

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: P331932-840

Luminaire Tested: **S123DIP-S560D805U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5174.2 lumens
Efficiency: N/A
Efficacy: 134.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

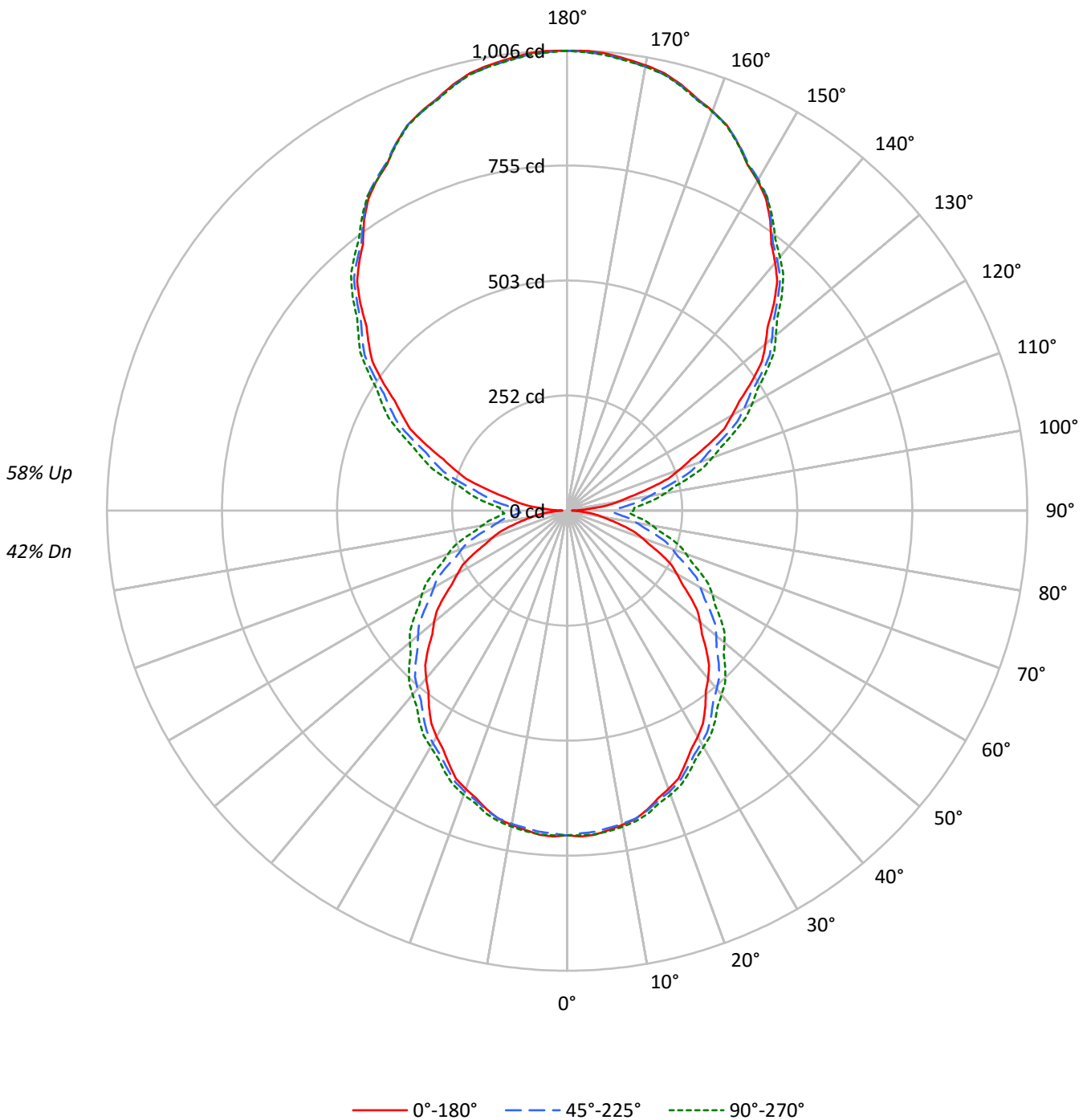
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7643	7643	7643
5°	7667	7451	7455
10°	7599	7280	7244
15°	7501	7084	7012
20°	7361	6862	6756
25°	7189	6606	6489
30°	7011	6375	6216
35°	6812	6132	6000
40°	6623	5910	5767
45°	6414	5697	5582
50°	6206	5488	5378
55°	5978	5271	5194
60°	5753	5053	5005
65°	5525	4819	4780
70°	5183	4558	4549
75°	4746	4256	4316
80°	4241	3962	4047
85°	3780	3757	3892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	1.3
10°-20°	191.9	3.7
20°-30°	287.0	5.5
30°-40°	342.8	6.6
40°-50°	358.6	6.9
50°-60°	336.5	6.5
60°-70°	281.1	5.4
70°-80°	201.1	3.9
80°-90°	122.9	2.4
90°-100°	140.7	2.7
100°-110°	251.3	4.9
110°-120°	370.3	7.2
120°-130°	459.6	8.9
130°-140°	502.3	9.7
140°-150°	486.4	9.4
150°-160°	407.8	7.9
160°-170°	271.5	5.2
170°-180°	95.1	1.8
0°-30°	546.3	10.6
0°-40°	889.0	17.2
0°-60°	1584.2	30.6
0°-90°	2189.3	42.3
90°-120°	762.3	14.7
90°-150°	2210.5	42.7
90°-180°	2985.0	57.7
0°-180°	5174.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	711	709	705	710	710	67
15°	677	679	678	686	685	191
25°	611	619	621	631	631	282
35°	526	538	548	560	563	329
45°	430	449	468	482	489	332
55°	328	354	381	401	408	294
65°	227	257	291	313	322	224
75°	123	160	198	223	233	131
85°	38	77	118	143	152	40
90°	11	57	106	135	145	10
95°	55	91	135	161	170	59
105°	184	205	244	265	275	197
115°	339	352	377	396	402	336
125°	493	497	517	529	532	440
135°	639	643	650	661	664	492
145°	774	775	777	782	782	483
155°	885	885	886	889	884	407
165°	964	962	962	966	961	272
175°	1003	1000	1000	1004	999	95
180°	1005	1005	1005	1005	1005	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	713.3	712.9	712.5	712.0	711.6	710.8	709.7	708.6	707.5	706.4	707.5
5°	710.9	710.5	710.2	709.9	709.5	708.8	707.8	706.8	705.8	704.7	706.1
7.5°	704.0	704.0	704.1	704.2	704.3	703.8	702.8	701.8	700.7	699.7	701.5
10°	697.8	698.1	698.4	698.8	699.1	698.9	698.0	697.2	696.3	695.5	697.2
