

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: P332013-927

Luminaire Tested: **S123DIP-S1000D585U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332013-927
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-S1000D585U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4921.5 lumens
Efficiency: N/A
Efficacy: 100.9 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: Semi-Direct

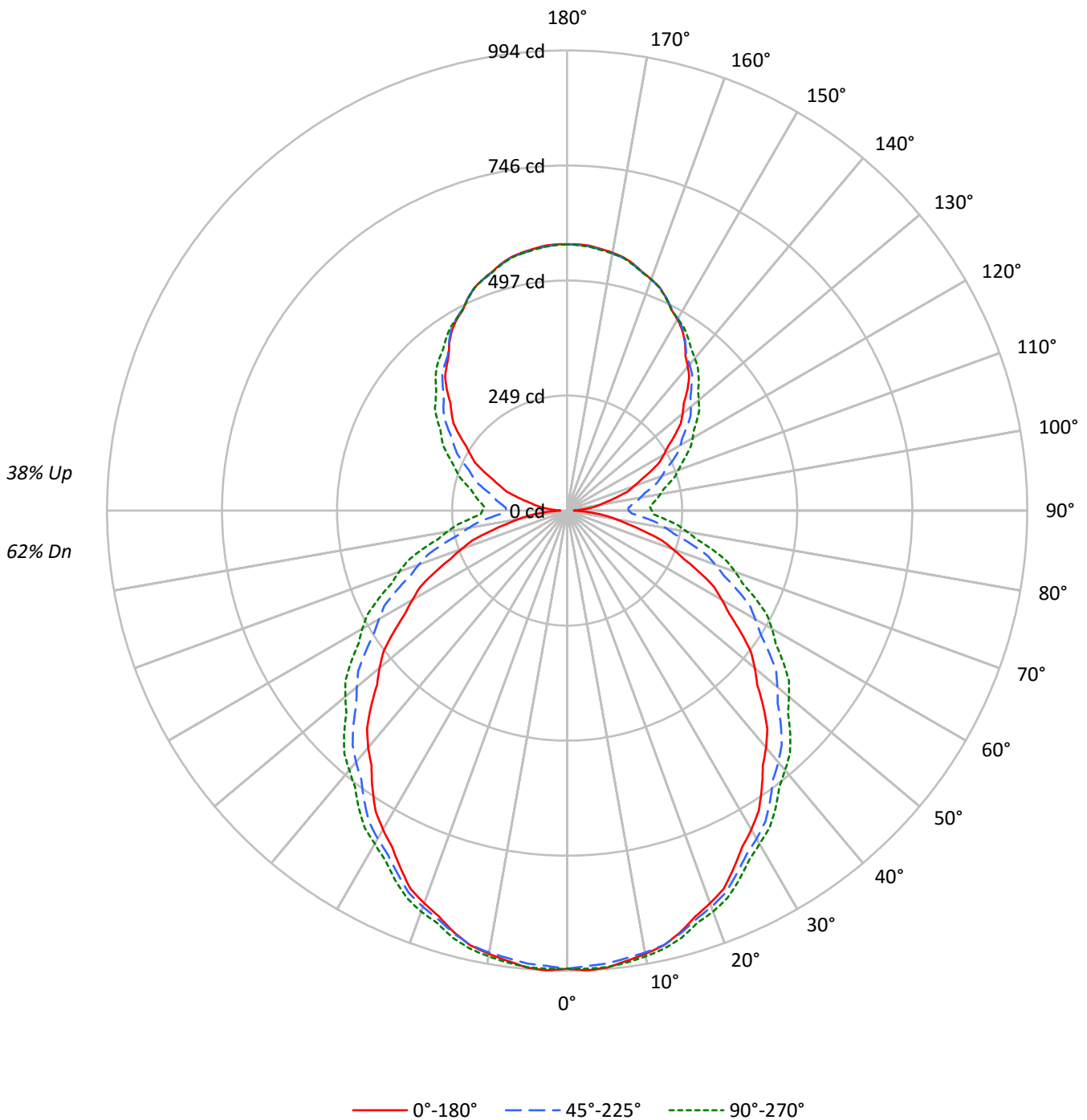
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	93	88	84	81	77	74	71	67	64	62	57	56	54	49
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	50	47	45	40
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	44	40	37	34
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25
6	63	50	42	35	59	47	39	34	42	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	30	38	31	27	33	28	24	29	25	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	38	30	24	47	35	28	23	32	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	1.9
10°-20°	267.5	5.4
20°-30°	400.0	8.1
30°-40°	477.7	9.7
40°-50°	499.9	10.2
50°-60°	469.1	9.5
60°-70°	391.8	8.0
70°-80°	280.3	5.7
80°-90°	168.9	3.4
90°-100°	142.4	2.9
100°-110°	189.2	3.8
110°-120°	242.2	4.9
120°-130°	280.3	5.7
130°-140°	295.2	6.0
140°-150°	280.0	5.7
150°-160°	233.4	4.7
160°-170°	155.4	3.2
170°-180°	54.4	1.1
0°-30°	761.3	15.5
0°-40°	1239.1	25.2
0°-60°	2208.0	44.9
0°-90°	3048.9	62.0
90°-120°	573.8	11.7
90°-150°	1429.4	29.0
90°-180°	1873.0	38.1
0°-180°	4921.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	14	72	133	170	183	11
95°	38	84	140	174	186	39
105°	110	138	188	217	228	118
115°	197	213	250	275	284	196
125°	284	287	316	336	343	254
135°	367	369	380	397	402	283
145°	444	443	445	452	455	277
155°	506	507	507	508	506	233
165°	552	550	550	553	550	155
175°	574	572	572	574	572	54
180°	575	575	575	575	575	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	28.8	40.9	53.0	65.2	77.3	89.6	102.1	114.5	127.1	139.5	147.7
90°	14.5	27.3	39.9	52.7	65.4	78.6	92.1	105.6	119.1	132.7	141.2
92.5°	24.1	35.3	46.7	57.9	69.2	81.2	94.0	106.7	119.5	132.3	140.5
95°	38.5	48.6	58.6	68.7	78.7	90.0	102.5	115.1	127.6	140.2	148.0
97.5°	57.9	66.9	75.8	84.8	93.7	104.1	115.9	127.7	139.5	151.3	158.9
100°	71.1	79.5	87.7	95.9	104.3	114.2	125.6	137.2	148.7	160.3	167.5
