

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: P331362-830

Luminaire Tested: **SA2XXDIP-C675D925U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331362-830  
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-C675D925U830-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

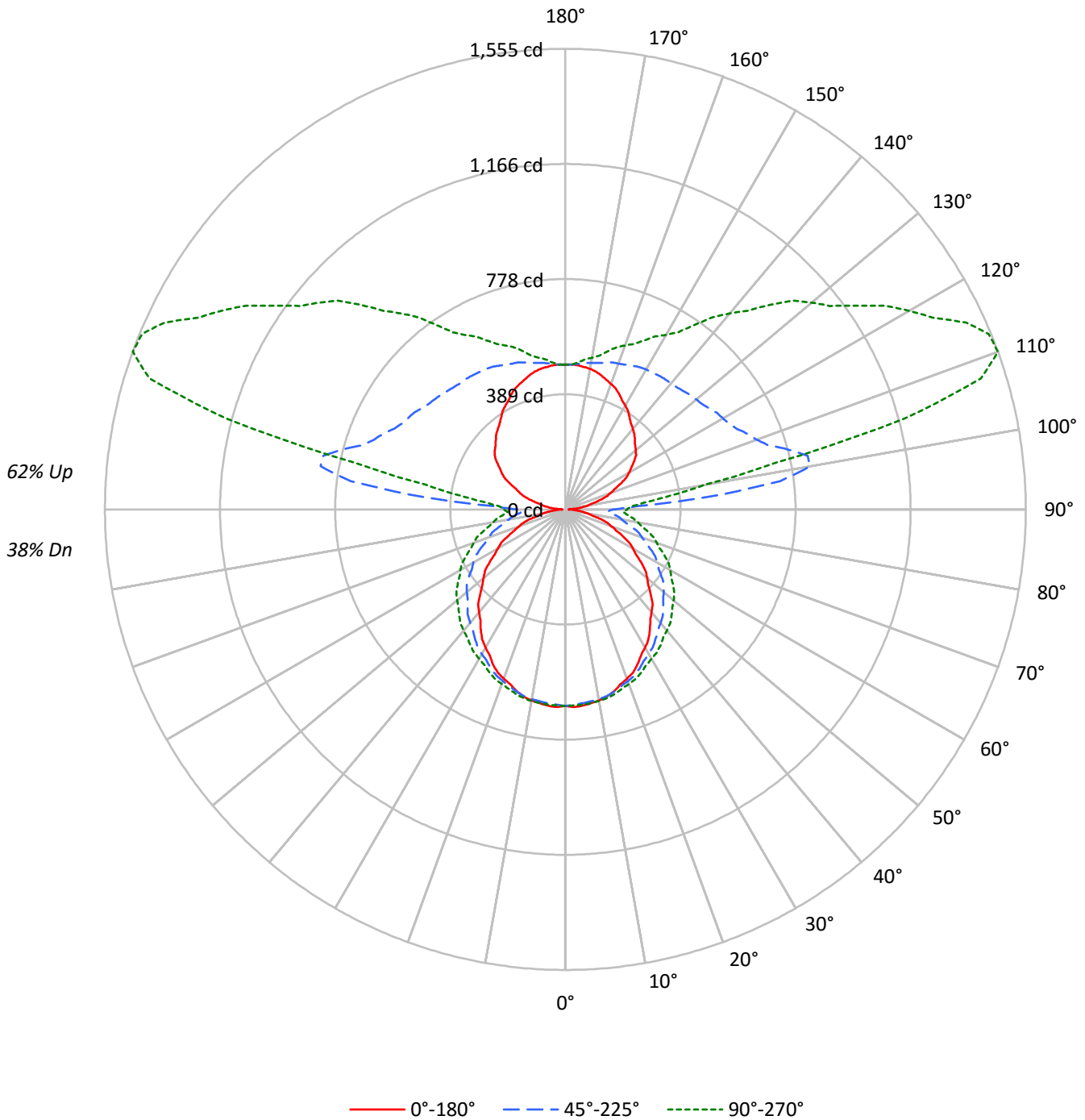
Lumens per Lamp: N/A  
Luminaire Lumens: 5941.1 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 52  
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	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	89	85	81	85	81	77	74	65	63	60	51	49	48	38	37	36	30
2	85	77	71	65	77	70	64	60	57	53	49	44	41	39	33	31	29	24
3	77	67	60	54	70	61	55	49	50	45	41	39	35	32	29	26	24	20
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	21	17
5	64	53	44	38	58	48	41	35	39	33	29	31	27	23	23	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	19	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	15	12	10	8

