

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: P331265-840

Luminaire Tested: **SA2XXDIP-C290D725U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331265-840
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-C290D725U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

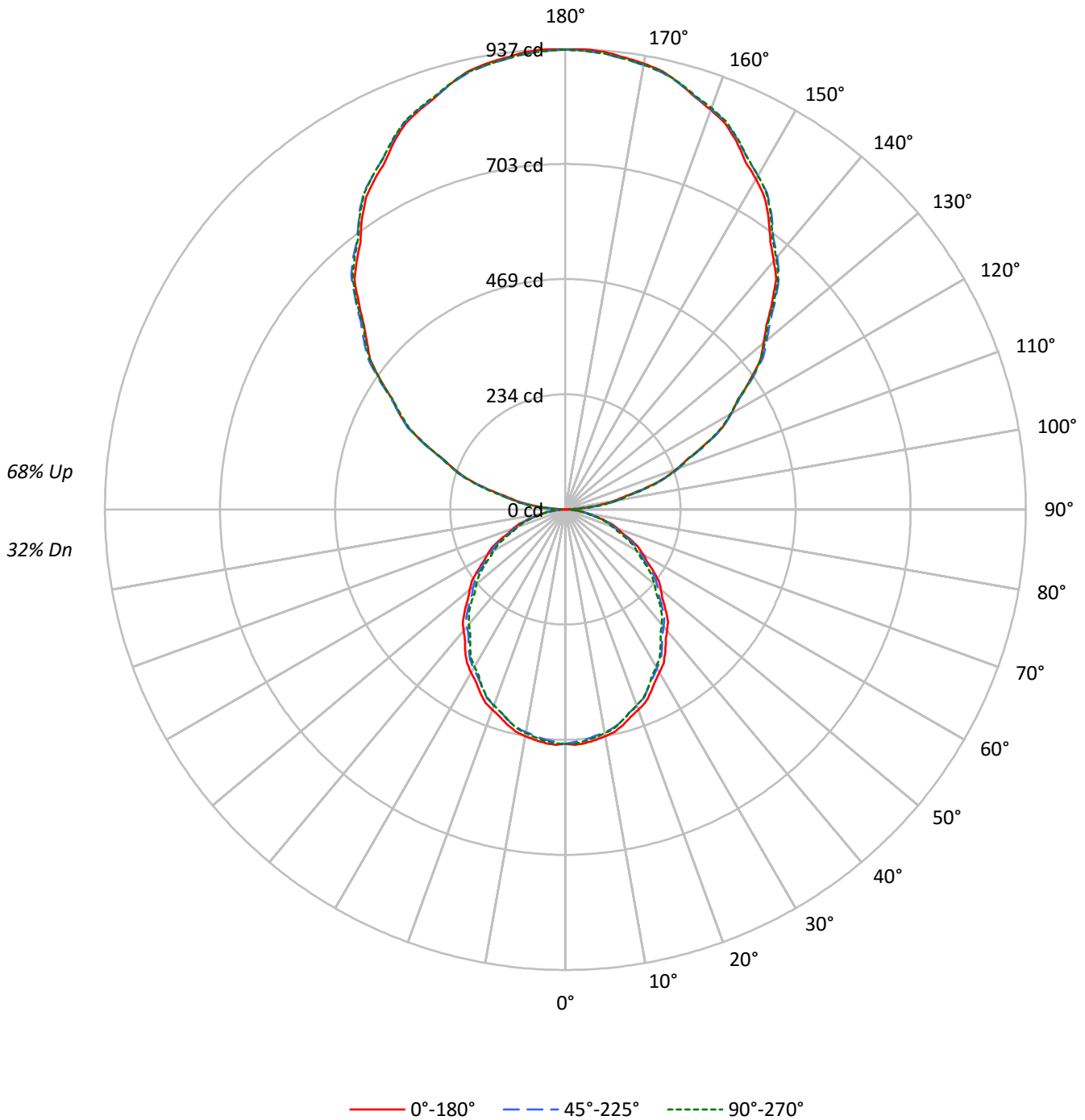
Lumens per Lamp: N/A
Luminaire Lumens: 3833.0 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 31.2
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	103	103	103	103	92	92	92	92	73	73	73	56	56	56	39	39	39	32
1	94	89	86	82	84	81	77	75	64	62	60	49	47	46	35	34	33	27
2	85	78	72	67	76	70	65	61	56	53	50	43	40	38	31	29	28	22
3	78	69	61	56	70	62	56	51	49	45	42	38	35	32	27	25	24	19
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	16
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18	14
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	17	16	12
7	55	43	36	30	50	39	33	28	32	27	23	25	21	18	18	16	14	11
8	51	39	32	27	46	36	29	25	29	24	20	23	19	16	16	14	12	10
9	48	36	28	24	43	33	26	22	26	22	18	21	17	15	15	13	11	9
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7703	7703	7703
5°	7733	7621	7666
10°	7688	7543	7581
15°	7590	7447	7438
20°	7455	7301	7290
25°	7322	7119	7119
30°	7150	6952	6893
35°	6991	6753	6654
40°	6787	6555	6431
45°	6588	6357	6202
50°	6373	6154	5935
55°	6145	5917	5695
60°	5896	5628	5422
65°	5624	5349	5100
70°	5282	4999	4763
75°	4810	4604	4492
80°	4258	4138	3924
85°	3483	3316	2983



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	1.2
10°-20°	126.2	3.3
20°-30°	185.5	4.8
30°-40°	215.5	5.6
40°-50°	215.3	5.6
50°-60°	187.7	4.9
60°-70°	138.8	3.6
70°-80°	78.6	2.1
80°-90°	24.9	0.6
90°-100°	59.3	1.5
100°-110°	184.1	4.8
110°-120°	314.7	8.2
120°-130°	413.8	10.8
130°-140°	464.4	12.1
140°-150°	455.4	11.9
150°-160°	382.0	10.0
160°-170°	253.3	6.6
170°-180°	88.5	2.3
0°-30°	356.6	9.3
0°-40°	572.2	14.9
0°-60°	975.2	25.4
0°-90°	1217.5	31.8
90°-120°	558.0	14.6
90°-150°	1891.7	49.4
90°-180°	2616.0	68.2
0°-180°	3833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	477	475	470	474	473	45
15°	454	451	446	447	445	128
25°	411	407	400	400	400	189
35°	355	350	343	340	338	221
45°	288	285	278	274	272	223
55°	218	215	210	205	202	195
65°	147	144	140	136	134	146
75°	77	76	74	71	72	82
85°	19	18	18	17	16	22
90°	1	11	28	26	27	3
95°	41	49	50	50	49	47
