

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: P331317-830

Luminaire Tested: **SA2XXDIP-C485D925U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331317-830  
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-C485D925U830-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

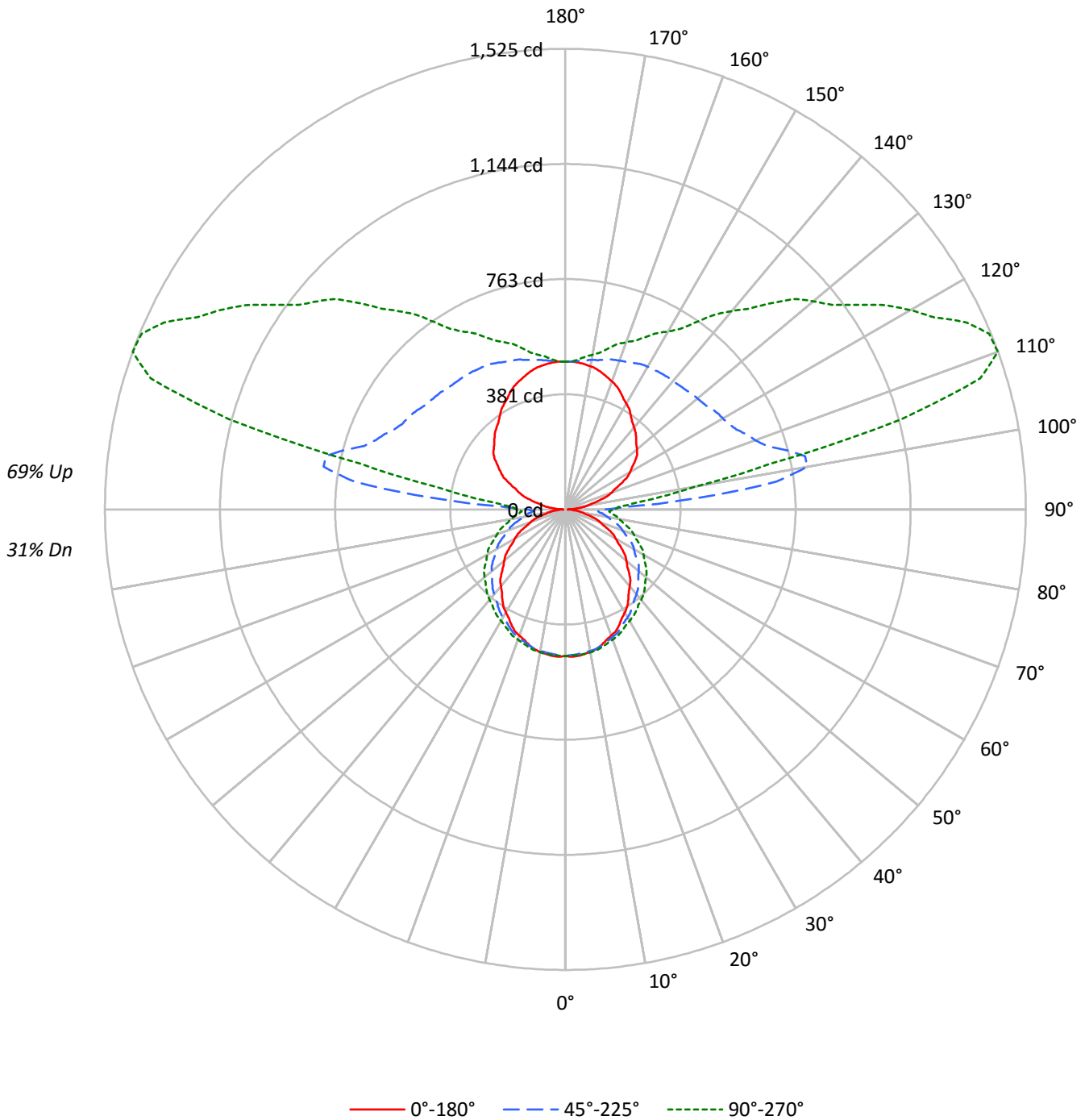
Lumens per Lamp: N/A  
Luminaire Lumens: 5261.3 lumens  
Efficiency: N/A  
Efficacy: 118.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

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	0
RCR																		
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20
3	76	67	59	53	68	60	54	48	47	43	39	36	33	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	17	15	12
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	12	11	8
9	46	34	27	22	42	31	25	20	25	20	16	19	16	13	14	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	9	6

