

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: P331895-940

Luminaire Tested: **S123DIP-S340D1025U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331895-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4938.5 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

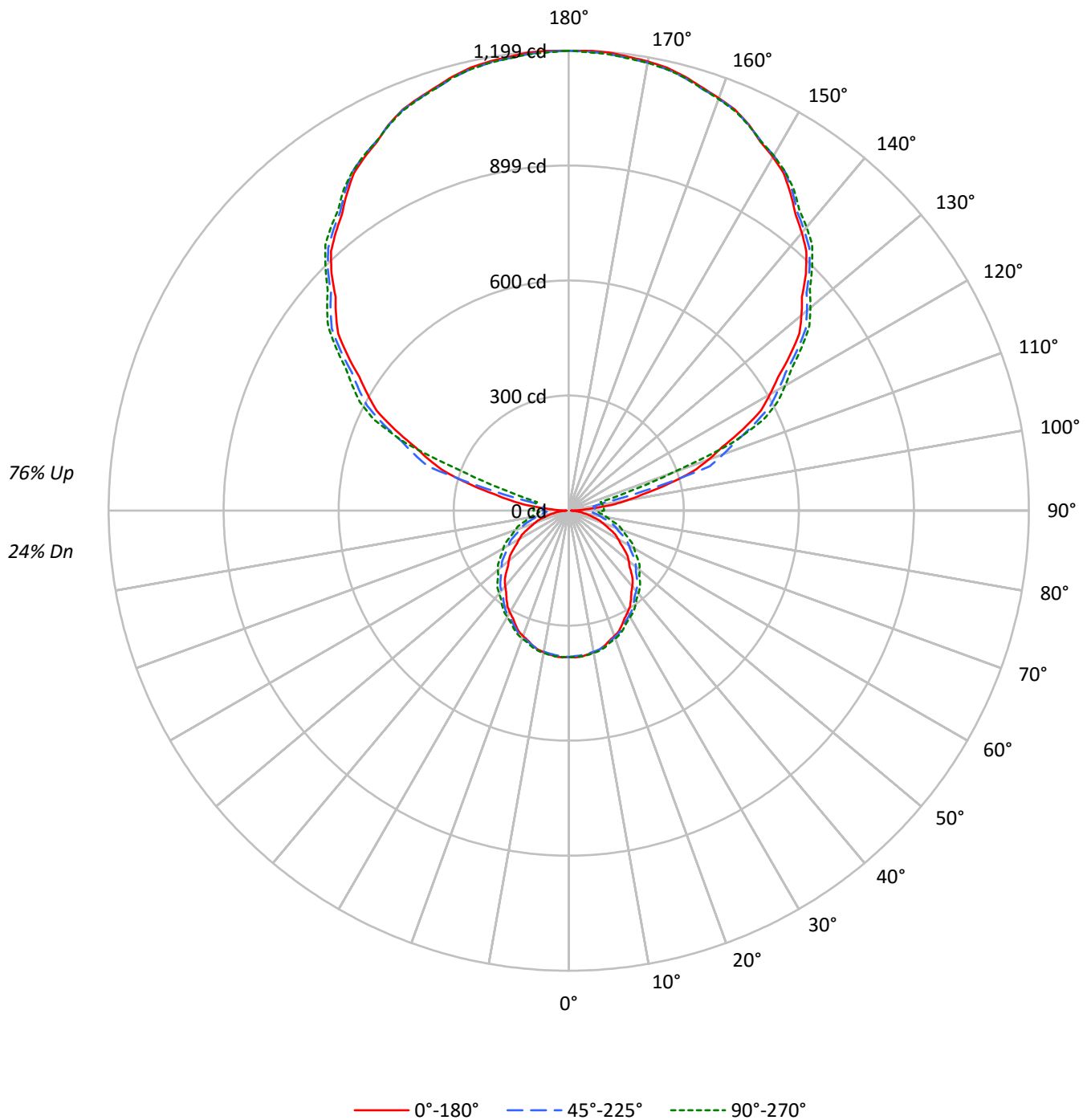
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
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	69	69	69	50	50	50	32	32	32	24		
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19		
2	83	76	70	64	73	67	62	58	52	48	45	37	35	33	24	23	21	16		
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13		
4	69	58	51	45	61	52	45	40	40	35	32	29	26	24	19	17	15	11		
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9		
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8		
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7		
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6		
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6		
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4105	4105	4105
5°	4118	4002	4004
10°	4082	3910	3890
15°	4029	3805	3766
20°	3954	3686	3630
25°	3860	3549	3485
30°	3767	3425	3339
35°	3659	3294	3223
40°	3557	3175	3098
45°	3445	3060	2998
50°	3333	2947	2888
55°	3211	2831	2789
60°	3090	2713	2689
65°	2967	2588	2567
70°	2783	2448	2443
75°	2551	2287	2318
80°	2278	2128	2175
85°	2025	2018	2090

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	0.7
10°-20°	103.1	2.1
20°-30°	154.2	3.1
30°-40°	184.1	3.7
40°-50°	192.6	3.9
50°-60°	180.7	3.7
60°-70°	151.0	3.1
70°-80°	108.0	2.2
80°-90°	67.8	1.4
90°-100°	84.0	1.7
100°-110°	237.3	4.8
110°-120°	518.5	10.5
120°-130°	646.3	13.1
130°-140°	683.5	13.8
140°-150°	635.5	12.9
150°-160°	511.7	10.4
160°-170°	330.3	6.7
170°-180°	113.8	2.3
0°-30°	293.4	5.9
0°-40°	477.5	9.7
0°-60°	850.9	17.2
0°-90°	1177.6	23.8
90°-120°	839.7	17.0
90°-150°	2805.0	56.8
90°-180°	3761.0	76.2
0°-180°	4938.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	381	381	381	381	381	
5°	382	381	378	382	381	36
15°	364	365	364	368	368	102
25°	328	332	334	339	339	151
35°	282	289	295	301	302	177
45°	231	241	251	259	263	178
55°	176	190	205	216	219	158
65°	122	138	156	168	173	120
75°	66	86	106	120	125	71
85°	20	41	63	77	81	21
90°	6	36	68	85	92	6
95°	59	41	69	87	92	71
105°	269	284	226	89	86	285
115°	500	511	533	551	559	493
125°	703	710	725	736	741	627
