

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: P331662-930

Luminaire Tested: **SA2XXRDIP-C485D725U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331662-930  
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: SA2XXRDIP-C485D725U930-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

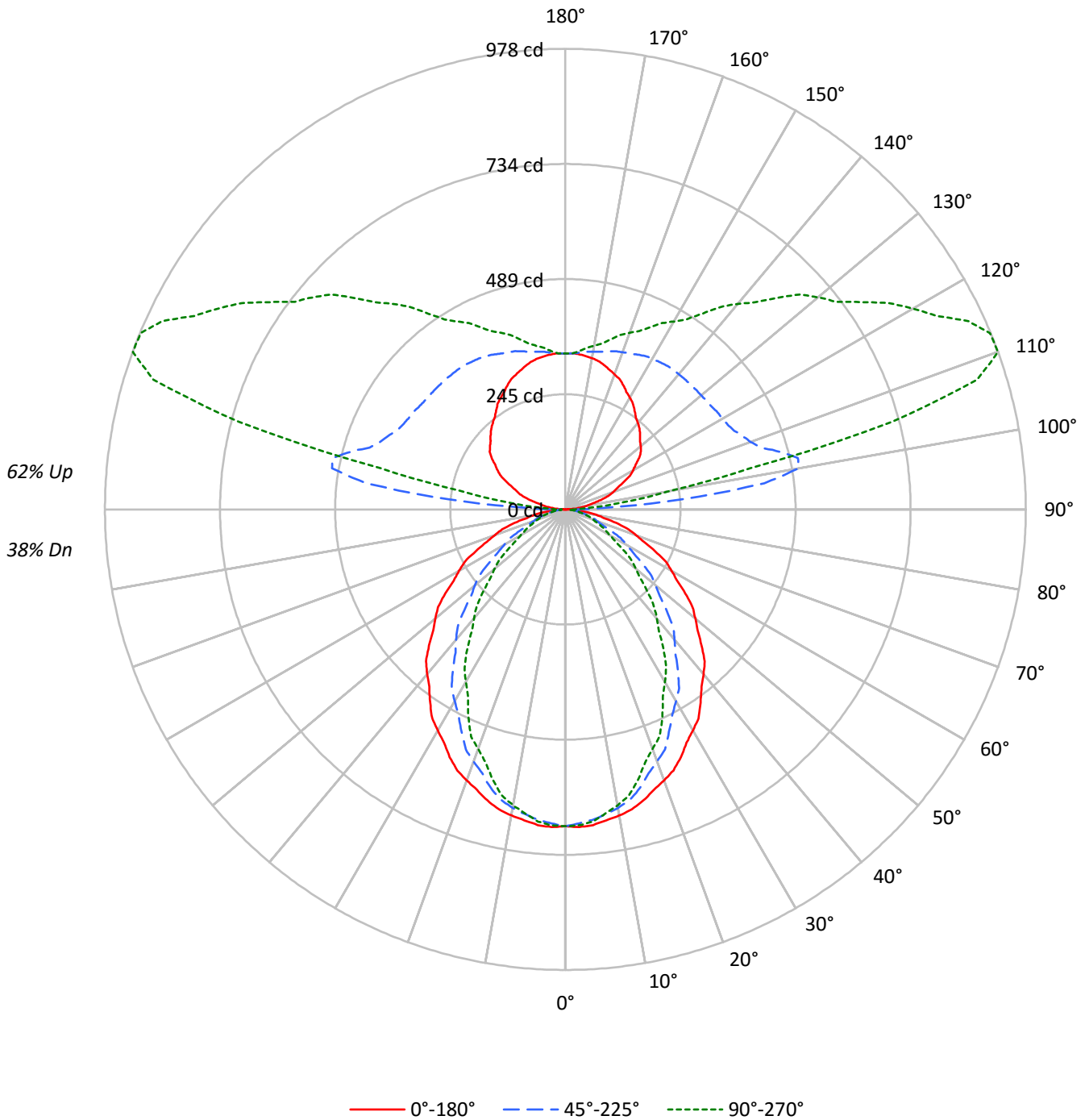
Lumens per Lamp: N/A  
Luminaire Lumens: 3693.0 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 38.4  
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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	38	38	38	38	
1	95	91	88	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32	32	32	32	
2	87	80	74	69	79	73	68	64	59	56	53	47	45	43	36	34	33	28	28	28	28	
3	80	71	64	58	72	64	58	54	53	48	45	42	39	36	32	30	28	24	24	24	24	
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21	21	21	21	
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18	18	18	18	
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16	16	16	16	
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15	15	15	15	
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	17	16	13	13	13	13	
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12	12	12	12	
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11	11	11	11	