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

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	0.9
10°-20°	132.0	2.5
20°-30°	200.0	3.8
30°-40°	243.6	4.6
40°-50°	262.1	5.0
50°-60°	254.5	4.8
60°-70°	222.2	4.2
70°-80°	171.1	3.3
80°-90°	119.2	2.3
90°-100°	274.7	5.2
100°-110°	721.5	13.7
110°-120°	743.2	14.1
120°-130°	601.7	11.4
130°-140°	475.0	9.0
140°-150°	353.8	6.7
150°-160°	247.5	4.7
160°-170°	145.7	2.8
170°-180°	47.4	0.9
0°-30°	378.0	7.2
0°-40°	621.6	11.8
0°-60°	1138.1	21.6
0°-90°	1650.6	31.4
90°-120°	1739.4	33.1
90°-150°	3169.9	60.3
90°-180°	3611.0	68.6
0°-180°	5261.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	61	125	151	161	7
95°	38	120	450	246	223	39
105°	118	198	758	1330	1153	126
115°	205	267	626	1266	1466	203
125°	284	337	585	1017	1181	252
135°	332	396	562	841	966	257
145°	378	435	551	689	756	237
155°	430	464	535	605	629	198
165°	468	483	513	544	552	132
175°	488	489	493	499	498	46
180°	489	489	489	489	489	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.8	33.9	43.6	53.3	63.6	74.6	85.9	97.0	107.2	113.4
90°	8.0	19.9	32.7	43.6	54.6	67.0	81.7	98.3	114.0	124.9	130.3
92.5°	17.9	31.5	46.7	59.3	74.1	92.0	122.9	162.5	198.8	210.1	197.3
95°	38.5	49.7	66.4	82.3	104.6	135.6	188.2	279.5	397.9	449.7	409.5
97.5°	58.5	70.1	86.7	106.0	129.9	163.2	226.6	349.6	540.0	704.4	741.0
100°	77.4	86.0	100.2	121.0	145.6	179.3	237.9	361.4	573.3	813.5	954.8
102.5°	94.1	101.4	115.2	135.5	160.4	193.6	248.3	358.7	555.3	813.3	1032.0
105°	118.3	126.6	137.7	156.4	181.6	214.2	266.6	358.4	521.8	757.6	1013.3
107.5°	145.2	151.8	161.9	178.5	202.6	234.9	285.6	366.4	502.5	698.4	924.7
110°	162.8	169.7	178.4	193.8	216.6	249.3	298.4	373.7	496.2	669.4	869.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	185.7	194.7	208.8	230.5	263.4	310.6	381.8	493.4	648.9	829.1
115°	205.1	211.5	218.9	231.9	252.4	282.2	329.7	394.1	492.4	625.5	778.8
117.5°	231.1	235.9	242.7	253.8	273.1	303.2	347.1	407.5	493.9	610.9	744.7
120°	247.6	252.0	258.3	267.4	286.8	316.6	359.6	416.6	495.3	602.2	726.0
122.5°	263.4	266.7	272.6	282.1	301.1	331.3	371.6	424.5	497.6	595.8	709.7
125°	283.6	286.4	292.1	303.4	322.2	351.0	389.9	437.2	500.6	584.6	685.7
127.5°	300.2	303.8	311.5	323.8	341.7	370.7	407.6	449.7	504.5	576.3	663.4
130°	309.9	313.6	322.8	335.8	354.5	382.4	418.6	457.6	507.9	571.5	648.6
132.5°	319.0	323.4	333.4	347.1	366.6	394.1	428.0	465.5	511.3	567.3	636.0
135°	331.9	335.5	346.9	361.0	382.6	409.7	441.4	475.9	515.1	561.8	618.7
137.5°	344.6	349.1	360.3	375.4	396.8	421.6	451.9	483.3	518.3	557.5	605.4
140°	354.4	358.0	369.1	384.0	404.5	429.1	457.6	487.1	519.4	554.5	597.5
142.5°	364.2	367.0	377.4	392.3	412.1	435.0	462.5	491.0	520.8	553.4	590.6
145°	378.1	381.9	391.3	405.5	424.2	445.0	470.3	496.7	523.0	551.2	582.3
147.5°	394.0	396.8	405.8	418.8	434.4	452.9	476.7	499.9	523.8	547.9	574.3
150°	404.5	407.3	414.8	427.1	441.2	458.1	479.8	501.3	523.0	545.6	568.2
152.5°	415.0	416.3	423.9	434.6	448.0	463.4	482.8	502.1	521.5	541.9	562.9
