

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: P332602-930

Luminaire Tested: **S124DIP-S795D810U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332602-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D810U930-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4928.9 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

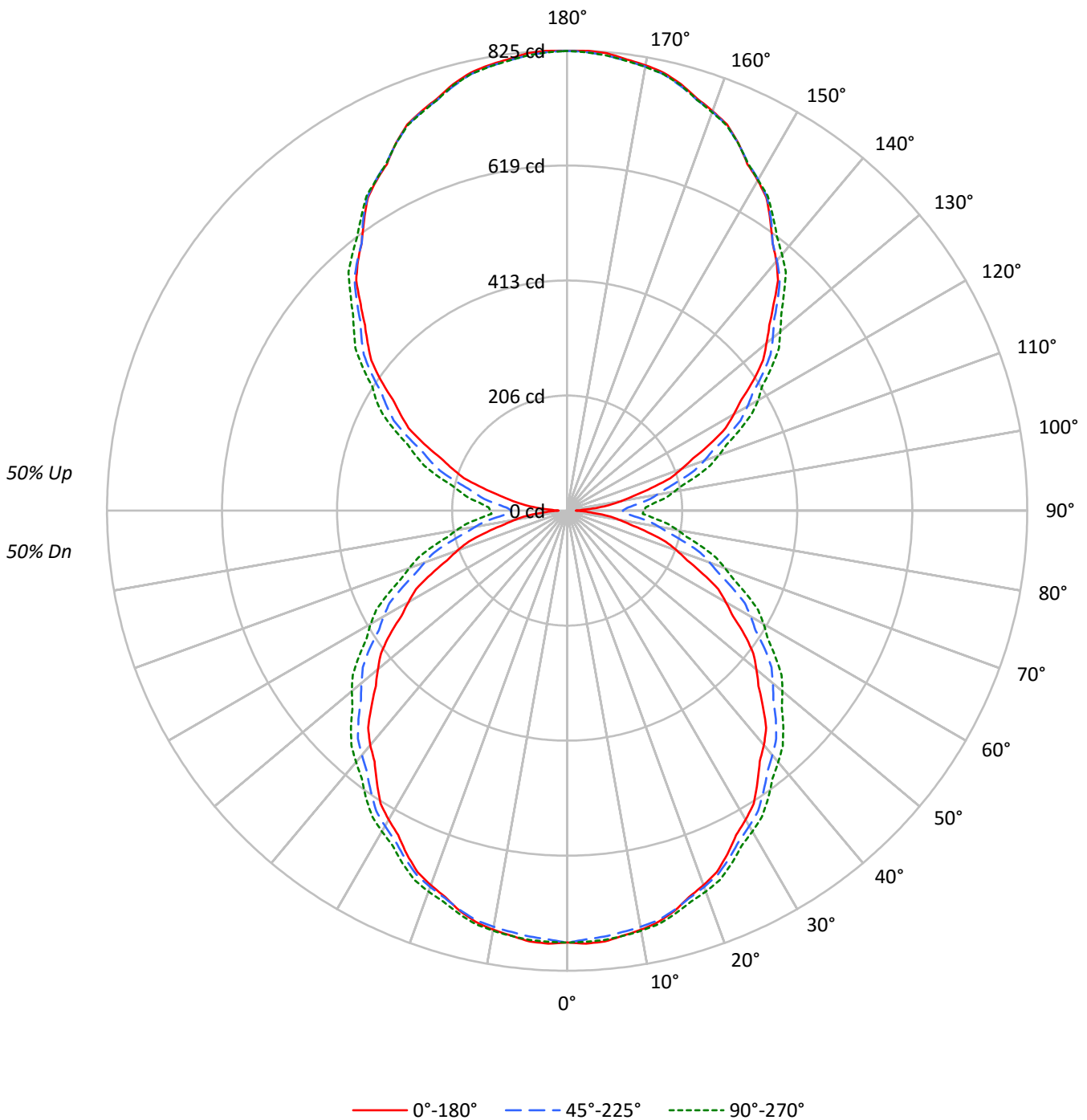
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66		59	57	55		48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54		51	48	45		41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45		45	41	38		36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38		40	36	32		32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32		36	31	28		29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28		32	28	24		26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25		29	25	21		24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22		27	22	19		22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19		24	20	17		20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17		23	18	15		19	15	13	11

