

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: P331271-930

Luminaire Tested: **S122DIP-S290D925U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331271-930  
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-S290D925U930-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3674.8 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

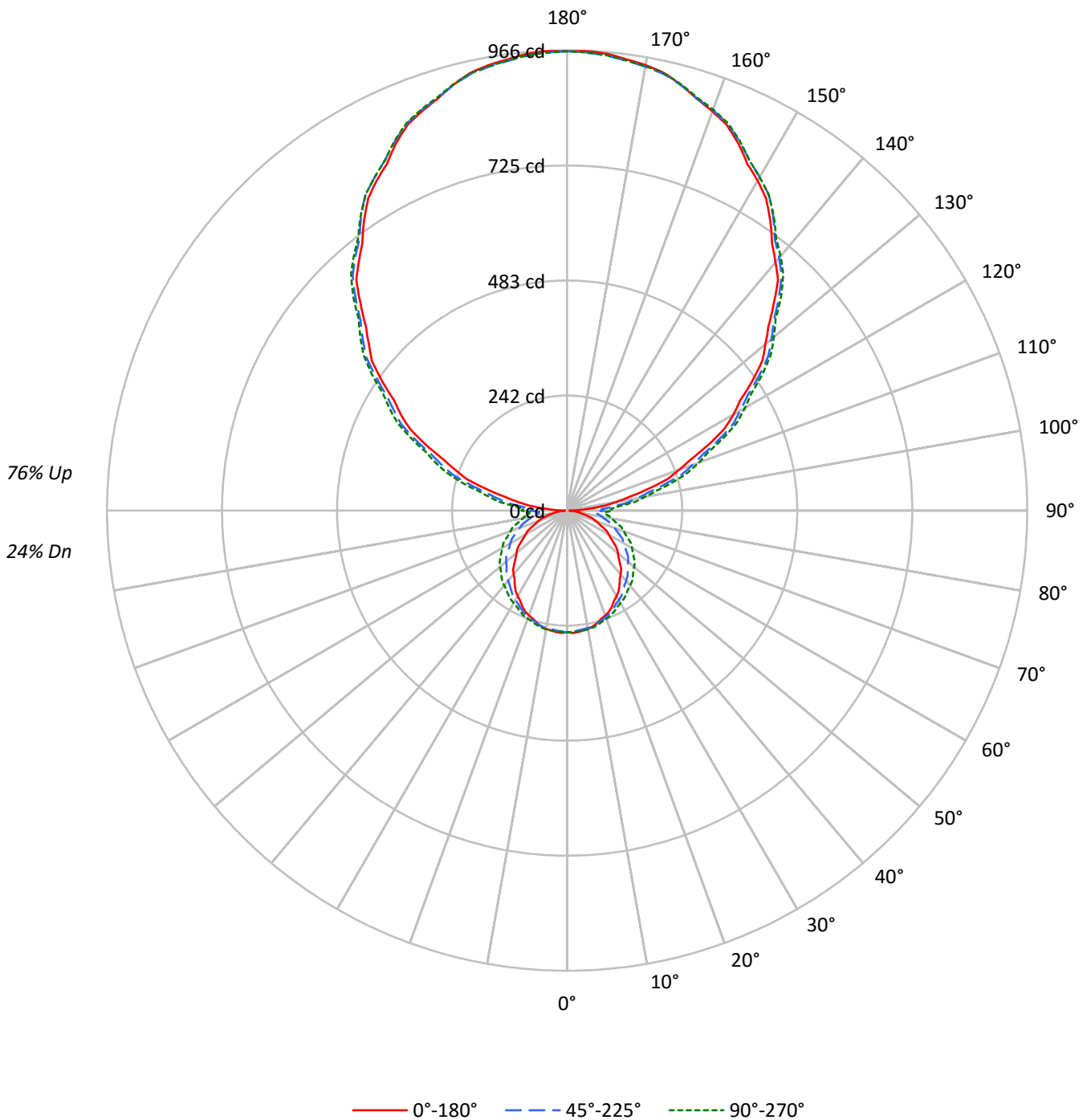
Input Watts (W): 37.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	79	81	77	74	71	59	57	55	42	41	40	27	26	25	18
2	83	75	69	64	73	67	62	57	51	48	45	37	34	32	23	22	21	15
3	75	66	59	53	66	59	52	47	45	41	37	32	29	27	20	19	17	12
4	69	58	50	44	60	52	45	40	40	35	31	28	25	23	18	16	15	10
5	63	51	43	38	55	46	39	34	35	30	27	25	22	20	16	14	13	9
6	58	46	38	32	51	41	34	29	32	27	23	23	19	17	15	13	11	8
7	53	41	33	28	47	37	30	25	28	24	20	21	17	15	13	11	10	7
8	49	37	30	24	43	33	27	22	26	21	18	19	15	13	12	10	9	6
9	46	34	26	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	38	28	21	17	21	17	14	16	13	10	10	8	7	5

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

	0°	45°	90°
0°	4127	4127	4127
5°	4146	3973	3957
10°	4121	3855	3812
15°	4063	3730	3659
20°	3992	3597	3511
25°	3922	3468	3376
30°	3821	3336	3241
35°	3720	3209	3148
40°	3615	3101	3051
45°	3512	3004	2971
50°	3404	2917	2891
55°	3289	2822	2810
60°	3151	2723	2724
65°	3006	2608	2622
70°	2844	2485	2512
75°	2639	2365	2410
80°	2312	2240	2305
85°	2005	2134	2226



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.2	0.7
10°-20°	69.4	1.9
20°-30°	105.2	2.9
30°-40°	128.2	3.5
40°-50°	137.9	3.8
50°-60°	133.9	3.6
60°-70°	116.9	3.2
70°-80°	90.0	2.4
80°-90°	64.3	1.7
90°-100°	102.7	2.8
100°-110°	220.1	6.0
110°-120°	344.4	9.4
120°-130°	437.7	11.9
130°-140°	483.4	13.2
140°-150°	470.2	12.8
150°-160°	393.7	10.7
160°-170°	261.1	7.1
170°-180°	91.3	2.5
0°-30°	198.9	5.4
0°-40°	327.1	8.9
0°-60°	598.8	16.3
0°-90°	870.0	23.7
90°-120°	667.3	18.2
90°-150°	2058.6	56.0
90°-180°	2805.0	76.3
0°-180°	3674.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	255	253	255	255	24
15°	244	245	245	248	248	69
25°	222	225	228	232	234	102
35°	192	198	205	213	216	120
45°	157	167	180	191	195	121
55°	120	134	153	166	171	108
65°	82	101	122	137	142	82
75°	46	66	90	105	111	48
85°	13	36	60	75	81	14
90°	4	36	77	90	96	5
95°	45	71	95	108	112	51
105°	177	190	211	225	230	187