135°	874	879	887	897	897	673
145°	1008	1014	1016	1020	1022	631
155°	1110	1108	1109	1113	1108	511
165°	1170	1168	1167	1173	1168	331
175°	1198	1194	1194	1200	1194	114
180°	1198	1198	1198	1198	1198	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	383.1	382.9	382.6	382.5	382.2	381.8	381.2	380.6	380.0	379.4	380.0
5°	381.8	381.7	381.5	381.3	381.1	380.8	380.1	379.6	379.1	378.5	379.2
7.5°	378.1	378.2	378.2	378.2	378.3	378.0	377.5	376.9	376.4	375.9	376.7
10°	374.8	375.0	375.1	375.3	375.5	375.4	374.9	374.4	374.0	373.5	374.4
12.5°	370.8	371.0	371.3	371.6	371.8	371.8	371.5	371.1	370.9	370.5	371.4
15°	363.6	363.8	364.1	364.4	364.6	364.8	364.6	364.5	364.4	364.4	365.3
17.5°	354.5	355.0	355.5	356.1	356.6	356.9	356.9	356.8	356.8	356.8	357.6
20°	347.8	348.3	348.8	349.5	350.0	350.4	350.5	350.7	350.9	351.1	352.0
22.5°	340.8	341.3	341.9	342.4	343.0	343.4	343.7	343.9	344.2	344.5	345.5
25°	328.2	329.1	330.1	331.0	331.9	332.5	332.8	333.1	333.3	333.7	334.8
27.5°	315.6	316.6	317.7	318.8	319.9	320.7	321.2	321.8	322.4	323.0	324.0
30°	306.7	307.8	309.1	310.2	311.5	312.4	313.2	313.9	314.6	315.4	316.5
32.5°	296.7	298.0	299.3	300.7	302.0	303.2	304.2	305.1	306.1	307.0	308.3
35°	282.5	284.0	285.5	287.0	288.5	289.8	291.0	292.2	293.4	294.6	296.0
37.5°	267.6	269.2	270.9	272.6	274.2	275.8	277.2	278.7	280.3	281.7	283.3
40°	257.6	259.3	260.9	262.6	264.2	266.0	267.9	269.7	271.5	273.4	275.0
42.5°	246.6	248.7	250.7	252.7	254.8	256.7	258.7	260.6	262.5	264.4	266.2
45°	231.0	233.3	235.4	237.6	239.9	242.1	244.4	246.7	249.1	251.4	253.2
47.5°	214.6	217.1	219.6	222.2	224.7	227.3	229.9	232.6	235.1	237.8	239.8
50°	204.0	206.6	209.2	211.8	214.4	217.0	219.9	222.8	225.7	228.5	230.7
52.5°	192.7	195.5	198.1	200.9	203.7	206.6	209.7	212.9	216.1	219.2	221.4
55°	176.2	179.2	182.3	185.3	188.3	191.5	194.8	198.2	201.5	204.8	207.3
57.5°	160.1	163.2	166.4	169.6	172.7	176.2	179.8	183.4	187.1	190.7	193.2
60°	148.7	152.0	155.4	158.7	162.0	165.6	169.4	173.2	176.9	180.7	183.3
62.5°	138.1	141.5	144.9	148.3	151.7	155.4	159.4	163.5	167.5	171.5	174.0
65°	121.7	125.4	128.9	132.5	136.2	140.0	144.0	148.1	152.1	156.2	159.0
67.5°	105.1	109.0	112.8	116.5	120.4	124.4	128.5	132.7	136.8	141.0	143.9
70°	93.5	97.5	101.4	105.4	109.3	113.6	118.0	122.4	126.9	131.3	134.3
72.5°	82.8	86.9	90.8	94.8	98.7	103.0	107.5	112.2	116.7	121.4	124.4
75°	66.1	70.4	74.7	79.1	83.5	87.9	92.6	97.1	101.7	106.4	109.4