105°	170	172	174	175	175	179
115°	316	320	319	318	316	312
125°	459	466	464	462	461	410
135°	594	603	605	604	602	459
145°	721	727	732	732	729	451
155°	825	827	830	833	831	380
165°	898	897	897	902	898	253
175°	934	932	930	935	931	89
180°	935	935	935	935	935	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1
2.5°	479.3	478.9	478.5	478.1	477.7	477.1	476.2	475.2	474.3	473.4	474.2
5°	477.1	476.7	476.3	475.8	475.4	474.7	473.6	472.5	471.3	470.2	471.0
7.5°	472.9	472.2	471.6	471.0	470.4	469.5	468.4	467.2	466.1	464.9	465.7
10°	468.9	468.2	467.5	466.8	466.0	465.0	463.8	462.6	461.4	460.1	460.9
12.5°	463.3	462.7	462.1	461.4	460.8	459.9	458.7	457.5	456.3	455.0	455.6
15°	454.1	453.5	452.9	452.3	451.7	450.8	449.4	448.1	446.8	445.5	445.9
17.5°	442.4	441.8	441.2	440.6	440.0	439.0	437.7	436.3	434.9	433.6	434.0
20°	433.9	433.3	432.7	432.1	431.5	430.5	429.1	427.7	426.3	424.9	425.2
22.5°	425.6	424.6	423.8	422.9	422.1	421.0	419.7	418.3	417.0	415.7	415.7
25°	411.0	410.2	409.4	408.6	407.8	406.5	404.8	403.0	401.3	399.6	399.8
27.5°	394.6	393.8	393.0	392.3	391.6	390.5	389.2	387.8	386.5	385.1	384.8
30°	383.5	382.7	381.9	381.1	380.2	379.1	377.6	376.1	374.5	372.9	372.6
32.5°	371.7	371.1	370.5	369.8	369.2	368.0	366.4	364.9	363.2	361.6	361.0
35°	354.7	353.6	352.5	351.5	350.5	349.2	347.6	346.0	344.4	342.6	342.0
37.5°	335.3	334.4	333.5	332.5	331.6	330.4	328.8	327.2	325.5	323.9	323.2
40°	322.0	321.2	320.4	319.6	318.8	317.6	315.9	314.3	312.7	311.0	310.1
42.5°	309.2	308.4	307.6	306.8	306.0	304.7	303.1	301.4	299.8	298.2	297.2
45°	288.5	287.8	287.1	286.4	285.7	284.6	283.1	281.6	280.0	278.4	277.3
47.5°	268.0	267.3	266.7	266.0	265.3	264.2	262.6	261.1	259.4	257.8	256.6
50°	253.7	253.2	252.7	252.2	251.7	250.6	249.2	247.8	246.4	245.0	243.6
52.5°	239.7	239.0	238.4	237.7	237.0	236.0	234.7	233.4	232.0	230.7	229.4
55°	218.3	217.7	217.1	216.5	215.9	215.0	213.8	212.6	211.4	210.2	208.8
57.5°	196.9	196.4	195.9	195.4	194.9	194.0	192.7	191.4	190.0	188.6	187.4
60°	182.6	182.2	181.8	181.4	181.0	180.1	178.6	177.2	175.7	174.3	173.2
62.5°	168.6	167.9	167.3	166.7	166.0	165.1	164.0	163.0	161.9	160.8	159.7
65°	147.2	146.6	146.0	145.4	144.8	144.0	143.0	142.0	141.0	140.0	139.0
67.5°	125.5	125.0	124.5	124.0	123.6	122.9	121.9	121.0	120.1	119.2	118.5
70°	111.9	111.5	111.1	110.7	110.3	109.7	108.8	107.9	106.8	105.9	105.2
