

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: P331316-940

Luminaire Tested: **SA2XXDIP-C485D925U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331316-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D925U940-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

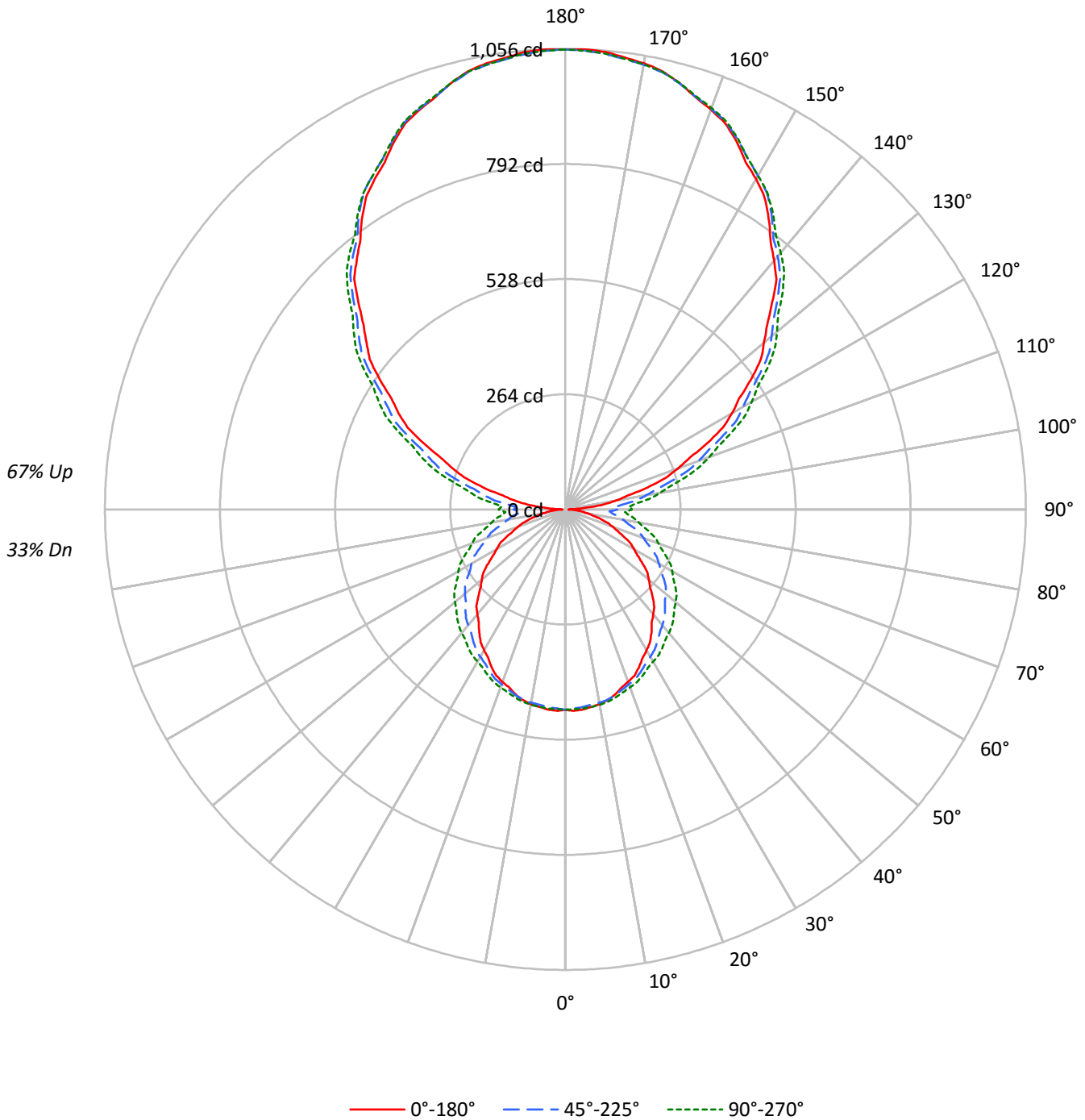
Lumens per Lamp: N/A  
Luminaire Lumens: 4705.9 lumens  
Efficiency: N/A  
Efficacy: 105.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 44.5  
Input Voltage (V): 120  
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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33				
1	93	88	84	80	84	80	76	73	63	61	58	48	47	45	34	33	32	26				
2	84	77	70	65	75	69	64	59	55	51	48	42	39	37	30	28	26	21				
3	77	67	59	53	69	60	54	49	48	43	39	37	33	31	26	24	22	17				
4	70	59	51	45	62	53	46	41	42	37	33	32	29	26	23	21	19	14				
5	64	52	44	38	57	47	40	35	38	32	28	29	25	22	21	18	16	12				
6	59	47	39	33	53	42	35	30	34	28	25	26	22	19	19	16	14	11				
7	54	42	34	28	48	38	31	26	30	25	21	23	20	17	17	14	12	9				
8	50	38	30	25	45	34	28	23	28	23	19	21	18	15	15	13	11	8				
9	47	34	27	22	42	31	25	20	25	20	17	20	16	13	14	12	10	8				
10	43	31	24	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	0.9
10°-20°	124.9	2.7
20°-30°	189.2	4.0
30°-40°	230.5	4.9
40°-50°	247.9	5.3
50°-60°	240.8	5.1
60°-70°	210.2	4.5
70°-80°	161.8	3.4
80°-90°	112.8	2.4
90°-100°	141.6	3.0
100°-110°	262.2	5.6
110°-120°	390.8	8.3
120°-130°	486.6	10.3
130°-140°	532.0	11.3
140°-150°	514.9	10.9
150°-160°	430.6	9.2
160°-170°	285.6	6.1
170°-180°	99.8	2.1
0°-30°	357.6	7.6
0°-40°	588.1	12.5
0°-60°	1076.8	22.9
0°-90°	1561.7	33.2
90°-120°	794.7	16.9
90°-150°	2328.2	49.5
90°-180°	3144.0	66.8
0°-180°	4705.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	8	58	119	143	153	7
95°	52	92	134	158	165	57
105°	195	217	253	277	285	206
115°	359	372	400	418	423	354
125°	519	528	546	561	566	464
135°	671	680	689	702	705	518
145°	813	820	825	830	830	508
155°	930	933	935	939	937	428
165°	1012	1011	1011	1017	1013	285
175°	1053	1050	1048	1054	1049	100
180°	1054	1054	1054	1054	1054	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.2	22.6	31.8	41.1	50.4	60.2	70.5	80.9	91.2	101.6	107.5
90°	7.6	18.5	29.4	40.4	51.4	63.8	77.6	91.4	105.2	119.0	124.6
92.5°	21.9	31.7	41.5	51.2	60.9	70.8	81.0	91.1	101.3	111.4	117.3
95°	51.6	60.5	69.5	78.4	87.3	96.4	105.8	115.0	124.3	133.6	139.2
