

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: P331320-940

Luminaire Tested: **SA2XXDIP-C485D925U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331320-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
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-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4986.5 lumens  
Efficiency: N/A  
Efficacy: 112.1 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

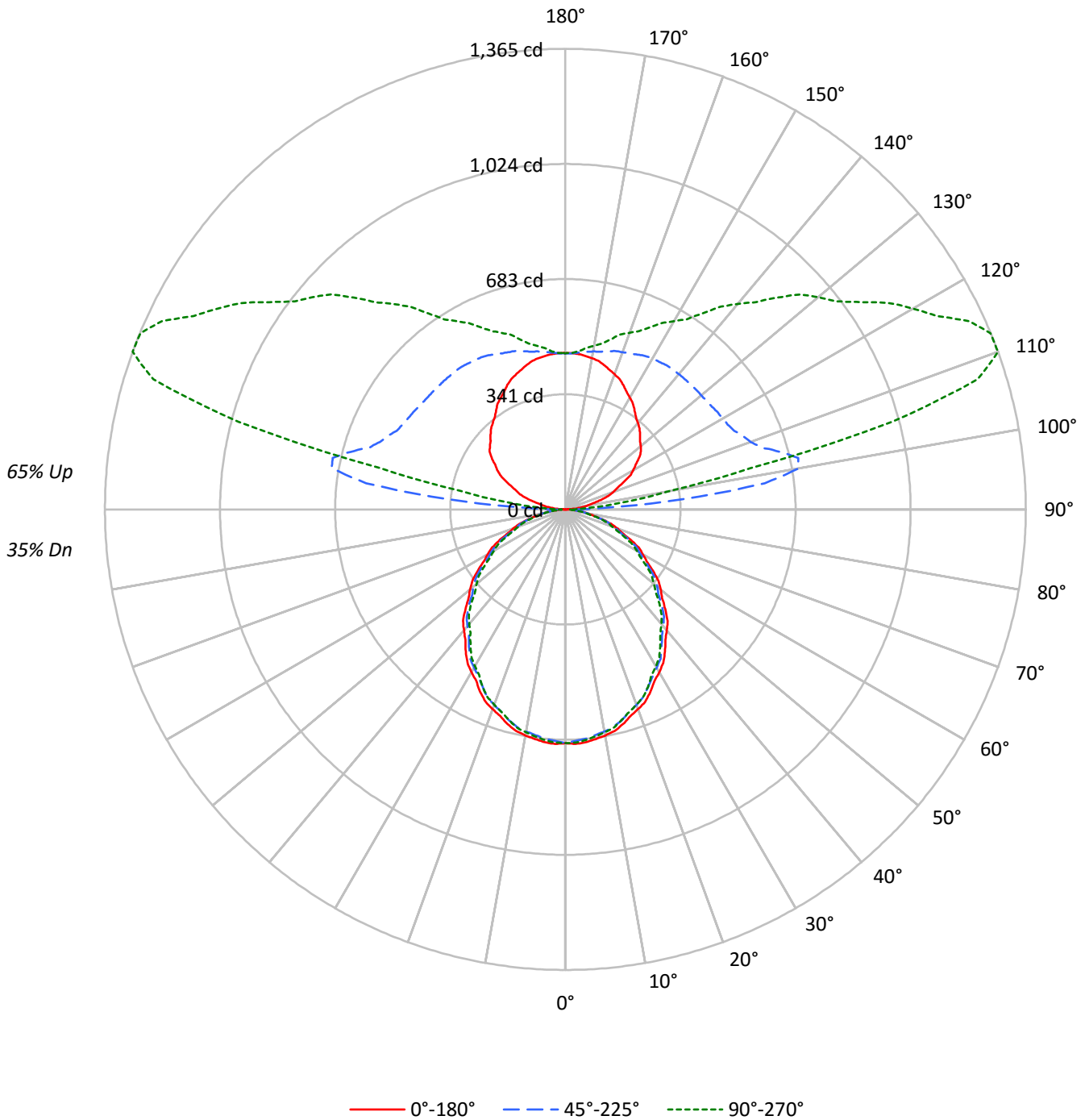
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	95	90	86	83	85	82	79	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	78	71	66	62	58	54	51	45	43	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	48	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	14	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