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

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.0	1.7
10°-20°	172.9	4.7
20°-30°	242.8	6.6
30°-40°	264.8	7.2
40°-50°	243.5	6.6
50°-60°	191.2	5.2
60°-70°	124.7	3.4
70°-80°	64.3	1.7
80°-90°	19.7	0.5
90°-100°	132.5	3.6
100°-110°	449.7	12.2
110°-120°	477.7	12.9
120°-130°	393.2	10.6
130°-140°	315.8	8.6
140°-150°	238.6	6.5
150°-160°	167.7	4.5
160°-170°	98.7	2.7
170°-180°	32.1	0.9
0°-30°	478.7	13.0
0°-40°	743.5	20.1
0°-60°	1178.2	31.9
0°-90°	1386.8	37.6
90°-120°	1059.9	28.7
90°-150°	2007.6	54.4
90°-180°	2306.0	62.4
0°-180°	3693.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	1	9	22	21	21	2
95°	22	55	250	94	73	24
105°	78	117	472	844	718	83
115°	137	173	395	815	945	136
125°	191	226	380	661	767	170
135°	224	268	375	555	635	173
145°	256	294	374	464	507	161
155°	291	314	363	410	426	134
165°	317	327	347	368	374	89
175°	331	331	334	338	337	31
180°	331	331	331	331	331	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	7.9	7.4	7.1	6.4	5.9	5.8	6.4	7.3	8.1	8.2	8.0
90°	0.7	2.5	5.1	6.4	7.7	9.5	12.7	17.2	21.0	21.7	21.0
92.5°	7.7	11.3	15.8	18.6	22.9	28.9	43.4	63.6	81.7	82.8	70.0
95°	22.3	24.9	31.2	36.9	47.1	62.5	91.8	147.2	221.2	249.8	218.6
97.5°	36.4	39.8	46.6	55.2	66.9	84.2	121.1	198.4	321.2	426.5	447.4
100°	49.1	51.0	56.7	66.9	79.7	97.5	131.3	209.0	346.7	503.4	595.3
102.5°	60.8	62.2	67.9	78.1	91.4	109.3	140.5	209.5	337.0	506.1	650.3
105°	77.8	80.3	84.8	94.3	108.4	126.2	156.1	212.9	318.0	472.2	641.8
107.5°	96.1	98.2	102.5	111.3	125.1	143.2	172.2	221.7	308.6	436.0	585.8
110°	108.4	110.9	114.7	123.0	136.4	154.9	182.9	228.8	306.6	418.7	550.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	119.5	122.1	126.5	134.2	147.1	166.1	193.1	236.4	307.0	407.5	526.2
115°	137.1	140.2	144.1	151.6	164.4	181.6	209.0	247.9	309.7	395.2	495.9
117.5°	155.2	157.7	161.5	168.3	180.5	198.4	223.7	260.2	314.3	389.1	476.7
120°	166.3	168.9	172.7	178.5	191.2	209.0	233.9	268.3	317.4	385.6	466.5
122.5°	177.1	179.1	182.9	189.1	201.9	220.3	243.6	275.5	321.0	383.5	457.9
125°	191.2	193.1	196.9	204.6	217.4	235.1	258.1	286.8	326.3	379.8	445.5
127.5°	202.4	205.0	210.3	218.7	231.0	249.3	271.7	297.3	331.8	377.6	434.0
130°	209.0	211.6	217.9	226.9	239.6	257.5	279.8	304.0	335.9	376.7	426.4
132.5°	215.2	218.3	225.1	234.6	247.8	265.6	286.9	310.6	340.0	376.2	420.3
135°	224.4	226.9	234.6	244.1	258.8	276.6	297.0	319.3	344.8	375.4	411.7
137.5°	233.0	236.0	243.7	253.9	268.5	285.0	305.2	326.0	349.1	375.3	405.7
140°	239.6	242.1	249.8	260.0	274.0	290.7	309.7	329.5	351.1	374.7	402.2
142.5°	246.2	248.3	255.4	265.6	279.2	294.7	313.3	332.6	352.7	374.7	398.6
145°	256.2	258.8	265.1	274.7	287.4	301.4	318.7	336.5	354.3	373.5	393.9
147.5°	266.9	268.8	274.9	283.7	294.3	306.8	323.0	338.7	354.9	371.2	389.1
150°	274.0	276.0	281.0	289.3	298.9	310.4	325.1	339.7	354.3	369.7	384.9
152.5°	281.2	282.1	287.1	294.4	303.5	314.0	327.1	340.2	353.4	367.1	381.4