12.5°	690.3	690.8	691.4	691.8	692.3	692.3	691.7	691.1	690.4	689.8	691.5
15°	676.9	677.4	677.9	678.4	678.9	679.1	678.9	678.7	678.6	678.4	680.1
17.5°	659.8	660.9	662.0	663.0	664.0	664.5	664.4	664.3	664.3	664.2	665.7
20°	647.5	648.5	649.5	650.6	651.6	652.3	652.7	653.0	653.3	653.7	655.2
22.5°	634.5	635.5	636.5	637.6	638.6	639.3	639.9	640.4	640.9	641.3	643.3
25°	611.2	612.9	614.6	616.3	618.0	619.1	619.7	620.2	620.7	621.2	623.4
27.5°	587.6	589.6	591.6	593.5	595.4	596.9	598.0	599.2	600.3	601.4	603.3
30°	570.9	573.1	575.3	577.6	579.9	581.7	583.0	584.4	585.7	587.1	589.3
32.5°	552.3	554.8	557.3	559.9	562.4	564.5	566.3	568.0	569.9	571.7	573.9
35°	526.0	528.8	531.5	534.3	537.0	539.6	541.8	544.0	546.2	548.5	551.1
37.5°	498.2	501.3	504.3	507.5	510.6	513.5	516.2	519.0	521.7	524.5	527.5
40°	479.6	482.7	485.8	488.9	492.0	495.2	498.7	502.1	505.5	509.0	511.9
42.5°	459.2	463.0	466.8	470.5	474.3	478.0	481.6	485.1	488.8	492.3	495.5
45°	430.1	434.2	438.4	442.5	446.6	450.8	455.1	459.4	463.7	468.0	471.3
47.5°	399.6	404.3	409.0	413.6	418.3	423.1	428.1	432.9	437.9	442.8	446.5
50°	379.8	384.7	389.4	394.3	399.1	404.1	409.5	414.9	420.1	425.5	429.4
52.5°	358.8	363.9	369.0	374.1	379.1	384.7	390.5	396.4	402.2	408.2	412.2
55°	328.0	333.7	339.3	345.0	350.7	356.6	362.8	369.0	375.2	381.3	386.0
57.5°	298.0	303.9	309.8	315.7	321.6	328.0	334.8	341.5	348.3	355.1	359.7
60°	276.9	283.2	289.3	295.5	301.6	308.3	315.4	322.4	329.4	336.5	341.3
62.5°	257.1	263.5	269.8	276.1	282.5	289.3	296.8	304.3	311.7	319.2	324.0
65°	226.6	233.4	240.0	246.8	253.5	260.6	268.2	275.7	283.3	290.8	296.0
67.5°	195.7	202.9	210.0	217.0	224.2	231.6	239.3	247.0	254.7	262.4	268.0
70°	174.1	181.5	188.8	196.2	203.6	211.5	219.6	227.9	236.2	244.5	249.9
72.5°	154.2	161.7	169.1	176.4	183.8	191.8	200.3	208.8	217.3	225.9	231.6
75°	123.0	131.1	139.2	147.2	155.3	163.7	172.3	180.9	189.5	198.0	203.7
77.5°	95.7	103.9	112.1	120.2	128.4	136.7	145.4	154.1	162.8	171.5	177.4
80°	76.5	85.0	93.4	101.9	110.3	119.0	127.8	136.8	145.8	154.7	160.6
82.5°	59.9	68.5	77.0	85.5	94.1	102.9	112.0	121.1	130.2	139.3	145.1
85°	37.9	46.5	55.1	63.7	72.3	81.1	90.3	99.4	108.5	117.5	123.4
87.5°	20.7	29.7	38.6	47.5	56.4	65.4	74.6	83.9	93.1	102.3	108.4
90°	10.8	21.0	31.2	41.4	51.6	62.2	73.2	84.2	95.3	106.3	112.9