72.5°	98.0	97.6	97.1	96.7	96.3	95.8	95.2	94.7	94.1	93.5	92.8
75°	77.1	76.9	76.6	76.4	76.2	75.9	75.4	74.8	74.3	73.8	73.2
77.5°	58.4	58.0	57.7	57.4	57.0	56.7	56.5	56.2	56.0	55.8	55.5
80°	45.8	45.7	45.6	45.5	45.4	45.3	45.1	44.9	44.7	44.5	44.2
82.5°	34.1	34.1	34.1	34.0	34.0	33.9	33.8	33.7	33.6	33.5	33.1
85°	18.8	18.7	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.6
87.5°	6.8	7.1	7.3	7.6	7.8	8.2	8.9	9.5	10.1	10.7	10.3
90°	0.8	2.9	5.0	7.1	9.2	12.2	16.1	19.9	23.7	27.7	27.3
92.5°	14.0	15.6	17.2	18.7	20.2	21.4	22.3	23.2	24.2	25.1	25.1
95°	41.0	42.8	44.5	46.4	48.1	49.1	49.5	49.8	50.2	50.5	50.5
97.5°	75.0	76.5	78.1	79.6	81.2	82.3	82.9	83.6	84.2	84.9	84.9
100°	100.3	101.7	103.0	104.4	105.8	106.8	107.3	107.9	108.4	109.0	109.0
102.5°	126.7	127.8	129.1	130.2	131.3	132.2	132.8	133.5	134.1	134.8	134.9
105°	169.8	170.3	170.8	171.3	171.8	172.3	172.6	173.0	173.3	173.7	174.0
107.5°	213.0	213.8	214.5	215.3	216.0	216.4	216.4	216.4	216.4	216.4	216.6
110°	240.8	241.8	242.9	243.9	245.0	245.5	245.5	245.5	245.5	245.5	245.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	271.0	272.2	273.2	274.2	275.3	275.7	275.6	275.5	275.3	275.2	274.8
115°	315.8	316.8	317.8	318.9	319.9	320.3	319.9	319.6	319.2	318.9	318.7
117.5°	360.2	361.6	363.0	364.5	365.9	366.1	365.1	364.2	363.1	362.1	361.7
120°	389.9	391.3	392.7	394.2	395.6	395.6	394.2	392.7	391.3	389.9	389.9
122.5°	417.1	418.8	420.5	422.1	423.8	424.1	423.2	422.2	421.2	420.2	419.8
125°	459.4	461.0	462.5	464.1	465.7	466.3	465.7	465.1	464.6	464.1	463.6
127.5°	500.6	502.6	504.6	506.6	508.6	509.3	508.7	508.1	507.4	506.8	506.1
130°	526.5	528.8	531.1	533.3	535.6	536.5	536.2	535.8	535.5	535.2	534.8
132.5°	555.5	557.4	559.3	561.1	563.0	563.9	564.0	564.1	564.1	564.2	563.5
135°	594.4	596.3	598.2	600.2	602.1	603.2	603.6	603.9	604.3	604.6	604.5
137.5°	635.3	636.8	638.4	640.1	641.6	642.6	643.1	643.5	644.0	644.4	644.3
140°	659.9	661.5	663.1	664.6	666.2	667.4	668.3	669.2	670.0	671.0	671.0
142.5°	685.2	686.7	688.3	689.9	691.5	692.6	693.2	693.8	694.4	695.0	695.1
145°	721.4	722.7	724.0	725.2	726.4	727.5	728.6	729.6	730.6	731.7	732.0
147.5°	753.9	755.3	756.8	758.2	759.7	760.8	761.5	762.2	763.0	763.7	764.0
150°	776.0	777.0	778.0	779.1	780.1	781.0	781.7	782.4	783.2	783.9	784.4
152.5°	795.5	796.6	797.6	798.7	799.7	800.6	801.5	802.3	803.1	804.1	804.7