97.5°	89.2	97.1	105.0	113.0	120.9	129.5	138.8	148.0	157.3	166.6	172.1
100°	117.7	124.8	131.8	138.8	145.9	153.9	162.7	171.7	180.5	189.4	194.8
102.5°	147.0	153.3	159.6	165.9	172.1	179.7	188.4	197.2	206.1	214.9	220.3
105°	194.7	199.6	204.5	209.3	214.2	220.7	228.8	236.8	245.0	253.1	258.6
107.5°	243.3	247.6	251.9	256.2	260.5	266.4	273.7	281.1	288.5	295.8	301.0
110°	274.1	278.2	282.4	286.5	290.7	296.4	303.6	310.9	318.1	325.4	330.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.3	311.9	315.6	319.2	323.0	328.1	334.9	341.6	348.4	355.1	359.4
115°	358.6	361.4	364.3	367.0	369.9	374.4	380.7	386.9	393.2	399.5	403.7
117.5°	408.1	410.8	413.4	416.1	418.7	422.6	427.7	432.7	437.7	442.7	446.7
120°	441.6	443.8	445.9	448.1	450.3	453.5	457.9	462.3	466.5	470.9	475.0
122.5°	472.3	474.4	476.4	478.6	480.7	484.0	488.5	492.9	497.4	501.9	505.4
125°	519.2	521.0	522.8	524.6	526.4	529.3	533.5	537.6	541.7	545.9	549.3
127.5°	565.7	567.8	569.9	572.0	574.1	576.8	579.9	582.9	586.0	589.2	592.1
130°	594.9	597.3	599.8	602.2	604.6	607.2	609.8	612.6	615.3	618.0	621.2
132.5°	627.7	629.5	631.5	633.5	635.4	637.7	640.1	642.6	645.1	647.6	650.1
135°	670.7	672.9	675.1	677.3	679.5	681.4	683.3	685.2	687.1	688.9	691.9
137.5°	716.8	718.6	720.3	722.1	723.8	725.3	726.5	727.6	728.8	730.0	732.5
140°	744.6	746.3	747.9	749.5	751.2	752.6	753.9	755.2	756.4	757.8	760.1
142.5°	773.1	774.7	776.3	778.0	779.6	780.8	781.5	782.3	783.0	783.7	785.8
145°	813.3	814.8	816.1	817.5	818.9	820.2	821.4	822.5	823.8	824.9	826.0
147.5°	849.8	851.5	853.2	854.8	856.5	857.7	858.5	859.3	860.1	860.9	861.4
150°	874.8	875.9	877.1	878.3	879.5	880.5	881.3	882.1	882.9	883.7	884.2
152.5°	896.8	898.0	899.2	900.4	901.6	902.7	903.6	904.6	905.4	906.4	907.2
155°	930.0	930.5	931.1	931.7	932.3	932.9	933.5	934.1	934.7	935.2	936.3
157.5°	958.2	958.6	959.0	959.4	959.8	960.2	960.6	960.9	961.3	961.6	963.0
160°	975.4	975.7	976.1	976.5	976.9	977.2	977.4	977.6	977.8	977.9	979.2
162.5°	991.0	991.0	991.1	991.2	991.3	991.4	991.7	991.8	992.0	992.2	993.5
165°	1011.8	1011.6	1011.4	1011.2	1011.0	1010.9	1010.9	1010.9	1010.9	1010.9	1012.3
167.5°	1029.2	1028.7	1028.1	1027.4	1026.9	1026.5	1026.5	1026.4	1026.4	1026.4	1027.8
170°	1038.5	1037.9	1037.3	1036.7	1036.1	1035.7	1035.5	1035.4	1035.1	1034.9	1036.3
172.5°	1044.9	1044.3	1043.7	1043.1	1042.5	1042.1	1042.0	1041.7	1041.5	1041.3	1042.8