115°	327	336	351	361	363	323
125°	474	482	491	498	501	424
135°	613	622	627	634	635	473
145°	744	749	754	757	756	464
155°	850	853	855	859	857	391
165°	925	924	924	929	926	261
175°	962	960	958	964	959	91
180°	964	964	964	964	964	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	257.1	256.8	256.7	256.4	256.2	255.9	255.4	255.0	254.5	254.0	254.4
5°	256.3	256.1	255.8	255.6	255.3	254.9	254.5	254.0	253.5	253.0	253.5
7.5°	254.0	253.8	253.6	253.5	253.3	253.1	252.7	252.3	251.9	251.5	252.2
10°	252.3	252.1	251.9	251.8	251.6	251.4	251.1	250.9	250.6	250.4	251.0
12.5°	249.2	249.3	249.3	249.4	249.4	249.3	249.2	249.0	248.7	248.6	249.2
15°	244.4	244.6	244.8	244.9	245.1	245.2	245.2	245.2	245.2	245.2	245.9
17.5°	238.2	238.6	238.9	239.3	239.6	239.9	240.2	240.4	240.7	241.0	241.7
20°	234.1	234.5	234.9	235.3	235.7	236.1	236.4	236.8	237.1	237.4	238.3
22.5°	229.7	230.1	230.6	231.1	231.5	232.0	232.4	232.9	233.4	233.8	234.7
25°	222.3	222.8	223.4	224.0	224.5	225.2	225.9	226.7	227.4	228.1	229.1
27.5°	213.4	214.3	215.2	216.1	217.1	218.0	218.8	219.7	220.6	221.5	222.7
30°	207.4	208.5	209.5	210.6	211.7	212.8	213.9	214.9	216.0	217.0	218.3
32.5°	200.9	202.1	203.3	204.5	205.7	206.9	208.2	209.5	210.8	212.0	213.5
35°	191.5	192.9	194.3	195.7	197.1	198.5	200.2	201.7	203.3	204.8	206.6
37.5°	181.2	182.9	184.5	186.1	187.7	189.6	191.6	193.6	195.6	197.6	199.7
40°	174.5	176.3	178.1	179.9	181.6	183.7	185.9	188.2	190.4	192.6	194.7
42.5°	168.0	169.7	171.5	173.3	175.2	177.3	179.9	182.5	185.0	187.5	189.9
45°	157.0	159.2	161.5	163.7	165.9	168.4	171.4	174.2	177.1	180.0	182.5
47.5°	146.3	148.7	151.2	153.5	156.0	158.9	162.2	165.6	169.0	172.4	175.0
50°	138.9	141.5	144.0	146.5	149.1	152.2	156.0	159.6	163.3	167.1	169.8
52.5°	131.8	134.4	137.1	139.8	142.5	145.8	149.7	153.6	157.5	161.4	164.3
55°	120.3	123.4	126.3	129.2	132.2	135.8	140.1	144.4	148.7	153.0	156.0
57.5°	109.1	112.4	115.8	119.1	122.5	126.3	130.7	135.0	139.4	143.8	147.0
60°	101.1	104.7	108.2	111.7	115.3	119.4	124.1	128.7	133.5	138.1	141.3
62.5°	94.0	97.7	101.3	105.0	108.7	112.8	117.6	122.2	126.9	131.7	134.9
65°	82.2	86.3	90.3	94.3	98.3	102.8	107.6	112.5	117.4	122.2	125.6
67.5°	71.4	75.7	79.8	84.1	88.3	92.9	97.8	102.8	107.8	112.8	116.2
70°	63.7	68.0	72.2	76.6	80.8	85.5	90.6	95.7	100.9	105.9	109.5
72.5°	56.6	61.0	65.4	69.8	74.3	79.0	84.2	89.4	94.6	99.7	103.2
