

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: P332551-840

Luminaire Tested: **S124DIP-S575D590U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332551-840
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-S575D590U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4585.1 lumens
Efficiency: N/A
Efficacy: 139.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

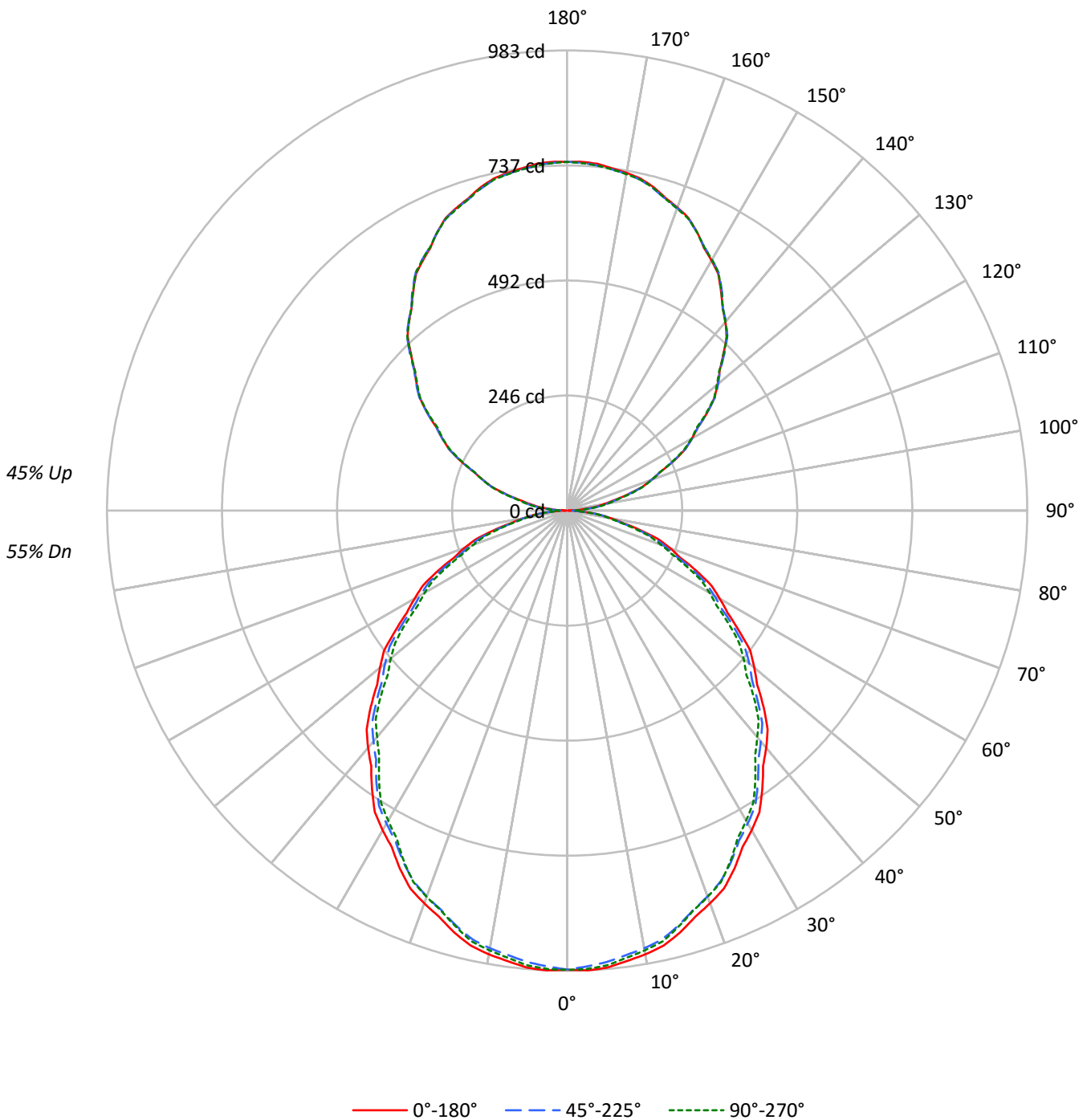
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	94	91	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	28	24
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	31	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	2.0
10°-20°	260.2	5.7
20°-30°	383.0	8.4
30°-40°	445.3	9.7
40°-50°	445.3	9.7
50°-60°	389.5	8.5
60°-70°	289.3	6.3
70°-80°	164.3	3.6
80°-90°	49.7	1.1
90°-100°	49.1	1.1
100°-110°	145.5	3.2
110°-120°	247.0	5.4
120°-130°	325.7	7.1
130°-140°	365.7	8.0
140°-150°	359.4	7.8
150°-160°	302.3	6.6
160°-170°	201.1	4.4
170°-180°	70.4	1.5
0°-30°	735.6	16.0
0°-40°	1180.9	25.8
0°-60°	2015.7	44.0
0°-90°	2518.9	54.9
90°-120°	441.6	9.6
90°-150°	1492.4	32.5
90°-180°	2066.0	45.1
0°-180°	4585.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	2	8	13	16	17	4
95°	34	40	44	45	46	38
105°	134	135	137	139	141	142
115°	251	251	250	249	249	248
125°	366	366	365	364	363	326
135°	472	475	475	474	472	365
145°	573	575	576	575	574	358
155°	657	657	656	658	656	302
165°	715	713	712	715	713	201
175°	744	741	740	744	740	71
180°	745	745	745	745	745	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	16.7	16.9	17.0	17.1	17.3	17.4	17.5	17.5	17.6	17.7	17.8
90°	1.7	3.1	4.5	6.0	7.4	8.6	9.6	10.6	11.6	12.6	13.4
92.5°	12.3	13.9	15.6	17.2	18.8	19.9	20.7	21.4	22.1	22.8	23.2
95°	34.5	35.7	36.9	38.0	39.2	40.2	41.1	42.0	42.9	43.7	44.1
97.5°	60.4	61.3	62.2	63.1	64.0	65.0	66.0	67.2	68.2	69.3	69.7
100°	80.6	81.2	81.7	82.2	82.7	83.5	84.6	85.8	86.9	88.2	88.4
102.5°	101.8	102.0	102.2	102.4	102.6	103.3	104.3	105.3	106.4	107.4	107.9
105°	134.2	134.3	134.4	134.6	134.7	135.0	135.5	136.0	136.5	137.0	137.4
107.5°	168.1	168.3	168.4	168.6	168.8	169.0	169.0	169.1	169.2	169.3	169.6