92.5°	28.6	37.4	46.2	54.9	63.7	73.1	83.0	92.9	102.8	112.8	119.1
95°	55.1	63.0	71.0	78.9	86.8	95.7	105.5	115.3	125.2	135.0	141.1
97.5°	90.3	97.3	104.2	111.2	118.2	126.2	135.2	144.3	153.4	162.5	168.3
100°	114.3	120.9	127.4	134.0	140.6	148.2	157.0	165.8	174.6	183.4	188.8
102.5°	142.2	147.7	153.3	158.9	164.5	171.8	180.7	189.6	198.5	207.4	212.8
105°	183.8	188.3	192.8	197.2	201.8	208.4	217.4	226.4	235.4	244.4	249.1
107.5°	231.6	235.3	238.9	242.7	246.4	252.1	259.7	267.4	275.0	282.7	287.8
110°	261.3	264.7	268.1	271.6	275.0	280.3	287.6	294.8	302.1	309.3	314.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.9	295.6	298.3	301.1	303.9	308.5	315.3	321.9	328.6	335.3	340.4
115°	339.4	342.0	344.6	347.2	349.8	354.0	359.8	365.7	371.5	377.4	381.6
117.5°	387.0	388.6	390.2	391.8	393.4	397.0	402.3	407.7	413.0	418.4	422.4
120°	416.1	418.0	419.9	421.7	423.6	427.1	431.8	436.7	441.4	446.3	450.0
122.5°	447.0	448.2	449.4	450.6	451.8	454.9	459.9	464.8	469.8	474.7	478.1
125°	493.4	493.9	494.4	495.0	495.5	498.1	502.7	507.4	512.0	516.6	519.6
127.5°	537.0	538.0	538.9	539.9	540.8	543.2	546.9	550.7	554.4	558.2	560.6
130°	566.0	567.3	568.6	569.8	571.0	573.1	575.9	578.9	581.8	584.7	587.2
132.5°	594.5	595.8	597.2	598.6	600.0	601.9	604.2	606.5	608.9	611.3	613.6
135°	638.7	639.6	640.5	641.4	642.3	643.6	645.3	647.0	648.6	650.4	652.8
137.5°	679.6	680.3	681.1	681.9	682.6	683.7	685.2	686.7	688.3	689.8	691.8
140°	707.4	708.3	709.2	710.0	710.9	711.8	712.5	713.1	713.8	714.5	716.9
142.5°	733.4	734.1	734.8	735.6	736.3	736.9	737.3	737.7	738.1	738.5	740.6
145°	773.8	774.0	774.1	774.3	774.5	774.8	775.4	775.9	776.4	776.9	778.1
147.5°	808.4	809.0	809.6	810.2	810.9	811.4	811.9	812.4	812.9	813.4	813.9
150°	832.9	833.3	833.6	834.0	834.4	834.8	835.1	835.5	835.8	836.2	836.2
152.5°	853.2	853.6	854.1	854.6	855.2	855.6	855.8	856.0	856.2	856.4	856.7
155°	885.0	885.0	885.0	885.0	885.0	885.1	885.3	885.6	885.8	885.9	886.6
157.5°	912.2	912.0	911.8	911.6	911.4	911.4	911.5	911.7	911.8	911.9	912.7
160°	929.3	929.0	928.6	928.3	927.9	927.8	927.8	927.8	927.8	927.8	928.6
162.5°	944.4	944.0	943.5	943.0	942.5	942.3	942.5	942.6	942.7	942.9	943.7
165°	964.0	963.5	963.0	962.5	961.9	961.7	961.7	961.7	961.7	961.7	962.7
