

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: P331388

Luminaire Tested: **S122DIP-S865D530U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331388  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D530U835-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5385.3 lumens  
Efficiency: N/A  
Efficacy: 110.4 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: General Diffuse

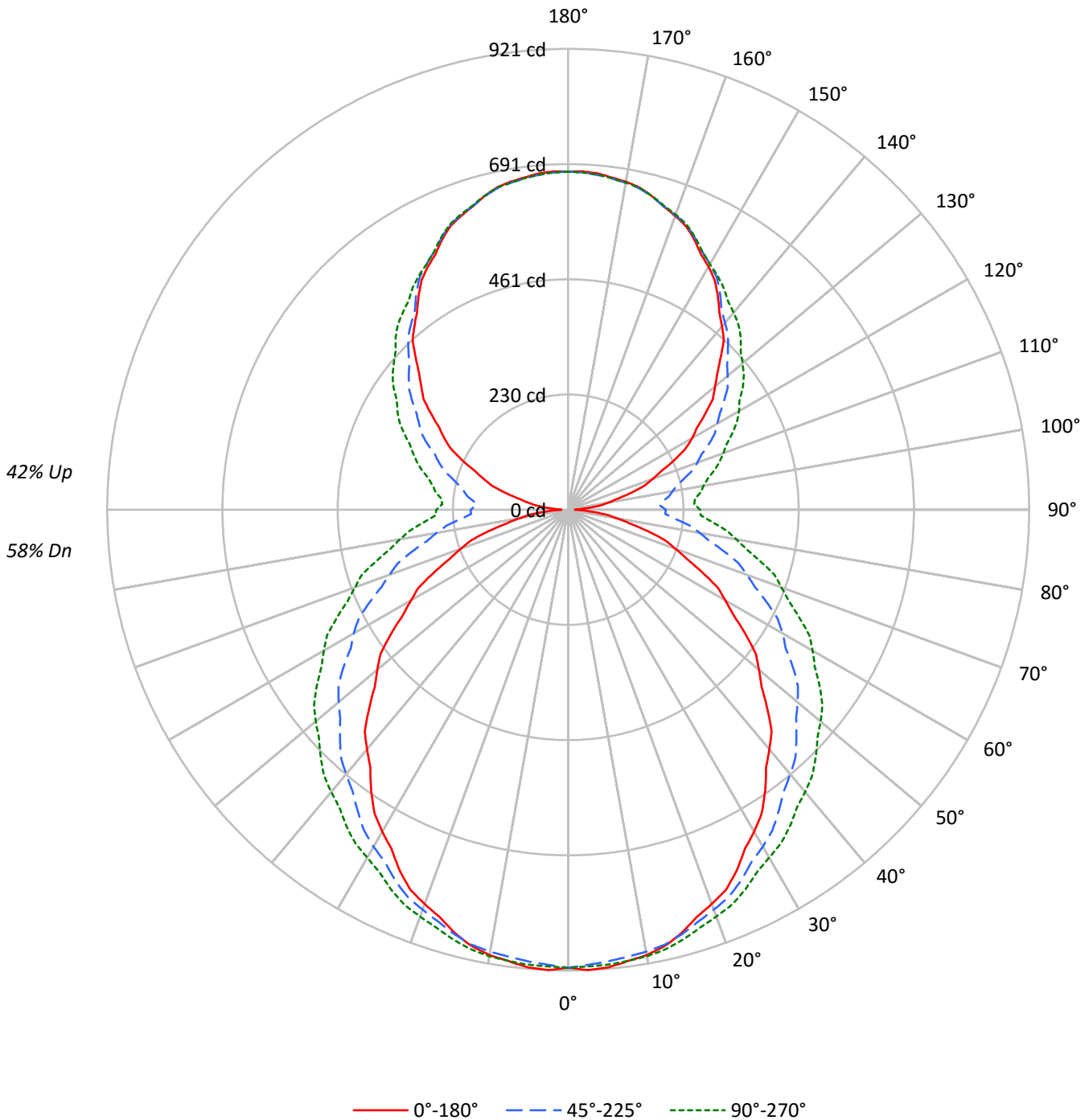
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	98	93	88	84	91	86	82	79	74	71	68	63	61	59	53	51	50	45
2	88	80	73	67	82	74	68	63	64	59	55	55	51	48	46	43	41	36
3	80	70	62	55	74	65	58	52	56	50	46	48	43	40	40	37	34	30
4	73	61	53	46	68	57	50	44	49	43	38	42	37	34	35	32	29	25
5	67	54	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19
7	57	44	35	30	53	41	33	28	36	30	25	31	26	22	26	22	19	16
8	53	40	32	26	49	37	30	25	33	26	22	28	23	20	24	20	17	15
9	49	36	28	23	46	34	27	22	30	24	20	26	21	17	22	18	15	13
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	17	14	12

