

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: P331320-830

Luminaire Tested: **S122DIP-S485D925U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331320-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S485D925U830-4F0-1E-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: 5270.8 lumens  
Efficiency: N/A  
Efficacy: 118.4 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

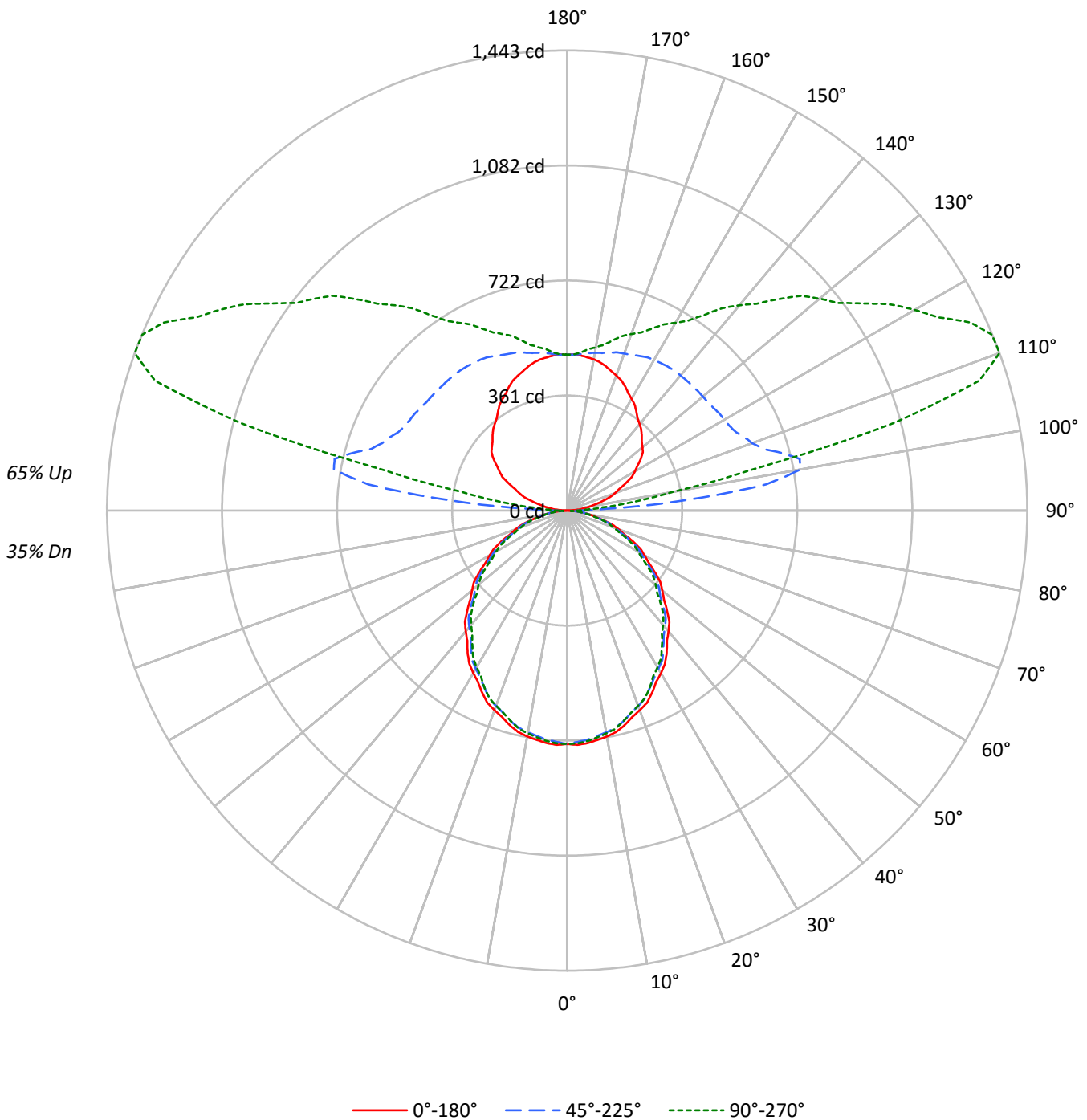
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.8	1.3
10°-20°	193.7	3.7
20°-30°	284.7	5.4
30°-40°	330.7	6.3
40°-50°	330.4	6.3
50°-60°	288.1	5.5
60°-70°	213.0	4.0
70°-80°	120.7	2.3
80°-90°	36.8	0.7
90°-100°	195.6	3.7
100°-110°	663.7	12.6
110°-120°	705.1	13.4
120°-130°	580.4	11.0
130°-140°	466.1	8.8
140°-150°	352.2	6.7
150°-160°	247.5	4.7
160°-170°	145.7	2.8
170°-180°	47.4	0.9
0°-30°	547.2	10.4
0°-40°	878.0	16.7
0°-60°	1496.4	28.4
0°-90°	1866.9	35.4
90°-120°	1564.4	29.7
90°-150°	2963.2	56.2
90°-180°	3404.0	64.6
0°-180°	5270.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	1	13	32	31	31	3
95°	33	81	369	139	107	35
105°	115	173	697	1246	1060	122
115°	202	255	583	1204	1395	200
125°	282	334	561	975	1132	251
135°	331	395	554	819	938	256
145°	378	435	551	684	749	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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.4	10.7	11.1	11.3	11.4	11.7	12.4	13.5	14.3	14.3	13.8
90°	0.9	3.8	7.5	9.4	11.3	14.1	18.9	25.4	31.0	32.0	31.0
92.5°	11.5	16.6	23.4	27.4	33.8	42.7	64.0	93.9	120.6	122.2	103.3
95°	32.9	36.7	46.1	54.6	69.7	92.2	135.4	217.3	326.4	368.7	322.6
97.5°	53.6	58.7	68.7	81.4	98.8	124.3	178.7	292.8	474.1	629.5	660.3
100°	72.4	75.2	83.7	98.8	117.6	143.9	193.8	308.6	511.7	743.1	878.6
102.5°	89.7	91.8	100.3	115.4	134.9	161.3	207.4	309.3	497.5	746.9	959.9
105°	114.8	118.6	125.1	139.2	159.9	186.2	230.5	314.1	469.4	697.0	947.3
107.5°	141.9	144.9	151.3	164.3	184.7	211.3	254.2	327.2	455.4	643.7	864.7
110°	159.9	163.7	169.3	181.5	201.3	228.6	269.9	337.7	452.5	618.0	812.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.4	180.2	186.6	198.1	217.1	245.2	285.0	349.0	453.2	601.4	776.7
115°	202.3	207.0	212.6	223.9	242.7	268.1	308.6	365.9	457.1	583.2	731.9
117.5°	228.9	232.7	238.4	248.4	266.4	292.8	330.2	384.0	463.9	574.4	703.6
120°	245.5	249.3	255.0	263.3	282.2	308.6	345.3	396.1	468.4	569.1	688.6
122.5°	261.4	264.3	269.9	279.2	298.0	325.1	359.5	406.5	473.7	566.1	675.8