102.5°	86.6	93.8	101.1	108.4	115.6	125.0	136.5	148.0	159.5	171.0	178.0
105°	110.3	116.2	122.2	128.2	134.1	142.7	153.9	165.1	176.3	187.5	194.2
107.5°	136.8	141.9	146.9	151.9	156.9	164.5	174.6	184.7	194.9	205.0	211.8
110°	153.3	157.8	162.3	166.8	171.3	178.6	188.3	198.1	207.9	217.7	224.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.4	175.1	178.7	182.4	186.1	192.5	201.8	211.0	220.2	229.5	236.0
115°	197.4	200.6	203.7	207.0	210.2	215.9	224.3	232.8	241.2	249.6	255.5
117.5°	224.5	226.5	228.5	230.4	232.4	237.3	245.2	252.9	260.8	268.6	274.3
120°	240.7	242.4	244.2	246.1	247.8	252.5	259.8	267.3	274.6	282.0	287.5
122.5°	258.3	259.4	260.5	261.6	262.6	266.7	274.0	281.3	288.6	295.8	300.9
125°	284.3	284.6	284.9	285.2	285.5	289.0	295.8	302.5	309.3	316.0	320.7
127.5°	309.3	309.7	310.1	310.5	310.9	313.8	319.3	324.9	330.4	336.0	340.1
130°	325.8	326.5	327.0	327.6	328.1	330.7	335.1	339.6	344.1	348.6	352.8
132.5°	341.6	342.4	343.2	343.9	344.7	346.8	350.5	354.0	357.7	361.3	365.2
135°	366.8	367.2	367.5	367.9	368.3	369.7	372.2	374.8	377.3	379.9	383.7
137.5°	390.1	390.4	390.7	391.0	391.3	392.4	394.1	395.9	397.6	399.3	402.7
140°	405.5	406.0	406.5	407.0	407.5	408.1	409.0	409.8	410.6	411.5	414.9
142.5°	420.3	420.6	421.0	421.2	421.5	421.8	422.2	422.6	422.9	423.2	426.3
145°	443.5	443.4	443.4	443.3	443.3	443.4	443.7	444.0	444.3	444.7	446.5
147.5°	462.6	463.0	463.3	463.7	464.1	464.4	464.7	464.9	465.2	465.5	466.0
150°	476.7	476.9	477.1	477.3	477.5	477.7	477.9	478.1	478.3	478.5	478.5
152.5°	488.3	488.5	488.9	489.1	489.4	489.6	489.7	489.8	490.0	490.0	490.2
155°	506.5	506.5	506.5	506.5	506.5	506.6	506.7	506.8	506.9	507.0	507.4
157.5°	522.0	522.0	521.8	521.7	521.6	521.6	521.7	521.7	521.8	521.9	522.3
160°	531.8	531.6	531.4	531.2	531.0	530.9	530.9	530.9	530.9	530.9	531.4
162.5°	540.5	540.2	540.0	539.6	539.4	539.3	539.4	539.5	539.6	539.6	540.1
165°	551.7	551.4	551.1	550.8	550.5	550.3	550.3	550.3	550.3	550.3	551.0
167.5°	560.6	560.2	559.8	559.4	559.0	558.9	559.0	559.0	559.1	559.2	559.8
170°	565.7	565.3	564.9	564.5	564.1	563.9	563.9	563.9	563.9	563.9	564.6
172.5°	569.7	569.3	568.9	568.5	568.1	567.9	567.9	567.9	567.9	567.9	568.5
175°	573.9	573.5	573.1	572.7	572.3	572.0	572.0	572.0	572.0	572.0	572.7