155°	824.9	825.4	826.0	826.5	827.0	827.5	828.0	828.6	829.1	829.6	830.5
157.5°	850.0	850.3	850.7	851.0	851.4	851.7	852.0	852.3	852.6	852.9	854.1
160°	865.2	865.5	865.9	866.2	866.6	866.8	867.0	867.2	867.4	867.5	868.6
162.5°	879.0	879.1	879.2	879.2	879.3	879.4	879.6	879.8	880.0	880.1	881.3
165°	897.5	897.4	897.2	897.0	896.8	896.7	896.7	896.7	896.7	896.7	898.0
167.5°	912.9	912.4	911.9	911.4	910.9	910.6	910.6	910.5	910.5	910.4	911.7
170°	921.2	920.7	920.1	919.6	919.1	918.7	918.6	918.4	918.2	918.0	919.3
172.5°	926.9	926.3	925.8	925.2	924.7	924.4	924.2	924.0	923.9	923.7	924.9
175°	933.8	933.3	932.7	932.2	931.7	931.3	930.9	930.6	930.2	929.9	931.1
177.5°	936.6	936.2	935.8	935.3	934.9	934.6	934.3	934.0	933.7	933.5	934.3
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1
2.5°	475.0	475.8	476.7	477.1	476.9	476.7	476.6	476.4
5°	471.9	472.7	473.5	473.8	473.6	473.4	473.2	473.0
7.5°	466.6	467.4	468.2	468.5	468.3	468.0	467.8	467.6
10°	461.8	462.6	463.4	463.6	463.3	463.0	462.7	462.4
12.5°	456.2	456.7	457.3	457.5	457.3	457.0	456.8	456.6
15°	446.3	446.7	447.1	447.1	446.6	446.1	445.6	445.0
17.5°	434.5	435.0	435.5	435.5	434.9	434.5	434.0	433.5
20°	425.5	425.8	426.1	426.0	425.6	425.2	424.7	424.3
22.5°	415.8	415.9	415.9	415.8	415.6	415.3	415.1	414.9
25°	400.0	400.2	400.4	400.4	400.2	400.0	399.8	399.6
27.5°	384.5	384.2	383.8	383.4	382.9	382.4	382.0	381.5
30°	372.3	372.0	371.7	371.4	371.0	370.6	370.2	369.7
32.5°	360.5	359.9	359.4	358.9	358.5	358.1	357.7	357.3
35°	341.4	340.8	340.2	339.7	339.2	338.7	338.2	337.6
37.5°	322.3	321.6	320.8	320.2	319.7	319.2	318.8	318.3
40°	309.2	308.3	307.4	306.7	306.3	305.9	305.5	305.1
42.5°	296.2	295.2	294.2	293.4	292.9	292.3	291.8	291.1
45°	276.2	275.1	274.0	273.2	272.8	272.4	272.0	271.6
47.5°	255.5	254.3	253.1	252.2	251.7	251.1	250.4	249.8
50°	242.2	240.7	239.2	238.3	237.8	237.3	236.8	236.3
52.5°	228.3	227.1	225.9	225.0	224.3	223.7	223.0	222.3
55°	207.6	206.4	205.2	204.4	203.9	203.3	202.8	202.3
57.5°	186.2	185.0	183.8	183.0	182.7	182.3	181.9	181.5
60°	172.1	171.0	169.9	169.2	168.8	168.5	168.2	167.9
62.5°	158.6	157.6	156.6	155.9	155.5	155.1	154.7	154.3
65°	138.0	137.1	136.2	135.5	135.0	134.5	134.0	133.5
67.5°	117.8	117.0	116.3	115.7	115.3	114.9	114.5	114.1
70°	104.5	103.8	103.1	102.6	102.2	101.7	101.3	100.9
72.5°	92.1	91.4	90.7	90.1	89.8	89.5	89.2	88.8