125°	282.2	285.0	290.7	302.0	320.7	347.1	381.0	423.3	481.6	560.6	657.5
127.5°	298.8	302.6	310.4	322.8	340.9	368.0	401.0	438.9	489.7	557.4	640.6
130°	308.6	312.3	321.7	334.9	353.7	380.0	412.9	448.7	495.8	555.9	629.3
132.5°	317.5	322.1	332.2	346.2	365.7	392.1	423.5	458.5	501.7	555.2	620.3
135°	331.1	334.9	346.2	360.2	381.9	408.2	438.4	471.3	508.9	554.0	607.7
137.5°	343.9	348.5	359.7	374.8	396.2	420.7	450.4	481.1	515.3	553.8	598.8
140°	353.7	357.5	368.7	383.8	404.5	429.0	457.1	486.4	518.3	553.1	593.6
142.5°	363.4	366.5	377.0	392.1	412.0	435.0	462.4	490.9	520.6	553.1	588.3
145°	378.1	381.9	391.3	405.5	424.2	445.0	470.3	496.7	523.0	551.2	581.4
147.5°	394.0	396.8	405.8	418.8	434.4	452.9	476.7	499.9	523.8	547.9	574.2
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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	13.2	12.4	12.4	12.3	12.3	12.1	12.0	11.9
90°	30.1	28.2	30.1	31.0	31.0	31.0	31.0	31.0
92.5°	82.0	70.4	62.5	56.6	55.9	52.9	53.6	52.1
95°	246.5	189.1	149.6	128.8	116.7	109.1	106.3	107.3
97.5°	575.1	470.5	368.7	300.9	255.9	232.7	219.0	211.1
100°	858.8	742.2	613.3	499.5	421.4	381.0	353.7	336.8
102.5°	1044.7	1018.4	924.2	803.5	718.7	649.6	615.6	592.7
105°	1142.9	1249.2	1261.5	1230.4	1172.1	1113.8	1073.3	1060.2
107.5°	1072.2	1232.3	1330.1	1375.6	1383.0	1379.8	1371.7	1354.2
110°	1011.3	1179.6	1300.0	1377.1	1417.6	1435.5	1444.0	1443.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	955.5	1117.2	1245.9	1334.3	1390.5	1420.4	1436.4	1441.5
115°	887.0	1031.9	1155.2	1252.1	1318.8	1362.1	1386.6	1395.1
117.5°	835.5	962.7	1074.4	1165.4	1233.4	1279.1	1305.0	1312.0
120°	809.9	926.6	1026.2	1111.9	1177.7	1221.9	1249.2	1258.7
122.5°	789.6	896.5	990.9	1068.3	1127.3	1170.7	1195.0	1203.0
125°	760.1	857.0	939.7	1010.3	1064.9	1100.6	1124.1	1131.6
127.5°	730.9	818.6	896.6	961.8	1009.4	1042.8	1063.2	1069.2
130°	712.1	793.0	867.3	929.4	975.5	1007.5	1026.2	1033.8
132.5°	694.0	768.9	837.2	895.5	940.8	972.9	990.1	996.9
135°	668.8	730.9	793.0	845.6	886.1	917.2	934.1	937.8
137.5°	648.7	700.6	749.9	795.8	832.7	859.4	874.3	880.0
140°	635.9	681.1	724.3	765.7	795.8	820.3	834.4	840.0
142.5°	625.4	663.7	701.0	735.7	764.2	786.5	799.0	800.1
145°	610.5	641.6	670.7	698.0	720.6	736.6	745.9	748.8
147.5°	599.0	623.5	646.2	666.2	684.9	697.6	704.0	705.7
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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