9	12.3
140°-150°	593.9	12.0
150°-160°	497.0	10.0
160°-170°	329.7	6.6
170°-180°	115.2	2.3
0°-30°	317.7	6.4
0°-40°	522.4	10.5
0°-60°	956.6	19.3
0°-90°	1388.5	28.0
90°-120°	873.2	17.6
90°-150°	2635.4	53.1
90°-180°	3577.0	72.0
0°-180°	4965.8	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	54	114	135	144	7
95°	58	96	134	155	161	65
105°	224	245	277	299	306	237
115°	413	427	450	466	471	408
125°	599	609	624	637	641	535
135°	774	785	793	804	806	598
145°	939	946	952	956	956	586
155°	1073	1076	1080	1084	1082	494
165°	1168	1167	1167	1173	1169	329
175°	1215	1212	1210	1216	1211	115
180°	1217	1217	1217	1217	1217	



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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	20.2	28.6	36.9	45.3	54.3	63.7	73.0	82.5	91.9	97.2
90°	7.0	17.3	27.6	38.0	48.4	60.3	73.8	87.1	100.6	114.1	118.8
92.5°	23.8	32.8	41.9	51.0	60.1	69.4	78.7	87.9	97.2	106.5	111.8
95°	58.1	66.6	75.1	83.5	92.0	100.4	108.8	117.1	125.4	133.8	138.8
97.5°	101.7	109.2	116.8	124.2	131.7	139.7	148.1	156.6	165.0	173.5	178.3
100°	134.6	141.2	148.0	154.6	161.4	168.7	176.7	184.8	192.9	200.9	205.8
102.5°	168.7	174.5	180.5	186.3	192.3	199.2	207.2	215.2	223.2	231.3	236.2
105°	223.8	228.3	232.8	237.3	241.8	247.7	255.0	262.3	269.6	276.9	281.9
107.5°	280.0	284.0	288.1	292.2	296.2	301.5	308.0	314.6	321.2	327.6	332.3
110°	315.7	319.6	323.7	327.6	331.7	336.8	343.3	349.7	356.2	362.7	366.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	355.1	358.7	362.3	365.8	369.4	374.1	380.1	386.0	392.0	397.9	401.6
115°	413.2	416.1	418.9	421.7	424.5	428.6	434.1	439.6	445.0	450.5	454.2
117.5°	470.6	473.3	476.1	478.9	481.6	485.1	489.3	493.5	497.7	501.9	505.3
120°	509.2	511.6	513.9	516.3	518.6	521.5	524.9	528.4	531.8	535.2	538.9
122.5°	544.5	546.9	549.4	551.8	554.1	557.1	560.9	564.5	568.2	571.8	574.9
125°	599.0	601.0	603.1	605.1	607.2	610.0	613.5	617.0	620.6	624.1	626.9
127.5°	652.6	655.1	657.6	660.0	662.5	665.0	667.6	670.2	672.7	675.3	677.7
130°	686.3	689.1	692.0	694.8	697.7	700.2	702.5	704.8	707.1	709.5	712.2
132.5°	724.1	726.4	728.6	730.9	733.2	735.5	737.8	740.0	742.2	744.4	746.5
135°	774.0	776.6	779.1	781.6	784.1	786.2	788.0	789.8	791.5	793.3	795.8
137.5°	827.3	829.3	831.3	833.4	835.4	836.9	838.1	839.3	840.5	841.7	843.9
140°	859.3	861.3	863.2	865.1	867.0	868.7	870.1	871.5	872.9	874.3	876.4
142.5°	892.2	894.1	896.0	897.9	899.8	901.3	902.1	902.9	903.7	904.6	906.4
145°	938.8	940.5	942.1	943.6	945.2	946.7	948.1	949.4	950.9	952.2	953.2
147.5°	981.0	982.9	984.8	986.7	988.6	990.1	990.9	991.9	992.8	993.7	994.3
150°	1009.7	1011.1	1012.5	1013.8	1015.2	1016.4	1017.2	1018.2	1019.1	1020.0	1020.6
152.5°	1035.2	1036.6	1037.9	1039.3	1040.7	1041.9	1043.0	1044.1	1045.2	1046.3	1047.2
155°	1073.4	1074.1	1074.8	1075.5	1076.2	1076.8	1077.5	1078.2	1078.9	1079.6	1080.7
157.5°	1106.0	1106.5	1107.0	1107.5	1107.9	1108.3	1108.7	1109.1	1109.5	1110.0	1111.5
160°	1125.8	1126.2	1126.7	1127.2	1127.6	1128.0	1128.1	1128.4	1128.6	1128.9	1130.2
162.5°	1143.8	1144.0	1144.1	1144.1	1144.2	1144.4	1144.6	1144.9	1145.1	1145.3	1146.8
165°	1167.9	1167.7	1167.4	1167.2	1167.0	1166.9	1166.9	1166.9	1166.9	1166.9	1168.5
167.5°	1188.0	1187.3	1186.7	1186.0	1185.3	1184.9	1184.9	1184.9	1184.8	1184.7	1186.4
170°	1198.7	1198.0	1197.4	1196.7	1196.0	1195.6	1195.3	1195.1	1194.8	1194.6	1196.2
172.5°	1206.1	1205.5	1204.8	1204.0	1203.4	1202.9	1202.7	1202.5	1202.2	1202.0	1203.6
175°	1215.1	1214.5	1213.8	1213.1	1212.4	1211.9	1211.4	1210.9	1210.5	1210.0	1211.6
177.5°	1218.9	1218.3	1217.7	1217.2	1216.6	1216.2	1215.8	1215.4	1215.1	1214.7	1215.8
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2