75°	72.6	72.0	71.4	71.2	71.4	71.6	71.8	72.0
77.5°	55.2	54.9	54.6	54.3	54.0	53.8	53.5	53.2
80°	43.9	43.6	43.3	43.0	42.8	42.6	42.4	42.2
82.5°	32.7	32.3	31.9	31.7	31.7	31.6	31.6	31.6
85°	17.3	17.0	16.7	16.5	16.4	16.3	16.2	16.1
87.5°	10.0	9.7	9.4	9.2	9.2	9.1	9.1	9.0
90°	27.0	26.6	26.3	26.2	26.4	26.5	26.7	26.9
92.5°	25.2	25.3	25.3	25.4	25.4	25.5	25.5	25.5
95°	50.5	50.5	50.5	50.4	50.0	49.7	49.3	49.0
97.5°	84.9	84.9	84.9	84.9	84.9	84.8	84.8	84.7
100°	109.0	109.0	109.0	108.9	108.7	108.5	108.4	108.2
102.5°	135.1	135.2	135.4	135.3	135.2	135.0	134.8	134.6
105°	174.4	174.7	175.1	175.2	175.2	175.2	175.2	175.2
107.5°	216.7	216.8	217.0	216.7	215.9	215.1	214.3	213.5
110°	245.5	245.5	245.5	245.2	244.7	244.2	243.7	243.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.3	273.9	273.5	273.1	272.7	272.3	272.0	271.6
115°	318.5	318.4	318.2	317.8	317.3	316.8	316.3	315.8
117.5°	361.3	360.9	360.4	360.0	359.5	358.9	358.4	357.9
120°	389.9	389.9	389.9	389.7	389.1	388.6	388.1	387.6
122.5°	419.4	419.0	418.6	418.2	417.8	417.4	417.0	416.7
125°	463.1	462.5	462.0	461.7	461.5	461.3	461.2	461.0
127.5°	505.5	504.8	504.2	503.6	503.1	502.5	502.0	501.4
130°	534.5	534.1	533.8	533.2	532.5	531.9	531.2	530.5
132.5°	562.7	561.9	561.2	560.5	559.9	559.4	558.8	558.3
135°	604.3	604.1	603.9	603.6	603.1	602.6	602.0	601.5
137.5°	644.2	644.0	643.9	643.5	642.8	642.1	641.4	640.7
140°	671.0	671.0	671.0	670.6	669.9	669.2	668.5	667.8
142.5°	695.2	695.4	695.5	695.2	694.5	693.8	693.2	692.5
145°	732.1	732.3	732.5	732.2	731.4	730.7	730.0	729.3
147.5°	764.4	764.8	765.2	765.1	764.4	763.7	763.1	762.3
150°	784.9	785.4	786.0	786.0	785.4	784.9	784.4	783.9
152.5°	805.4	806.1	806.7	806.7	806.1	805.4	804.7	804.1
155°	831.3	832.2	833.1	833.3	832.7	832.2	831.7	831.2
157.5°	855.4	856.6	857.8	857.9	857.1	856.3	855.4	854.5
160°	869.6	870.7	871.7	871.9	871.2	870.5	869.8	869.1
162.5°	882.5	883.7	884.9	885.0	884.2	883.4	882.5	881.7
165°	899.2	900.4	901.6	901.8	900.9	900.0	899.2	898.3
167.5°	912.9	914.1	915.3	915.5	914.6	913.7	912.8	911.9
170°	920.5	921.7	922.9	923.0	922.0	920.9	919.9	918.8
172.5°	926.1	927.4	928.6	928.7	927.7	926.6	925.5	924.5
175°	932.3	933.5	934.7	934.8	933.8	932.7	931.7	930.7
177.5°	935.1	936.0	936.9	936.9	936.0	935.1	934.3	933.5
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3

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