75°	45.6	50.1	54.8	59.4	64.0	68.9	74.2	79.5	84.7	90.0	93.5
77.5°	34.9	39.7	44.5	49.3	54.2	59.3	64.7	70.0	75.3	80.6	84.2
80°	27.8	32.8	37.8	42.8	47.9	53.1	58.4	63.8	69.1	74.4	77.9
82.5°	21.9	26.8	31.8	36.7	41.7	46.9	52.3	57.7	63.1	68.5	72.0
85°	13.4	18.4	23.6	28.6	33.8	38.9	44.2	49.5	54.7	60.0	63.4
87.5°	7.4	12.8	18.1	23.5	28.8	34.5	40.5	46.6	52.7	58.7	62.0
90°	4.5	11.5	18.4	25.4	32.3	40.4	49.7	58.9	68.2	77.4	80.3
92.5°	17.9	23.9	29.9	36.0	42.1	48.0	54.1	60.1	66.1	72.1	75.4
95°	45.2	51.0	56.7	62.3	68.0	73.5	78.8	84.1	89.4	94.7	97.8
97.5°	79.9	85.0	89.9	95.0	100.0	105.3	110.6	116.1	121.6	126.9	130.0
100°	105.9	110.4	114.9	119.4	123.9	128.7	133.9	139.0	144.1	149.3	152.4
102.5°	133.0	136.9	140.9	144.8	148.7	153.3	158.4	163.6	168.8	173.9	177.1
105°	176.8	179.7	182.6	185.6	188.5	192.2	196.9	201.5	206.2	210.8	214.1
107.5°	221.3	224.0	226.7	229.4	232.1	235.5	239.6	243.7	247.9	251.9	254.9
110°	249.6	252.3	255.1	257.8	260.6	263.9	268.0	272.0	276.1	280.1	282.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.9	283.3	285.8	288.3	290.7	293.8	297.5	301.3	304.9	308.6	310.8
115°	326.9	328.9	330.9	332.9	334.9	337.5	340.9	344.2	347.6	350.9	353.2
117.5°	372.4	374.5	376.5	378.5	380.6	382.9	385.2	387.7	390.0	392.5	394.4
120°	403.1	404.8	406.6	408.4	410.2	412.0	413.8	415.6	417.5	419.3	421.7
122.5°	431.0	432.9	434.8	436.7	438.5	440.5	442.5	444.7	446.7	448.8	450.6
125°	474.3	475.9	477.5	479.2	480.8	482.7	484.7	486.8	488.9	491.0	492.7
127.5°	516.7	518.7	520.7	522.7	524.6	526.4	527.8	529.3	530.8	532.3	533.7
130°	543.4	545.7	548.0	550.2	552.5	554.3	555.7	557.1	558.4	559.8	561.4
132.5°	573.4	575.2	577.1	578.9	580.7	582.4	583.8	585.1	586.5	587.9	589.1
135°	613.0	615.1	617.0	619.0	621.0	622.6	623.8	624.9	626.1	627.3	628.8
137.5°	655.2	656.8	658.4	660.0	661.6	662.8	663.7	664.5	665.4	666.2	667.6
140°	680.5	682.1	683.6	685.2	686.7	688.0	689.1	690.2	691.3	692.4	693.7
142.5°	706.6	708.2	709.7	711.3	712.8	713.9	714.5	715.2	715.8	716.5	717.6
145°	743.6	744.9	746.2	747.5	748.7	749.9	751.0	752.0	753.2	754.2	754.9
147.5°	777.0	778.5	780.1	781.5	783.1	784.2	785.0	785.6	786.4	787.1	787.6
150°	799.8	800.9	801.9	803.1	804.1	805.0	805.8	806.5	807.2	808.0	808.5
152.5°	819.9	821.1	822.1	823.2	824.3	825.3	826.1	827.0	827.9	828.8	829.5
155°	850.3	850.8	851.3	851.9	852.4	853.0	853.5	854.0	854.6	855.1	856.1