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

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	1.6
10°-20°	248.8	4.6
20°-30°	377.0	7.0
30°-40°	459.2	8.5
40°-50°	494.0	9.2
50°-60°	479.7	8.9
60°-70°	418.9	7.8
70°-80°	322.5	6.0
80°-90°	219.1	4.1
90°-100°	191.9	3.6
100°-110°	241.9	4.5
110°-120°	299.2	5.6
120°-130°	339.1	6.3
130°-140°	352.4	6.5
140°-150°	331.9	6.2
150°-160°	275.9	5.1
160°-170°	183.0	3.4
170°-180°	64.0	1.2
0°-30°	712.5	13.2
0°-40°	1171.7	21.8
0°-60°	2145.5	39.8
0°-90°	3106.0	57.7
90°-120°	733.0	13.6
90°-150°	1756.4	32.6
90°-180°	2279.0	42.3
0°-180°	5385.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	98	195	245	264	10
95°	40	109	189	238	254	42
105°	129	171	240	285	302	137
115°	233	254	310	348	362	230
125°	334	342	380	413	426	299
135°	431	437	451	478	488	333
145°	521	525	529	537	542	326
155°	596	598	599	602	600	274
165°	648	648	648	651	649	183
175°	675	673	672	675	672	64
180°	676	676	676	676	676	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.1	44.0	61.9	79.8	97.6	116.3	135.7	155.2	174.6	194.0	206.0
90°	13.8	32.5	51.1	69.7	88.3	108.5	130.1	151.8	173.5	195.1	206.7
92.5°	22.4	39.4	56.4	73.5	90.5	108.4	127.3	146.1	164.9	183.7	195.3
95°	40.3	55.4	70.5	85.6	100.8	117.3	135.3	153.2	171.1	189.1	200.3
97.5°	63.5	76.9	90.3	103.8	117.2	132.7	150.1	167.6	185.1	202.5	213.5
100°	81.7	93.6	105.6	117.5	129.4	143.8	160.7	177.6	194.5	211.4	222.3
102.5°	99.8	110.6	121.4	132.1	142.9	156.6	173.1	189.6	206.1	222.7	233.4
105°	129.2	138.2	147.1	156.0	165.0	177.2	192.8	208.4	224.0	239.6	250.1
107.5°	160.2	167.6	175.0	182.4	189.8	200.9	215.5	230.2	244.9	259.6	269.6
110°	179.2	185.9	192.5	199.2	205.9	216.4	230.9	245.3	259.8	274.2	283.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.1	206.8	212.6	218.3	224.0	233.7	247.3	260.9	274.6	288.2	297.4
115°	233.4	237.4	241.4	245.4	249.4	257.9	270.9	284.0	297.0	310.0	318.7
117.5°	264.2	267.4	270.5	273.7	276.8	284.1	295.7	307.2	318.8	330.4	338.8
120°	285.7	287.9	290.1	292.3	294.5	300.9	311.7	322.5	333.3	344.1	352.3
122.5°	305.3	307.0	308.7	310.4	312.1	318.1	328.5	338.8	349.2	359.6	367.3
125°	334.5	335.7	336.8	338.0	339.1	344.2	353.3	362.3	371.4	380.4	388.0
127.5°	364.3	365.5	366.6	367.8	368.9	373.1	380.2	387.4	394.5	401.7	408.5
130°	383.0	384.4	385.7	387.1	388.4	392.1	398.0	403.9	409.9	415.8	422.6
132.5°	404.0	405.0	406.1	407.1	408.2	411.1	416.0	420.8	425.6	430.4	436.7
135°	430.7	432.1	433.5	434.9	436.3	438.6	441.8	445.0	448.2	451.4	457.5
137.5°	460.3	461.3	462.4	463.5	464.6	465.9	467.6	469.2	470.8	472.4	477.8
140°	478.1	478.9	479.7	480.6	481.4	482.5	483.7	484.9	486.1	487.4	492.1
142.5°	496.3	497.1	498.0	498.8	499.7	500.4	500.9	501.5	502.0	502.6	506.4
145°	521.2	522.1	523.0	523.9	524.8	525.6	526.3	527.1	527.9	528.6	530.5
147.5°	544.6	545.6	546.7	547.8	548.8	549.6	550.1	550.6	551.1	551.7	552.2
150°	560.6	561.3	562.1	562.8	563.6	564.2	564.7	565.2	565.7	566.3	566.6
152.5°	574.7	575.5	576.2	577.0	577.7	578.4	579.0	579.6	580.2	580.9	581.3
