

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: P332603-930

Luminaire Tested: **S124DIP-S795D810U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332603-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
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-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5001.7 lumens
Efficiency: N/A
Efficacy: 109.0 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

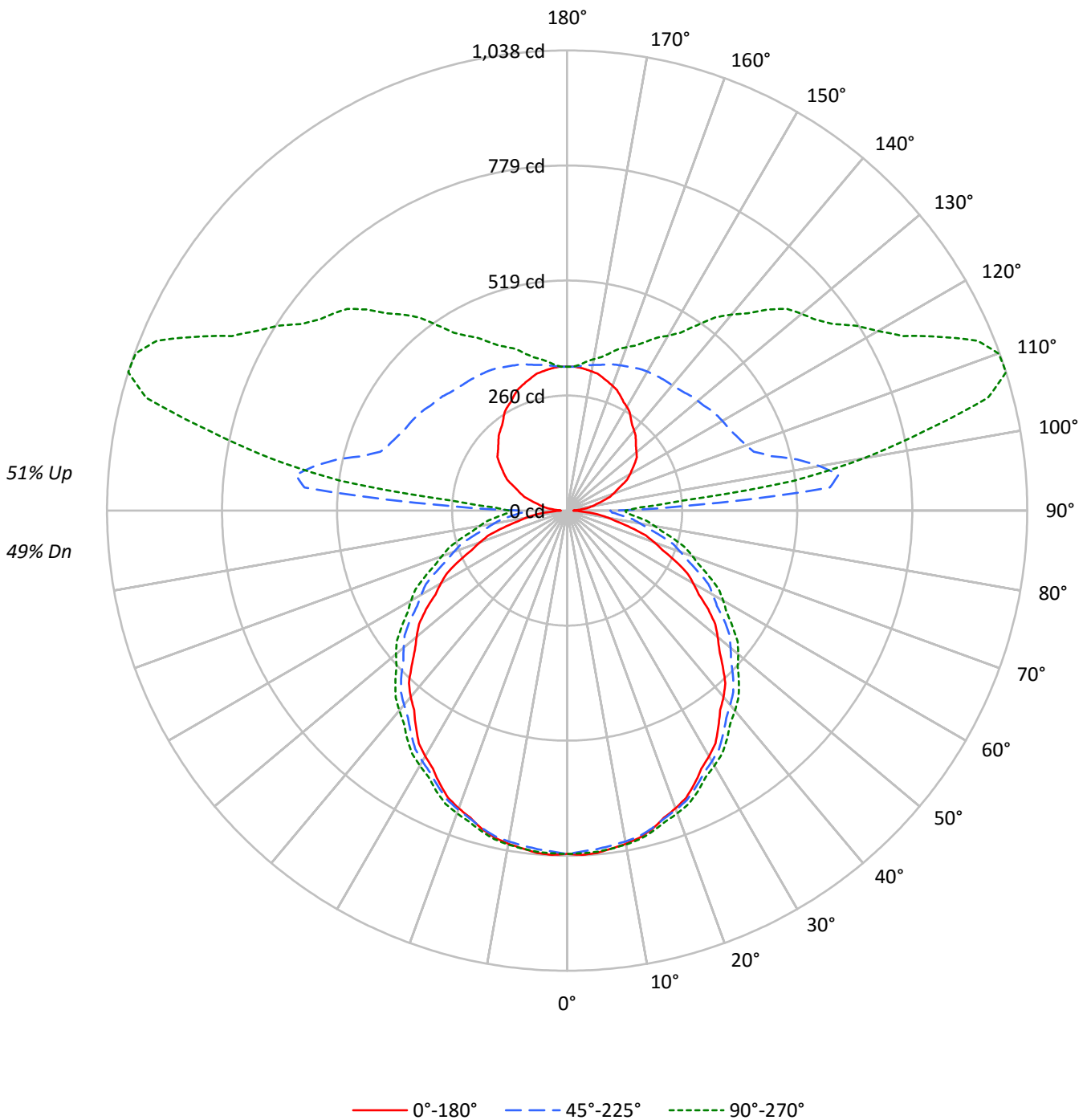
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	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	4.2
20°-30°	317.7	6.4
30°-40°	384.4	7.7
40°-50°	406.4	8.1
50°-60°	382.5	7.6
60°-70°	317.3	6.3
70°-80°	222.9	4.5
80°-90°	127.8	2.6
90°-100°	309.2	6.2
100°-110°	543.2	10.9
110°-120°	474.1	9.5
120°-130°	388.5	7.8
130°-140°	315.5	6.3
140°-150°	235.9	4.7
150°-160°	164.6	3.3
160°-170°	96.8	1.9
170°-180°	31.5	0.6
0°-30°	601.2	12.0
0°-40°	985.6	19.7
0°-60°	1774.4	35.5
0°-90°	2442.4	48.8
90°-120°	1326.5	26.5
90°-150°	2266.4	45.3
90°-180°	2559.0	51.2
0°-180°	5001.7	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°	14	54	97	123	131	10
95°	32	107	595	355	262	32
105°	82	134	475	979	983	88
115°	137	179	414	776	927	136
125°	186	221	395	650	733	166
135°	219	261	376	562	641	170
145°	251	287	366	462	510	158
155°	285	308	356	403	420	131
165°	310	320	341	361	367	88
175°	324	324	327	332	330	31
180°	324	324	324	324	324	