77.5°	51.5	55.8	60.2	64.6	68.9	73.5	78.1	82.8	87.4	92.1	95.3
80°	41.1	45.7	50.2	54.8	59.2	63.9	68.7	73.5	78.3	83.1	86.2
82.5°	32.2	36.7	41.4	45.9	50.6	55.3	60.2	65.0	69.9	74.8	77.9
85°	20.3	25.0	29.6	34.2	38.8	43.6	48.5	53.3	58.2	63.1	66.3
87.5°	11.2	16.2	21.2	26.2	31.2	36.3	41.6	46.7	52.0	57.2	60.5
90°	6.3	12.8	19.3	25.8	32.3	39.2	46.5	53.8	61.0	68.3	72.2
92.5°	21.7	25.1	28.7	32.2	35.8	40.8	47.3	53.9	60.5	67.1	71.4
95°	58.9	54.4	49.8	45.3	40.8	41.9	48.6	55.3	62.1	68.8	72.9
97.5°	113.2	112.8	112.4	112.0	111.6	106.5	96.6	86.7	76.7	66.8	71.2
100°	154.2	161.0	168.0	174.9	181.8	171.9	145.3	118.8	92.1	65.5	69.8
102.5°	200.8	206.3	211.9	217.3	222.8	210.8	181.3	151.8	122.3	92.7	90.4
105°	268.6	273.0	277.3	281.8	286.1	281.4	267.6	253.8	240.0	226.0	193.7
107.5°	339.7	343.2	346.9	350.5	354.1	359.2	365.8	372.4	379.0	385.5	362.3
110°	387.0	390.2	393.5	396.7	399.9	404.6	410.4	416.3	422.1	428.0	423.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	432.6	435.3	438.2	441.0	443.7	448.0	453.7	459.4	465.1	470.9	473.3
115°	499.6	501.9	504.2	506.5	508.8	512.5	517.6	522.7	527.8	532.9	537.1
117.5°	564.9	567.0	569.2	571.3	573.5	576.6	580.6	584.6	588.6	592.6	596.5
120°	605.1	607.3	609.6	611.8	614.1	617.1	620.6	624.3	627.9	631.6	635.3
122.5°	646.4	648.1	649.8	651.6	653.3	655.9	659.6	663.3	666.8	670.5	673.7
125°	702.6	704.2	705.8	707.4	708.9	711.5	715.0	718.4	721.8	725.3	727.6
127.5°	757.4	758.9	760.5	761.9	763.4	765.7	768.9	772.0	775.3	778.4	780.9
130°	791.7	793.1	794.6	796.1	797.5	799.7	802.3	804.9	807.5	810.2	812.7
132.5°	824.0	825.6	827.2	828.8	830.3	832.1	834.3	836.3	838.5	840.6	843.0
135°	874.0	875.0	876.2	877.3	878.3	879.8	881.6	883.4	885.2	887.1	889.3
137.5°	916.6	918.0	919.4	920.9	922.3	923.5	924.5	925.6	926.6	927.6	930.0
140°	944.8	945.9	947.2	948.3	949.5	950.6	951.5	952.3	953.1	954.0	956.2
142.5°	971.1	972.2	973.3	974.5	975.5	976.4	977.1	977.8	978.4	979.0	980.9
145°	1008.0	1009.2	1010.6	1011.8	1013.2	1014.0	1014.4	1014.8	1015.1	1015.6	1016.7
147.5°	1042.2	1043.2	1044.1	1045.0	1045.9	1046.5	1047.0	1047.3	1047.8	1048.1	1048.7
150°	1063.6	1064.3	1064.8	1065.4	1066.0	1066.5	1066.8	1067.3	1067.6	1068.1	1068.4
152.5°	1082.8	1083.2	1083.4	1083.7	1084.0	1084.2	1084.4	1084.7	1084.9	1085.1	1085.8
155°	1109.9	1109.5	1109.1	1108.8	1108.3	1108.2	1108.4	1108.6	1108.8	1109.0	1110.0
157.5°	1130.9	1130.9	1130.9	1130.8	1130.8	1130.6	1130.4	1130.2	1130.1	1129.8	1131.0