155°	595.9	596.3	596.7	597.0	597.4	597.8	598.2	598.6	598.9	599.3	600.0
157.5°	614.0	614.3	614.5	614.8	615.1	615.3	615.5	615.8	616.0	616.2	617.1
160°	625.0	625.2	625.5	625.7	626.0	626.2	626.3	626.4	626.6	626.7	627.5
162.5°	635.0	635.1	635.1	635.2	635.2	635.3	635.4	635.6	635.7	635.8	636.7
165°	648.4	648.2	648.1	648.0	647.9	647.8	647.8	647.8	647.8	647.8	648.7
167.5°	659.5	659.2	658.8	658.4	658.0	657.8	657.8	657.8	657.7	657.7	658.6
170°	665.5	665.1	664.7	664.3	664.0	663.7	663.6	663.4	663.3	663.2	664.1
172.5°	669.6	669.2	668.8	668.4	668.1	667.8	667.7	667.6	667.4	667.3	668.2
175°	674.6	674.2	673.8	673.5	673.1	672.8	672.5	672.3	672.0	671.7	672.6
177.5°	676.7	676.3	676.0	675.7	675.4	675.2	675.0	674.8	674.6	674.4	675.0
180°	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	218.0	230.0	241.9	249.8	253.6	257.4	261.2	265.0
90°	218.2	229.7	241.3	248.9	252.6	256.2	259.9	263.5
92.5°	207.0	218.6	230.2	237.8	241.3	244.9	248.5	252.0
95°	211.5	222.7	233.9	241.2	244.4	247.7	251.0	254.3
97.5°	224.4	235.3	246.2	253.4	256.8	260.3	263.7	267.2
100°	233.2	244.1	255.0	262.0	265.2	268.3	271.4	274.5
102.5°	244.2	255.0	265.8	272.7	275.8	278.9	282.1	285.2
105°	260.7	271.3	281.9	288.8	292.0	295.3	298.5	301.8
107.5°	279.6	289.6	299.6	306.0	308.6	311.3	314.0	316.6
110°	293.1	302.5	312.0	318.1	321.0	323.8	326.7	329.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	306.5	315.6	324.8	330.8	333.8	336.7	339.7	342.7
115°	327.4	336.2	344.9	350.7	353.5	356.4	359.3	362.1
117.5°	347.2	355.6	364.1	369.6	372.2	374.8	377.5	380.1
120°	360.6	368.8	377.1	382.7	385.5	388.4	391.2	394.1
122.5°	375.0	382.7	390.5	395.6	398.1	400.6	403.0	405.5
125°	395.6	403.2	410.7	415.8	418.3	420.9	423.4	425.9
127.5°	415.4	422.2	429.1	433.6	435.8	438.0	440.2	442.4
130°	429.5	436.3	443.1	447.5	449.3	451.2	453.0	454.9
132.5°	443.0	449.3	455.6	459.7	461.6	463.6	465.5	467.5
135°	463.5	469.6	475.7	479.7	481.7	483.6	485.6	487.6
137.5°	483.1	488.4	493.7	497.2	498.7	500.2	501.7	503.1
140°	496.8	501.5	506.2	509.2	510.5	511.7	513.0	514.3
142.5°	510.3	514.2	518.1	520.5	521.6	522.6	523.6	524.6
145°	532.4	534.3	536.2	537.6	538.6	539.6	540.5	541.5
147.5°	552.7	553.2	553.7	554.1	554.3	554.5	554.8	555.0
150°	567.0	567.4	567.8	567.8	567.4	567.0	566.6	566.3
152.5°	581.8	582.3	582.8	582.8	582.3	581.8	581.3	580.9
155°	600.6	601.2	601.9	602.0	601.6	601.2	600.8	600.5
157.5°	617.9	618.8	619.7	619.8	619.2	618.6	618.0	617.3
160°	628.2	629.0	629.7	629.9	629.4	628.9	628.3	627.8
162.5°	637.5	638.4	639.3	639.4	638.8	638.2	637.6	637.0
165°	649.6	650.5	651.3	651.5	650.8	650.2	649.6	648.9
167.5°	659.5	660.4	661.3	661.4	660.7	660.1	659.4	658.7
170°	665.0	665.9	666.7	666.8	666.0	665.3	664.5	663.8
172.5°	669.1	670.0	670.8	670.9	670.2	669.4	668.6	667.9
175°	673.5	674.4	675.3	675.4	674.6	673.8	673.1	672.3
177.5°	675.6	676.2	676.8	676.8	676.2	675.6	675.0	674.4
180°	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7

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