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

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.1	1.3
10°-20°	183.3	3.7
20°-30°	269.4	5.4
30°-40°	312.9	6.3
40°-50°	312.5	6.3
50°-60°	272.6	5.5
60°-70°	201.5	4.0
70°-80°	114.1	2.3
80°-90°	34.9	0.7
90°-100°	185.0	3.7
100°-110°	627.9	12.6
110°-120°	667.1	13.4
120°-130°	549.1	11.0
130°-140°	441.0	8.8
140°-150°	333.2	6.7
150°-160°	234.2	4.7
160°-170°	137.9	2.8
170°-180°	44.9	0.9
0°-30°	517.7	10.4
0°-40°	830.6	16.7
0°-60°	1415.7	28.4
0°-90°	1766.2	35.4
90°-120°	1480.0	29.7
90°-150°	2803.4	56.2
90°-180°	3220.0	64.6
0°-180°	4986.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	1	12	30	29	29	3
95°	31	77	349	132	102	33
105°	109	164	659	1179	1003	115
115°	191	242	552	1139	1320	190
125°	267	316	530	922	1071	237
135°	313	374	524	775	887	242
145°	358	411	522	647	708	224
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.8	10.1	10.5	10.7	10.8	11.1	11.8	12.8	13.6	13.6	13.0
90°	0.9	3.6	7.1	8.9	10.7	13.4	17.8	24.0	29.3	30.2	29.3
92.5°	10.9	15.7	22.1	25.9	32.0	40.4	60.5	88.8	114.0	115.7	97.7
95°	31.1	34.7	43.6	51.6	65.9	87.2	128.1	205.5	308.8	348.8	305.2
97.5°	50.7	55.6	65.0	77.0	93.5	117.6	169.1	277.0	448.5	595.6	624.7
100°	68.5	71.2	79.2	93.5	111.3	136.2	183.3	291.9	484.1	703.0	831.3
102.5°	84.9	86.9	94.9	109.1	127.6	152.6	196.2	292.7	470.6	706.6	908.1
105°	108.6	112.2	118.3	131.7	151.3	176.2	218.0	297.2	444.1	659.4	896.2
107.5°	134.2	137.1	143.1	155.4	174.8	199.9	240.5	309.5	430.9	608.9	818.1
110°	151.3	154.9	160.2	171.7	190.5	216.2	255.4	319.5	428.1	584.7	768.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	166.9	170.5	176.6	187.4	205.4	231.9	269.7	330.2	428.7	569.0	734.8
115°	191.4	195.8	201.2	211.8	229.6	253.6	291.9	346.2	432.5	551.8	692.4
117.5°	216.6	220.2	225.5	235.0	252.0	277.0	312.4	363.3	438.9	543.4	665.7
120°	232.3	235.9	241.2	249.1	267.0	291.9	326.6	374.7	443.2	538.4	651.5
122.5°	247.3	250.0	255.4	264.1	282.0	307.6	340.1	384.6	448.2	535.6	639.4
125°	267.0	269.7	275.0	285.7	303.4	328.4	360.4	400.5	455.7	530.4	622.1
127.5°	282.7	286.2	293.6	305.4	322.5	348.1	379.3	415.3	463.3	527.4	606.1
130°	291.9	295.4	304.3	316.8	334.7	359.5	390.7	424.5	469.0	525.9	595.4
132.5°	300.4	304.7	314.3	327.5	346.0	371.0	400.6	433.7	474.7	525.2	586.8
135°	313.3	316.8	327.5	340.8	361.3	386.2	414.7	445.9	481.4	524.1	574.9
137.5°	325.4	329.7	340.3	354.5	374.9	398.0	426.1	455.1	487.5	524.0	566.5
140°	334.7	338.2	348.8	363.1	382.7	405.8	432.5	460.1	490.4	523.3	561.6
142.5°	343.8	346.7	356.7	371.0	389.8	411.5	437.5	464.4	492.5	523.3	556.6
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	550.0
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.2
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	12.5	11.8	11.8	11.7	11.6	11.4	11.3	11.2
90°	28.4	26.7	28.4	29.3	29.3	29.3	29.3	29.3
92.5°	77.6	66.6	59.1	53.6	52.9	50.0	50.7	49.3
95°	233.2	178.9	141.5	121.9	110.4	103.3	100.6	101.5
97.5°	544.1	445.1	348.8	284.6	242.1	220.2	207.1	199.7
100°	812.5	702.1	580.2	472.6	398.7	360.4	334.7	318.6
102.5°	988.4	963.5	874.3	760.2	679.9	614.6	582.4	560.7
105°	1081.3	1181.9	1193.5	1164.0	1108.8	1053.7	1015.4	1003.0
107.5°	1014.4	1165.8	1258.4	1301.5	1308.4	1305.4	1297.7	1281.2
110°	956.7	1116.0	1229.9	1302.9	1341.1	1358.1	1366.1	1365.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	904.0	1056.9	1178.7	1262.3	1315.5	1343.8	1359.0	1363.8
115°	839.2	976.2	1092.9	1184.5	1247.7	1288.6	1311.8	1319.8
117.5°	790.4	910.8	1016.5	1102.5	1166.9	1210.1	1234.6	1241.3
120°	766.2	876.6	970.9	1052.0	1114.2	1156.0	1181.9	1190.8
122.5°	747.0	848.1	937.5	1010.7	1066.5	1107.6	1130.6	1138.1
125°	719.1	810.7	889.0	955.8	1007.5	1041.3	1063.5	1070.6
127.5°	691.5	774.5	848.3	909.9	954.9	986.6	1005.8	1011.6
130°	673.7	750.2	820.6	879.3	922.9	953.1	970.9	978.0
132.5°	656.6	727.5	792.0	847.2	890.1	920.4	936.7	943.2
135°	632.8	691.5	750.2	800.0	838.3	867.7	883.7	887.3
137.5°	613.7	662.8	709.4	752.9	787.8	813.1	827.2	832.5
140°	601.6	644.4	685.3	724.4	752.9	776.1	789.4	794.7
142.5°	591.7	627.9	663.2	696.0	723.0	744.0	755.9	757.0
145°	577.6	607.0	634.5	660.3	681.7	696.9	705.7	708.4
147.5°	566.7	589.9	611.4	630.3	647.9	660.0	666.0	667.6
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

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