160°	1143.7	1143.5	1143.4	1143.2	1142.9	1142.7	1142.5	1142.4	1142.1	1141.9	1143.2
162.5°	1155.8	1155.3	1154.8	1154.3	1153.8	1153.4	1153.2	1153.0	1152.8	1152.6	1154.0
165°	1170.5	1169.8	1169.2	1168.7	1168.1	1167.7	1167.4	1167.2	1167.1	1166.9	1168.4
167.5°	1181.8	1181.1	1180.3	1179.5	1178.7	1178.2	1178.2	1178.2	1178.2	1178.2	1179.8
170°	1188.2	1187.4	1186.7	1185.9	1185.1	1184.6	1184.6	1184.6	1184.6	1184.6	1186.2
172.5°	1192.5	1191.6	1190.6	1189.6	1188.7	1188.3	1188.5	1188.7	1188.7	1188.9	1190.5
175°	1198.0	1197.0	1196.1	1195.1	1194.1	1193.6	1193.8	1194.1	1194.3	1194.4	1195.9
177.5°	1199.4	1198.6	1197.8	1197.0	1196.3	1196.0	1196.1	1196.3	1196.4	1196.6	1197.8
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	380.6	381.2	381.8	382.0	382.0	381.9	381.8	381.7
5°	380.0	380.8	381.5	381.8	381.7	381.6	381.5	381.4
7.5°	377.7	378.6	379.5	380.0	379.9	379.7	379.6	379.5
10°	375.4	376.3	377.2	377.6	377.4	377.2	377.0	376.8
12.5°	372.2	373.1	373.9	374.3	374.1	373.9	373.7	373.5
15°	366.2	367.1	368.1	368.5	368.4	368.3	368.2	368.1
17.5°	358.4	359.3	360.1	360.4	360.3	360.2	360.1	359.9
20°	352.8	353.6	354.5	354.9	355.0	355.1	355.2	355.3
22.5°	346.5	347.6	348.7	349.2	349.1	349.0	349.0	348.9
25°	336.0	337.2	338.4	339.0	339.0	339.0	339.0	339.0
27.5°	325.0	326.1	327.2	327.7	327.8	327.9	327.9	328.0
30°	317.5	318.7	319.8	320.3	320.3	320.3	320.3	320.3
32.5°	309.4	310.6	311.7	312.5	312.7	312.9	313.2	313.3
35°	297.4	298.7	300.1	301.0	301.4	301.8	302.1	302.5
37.5°	284.8	286.4	288.0	288.9	289.2	289.5	289.8	290.1
40°	276.5	278.1	279.6	280.6	281.0	281.4	281.8	282.1
42.5°	267.9	269.6	271.3	272.4	273.0	273.4	273.9	274.5
45°	254.9	256.6	258.4	259.7	260.4	261.1	261.9	262.6
47.5°	241.7	243.8	245.8	247.0	247.5	248.2	248.7	249.3
50°	232.7	234.9	237.0	238.4	239.1	239.7	240.3	241.0
52.5°	223.6	225.8	228.0	229.5	230.3	231.1	231.8	232.6
55°	209.8	212.3	214.8	216.4	217.1	217.9	218.6	219.4
57.5°	195.7	198.2	200.7	202.4	203.3	204.2	205.1	205.9
60°	185.9	188.5	191.1	192.9	193.9	194.9	195.9	197.0
62.5°	176.6	179.1	181.7	183.5	184.5	185.4	186.4	187.3
65°	161.8	164.5	167.3	169.2	170.0	171.0	171.9	172.8
67.5°	147.0	150.0	153.0	155.0	155.7	156.5	157.3	158.0
70°	137.2	140.2	143.1	145.1	146.0	146.9	147.8	148.7
72.5°	127.3	130.4	133.4	135.5	136.3	137.2	138.2	139.1
75°	112.4	115.5	118.6	120.6	121.7	122.9	123.9	125.1