157.5°	876.1	876.4	876.9	877.2	877.6	877.9	878.2	878.6	878.9	879.2	880.4
160°	891.8	892.1	892.4	892.8	893.2	893.5	893.6	893.8	894.0	894.1	895.3
162.5°	906.0	906.1	906.2	906.3	906.4	906.4	906.7	906.9	907.0	907.2	908.4
165°	925.1	925.0	924.7	924.5	924.4	924.3	924.3	924.3	924.3	924.3	925.5
167.5°	941.0	940.5	940.0	939.4	938.9	938.6	938.6	938.5	938.5	938.4	939.7
170°	949.5	948.9	948.4	947.9	947.3	947.0	946.8	946.6	946.4	946.2	947.5
172.5°	955.4	954.8	954.3	953.7	953.2	952.8	952.7	952.4	952.3	952.1	953.4
175°	962.5	962.0	961.4	960.9	960.3	959.9	959.5	959.2	958.8	958.5	959.7
177.5°	965.5	965.0	964.6	964.2	963.7	963.4	963.0	962.8	962.5	962.2	963.0
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	254.7	255.0	255.4	255.5	255.4	255.2	255.1	254.9
5°	254.0	254.5	254.9	255.1	255.0	254.9	254.9	254.8
7.5°	252.7	253.3	254.0	254.2	254.1	254.0	254.0	253.9
10°	251.7	252.3	253.0	253.3	253.2	253.2	253.1	253.0
12.5°	249.9	250.5	251.2	251.5	251.4	251.4	251.3	251.2
15°	246.6	247.4	248.2	248.5	248.4	248.3	248.3	248.2
17.5°	242.6	243.3	244.0	244.4	244.4	244.4	244.4	244.4
20°	239.2	240.1	241.0	241.5	241.5	241.5	241.5	241.5
22.5°	235.7	236.6	237.5	238.0	238.1	238.2	238.4	238.6
25°	230.2	231.1	232.1	232.7	232.9	233.2	233.4	233.7
27.5°	224.0	225.3	226.5	227.2	227.4	227.6	227.7	228.0
30°	219.6	221.0	222.3	223.1	223.3	223.6	223.8	224.0
32.5°	215.0	216.5	218.1	219.1	219.5	220.0	220.4	220.8
35°	208.5	210.3	212.1	213.3	213.9	214.4	215.0	215.6
37.5°	201.6	203.7	205.7	207.0	207.6	208.2	208.8	209.4
40°	196.9	199.0	201.1	202.6	203.3	204.1	204.8	205.5
42.5°	192.2	194.5	196.9	198.4	199.2	199.9	200.6	201.4
45°	185.1	187.7	190.2	191.9	192.7	193.6	194.4	195.2
47.5°	177.7	180.3	183.0	184.8	185.7	186.6	187.5	188.4
50°	172.6	175.5	178.2	180.1	181.0	181.9	182.8	183.7
52.5°	167.1	170.0	172.8	174.8	175.8	176.8	177.7	178.6
55°	158.9	161.8	164.9	166.8	167.9	169.0	170.1	171.1
57.5°	150.2	153.4	156.5	158.7	159.8	160.9	161.9	163.1
60°	144.4	147.6	150.7	152.8	153.9	155.1	156.3	157.4
62.5°	138.3	141.6	145.0	147.2	148.2	149.3	150.4	151.5
65°	129.0	132.3	135.7	137.9	139.0	140.1	141.1	142.2
67.5°	119.5	122.9	126.4	128.7	129.7	130.9	132.0	133.1
70°	113.0	116.5	120.1	122.4	123.4	124.3	125.3	126.3
72.5°	106.6	110.1	113.6	115.9	117.1	118.3	119.5	120.7
75°	97.1	100.6	104.2	106.5	107.5	108.6	109.7	110.7
