

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: P331388-830

Luminaire Tested: **SA2XXDIP-C865D530U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331388-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C865D530U830-4F0-1E-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: 5075.8 lumens  
Efficiency: N/A  
Efficacy: 104.0 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

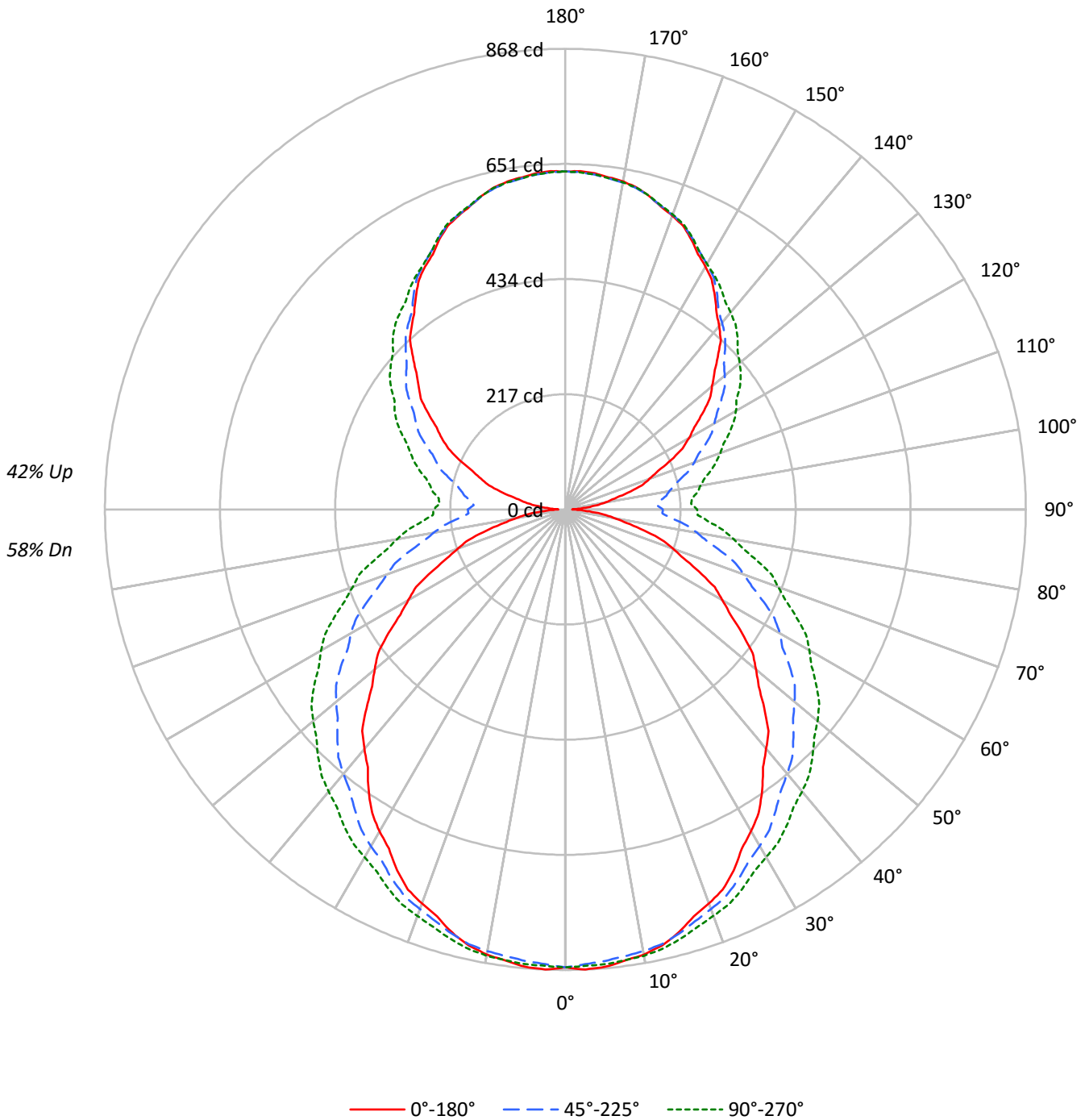
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	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°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.8	1.6
10°-20°	234.5	4.6
20°-30°	355.3	7.0
30°-40°	432.8	8.5
40°-50°	465.6	9.2
50°-60°	452.2	8.9
60°-70°	394.8	7.8
70°-80°	304.0	6.0
80°-90°	206.5	4.1
90°-100°	180.9	3.6
100°-110°	228.0	4.5
110°-120°	282.0	5.6
120°-130°	319.6	6.3
130°-140°	332.1	6.5
140°-150°	312.8	6.2
150°-160°	260.1	5.1
160°-170°	172.5	3.4
170°-180°	60.3	1.2
0°-30°	671.6	13.2
0°-40°	1104.4	21.8
0°-60°	2022.2	39.8
0°-90°	2927.5	57.7
90°-120°	690.9	13.6
90°-150°	1655.4	32.6
90°-180°	2148.0	42.3
0°-180°	5075.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	93	184	231	248	10
95°	38	103	178	224	240	40
105°	122	161	226	269	284	129
115°	220	239	292	328	341	217
125°	315	322	358	390	401	282
135°	406	412	426	450	460	314
145°	491	495	498	506	510	307
155°	562	563	565	567	566	258
165°	611	611	611	614	612	172
175°	636	634	633	637	634	60
180°	637	637	637	637	637	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.6	41.5	58.3	75.2	92.0	109.6	127.9	146.3	164.6	182.9	194.2
90°	13.0	30.6	48.2	65.7	83.2	102.3	122.6	143.1	163.5	183.9	194.8
92.5°	21.1	37.1	53.2	69.3	85.3	102.2	120.0	137.7	155.4	173.1	184.1
95°	38.0	52.2	66.4	80.7	95.0	110.6	127.5	144.4	161.3	178.2	188.8
97.5°	59.9	72.5	85.1	97.8	110.5	125.1	141.5	158.0	174.5	190.9	201.2
100°	77.0	88.2	99.5	110.7	122.0	135.5	151.5	167.4	183.3	199.3	209.5
102.5°	94.1	104.2	114.4	124.5	134.7	147.6	163.2	178.7	194.3	209.9	220.0
105°	121.8	130.3	138.6	147.0	155.5	167.0	181.7	196.4	211.1	225.8	235.7
107.5°	151.0	158.0	164.9	171.9	178.9	189.4	203.1	217.0	230.8	244.7	254.1