175°	1052.8	1052.1	1051.5	1051.0	1050.3	1049.9	1049.5	1049.1	1048.7	1048.3	1049.6
177.5°	1056.0	1055.4	1055.0	1054.5	1054.0	1053.6	1053.3	1053.0	1052.7	1052.4	1053.3
180°	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	113.5	119.5	125.5	129.4	131.3	133.2	135.2	137.1
90°	130.1	135.6	141.2	144.9	146.9	148.8	150.8	152.8
92.5°	123.1	129.0	134.9	138.8	140.6	142.4	144.2	146.1
95°	144.8	150.4	156.0	159.5	161.0	162.3	163.7	165.1
97.5°	177.5	183.1	188.5	192.1	193.8	195.6	197.2	198.9
100°	200.4	205.8	211.3	214.7	216.2	217.6	219.0	220.5
102.5°	225.9	231.4	236.9	240.4	241.8	243.3	244.7	246.1
105°	264.2	269.7	275.4	278.9	280.6	282.2	283.8	285.4
107.5°	306.0	311.2	316.4	319.2	319.9	320.7	321.5	322.2
110°	334.8	339.6	344.3	347.2	348.2	349.3	350.3	351.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	363.6	367.9	372.1	374.9	376.0	377.3	378.4	379.6
115°	408.0	412.2	416.4	419.1	420.1	421.2	422.2	423.2
117.5°	450.6	454.5	458.4	460.8	461.7	462.6	463.6	464.5
120°	479.2	483.3	487.5	490.1	491.1	492.1	493.2	494.2
122.5°	509.0	512.6	516.1	518.4	519.3	520.2	521.2	522.2
125°	552.7	556.1	559.5	561.8	562.9	564.0	565.2	566.3
127.5°	595.0	598.1	601.0	602.8	603.5	604.1	604.8	605.5
130°	624.3	627.5	630.6	632.4	632.8	633.2	633.6	634.0
132.5°	652.6	655.2	657.8	659.3	659.9	660.5	661.0	661.6
135°	694.8	697.7	700.6	702.4	702.9	703.6	704.2	704.7
137.5°	735.1	737.6	740.2	741.6	741.8	742.1	742.3	742.4
140°	762.5	764.8	767.2	768.5	768.6	768.7	768.7	768.8
142.5°	787.8	789.9	791.9	792.9	792.9	792.9	792.9	792.8
145°	827.1	828.2	829.3	829.8	829.7	829.6	829.6	829.6
147.5°	862.0	862.6	863.1	863.2	862.7	862.4	862.0	861.6
150°	884.8	885.5	886.0	886.0	885.5	884.8	884.2	883.7
152.5°	907.9	908.7	909.5	909.5	908.7	907.9	907.2	906.4
155°	937.3	938.3	939.2	939.4	938.8	938.3	937.6	937.0
157.5°	964.3	965.6	967.0	967.1	966.3	965.3	964.3	963.4
160°	980.3	981.5	982.8	982.9	982.1	981.3	980.5	979.7
162.5°	994.9	996.2	997.6	997.8	996.8	995.9	995.0	994.0
165°	1013.7	1015.0	1016.5	1016.6	1015.7	1014.7	1013.7	1012.7
167.5°	1029.1	1030.6	1031.9	1032.1	1031.1	1030.0	1029.0	1028.0
170°	1037.7	1039.1	1040.4	1040.5	1039.4	1038.2	1037.0	1035.8
172.5°	1044.1	1045.5	1046.9	1047.0	1045.8	1044.6	1043.4	1042.2
175°	1051.1	1052.4	1053.8	1053.9	1052.8	1051.5	1050.3	1049.2
177.5°	1054.3	1055.3	1056.1	1056.1	1055.3	1054.3	1053.3	1052.4
180°	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5

(END OF REPORT)