77.5°	98.5	101.7	105.0	106.9	107.8	108.7	109.5	110.4
80°	89.3	92.6	95.7	97.6	98.6	99.5	100.5	101.4
82.5°	81.1	84.2	87.4	89.3	90.3	91.2	92.1	93.1
85°	69.5	72.6	75.7	77.8	78.6	79.6	80.5	81.4
87.5°	63.8	67.1	70.4	72.6	73.6	74.5	75.5	76.6
90°	76.2	80.1	84.0	86.7	88.0	89.3	90.6	91.9
92.5°	75.7	80.1	84.4	87.1	88.2	89.3	90.3	91.5
95°	77.2	81.5	85.7	88.3	89.3	90.2	91.0	92.0
97.5°	75.4	79.8	84.2	86.9	88.0	89.1	90.2	91.3
100°	74.0	78.3	82.6	85.2	86.4	87.5	88.6	89.7
102.5°	88.1	85.8	83.6	83.0	84.3	85.6	86.9	88.1
105°	161.2	128.9	96.4	80.8	82.0	83.3	84.4	85.7
107.5°	339.1	315.9	292.7	268.3	242.8	217.2	191.6	166.0
110°	419.7	415.6	411.5	395.7	368.1	340.5	313.0	285.5

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	475.7	478.2	480.6	479.3	474.1	469.0	463.8	458.7
115°	541.3	545.5	549.7	552.6	554.1	555.6	557.1	558.7
117.5°	600.2	604.0	607.8	610.1	611.0	611.9	612.8	613.6
120°	639.0	642.7	646.4	648.6	649.3	649.9	650.5	651.2
122.5°	676.8	680.0	683.1	685.1	685.9	686.7	687.5	688.3
125°	730.0	732.4	734.7	736.4	737.4	738.4	739.5	740.6
127.5°	783.3	785.8	788.3	789.6	789.8	790.1	790.2	790.5
130°	815.3	817.8	820.4	821.7	821.9	822.1	822.2	822.3
132.5°	845.5	848.0	850.4	851.8	851.8	851.9	851.9	852.0
135°	891.5	893.8	896.1	897.2	897.0	896.9	896.7	896.6
137.5°	932.4	934.8	937.2	938.4	938.5	938.6	938.6	938.7
140°	958.4	960.6	962.7	963.9	963.9	963.9	964.0	964.1
142.5°	982.8	984.6	986.5	987.4	987.3	987.2	987.1	987.0
145°	1017.8	1019.0	1020.1	1020.8	1021.2	1021.5	1022.0	1022.3
147.5°	1049.4	1050.0	1050.6	1050.6	1050.1	1049.5	1048.9	1048.3
150°	1068.9	1069.3	1069.7	1069.6	1069.3	1068.8	1068.4	1068.0
152.5°	1086.5	1087.3	1088.0	1087.9	1087.1	1086.2	1085.3	1084.4
155°	1111.0	1112.0	1112.9	1112.9	1111.7	1110.5	1109.3	1108.1
157.5°	1132.2	1133.4	1134.6	1134.4	1132.8	1131.3	1129.8	1128.3
160°	1144.3	1145.5	1146.7	1146.6	1145.2	1143.8	1142.5	1141.0
162.5°	1155.3	1156.6	1158.0	1158.1	1156.8	1155.6	1154.4	1153.2
165°	1170.0	1171.6	1173.2	1173.3	1171.9	1170.5	1169.1	1167.8
167.5°	1181.4	1183.0	1184.5	1184.5	1183.0	1181.4	1179.8	1178.2
170°	1187.8	1189.5	1191.0	1191.0	1189.5	1187.8	1186.2	1184.6
172.5°	1192.1	1193.6	1195.2	1195.2	1193.5	1191.7	1190.0	1188.2
175°	1197.2	1198.6	1200.0	1199.9	1198.3	1196.8	1195.2	1193.6
177.5°	1199.1	1200.4	1201.7	1201.5	1199.9	1198.4	1196.8	1195.2
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0

(END OF REPORT)