110°	191.3	191.5	191.8	192.0	192.3	192.3	192.2	192.1	192.0	191.8	191.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	215.2	215.2	215.3	215.3	215.4	215.3	215.1	214.8	214.6	214.4	214.3
115°	251.2	251.2	251.2	251.2	251.2	251.0	250.7	250.4	250.2	249.9	249.8
117.5°	285.0	285.1	285.2	285.3	285.4	285.4	285.2	285.0	284.8	284.7	284.2
120°	307.6	308.1	308.6	309.1	309.6	309.7	309.3	308.9	308.5	308.1	307.5
122.5°	331.0	331.2	331.4	331.6	331.8	331.9	331.7	331.5	331.3	331.2	330.7
125°	365.8	365.8	365.8	365.8	365.8	365.7	365.6	365.5	365.3	365.2	364.9
127.5°	397.2	397.6	398.0	398.4	398.7	398.8	398.6	398.4	398.2	398.0	397.8
130°	419.3	419.7	420.1	420.5	420.8	421.0	421.0	421.0	421.0	421.0	420.8
132.5°	441.9	442.2	442.4	442.7	443.0	443.1	443.0	442.9	442.8	442.7	442.4
135°	471.7	472.5	473.2	474.0	474.8	475.1	475.1	475.1	475.1	475.1	474.9
137.5°	504.2	504.5	504.9	505.2	505.6	505.9	506.1	506.3	506.5	506.8	506.4
140°	525.8	526.1	526.3	526.6	526.8	527.0	527.0	527.0	527.0	527.0	526.8
142.5°	545.6	545.9	546.2	546.4	546.7	546.7	546.6	546.5	546.4	546.3	546.3
145°	573.1	573.6	574.1	574.6	575.1	575.4	575.6	575.7	575.8	575.9	575.8
147.5°	600.3	600.9	601.5	602.1	602.8	603.0	602.9	602.8	602.7	602.6	602.5
150°	616.8	617.4	617.9	618.4	618.9	619.1	619.1	619.1	619.1	619.1	619.1
152.5°	632.6	632.9	633.2	633.5	633.8	634.0	634.1	634.2	634.3	634.4	634.7
155°	656.6	656.6	656.6	656.6	656.6	656.5	656.4	656.3	656.2	656.0	656.5
157.5°	676.9	676.6	676.4	676.2	676.0	675.8	675.8	675.8	675.8	675.7	676.1
160°	688.8	688.7	688.6	688.5	688.3	688.2	688.1	688.0	687.8	687.7	688.1
162.5°	699.9	699.6	699.2	698.9	698.6	698.3	698.2	698.1	698.0	697.8	698.5
165°	714.8	714.4	714.0	713.7	713.3	713.0	712.7	712.5	712.2	712.0	712.7
167.5°	726.2	725.7	725.1	724.6	724.1	723.8	723.8	723.9	723.9	723.9	724.7
170°	732.7	732.1	731.3	730.7	730.0	729.8	729.9	730.0	730.2	730.3	731.1
172.5°	737.2	736.7	736.2	735.7	735.1	734.9	734.9	734.9	734.9	735.0	735.8
175°	743.6	743.0	742.4	741.6	741.0	740.6	740.5	740.4	740.2	740.1	741.0
177.5°	745.7	745.2	744.7	744.2	743.6	743.4	743.4	743.4	743.4	743.4	744.1
180°	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	18.0	18.1	18.3	18.4	18.4	18.5	18.5	18.6