110°	168.9	175.2	181.4	187.8	194.1	204.0	217.6	231.2	244.9	258.4	267.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	189.5	194.9	200.4	205.8	211.1	220.3	233.1	245.9	258.8	271.6	280.3
115°	220.0	223.8	227.5	231.3	235.1	243.1	255.3	267.7	279.9	292.2	300.4
117.5°	249.0	252.0	255.0	258.0	260.9	267.8	278.7	289.5	300.5	311.4	319.3
120°	269.3	271.4	273.4	275.5	277.6	283.6	293.8	304.0	314.1	324.3	332.1
122.5°	287.8	289.4	291.0	292.6	294.2	299.8	309.6	319.3	329.1	338.9	346.2
125°	315.3	316.4	317.4	318.6	319.6	324.4	333.0	341.5	350.1	358.5	365.7
127.5°	343.4	344.5	345.5	346.7	347.7	351.7	358.4	365.1	371.8	378.6	385.0
130°	361.0	362.3	363.5	364.9	366.1	369.6	375.1	380.7	386.3	391.9	398.3
132.5°	380.8	381.7	382.8	383.7	384.7	387.5	392.1	396.6	401.1	405.7	411.6
135°	406.0	407.3	408.6	409.9	411.2	413.4	416.4	419.4	422.4	425.5	431.2
137.5°	433.9	434.8	435.8	436.9	437.9	439.1	440.7	442.2	443.7	445.3	450.3
140°	450.6	451.4	452.1	453.0	453.7	454.8	455.9	457.0	458.2	459.4	463.8
142.5°	467.8	468.5	469.4	470.1	471.0	471.6	472.1	472.7	473.2	473.7	477.3
145°	491.3	492.1	492.9	493.8	494.6	495.4	496.1	496.8	497.6	498.2	500.0
147.5°	513.3	514.3	515.3	516.3	517.3	518.0	518.5	519.0	519.4	520.0	520.5
150°	528.4	529.0	529.8	530.5	531.2	531.8	532.3	532.7	533.2	533.8	534.0
152.5°	541.7	542.4	543.1	543.8	544.5	545.2	545.7	546.3	546.9	547.5	547.9
155°	561.7	562.0	562.4	562.7	563.1	563.5	563.8	564.2	564.5	564.9	565.5
157.5°	578.7	579.0	579.2	579.5	579.8	579.9	580.1	580.4	580.6	580.8	581.6
160°	589.1	589.3	589.6	589.7	590.0	590.2	590.3	590.4	590.6	590.7	591.4
162.5°	598.5	598.6	598.6	598.7	598.7	598.8	598.9	599.1	599.2	599.3	600.1
165°	611.1	611.0	610.9	610.8	610.7	610.6	610.6	610.6	610.6	610.6	611.4
167.5°	621.6	621.3	620.9	620.6	620.2	620.0	620.0	620.0	619.9	619.9	620.8
170°	627.3	626.9	626.5	626.1	625.8	625.6	625.5	625.3	625.2	625.1	625.9
172.5°	631.1	630.7	630.4	630.0	629.7	629.4	629.3	629.2	629.1	629.0	629.8
175°	635.8	635.5	635.1	634.8	634.4	634.1	633.9	633.7	633.4	633.1	634.0
177.5°	637.8	637.4	637.2	636.9	636.6	636.4	636.2	636.0	635.8	635.7	636.2
180°	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	205.5	216.8	228.0	235.4	239.0	242.6	246.2	249.8