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

	0°	45°	90°
0°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.3	1.5
10°-20°	210.1	4.3
20°-30°	317.7	6.4
30°-40°	384.4	7.8
40°-50°	406.4	8.2
50°-60°	382.5	7.8
60°-70°	317.3	6.4
70°-80°	222.9	4.5
80°-90°	128.5	2.6
90°-100°	129.2	2.6
100°-110°	216.4	4.4
110°-120°	310.5	6.3
120°-130°	381.3	7.7
130°-140°	413.8	8.4
140°-150°	399.6	8.1
150°-160°	334.5	6.8
160°-170°	222.6	4.5
170°-180°	77.9	1.6
0°-30°	601.2	12.2
0°-40°	985.6	20.0
0°-60°	1774.4	36.0
0°-90°	2443.1	49.6
90°-120°	656.1	13.3
90°-150°	1850.8	37.5
90°-180°	2486.0	50.4
0°-180°	4928.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	16	58	100	128	137	12
95°	50	84	124	148	157	51
105°	156	175	209	232	241	166
115°	283	292	317	335	341	279
125°	408	409	428	443	448	364
135°	524	528	534	546	550	405
145°	635	637	637	642	644	397
155°	727	727	726	728	726	334
165°	791	789	788	791	789	223
175°	823	820	819	823	819	78
180°	824	824	824	824	824	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	26.1	34.2	42.4	50.5	58.8	67.2	75.8	84.5	93.2	101.8	107.6
90°	15.8	25.0	34.3	43.6	52.8	62.2	71.6	81.0	90.4	99.9	106.3
92.5°	26.8	35.5	44.3	53.0	61.7	70.6	79.7	88.8	97.8	107.0	112.8
95°	49.5	57.2	64.8	72.4	80.1	88.3	97.2	106.1	115.0	123.9	129.6
97.5°	77.0	83.5	90.0	96.5	103.0	110.7	119.8	128.7	137.7	146.7	152.2
100°	98.8	104.4	109.9	115.5	121.1	128.2	137.1	145.9	154.7	163.5	168.9
102.5°	122.2	126.9	131.5	136.1	140.7	147.2	155.8	164.4	172.8	181.4	186.8
105°	156.3	160.3	164.3	168.3	172.3	178.1	185.8	193.6	201.2	209.0	214.2
107.5°	193.7	197.1	200.4	203.7	207.1	212.1	219.0	225.8	232.6	239.5	244.6
110°	218.6	221.5	224.5	227.5	230.5	235.3	241.9	248.5	255.1	261.7	265.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	244.3	246.8	249.2	251.7	254.1	258.4	264.6	270.8	277.0	283.2	287.4
115°	283.1	284.9	286.6	288.3	290.1	293.8	299.7	305.7	311.5	317.4	321.5
117.5°	320.4	321.6	322.7	323.8	325.1	328.4	333.9	339.5	345.0	350.6	354.1
120°	344.7	345.8	347.0	348.1	349.3	352.5	357.6	362.7	367.9	373.1	376.3
122.5°	370.7	371.0	371.4	371.7	372.1	374.8	379.8	385.0	390.0	395.1	398.5
125°	408.2	408.1	407.8	407.6	407.4	409.7	414.3	419.1	423.7	428.4	431.8
127.5°	442.9	443.0	443.3	443.5	443.8	445.6	449.1	452.6	456.1	459.5	462.7
130°	466.6	466.8	467.1	467.3	467.6	469.2	472.3	475.4	478.5	481.5	484.7
132.5°	491.6	491.7	491.9	492.0	492.1	493.3	495.7	498.1	500.3	502.7	505.7
135°	523.7	524.6	525.5	526.3	527.2	528.2	529.6	530.9	532.3	533.6	536.5
137.5°	559.7	559.9	560.1	560.4	560.5	561.1	562.0	562.8	563.7	564.6	567.0
140°	583.7	583.8	583.8	583.9	584.0	584.2	584.4	584.6	584.7	585.0	587.3
142.5°	604.9	605.1	605.4	605.6	605.8	605.9	605.7	605.4	605.2	605.0	607.2
145°	635.0	635.4	635.9	636.2	636.6	636.8	637.0	637.1	637.2	637.4	638.4
147.5°	665.1	665.6	666.1	666.6	667.1	667.3	667.2	667.1	666.9	666.8	666.9
150°	683.5	683.9	684.3	684.6	685.0	685.2	685.2	685.2	685.2	685.2	685.2
152.5°	700.2	700.4	700.7	701.1	701.3	701.6	701.6	701.8	701.9	702.1	702.4