167.5°	979.7	979.0	978.3	977.5	976.8	976.6	976.7	976.8	977.0	977.1	978.3
170°	988.6	987.8	987.1	986.4	985.7	985.3	985.3	985.3	985.3	985.3	986.6
172.5°	995.4	994.8	994.1	993.4	992.7	992.3	992.3	992.3	992.3	992.3	993.4
175°	1002.7	1002.0	1001.4	1000.7	1000.0	999.6	999.6	999.6	999.6	999.6	1000.7
177.5°	1005.7	1005.2	1004.6	1004.0	1003.5	1003.2	1003.2	1003.2	1003.2	1003.2	1004.0
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	708.6	709.7	710.8	711.3	711.1	711.0	710.9	710.7
5°	707.5	708.8	710.2	710.8	710.6	710.4	710.3	710.1
7.5°	703.2	704.9	706.7	707.4	707.2	707.0	706.8	706.6
10°	698.9	700.6	702.4	703.0	702.7	702.4	702.0	701.7
12.5°	693.1	694.6	696.2	696.8	696.5	696.1	695.8	695.5
15°	681.9	683.6	685.3	686.1	685.9	685.7	685.6	685.4
17.5°	667.3	668.8	670.3	671.1	670.8	670.6	670.3	670.0
20°	656.8	658.3	659.8	660.8	660.9	661.1	661.3	661.4
22.5°	645.2	647.2	649.1	650.1	649.9	649.8	649.7	649.6
25°	625.6	627.9	630.2	631.3	631.3	631.3	631.3	631.3
27.5°	605.2	607.1	609.0	610.2	610.3	610.4	610.6	610.7
30°	591.3	593.3	595.4	596.4	596.4	596.4	596.4	596.4
32.5°	576.0	578.2	580.5	581.8	582.2	582.6	583.0	583.4
35°	553.6	556.2	558.8	560.4	561.1	561.8	562.5	563.2
37.5°	530.3	533.2	536.1	538.0	538.5	539.0	539.6	540.1
40°	514.8	517.8	520.7	522.5	523.2	523.9	524.5	525.2
42.5°	498.7	501.9	505.1	507.2	508.2	509.1	510.1	511.0
45°	474.5	477.8	481.1	483.4	484.7	486.1	487.6	488.9
47.5°	450.2	453.8	457.5	459.9	460.9	462.0	463.1	464.1
50°	433.3	437.4	441.3	443.8	445.0	446.3	447.5	448.7
52.5°	416.4	420.4	424.5	427.3	428.8	430.2	431.7	433.2
55°	390.6	395.3	399.9	402.9	404.3	405.7	407.1	408.5
57.5°	364.5	369.1	373.8	376.9	378.5	380.1	381.7	383.3
60°	346.2	350.9	355.8	359.1	361.0	362.8	364.8	366.7
62.5°	328.8	333.7	338.4	341.7	343.5	345.2	347.0	348.7
65°	301.1	306.3	311.5	315.0	316.7	318.4	320.1	321.8
67.5°	273.7	279.3	285.0	288.5	289.9	291.3	292.9	294.3
70°	255.5	260.9	266.5	270.0	271.8	273.5	275.2	276.9
72.5°	237.1	242.8	248.4	252.2	253.9	255.6	257.3	259.0
75°	209.3	215.1	220.8	224.6	226.6	228.7	230.8	232.9
77.5°	183.4	189.3	195.3	199.1	200.8	202.3	203.9	205.5
80°	166.4	172.3	178.1	181.9	183.6	185.3	187.0	188.7
82.5°	151.0	156.7	162.6	166.4	168.1	169.9	171.6	173.3