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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°	102.4	107.7	113.0	116.5	118.2	119.9	121.7	123.4
90°	123.7	128.5	133.2	136.6	138.4	140.1	142.0	143.8
92.5°	117.0	122.2	127.5	130.9	132.5	134.2	135.8	137.4
95°	143.8	148.8	153.8	156.9	158.0	159.1	160.2	161.3
97.5°	183.2	188.1	192.9	196.1	197.6	199.2	200.7	202.2
100°	210.6	215.5	220.4	223.4	224.7	225.9	227.0	228.3
102.5°	241.1	246.1	251.0	254.1	255.3	256.6	257.8	259.0
105°	287.0	292.0	297.1	300.3	301.8	303.2	304.7	306.1
107.5°	336.9	341.5	346.1	348.6	349.0	349.4	349.7	350.1
110°	371.1	375.3	379.5	382.0	382.7	383.5	384.2	385.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	405.3	408.9	412.6	414.9	415.8	416.8	417.7	418.7
115°	457.9	461.6	465.3	467.5	468.3	469.1	469.8	470.6
117.5°	508.6	511.9	515.3	517.3	517.9	518.6	519.3	519.9
120°	542.6	546.3	549.9	552.2	552.9	553.7	554.4	555.2
122.5°	577.9	580.9	583.9	585.8	586.5	587.3	588.0	588.7
125°	629.9	632.7	635.6	637.5	638.4	639.4	640.3	641.3
127.5°	680.2	682.6	685.1	686.5	686.9	687.4	687.8	688.2
130°	714.9	717.6	720.3	721.7	721.8	721.9	722.1	722.2
132.5°	748.5	750.5	752.6	753.8	754.1	754.4	754.7	755.0
135°	798.4	800.9	803.4	804.9	805.3	805.6	806.0	806.4
137.5°	846.1	848.3	850.6	851.8	851.7	851.7	851.7	851.7
140°	878.5	880.6	882.7	883.7	883.6	883.4	883.3	883.2
142.5°	908.3	910.1	912.0	912.8	912.6	912.4	912.1	912.0
145°	954.3	955.2	956.2	956.6	956.4	956.2	955.8	955.6
147.5°	994.9	995.5	996.1	996.2	995.6	995.1	994.5	994.0
150°	1021.4	1022.1	1022.7	1022.7	1022.1	1021.4	1020.6	1020.0
152.5°	1048.1	1048.8	1049.7	1049.7	1048.8	1048.1	1047.2	1046.3
155°	1081.9	1083.0	1084.1	1084.3	1083.7	1083.0	1082.3	1081.6
157.5°	1113.1	1114.6	1116.2	1116.4	1115.3	1114.2	1113.1	1112.0
160°	1131.6	1133.0	1134.3	1134.6	1133.7	1132.7	1131.9	1130.9
162.5°	1148.4	1149.9	1151.5	1151.8	1150.6	1149.5	1148.4	1147.4
165°	1170.1	1171.6	1173.3	1173.5	1172.4	1171.2	1170.1	1168.9
167.5°	1188.0	1189.5	1191.1	1191.4	1190.2	1189.0	1187.8	1186.6
170°	1197.8	1199.4	1201.0	1201.1	1199.8	1198.4	1197.0	1195.6
172.5°	1205.2	1206.8	1208.4	1208.5	1207.1	1205.8	1204.4	1203.0
175°	1213.2	1214.8	1216.4	1216.6	1215.1	1213.8	1212.4	1211.0
177.5°	1217.0	1218.1	1219.1	1219.1	1218.1	1217.0	1215.8	1214.7
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2

(END OF REPORT)