155°	726.6	726.6	726.6	726.6	726.6	726.5	726.4	726.3	726.1	726.0	726.5
157.5°	749.1	748.8	748.5	748.3	748.0	747.9	747.9	747.9	747.8	747.8	748.2
160°	762.3	762.1	762.1	761.9	761.7	761.6	761.5	761.3	761.2	761.1	761.5
162.5°	774.5	774.2	773.8	773.5	773.1	772.8	772.7	772.6	772.4	772.3	773.1
165°	791.0	790.6	790.2	789.7	789.3	789.0	788.6	788.4	788.1	787.8	788.6
167.5°	803.6	803.0	802.4	801.8	801.3	801.0	801.0	801.0	801.0	801.0	801.9
170°	810.7	810.1	809.3	808.6	808.0	807.6	807.8	808.0	808.0	808.2	809.0
172.5°	815.9	815.3	814.6	814.1	813.5	813.2	813.3	813.3	813.3	813.3	814.2
175°	822.9	822.1	821.4	820.8	820.0	819.6	819.5	819.3	819.2	819.0	820.0
177.5°	825.2	824.6	824.0	823.5	822.9	822.6	822.6	822.6	822.6	822.6	823.4
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	113.3	119.1	124.9	128.7	130.4	132.2	133.9	135.7
90°	112.8	119.2	125.6	129.8	131.6	133.4	135.3	137.1
92.5°	118.8	124.7	130.7	134.5	136.2	137.9	139.7	141.4
95°	135.2	140.8	146.4	150.1	151.8	153.5	155.3	157.0
97.5°	157.8	163.4	168.9	172.5	174.1	175.9	177.5	179.1
100°	174.4	179.9	185.4	188.8	190.1	191.5	192.8	194.2
102.5°	192.2	197.7	203.2	206.7	208.3	209.9	211.6	213.1
105°	219.4	224.7	229.9	233.5	235.5	237.4	239.4	241.4
107.5°	249.7	254.9	260.0	263.3	264.6	266.0	267.3	268.7
110°	269.9	274.1	278.3	281.4	283.3	285.3	287.2	289.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.6	295.9	300.1	303.0	304.6	306.2	307.9	309.5
115°	325.5	329.7	333.8	336.4	337.6	338.8	340.1	341.3
117.5°	357.6	361.1	364.7	367.0	368.4	369.6	370.8	372.1
120°	379.4	382.5	385.6	388.2	390.0	391.8	393.6	395.4
122.5°	401.9	405.2	408.6	410.7	411.6	412.5	413.4	414.3
125°	435.1	438.5	441.9	444.0	444.9	445.8	446.6	447.5
127.5°	465.9	469.0	472.2	474.4	475.5	476.5	477.7	478.7
130°	487.9	491.1	494.3	496.2	496.8	497.3	497.9	498.6
132.5°	508.8	511.8	514.9	516.8	517.8	518.7	519.6	520.6
135°	539.2	542.1	544.9	546.7	547.3	548.0	548.8	549.5
137.5°	569.5	571.9	574.4	576.1	577.2	578.2	579.3	580.3
140°	589.7	592.1	594.4	596.0	596.8	597.6	598.4	599.2
142.5°	609.3	611.5	613.7	615.1	615.9	616.7	617.5	618.2
145°	639.4	640.4	641.5	642.1	642.5	642.8	643.2	643.5
147.5°	666.9	667.0	667.0	667.2	667.7	668.2	668.7	669.2
150°	685.2	685.2	685.2	685.1	685.0	684.9	684.7	684.5
152.5°	702.7	703.0	703.4	703.4	703.0	702.6	702.3	701.9
155°	727.1	727.7	728.2	728.2	727.7	727.1	726.5	726.0
157.5°	748.6	749.1	749.5	749.4	749.0	748.5	748.0	747.5
160°	761.9	762.3	762.7	762.6	761.9	761.2	760.5	759.8
162.5°	773.8	774.5	775.3	775.3	774.6	774.0	773.2	772.5
165°	789.5	790.4	791.2	791.3	790.8	790.2	789.6	789.1
167.5°	802.7	803.6	804.5	804.5	803.6	802.7	801.8	801.0
170°	809.9	810.7	811.6	811.5	810.6	809.6	808.5	807.6
172.5°	815.2	816.2	817.2	817.2	816.2	815.1	814.2	813.2
175°	821.0	822.0	823.0	823.0	822.0	821.0	820.0	819.0
177.5°	824.2	825.0	825.8	825.7	824.8	823.9	823.0	822.1
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1

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