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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°	25.8	33.9	42.2	50.1	58.1	66.3	75.5	84.0	92.6	101.3	106.8
90°	14.5	23.5	33.1	41.5	49.8	57.8	70.0	78.2	87.8	97.3	102.3
92.5°	20.5	30.7	43.6	58.4	74.6	95.5	136.2	193.9	250.4	283.9	255.5
95°	32.3	40.6	53.3	68.0	89.6	123.5	186.9	299.4	459.6	595.0	614.9
97.5°	47.9	53.5	64.4	77.5	96.1	125.2	175.8	269.9	429.2	617.3	746.2
100°	58.0	63.0	72.5	85.1	102.2	128.9	174.1	253.6	391.2	578.5	746.9
102.5°	68.2	73.6	81.9	93.5	109.5	134.8	176.1	246.9	364.9	531.7	705.0
105°	82.4	88.1	95.2	106.7	122.1	146.0	183.8	243.8	340.1	475.4	630.1
107.5°	99.8	104.3	110.6	121.9	136.1	159.2	194.0	249.0	332.0	441.8	568.8
110°	110.9	114.8	120.7	131.0	145.2	167.1	201.9	253.3	330.2	429.4	537.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.4	125.1	131.1	140.6	154.5	176.2	209.6	258.1	330.1	421.3	518.3
115°	136.6	140.1	146.3	154.5	168.4	189.5	221.2	265.5	331.0	413.7	498.2
117.5°	153.2	156.0	161.0	169.1	181.5	202.7	232.7	273.6	332.5	407.9	486.2
120°	163.7	165.6	170.6	178.2	189.6	210.5	240.4	279.1	333.8	404.4	479.0
122.5°	173.9	175.3	179.9	186.5	198.4	218.5	248.0	284.4	335.2	400.4	471.5
125°	186.5	188.8	192.4	199.3	211.2	231.3	259.1	293.3	338.2	395.3	460.2
127.5°	198.1	200.0	204.4	212.2	224.6	244.3	270.3	300.8	339.6	388.7	445.7
130°	204.1	206.4	211.3	220.7	232.6	252.6	277.3	305.2	340.9	384.7	436.7
132.5°	210.7	212.5	219.0	227.8	240.8	259.3	283.5	310.3	342.3	381.4	428.6
135°	219.2	221.7	228.0	238.9	252.3	269.5	291.9	316.2	343.7	375.6	415.7
137.5°	228.4	230.6	237.5	247.6	261.3	277.4	297.7	319.8	343.6	371.5	404.8
140°	235.1	236.8	243.6	254.2	267.4	282.7	302.1	322.6	344.5	368.9	398.8
142.5°	241.5	243.4	249.8	260.2	273.0	287.7	306.1	325.0	345.4	367.5	394.1
145°	251.4	253.2	259.3	268.1	280.0	293.9	310.5	327.7	346.2	365.9	387.5
147.5°	262.8	263.2	268.6	277.6	287.5	300.0	315.6	330.6	346.8	363.6	381.7
150°	269.9	270.4	275.2	282.7	292.0	304.1	318.1	332.2	346.8	362.1	378.1
152.5°	275.8	275.9	281.0	288.0	296.6	307.7	320.2	333.1	345.8	359.5	374.0
155°	284.9	285.6	289.4	295.8	302.8	312.3	323.2	334.0	344.2	355.7	367.9
157.5°	294.0	294.0	297.6	302.6	308.7	316.2	325.4	334.0	342.6	351.8	361.6
160°	299.6	299.6	302.1	306.6	311.8	318.8	326.4	334.0	341.0	348.7	357.0
162.5°	304.8	304.2	306.2	310.2	314.8	320.2	327.4	334.0	339.6	345.7	352.9
165°	310.5	310.5	311.8	315.0	318.1	322.0	327.7	332.8	336.6	341.0	346.2
167.5°	316.2	315.6	316.2	318.6	320.4	323.3	327.6	331.3	333.5	336.5	340.1
170°	318.8	318.1	318.8	320.7	322.0	323.8	327.0	330.2	331.5	333.4	336.0
172.5°	321.3	320.7	320.8	322.2	322.9	324.3	326.5	329.2	329.5	330.4	332.4
175°	323.8	323.2	323.2	323.8	324.5	324.5	325.8	327.7	327.0	327.0	328.3
177.5°	325.0	324.5	324.0	324.5	324.5	324.5	325.0	326.0	325.0	325.0	325.5
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5



