

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: P331261-927

Luminaire Tested: **S122DIP-S290D725U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331261-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S290D725U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3244.3 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: Semi-Indirect

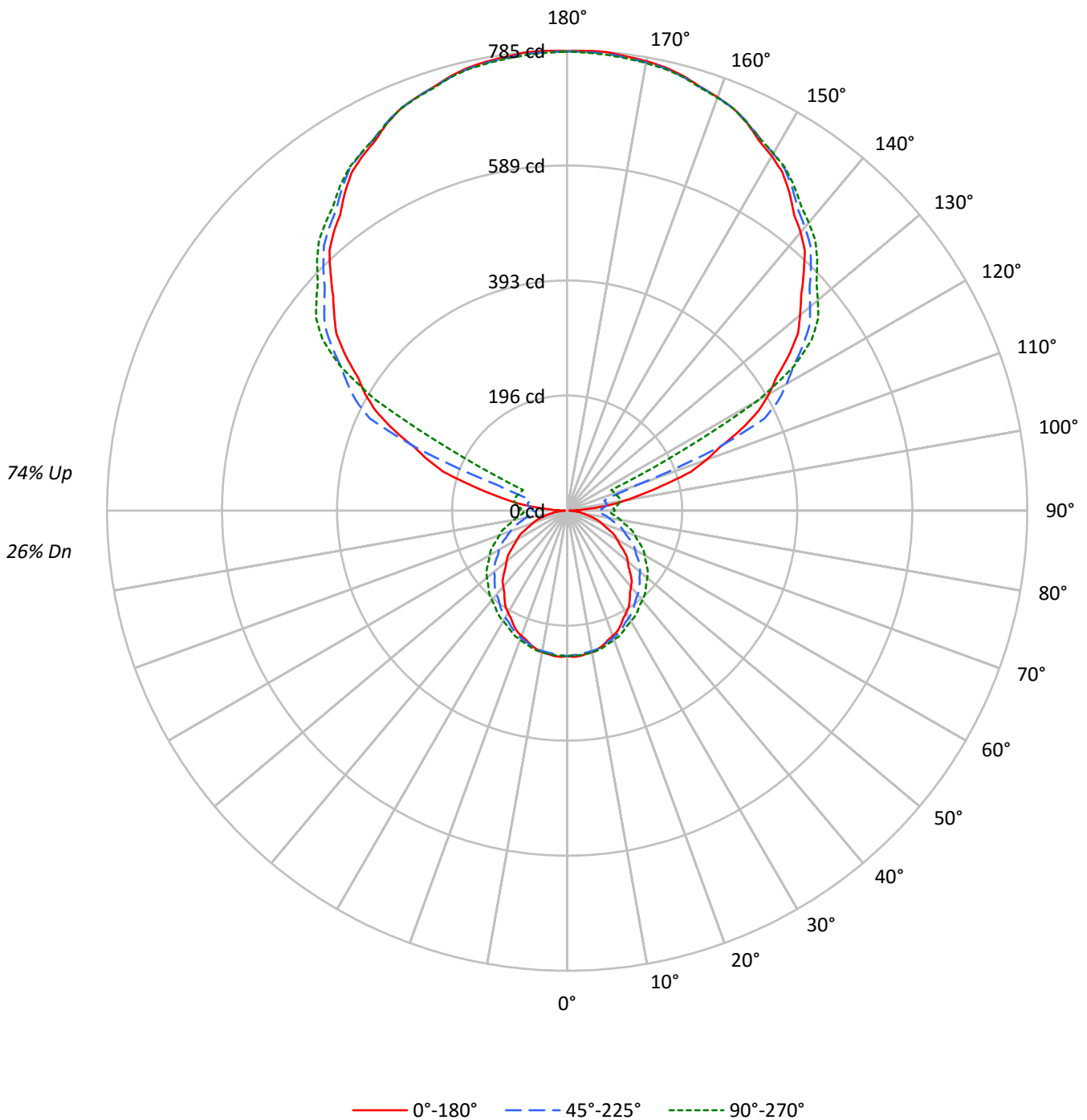
Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331261-927

CATALOG NUMBER: S122DIP-S290D725U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331261-927

CATALOG NUMBER: S122DIP-S290D725U927-4F0-1E-UDD-D

**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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	87	83	79	81	78	74	71	60	58	56	44	42	41	29	28	27	20
2	83	76	69	64	74	67	62	58	52	48	45	38	36	34	25	23	22	16
3	76	66	59	53	67	59	53	48	46	41	38	33	30	28	22	20	19	13
4	69	58	50	44	61	52	45	40	40	36	32	29	26	24	19	17	16	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	14	10
6	58	46	38	32	51	41	34	29	32	27	23	24	20	18	16	13	12	8
7	53	41	34	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	14	13	11	9	7
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5