85°	129.3	135.1	141.0	144.7	146.4	148.1	149.9	151.6
87.5°	114.3	120.3	126.3	130.2	132.0	133.7	135.5	137.3
90°	119.5	126.0	132.6	136.8	139.0	141.0	143.1	145.1
92.5°	125.3	131.6	137.8	141.7	143.1	144.4	145.8	147.1
95°	147.0	153.1	159.2	163.0	164.7	166.4	168.1	169.9
97.5°	174.3	180.3	186.1	190.0	191.6	193.3	194.9	196.5
100°	194.4	199.9	205.4	209.2	211.3	213.4	215.4	217.5
102.5°	218.2	223.6	228.9	232.5	234.1	235.7	237.4	239.0
105°	254.0	258.8	263.6	267.0	268.8	270.7	272.7	274.6
107.5°	293.1	298.2	303.4	306.6	307.9	309.2	310.5	311.8
110°	319.6	324.8	329.9	333.1	334.1	335.1	336.1	337.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	345.6	350.7	356.0	359.2	360.7	362.1	363.6	365.1
115°	386.0	390.2	394.6	397.3	398.5	399.7	400.9	402.1
117.5°	426.5	430.5	434.5	437.1	437.9	438.8	439.6	440.4
120°	453.7	457.6	461.3	463.6	464.5	465.3	466.2	467.1
122.5°	481.4	484.7	488.2	490.2	490.9	491.6	492.3	493.0
125°	522.5	525.3	528.3	530.0	530.5	531.0	531.5	532.0
127.5°	563.0	565.4	567.8	569.2	569.6	569.9	570.3	570.7
130°	589.9	592.4	595.0	596.1	595.9	595.7	595.5	595.3
132.5°	615.9	618.1	620.5	621.7	621.9	622.2	622.4	622.6
135°	655.2	657.6	659.9	661.5	662.0	662.5	663.0	663.5
137.5°	693.8	695.7	697.7	698.8	699.0	699.2	699.3	699.5
140°	719.3	721.6	724.1	725.1	724.8	724.4	724.0	723.7
142.5°	742.8	744.9	747.1	748.1	748.0	747.9	747.8	747.7
145°	779.3	780.5	781.7	782.3	782.3	782.2	782.2	782.2
147.5°	814.3	814.7	815.1	815.1	814.6	814.2	813.7	813.3
150°	836.2	836.2	836.2	835.8	835.1	834.4	833.6	832.9
152.5°	856.9	857.2	857.5	857.2	856.4	855.5	854.6	853.8
155°	887.3	888.0	888.7	888.4	887.2	886.0	884.7	883.5
157.5°	913.4	914.1	914.8	914.7	913.8	912.8	911.8	910.8
160°	929.5	930.4	931.2	931.3	930.6	929.9	929.2	928.5
162.5°	944.6	945.5	946.4	946.2	945.1	944.0	942.9	941.8
165°	963.8	964.8	965.9	965.8	964.6	963.3	962.1	960.9
167.5°	979.4	980.4	981.5	981.5	980.4	979.4	978.3	977.1
170°	987.8	989.1	990.3	990.3	989.1	987.8	986.6	985.3
172.5°	994.5	995.6	996.6	996.6	995.3	994.1	992.9	991.7
175°	1001.7	1002.7	1003.8	1003.7	1002.5	1001.3	1000.0	998.8
177.5°	1004.9	1005.7	1006.5	1006.5	1005.5	1004.5	1003.6	1002.6
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1

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