90°	14.2	14.9	15.8	16.3	16.6	16.8	17.1	17.3
92.5°	23.7	24.2	24.6	24.9	25.1	25.2	25.4	25.5
95°	44.5	44.9	45.3	45.5	45.5	45.5	45.5	45.5
97.5°	70.2	70.6	71.1	71.3	71.3	71.3	71.3	71.3
100°	88.7	88.9	89.2	89.3	89.3	89.3	89.3	89.3
102.5°	108.2	108.6	108.9	109.2	109.3	109.4	109.5	109.6
105°	137.8	138.3	138.7	139.0	139.4	139.8	140.2	140.6
107.5°	170.0	170.3	170.7	170.9	170.8	170.8	170.8	170.8
110°	191.3	191.1	190.8	190.9	191.3	191.6	192.0	192.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	214.3	214.2	214.2	214.2	214.3	214.3	214.4	214.5
115°	249.7	249.6	249.4	249.3	249.2	249.0	248.9	248.8
117.5°	283.8	283.4	282.9	282.6	282.3	282.1	281.8	281.6
120°	306.9	306.2	305.6	305.4	305.7	305.9	306.2	306.4
122.5°	330.3	329.9	329.4	329.0	328.5	328.1	327.6	327.2
125°	364.7	364.4	364.2	363.9	363.7	363.3	363.1	362.8
127.5°	397.5	397.3	397.0	396.8	396.6	396.4	396.2	396.0
130°	420.5	420.3	420.0	419.6	419.1	418.6	418.1	417.6
132.5°	442.2	441.9	441.7	441.4	441.2	441.0	440.8	440.6
135°	474.6	474.4	474.1	473.8	473.4	473.0	472.7	472.3
137.5°	506.0	505.7	505.4	505.2	505.3	505.4	505.5	505.6
140°	526.7	526.6	526.5	526.3	526.2	526.1	526.0	525.8
142.5°	546.3	546.3	546.2	546.2	546.2	546.2	546.1	546.1
145°	575.7	575.6	575.4	575.2	574.8	574.4	574.0	573.7
147.5°	602.4	602.3	602.2	602.1	602.0	601.8	601.7	601.6
150°	619.1	619.1	619.1	619.1	618.9	618.8	618.7	618.6
152.5°	635.0	635.3	635.6	635.6	635.3	634.9	634.6	634.3
155°	657.0	657.5	658.1	658.1	657.5	657.0	656.5	656.0
157.5°	676.5	676.9	677.3	677.2	676.8	676.4	675.9	675.5
160°	688.5	688.8	689.2	689.1	688.5	687.8	687.2	686.6
162.5°	699.2	699.9	700.6	700.6	700.0	699.3	698.7	698.1
165°	713.5	714.2	715.0	715.1	714.6	714.1	713.6	713.1
167.5°	725.4	726.2	727.0	726.9	726.2	725.4	724.6	723.8
170°	731.8	732.7	733.4	733.4	732.5	731.5	730.6	729.7
172.5°	736.7	737.6	738.4	738.4	737.5	736.6	735.7	734.9
175°	741.9	742.9	743.7	743.7	742.9	741.9	741.0	740.1
177.5°	744.8	745.5	746.2	746.2	745.4	744.6	743.7	742.9
180°	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8

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