90°	205.7	216.5	227.4	234.6	238.1	241.5	245.0	248.4
92.5°	195.1	206.0	217.0	224.1	227.4	230.8	234.2	237.5
95°	199.3	209.9	220.5	227.3	230.4	233.5	236.6	239.7
97.5°	211.5	221.8	232.1	238.8	242.0	245.3	248.5	251.8
100°	219.8	230.1	240.3	246.9	250.0	252.9	255.8	258.7
102.5°	230.2	240.3	250.5	257.0	260.0	262.9	265.9	268.8
105°	245.7	255.7	265.7	272.2	275.2	278.3	281.3	284.5
107.5°	263.5	273.0	282.4	288.4	290.9	293.4	296.0	298.4
110°	276.3	285.1	294.1	299.8	302.6	305.2	307.9	310.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	288.9	297.5	306.1	311.8	314.6	317.4	320.2	323.0
115°	308.6	316.9	325.1	330.5	333.2	335.9	338.7	341.3
117.5°	327.3	335.2	343.2	348.4	350.8	353.3	355.8	358.3
120°	339.9	347.6	355.4	360.7	363.4	366.1	368.7	371.5
122.5°	353.5	360.7	368.1	372.9	375.2	377.6	379.8	382.2
125°	372.9	380.0	387.1	391.9	394.3	396.7	399.1	401.4
127.5°	391.5	397.9	404.4	408.7	410.8	412.8	414.9	417.0
130°	404.8	411.2	417.6	421.8	423.5	425.3	427.0	428.8
132.5°	417.5	423.5	429.4	433.3	435.1	437.0	438.8	440.6
135°	436.9	442.6	448.4	452.1	454.0	455.8	457.7	459.6
137.5°	455.3	460.3	465.3	468.6	470.0	471.5	472.9	474.2
140°	468.3	472.7	477.1	479.9	481.2	482.3	483.5	484.7
142.5°	481.0	484.7	488.3	490.6	491.6	492.6	493.5	494.5
145°	501.8	503.6	505.4	506.7	507.7	508.6	509.4	510.4
147.5°	520.9	521.4	521.9	522.3	522.5	522.6	522.9	523.1
150°	534.4	534.8	535.2	535.2	534.8	534.4	534.0	533.8
152.5°	548.4	548.8	549.3	549.3	548.8	548.4	547.9	547.5
155°	566.1	566.7	567.3	567.4	567.0	566.7	566.3	566.0
157.5°	582.4	583.2	584.1	584.2	583.6	583.1	582.5	581.8
160°	592.1	592.9	593.5	593.7	593.2	592.8	592.2	591.7
162.5°	600.9	601.7	602.6	602.7	602.1	601.5	601.0	600.4
165°	612.3	613.1	613.9	614.1	613.4	612.8	612.3	611.6
167.5°	621.6	622.5	623.3	623.4	622.7	622.2	621.5	620.9
170°	626.8	627.6	628.4	628.5	627.7	627.1	626.3	625.7
172.5°	630.7	631.5	632.3	632.4	631.7	630.9	630.2	629.5
175°	634.8	635.7	636.5	636.6	635.8	635.1	634.4	633.7
177.5°	636.8	637.3	637.9	637.9	637.3	636.8	636.2	635.7
180°	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9

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