155°	429.9	430.8	436.5	446.9	457.1	471.3	487.3	503.2	519.2	535.3	553.1
157.5°	442.3	443.3	447.8	456.8	465.1	476.9	490.5	503.2	514.9	528.5	543.9
160°	450.6	451.6	455.2	462.8	470.3	480.7	492.0	503.2	512.6	524.0	537.2
162.5°	458.8	458.3	462.0	468.1	474.9	483.0	492.8	502.5	510.4	520.2	531.1
165°	468.4	467.5	469.4	475.0	479.8	485.4	493.9	500.5	506.1	512.6	521.1
167.5°	476.4	475.2	476.9	480.5	483.9	487.5	493.7	499.2	501.7	506.1	511.3
170°	481.6	479.8	480.7	483.5	485.4	488.2	492.9	497.7	499.5	502.3	506.1
172.5°	484.7	483.5	483.0	485.8	486.9	489.0	492.2	495.4	496.5	497.9	500.9
175°	488.2	487.3	486.4	488.2	488.2	489.2	491.1	492.9	492.0	492.9	493.9
177.5°	489.9	488.4	487.7	489.2	489.2	489.2	489.9	491.4	489.9	489.2	489.9
180°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	119.6	125.5	132.3	136.8	138.7	140.7	142.7	144.8
90°	135.5	139.9	148.1	153.1	155.0	156.8	158.7	160.6
92.5°	182.1	176.6	174.8	173.1	174.2	173.0	175.6	176.0
95°	339.3	287.9	254.3	237.5	227.2	221.5	220.6	223.4
97.5°	661.6	562.8	466.8	402.7	359.6	338.3	326.4	320.4
100°	940.8	829.9	706.9	596.8	520.5	481.7	456.2	440.9
102.5°	1122.5	1101.8	1013.2	896.4	813.2	745.8	713.5	692.3
105°	1214.4	1326.2	1343.9	1316.4	1259.8	1203.2	1164.5	1153.1
107.5°	1137.5	1302.8	1405.9	1454.9	1464.0	1462.5	1456.1	1440.4
110°	1072.6	1246.0	1371.4	1451.9	1494.1	1513.7	1523.9	1524.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1013.0	1179.6	1313.3	1405.1	1463.1	1494.7	1512.4	1519.2
115°	938.7	1088.3	1216.2	1316.3	1384.8	1429.7	1455.9	1466.1
117.5°	881.3	1013.0	1129.4	1223.4	1293.1	1340.4	1367.8	1376.6
120°	851.8	972.8	1076.9	1165.5	1233.1	1279.0	1308.1	1319.2
122.5°	827.8	939.0	1037.6	1117.9	1178.4	1223.3	1249.1	1258.4
125°	792.5	893.5	980.5	1054.0	1109.9	1147.1	1172.0	1180.9
127.5°	757.5	849.0	931.0	998.8	1047.7	1082.6	1104.3	1111.7
130°	735.1	819.7	897.8	962.4	1009.7	1043.0	1063.0	1071.9
132.5°	713.4	791.9	863.8	924.6	971.2	1004.5	1022.9	1031.0
135°	683.2	748.5	813.9	868.8	910.5	942.8	961.0	966.0
137.5°	658.1	712.9	765.1	812.9	850.9	878.6	894.6	901.4
140°	642.3	689.9	735.7	778.8	809.9	835.3	850.4	857.0
142.5°	629.6	670.1	709.3	745.3	774.8	797.8	811.2	813.1
145°	612.4	644.3	674.5	702.6	725.9	742.7	752.9	756.5
147.5°	599.3	623.9	646.8	666.9	686.0	699.1	705.9	707.9
150°	590.8	611.4	631.2	648.1	662.2	673.5	679.2	680.1
152.5°	582.5	601.6	618.4	633.1	644.1	653.9	658.1	658.3
155°	571.0	586.1	600.1	610.5	620.9	627.5	631.2	629.3
157.5°	557.6	570.2	582.1	590.2	597.5	602.9	604.6	604.6
160°	549.3	559.7	570.0	576.6	583.2	588.0	588.9	588.9
162.5°	541.1	549.9	558.7	563.8	570.4	573.6	574.6	573.8
165°	528.7	535.3	541.9	545.6	549.3	553.1	553.1	552.1
167.5°	516.8	521.9	526.4	529.8	531.5	533.6	533.4	532.3
170°	510.8	513.6	517.4	519.2	520.2	523.0	522.1	520.2
172.5°	504.0	506.1	509.1	510.2	511.1	512.5	511.5	510.4
175°	496.7	497.7	498.6	499.5	499.5	500.5	499.5	497.7
177.5°	491.4	491.4	492.2	492.2	492.2	492.2	491.4	489.9
180°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2

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