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

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.1
10°-20°	180.4	3.0
20°-30°	273.4	4.6
30°-40°	333.0	5.6
40°-50°	358.2	6.0
50°-60°	347.9	5.9
60°-70°	303.7	5.1
70°-80°	233.8	3.9
80°-90°	161.3	2.7
90°-100°	303.7	5.1
100°-110°	742.7	12.5
110°-120°	757.2	12.7
120°-130°	609.5	10.3
130°-140°	478.3	8.1
140°-150°	354.4	6.0
150°-160°	247.5	4.2
160°-170°	145.7	2.5
170°-180°	47.4	0.8
0°-30°	516.7	8.7
0°-40°	849.6	14.3
0°-60°	1555.7	26.2
0°-90°	2254.6	37.9
90°-120°	1803.6	30.4
90°-150°	3245.8	54.6
90°-180°	3687.0	62.1
0°-180°	5941.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	11	78	159	195	208	8
95°	41	135	479	285	266	41
105°	120	207	780	1361	1187	127
115°	206	272	641	1289	1492	204
125°	284	338	593	1033	1199	253
135°	332	397	565	849	976	257
145°	378	435	551	690	759	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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	19.0	32.3	45.8	59.0	72.1	85.9	100.5	115.5	130.4	144.2	152.7
90°	10.6	25.8	41.9	56.3	70.5	86.3	104.8	125.1	144.4	159.0	166.6
92.5°	20.4	36.9	55.2	71.0	88.9	110.1	144.5	187.7	227.5	242.3	231.8
95°	40.6	54.5	73.9	92.4	117.5	151.6	207.6	302.3	424.2	479.4	441.4
97.5°	60.3	74.4	93.3	115.0	141.3	177.5	244.1	370.5	564.2	731.9	770.6
100°	79.2	89.9	106.3	129.2	156.0	192.3	254.1	380.8	596.0	839.3	982.7
102.5°	95.7	105.0	120.7	143.0	169.8	205.6	263.3	376.8	576.6	837.7	1058.5
105°	119.6	129.5	142.3	162.6	189.5	224.5	279.8	374.7	541.0	779.8	1037.5
107.5°	146.5	154.5	165.8	183.7	209.2	243.6	297.1	380.7	519.7	718.5	946.7
110°	163.7	171.8	181.7	198.2	222.3	256.9	308.8	387.0	512.3	688.2	889.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.3	187.7	197.7	212.7	235.4	270.1	320.0	393.9	508.1	666.3	848.3
115°	206.1	213.1	221.1	234.8	256.0	287.4	337.4	404.4	505.3	640.9	796.0
117.5°	231.9	237.1	244.3	255.8	275.4	307.0	353.4	416.0	504.9	624.2	759.8
120°	248.4	253.0	259.5	268.8	288.5	319.5	364.8	424.1	505.1	614.3	739.8
122.5°	264.2	267.6	273.5	283.1	302.3	333.6	376.0	431.1	506.3	606.7	722.2
125°	284.2	286.9	292.6	303.9	322.7	352.4	393.1	442.3	507.5	593.3	696.1
127.5°	300.7	304.3	311.9	324.1	342.0	371.7	410.2	453.6	510.0	583.2	671.7
130°	310.5	314.1	323.2	336.2	354.8	383.2	420.7	460.9	512.5	577.1	655.6
132.5°	319.5	323.8	333.8	347.4	366.8	394.7	429.6	468.1	514.8	571.7	641.8
135°	332.1	335.8	347.1	361.3	382.9	410.3	442.5	477.6	517.4	564.7	622.7
137.5°	344.9	349.3	360.6	375.6	397.0	421.9	452.6	484.2	519.3	558.8	607.8
140°	354.7	358.2	369.3	384.1	404.6	429.1	457.8	487.4	519.8	555.1	598.9
142.5°	364.5	367.2	377.6	392.4	412.1	435.0	462.6	491.1	520.8	553.5	591.4
145°	378.1	381.9	391.3	405.5	424.2	445.0	470.3	496.7	523.0	551.2	582.6
147.5°	394.0	396.8	405.8	418.8	434.4	452.9	476.7	499.9	523.8	547.9	574.4
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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	161.3	169.6	178.7	184.6	187.4	190.1	192.8	195.6
90°	174.2	180.9	191.3	197.8	200.4	202.9	205.5	208.1
92.5°	218.9	215.6	216.0	215.7	217.5	217.1	220.4	221.5
95°	373.3	324.1	292.8	277.4	267.7	262.8	262.5	266.0
97.5°	693.3	596.6	502.8	440.1	397.7	377.0	365.8	360.4
100°	970.9	862.1	741.2	632.5	556.8	518.7	493.7	479.2
102.5°	1151.0	1132.5	1045.9	930.4	847.9	781.2	749.5	728.9
105°	1240.7	1354.4	1374.1	1348.0	1292.0	1236.1	1198.0	1187.1
107.5°	1161.4	1328.7	1433.7	1484.0	1493.7	1492.9	1487.1	1472.0
110°	1095.1	1270.4	1397.6	1479.3	1522.2	1542.4	1553.2	1554.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1034.1	1202.5	1338.0	1431.1	1489.7	1521.9	1540.3	1547.7
115°	957.6	1108.9	1238.6	1339.8	1409.0	1454.6	1481.4	1492.2
117.5°	898.1	1031.5	1149.6	1244.7	1315.0	1362.9	1390.9	1400.2
120°	867.1	989.8	1095.4	1185.2	1253.4	1300.0	1329.6	1341.4
122.5°	841.9	954.5	1054.8	1136.0	1197.1	1242.6	1268.9	1278.7
125°	804.4	907.0	995.5	1070.0	1126.4	1164.1	1189.6	1199.0
127.5°	767.3	860.3	943.7	1012.4	1061.9	1097.2	1119.4	1127.3
130°	743.6	829.5	909.0	974.5	1022.3	1056.0	1076.6	1085.8
132.5°	720.5	800.3	873.6	935.3	982.3	1016.0	1035.0	1043.5
135°	688.4	755.0	821.5	877.3	919.5	952.3	970.9	976.4
137.5°	661.6	717.5	770.6	819.3	857.6	885.7	902.1	909.2
140°	644.7	693.2	739.9	783.7	815.0	840.8	856.2	863.1
142.5°	631.2	672.3	712.4	748.9	778.5	801.9	815.6	817.8
145°	613.0	645.4	675.8	704.3	727.9	745.0	755.4	759.4
147.5°	599.4	624.0	647.0	667.2	686.4	699.6	706.5	708.8
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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