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

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	0.7
10°-20°	67.5	2.1
20°-30°	102.2	3.2
30°-40°	124.5	3.8
40°-50°	134.0	4.1
50°-60°	130.1	4.0
60°-70°	113.6	3.5
70°-80°	87.5	2.7
80°-90°	60.6	1.9
90°-100°	66.6	2.1
100°-110°	125.3	3.9
110°-120°	275.6	8.5
120°-130°	433.6	13.4
130°-140°	454.1	14.0
140°-150°	418.6	12.9
150°-160°	335.9	10.4
160°-170°	216.5	6.7
170°-180°	74.5	2.3
0°-30°	193.2	6.0
0°-40°	317.8	9.8
0°-60°	581.9	17.9
0°-90°	843.5	26.0
90°-120°	467.5	14.4
90°-150°	1773.8	54.7
90°-180°	2401.0	74.0
0°-180°	3244.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	31	59	75	82	4
95°	40	39	64	79	84	47
105°	174	192	66	84	90	186
115°	327	342	371	132	83	322
125°	461	470	491	504	510	411
135°	570	579	588	601	603	441
145°	661	661	670	676	676	414
155°	728	724	730	733	729	335
165°	767	764	766	769	766	217
175°	785	781	782	785	780	75
180°	783	783	783	783	783	