155°	291.2	291.9	295.7	302.7	309.7	319.3	330.1	341.0	351.8	362.6	374.7
157.5°	299.7	300.3	303.4	309.5	315.1	323.1	332.3	341.0	348.9	358.1	368.5
160°	305.2	305.9	308.4	313.6	318.7	325.6	333.3	341.0	347.3	355.0	363.9
162.5°	310.9	310.5	313.1	317.2	321.7	327.2	333.9	340.5	345.8	352.5	359.8
165°	317.4	316.7	318.0	321.9	325.1	328.9	334.6	339.1	342.9	347.3	353.1
167.5°	322.8	322.0	323.1	325.5	327.8	330.3	334.4	338.2	340.0	342.9	346.4
170°	326.3	325.1	325.6	327.6	328.9	330.8	333.9	337.1	338.4	340.3	342.9
172.5°	328.3	327.6	327.2	329.1	329.9	331.3	333.5	335.6	336.4	337.3	339.3
175°	330.8	330.1	329.5	330.8	330.8	331.4	332.6	333.9	333.3	333.9	334.6
177.5°	331.9	330.9	330.4	331.4	331.4	331.4	331.9	333.0	331.9	331.4	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	7.7	7.4	7.6	7.6	7.6	7.6	7.6	7.6
90°	20.4	19.2	20.4	21.0	21.0	21.0	21.0	21.0
92.5°	55.6	47.7	42.3	38.4	37.8	35.8	36.4	35.3
95°	167.0	128.1	101.3	87.3	79.0	73.9	72.0	72.6
97.5°	389.6	318.8	249.8	203.8	173.3	157.7	148.4	143.0
100°	581.9	502.9	415.6	338.4	285.5	258.1	239.6	228.1
102.5°	707.8	690.0	626.1	544.4	486.9	440.1	417.0	401.5
105°	774.4	846.4	854.7	833.6	794.1	754.6	727.2	718.3
107.5°	726.4	834.9	901.2	932.1	937.0	934.8	929.4	917.5
110°	685.1	799.2	880.8	933.0	960.4	972.6	978.3	977.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	647.4	756.8	844.1	904.0	942.1	962.4	973.2	976.6
115°	601.0	699.1	782.6	848.2	893.5	922.8	939.4	945.2
117.5°	566.1	652.2	728.0	789.5	835.7	866.7	884.1	888.9
120°	548.7	627.8	695.3	753.3	797.9	827.9	846.4	852.7
122.5°	535.0	607.4	671.3	723.7	763.8	793.2	809.7	815.0
125°	514.9	580.6	636.7	684.4	721.5	745.7	761.6	766.7
127.5°	495.2	554.6	607.5	651.6	683.9	706.5	720.3	724.4
130°	482.4	537.3	587.6	629.7	660.9	682.6	695.3	700.4
132.5°	470.2	521.0	567.2	606.7	637.5	659.1	670.8	675.4
135°	453.1	495.2	537.3	572.9	600.4	621.4	632.8	635.4
137.5°	439.5	474.7	508.1	539.2	564.2	582.3	592.3	596.1
140°	430.8	461.5	490.7	518.8	539.2	555.7	565.3	569.2
142.5°	423.7	449.7	474.9	498.4	517.8	532.8	541.4	542.1
145°	413.6	434.6	454.4	472.9	488.2	499.0	505.4	507.3
147.5°	405.9	422.4	437.8	451.3	464.0	472.6	477.0	478.1
150°	400.2	414.3	427.6	439.1	448.7	456.3	460.2	460.8
152.5°	394.6	407.6	419.0	428.9	436.4	443.0	445.9	446.0
155°	386.9	397.1	406.6	413.6	420.6	425.1	427.6	426.4
157.5°	377.8	386.4	394.4	399.8	404.8	408.5	409.7	409.7
160°	372.2	379.2	386.2	390.7	395.2	398.4	398.9	398.9
162.5°	366.6	372.6	378.5	382.0	386.5	388.7	389.3	388.7
165°	358.2	362.6	367.1	369.7	372.2	374.7	374.7	374.1
167.5°	350.2	353.6	356.6	359.0	360.1	361.5	361.3	360.6
170°	346.1	348.0	350.5	351.8	352.5	354.3	353.7	352.5
172.5°	341.4	342.9	345.0	345.7	346.3	347.2	346.6	345.8
175°	336.5	337.1	337.8	338.4	338.4	339.1	338.4	337.1
177.5°	333.0	333.0	333.5	333.5	333.5	333.5	333.0	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4

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