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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°	112.5	118.2	123.9	127.6	129.4	131.3	132.8	134.5
90°	108.5	114.7	121.0	124.5	126.7	128.9	129.8	131.3
92.5°	217.8	192.2	178.4	169.2	163.1	161.3	160.6	162.2
95°	558.2	464.6	384.4	326.0	296.5	278.5	268.8	262.2
97.5°	778.1	746.4	689.2	625.9	581.8	545.1	527.7	516.0
100°	845.1	863.1	837.1	793.1	739.1	701.5	683.7	680.0
102.5°	837.8	906.0	920.1	903.8	871.3	844.7	826.0	823.4
105°	780.9	896.0	963.9	993.2	996.1	992.5	985.1	982.8
107.5°	702.9	825.1	918.7	978.6	1011.5	1027.4	1035.2	1038.2
110°	655.7	770.4	867.2	940.4	987.2	1015.5	1028.5	1035.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	619.7	721.5	813.2	886.2	939.1	973.1	990.7	1001.5
115°	582.2	664.9	743.6	807.6	859.4	898.9	920.7	927.2
117.5°	560.7	629.7	692.3	747.0	791.5	825.2	847.3	852.8
120°	549.8	612.9	667.8	715.8	753.7	783.3	801.4	809.9
122.5°	540.2	601.3	651.6	693.8	725.9	751.3	766.7	775.1
125°	525.1	583.5	631.2	668.6	695.3	714.9	728.2	733.2
127.5°	506.7	562.6	609.9	645.6	672.5	690.2	701.7	706.9
130°	493.0	546.8	593.7	629.7	657.0	674.2	685.5	690.5
132.5°	479.2	529.9	575.5	611.5	638.3	657.5	668.3	673.3
135°	458.9	503.4	545.4	579.4	606.1	625.1	636.4	641.4
137.5°	441.0	478.9	514.5	545.2	570.0	588.6	597.9	603.5
140°	430.7	463.2	494.3	522.9	546.2	561.1	571.0	577.1
142.5°	421.5	450.1	477.0	501.7	522.2	536.1	544.7	549.1
145°	409.0	431.9	452.2	471.0	487.7	499.3	506.5	510.4
147.5°	398.8	416.1	431.5	446.0	458.4	468.2	473.7	475.5
150°	393.3	408.0	420.8	432.2	442.5	450.7	454.5	455.2
152.5°	387.8	400.3	412.1	421.5	430.2	436.9	439.2	439.9
155°	379.3	389.6	399.1	406.8	413.1	418.2	420.1	420.1
157.5°	370.2	378.8	386.9	393.0	397.8	401.6	402.8	402.8
160°	364.7	371.7	378.7	383.8	387.6	391.4	392.1	392.1
162.5°	359.1	365.0	370.6	375.1	377.9	381.7	382.4	381.9
165°	351.2	355.1	359.5	362.7	365.3	367.9	367.2	366.6
167.5°	343.7	346.7	350.3	352.1	353.4	355.1	355.0	354.4
170°	339.2	341.0	343.6	345.5	346.8	347.4	346.8	346.8
172.5°	335.1	336.5	338.0	339.4	340.1	340.8	340.1	339.2
175°	329.6	330.2	331.5	331.5	331.5	332.8	331.5	330.2
177.5°	326.0	326.5	326.5	327.0	326.5	327.0	326.0	325.0
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5

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