TEST NUMBER: P331261-927

CATALOG NUMBER: S122DIP-S290D725U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.1	12.2	17.3	22.3	27.3	32.6	37.9	43.2	48.5	53.8	57.2
90°	4.2	10.2	16.2	22.3	28.3	34.3	40.5	46.6	52.7	58.9	62.7
92.5°	14.7	18.9	23.1	27.3	31.5	36.4	41.7	47.2	52.6	58.1	61.6
95°	39.7	39.3	38.9	38.5	38.1	40.8	46.4	52.1	57.8	63.5	67.2
97.5°	75.7	67.3	58.9	50.5	42.1	41.3	47.9	54.6	61.2	67.9	71.3
100°	102.8	88.6	74.2	60.0	45.6	41.8	48.4	55.1	61.6	68.3	72.2
102.5°	132.5	131.5	130.6	129.6	128.7	121.4	107.8	94.3	80.7	67.2	71.4
105°	174.0	180.1	186.2	192.3	198.4	186.4	156.1	126.0	95.8	65.5	69.7
107.5°	222.0	226.8	231.7	236.6	241.5	225.4	188.1	150.9	113.6	76.4	77.6
110°	252.5	256.7	260.9	265.2	269.4	255.3	222.8	190.4	157.9	125.4	115.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.5	285.2	288.8	292.6	296.2	295.4	290.2	284.9	279.6	274.4	231.0
115°	327.3	330.3	333.4	336.4	339.4	344.3	351.0	357.7	364.5	371.2	315.3
117.5°	367.8	370.8	373.8	376.8	379.7	384.0	389.4	394.9	400.4	405.9	394.2
120°	397.8	400.0	402.2	404.4	406.5	410.4	415.9	421.4	426.8	432.3	436.0
122.5°	423.1	425.2	427.4	429.5	431.6	435.4	440.8	446.4	451.9	457.3	460.4
125°	461.4	463.0	464.7	466.4	467.9	471.3	476.3	481.2	486.2	491.1	494.1
127.5°	496.5	498.2	499.9	501.6	503.4	506.2	510.0	513.9	517.7	521.6	524.8
130°	518.6	520.6	522.5	524.5	526.4	528.9	532.0	535.0	538.1	541.1	544.5
132.5°	541.3	543.0	544.6	546.2	547.9	550.0	552.7	555.4	558.1	560.7	563.8
135°	570.5	572.4	574.5	576.5	578.5	580.4	582.4	584.3	586.3	588.2	591.1
137.5°	600.2	601.7	603.0	604.4	605.8	607.4	609.0	610.6	612.3	613.9	616.6
140°	619.7	620.7	621.6	622.5	623.4	624.7	626.2	627.8	629.3	630.9	633.3
142.5°	636.0	636.9	637.7	638.5	639.4	640.6	642.2	643.8	645.5	647.1	649.1
145°	661.3	661.2	661.1	660.9	660.8	661.8	663.9	666.1	668.2	670.3	671.8
147.5°	683.7	683.2	682.7	682.2	681.8	682.5	684.7	686.7	688.9	691.0	691.7
150°	698.2	697.3	696.4	695.5	694.6	695.2	697.2	699.2	701.2	703.2	704.0
152.5°	710.3	709.4	708.4	707.4	706.5	706.9	708.8	710.7	712.6	714.5	715.3
155°	728.2	727.1	725.9	724.8	723.7	723.8	725.3	726.8	728.3	729.8	730.6
157.5°	742.1	741.2	740.2	739.3	738.3	738.3	739.4	740.5	741.5	742.6	743.5
160°	750.3	749.5	748.8	748.0	747.3	747.3	748.0	748.8	749.5	750.3	751.1
162.5°	757.6	756.8	756.1	755.3	754.5	754.5	755.1	755.7	756.5	757.1	758.0
165°	767.3	766.5	765.8	765.0	764.2	764.1	764.5	764.9	765.2	765.6	766.4
167.5°	774.5	773.8	773.0	772.3	771.5	771.3	771.7	772.0	772.4	772.7	773.6
170°	778.6	777.8	777.1	776.3	775.6	775.3	775.6	775.9	776.1	776.3	777.2
172.5°	781.3	780.5	779.8	779.0	778.3	778.1	778.3	778.6	778.8	779.0	780.0
175°	784.8	783.9	783.1	782.2	781.3	781.0	781.3	781.5	781.7	782.0	782.9
177.5°	785.4	784.7	784.0	783.3	782.6	782.3	782.4	782.5	782.6	782.7	783.4
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	60.6	63.9	67.3	69.6	70.7	71.8	72.8	73.9
90°	66.5	70.3	74.1	76.7	77.9	79.1	80.3	81.5
92.5°	65.0	68.4	71.9	74.2	75.3	76.4	77.6	78.7
95°	70.8	74.5	78.2	80.4	81.3	82.1	82.9	83.7
97.5°	74.8	78.3	81.8	84.0	85.1	86.2	87.3	88.4
100°	76.2	80.2	84.1	86.7	87.9	89.0	90.1	91.3
102.5°	75.6	79.8	84.0	86.7	87.9	89.2	90.4	91.7
105°	73.9	78.0	82.2	85.0	86.4	87.8	89.2	90.5
107.5°	79.0	80.2	81.5	82.9	84.2	85.6	87.0	88.3
110°	105.4	95.3	85.3	81.0	82.4	83.7	85.2	86.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	187.6	144.3	100.8	79.9	81.1	82.4	83.7	84.9
115°	259.4	203.5	147.6	115.6	107.3	99.2	91.0	82.8
117.5°	382.5	370.7	358.9	338.6	309.6	280.7	251.7	222.7
120°	439.8	443.5	447.3	441.1	425.0	408.8	392.8	376.6
122.5°	463.5	466.5	469.6	469.9	467.4	464.8	462.2	459.7
125°	497.2	500.2	503.3	505.3	506.4	507.5	508.6	509.7
127.5°	528.1	531.4	534.6	536.7	537.4	538.2	539.0	539.8
130°	547.8	551.0	554.4	556.3	556.8	557.3	557.9	558.3
132.5°	566.8	569.8	572.9	574.6	575.2	575.7	576.2	576.7
135°	594.1	597.0	599.9	601.6	602.0	602.4	602.8	603.2
137.5°	619.3	622.0	624.7	626.1	626.2	626.4	626.5	626.5
140°	635.7	638.1	640.5	641.7	641.5	641.4	641.2	641.0
142.5°	651.2	653.2	655.3	656.2	656.0	655.8	655.5	655.4
145°	673.1	674.5	675.8	676.4	676.1	675.9	675.7	675.5
147.5°	692.4	693.2	693.9	694.0	693.7	693.4	693.1	692.7
150°	704.7	705.5	706.2	706.3	705.7	705.0	704.4	703.8
152.5°	716.1	716.8	717.6	717.6	716.8	715.9	715.1	714.2
155°	731.4	732.1	732.9	732.8	731.7	730.8	729.8	728.7
157.5°	744.3	745.1	746.0	745.9	745.0	743.9	743.0	742.0
160°	751.8	752.6	753.3	753.2	752.3	751.5	750.6	749.7
162.5°	758.8	759.6	760.5	760.4	759.3	758.2	757.2	756.1
165°	767.3	768.3	769.1	769.1	768.3	767.3	766.4	765.6
167.5°	774.5	775.4	776.3	776.1	775.0	773.9	772.7	771.6
170°	778.1	779.0	779.9	779.7	778.6	777.4	776.3	775.2
172.5°	780.9	781.7	782.6	782.4	781.3	780.2	779.0	777.9
175°	783.8	784.7	785.5	785.4	784.1	782.8	781.6	780.3
177.5°	784.1	784.8	785.5	785.4	784.5	783.6	782.7	781.8
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2

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