77.5°	87.7	91.2	94.7	97.1	98.2	99.4	100.5	101.7
80°	81.4	84.8	88.3	90.6	91.7	92.9	94.0	95.1
82.5°	75.4	78.9	82.3	84.6	85.7	86.8	87.9	88.9
85°	66.9	70.4	73.9	76.1	77.3	78.4	79.6	80.7
87.5°	65.3	68.6	71.9	74.0	75.2	76.2	77.4	78.4
90°	83.2	86.2	89.1	91.2	92.3	93.5	94.7	95.8
92.5°	78.7	82.0	85.3	87.5	88.5	89.5	90.5	91.6
95°	100.9	104.0	107.2	109.1	109.7	110.3	111.0	111.5
97.5°	133.1	136.1	139.2	141.1	142.0	143.0	143.9	144.9
100°	155.4	158.5	161.5	163.4	164.1	164.9	165.6	166.3
102.5°	180.2	183.3	186.5	188.3	189.1	189.8	190.5	191.3
105°	217.4	220.5	223.8	225.9	226.8	227.7	228.6	229.5
107.5°	257.7	260.7	263.6	265.1	265.1	265.2	265.3	265.3
110°	285.4	288.0	290.6	292.1	292.4	292.9	293.2	293.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	313.0	315.2	317.4	318.8	319.3	319.8	320.2	320.7
115°	355.5	357.8	360.1	361.4	361.7	362.2	362.5	362.9
117.5°	396.5	398.5	400.5	401.6	401.9	402.3	402.5	402.8
120°	424.0	426.2	428.5	429.9	430.2	430.6	431.0	431.4
122.5°	452.4	454.2	456.0	457.1	457.5	457.9	458.3	458.6
125°	494.4	496.0	497.7	498.9	499.4	499.9	500.5	501.1
127.5°	535.1	536.5	537.9	538.6	538.7	538.9	539.1	539.2
130°	563.0	564.6	566.2	567.0	567.0	566.9	566.8	566.8
132.5°	590.2	591.3	592.4	593.0	593.0	593.1	593.2	593.3
135°	630.4	631.9	633.5	634.3	634.5	634.5	634.7	634.8
137.5°	669.0	670.3	671.6	672.3	672.1	671.9	671.7	671.6
140°	695.0	696.3	697.6	698.1	697.9	697.7	697.5	697.2
142.5°	718.8	720.1	721.3	721.7	721.4	721.1	720.8	720.6
145°	755.6	756.3	756.9	757.1	756.8	756.5	756.2	755.9
147.5°	788.1	788.5	789.0	789.0	788.5	788.0	787.5	787.0
150°	809.0	809.6	810.1	810.1	809.6	809.0	808.5	808.0
152.5°	830.1	830.8	831.5	831.5	830.8	830.1	829.5	828.8
155°	857.0	857.9	858.8	858.9	858.3	857.9	857.3	856.7
157.5°	881.7	882.9	884.1	884.3	883.5	882.6	881.7	880.8
160°	896.3	897.4	898.5	898.7	898.0	897.2	896.5	895.8
162.5°	909.6	910.9	912.1	912.3	911.4	910.5	909.7	908.8
165°	926.8	928.1	929.4	929.5	928.6	927.7	926.8	925.9
167.5°	940.9	942.2	943.5	943.6	942.7	941.8	940.9	939.9
170°	948.8	950.1	951.3	951.4	950.3	949.3	948.1	947.1
172.5°	954.6	955.9	957.2	957.2	956.2	955.1	954.0	952.9
175°	961.0	962.2	963.5	963.6	962.5	961.4	960.3	959.3
177.5°	963.9	964.8	965.6	965.6	964.8	963.9	963.0	962.2
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2

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