177.5°	575.6	575.3	575.0	574.6	574.3	574.1	574.1	574.1	574.1	574.1	574.6
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	156.0	164.2	172.5	177.8	180.2	182.7	185.1	187.5
90°	149.8	158.4	166.8	172.5	175.1	177.6	180.2	182.8
92.5°	148.9	157.1	165.4	170.6	172.6	174.8	176.8	178.9
95°	155.8	163.7	171.5	176.6	179.0	181.4	183.8	186.2
97.5°	166.5	174.1	181.7	186.7	189.0	191.4	193.8	196.1
100°	174.8	182.0	189.3	194.2	196.8	199.3	201.9	204.5
102.5°	185.1	192.1	199.2	203.9	206.3	208.6	211.0	213.3
105°	200.9	207.6	214.4	218.9	221.3	223.6	225.9	228.3
107.5°	218.5	225.2	232.0	236.3	238.3	240.3	242.2	244.3
110°	230.9	237.6	244.2	248.3	250.1	251.8	253.5	255.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	242.5	249.1	255.6	259.8	261.9	264.0	266.1	268.2
115°	261.3	267.2	273.1	276.9	278.7	280.5	282.3	284.2
117.5°	280.0	285.7	291.4	295.0	296.6	298.2	299.8	301.3
120°	292.9	298.3	303.7	307.1	308.6	310.1	311.6	313.1
122.5°	305.9	311.0	316.1	319.2	320.7	322.1	323.4	324.9
125°	325.3	329.9	334.5	337.5	338.7	340.0	341.3	342.6
127.5°	344.3	348.5	352.7	355.3	356.5	357.7	358.9	360.0
130°	356.9	361.1	365.2	367.7	368.4	369.2	369.9	370.6
132.5°	369.0	372.9	376.8	379.3	380.3	381.4	382.5	383.7
135°	387.7	391.6	395.5	397.9	398.9	400.0	400.9	402.0
137.5°	406.1	409.4	412.8	414.9	415.7	416.5	417.3	418.1
140°	418.4	421.9	425.4	427.4	427.9	428.4	428.9	429.4
142.5°	429.4	432.5	435.6	437.5	438.2	438.8	439.4	440.1
145°	448.3	450.0	451.9	453.0	453.6	454.2	454.7	455.3
147.5°	466.7	467.2	467.8	468.2	468.5	468.7	469.0	469.3
150°	478.5	478.5	478.5	478.5	478.3	478.2	478.1	477.9
152.5°	490.4	490.6	490.8	490.6	490.2	489.7	489.3	488.9
155°	507.8	508.2	508.6	508.4	507.7	507.0	506.4	505.6
157.5°	522.8	523.2	523.6	523.5	522.9	522.4	521.8	521.3
160°	532.0	532.4	532.9	533.0	532.6	532.2	531.8	531.4
162.5°	540.6	541.1	541.6	541.5	540.9	540.3	539.6	539.0
165°	551.6	552.2	552.8	552.7	552.0	551.3	550.6	549.9
167.5°	560.5	561.1	561.7	561.7	561.1	560.5	559.8	559.2
170°	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9
172.5°	569.1	569.7	570.4	570.4	569.7	568.9	568.2	567.5
175°	573.2	573.9	574.5	574.4	573.7	573.0	572.3	571.6
177.5°	575.1	575.6	576.1	576.0	575.4	574.9	574.3	573.8
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

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