

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: P332784-830

Luminaire Tested: **S124DIW-S795D770U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784-830
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: S124DIW-S795D770U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5564.1 lumens
Efficiency: N/A
Efficacy: 123.6 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

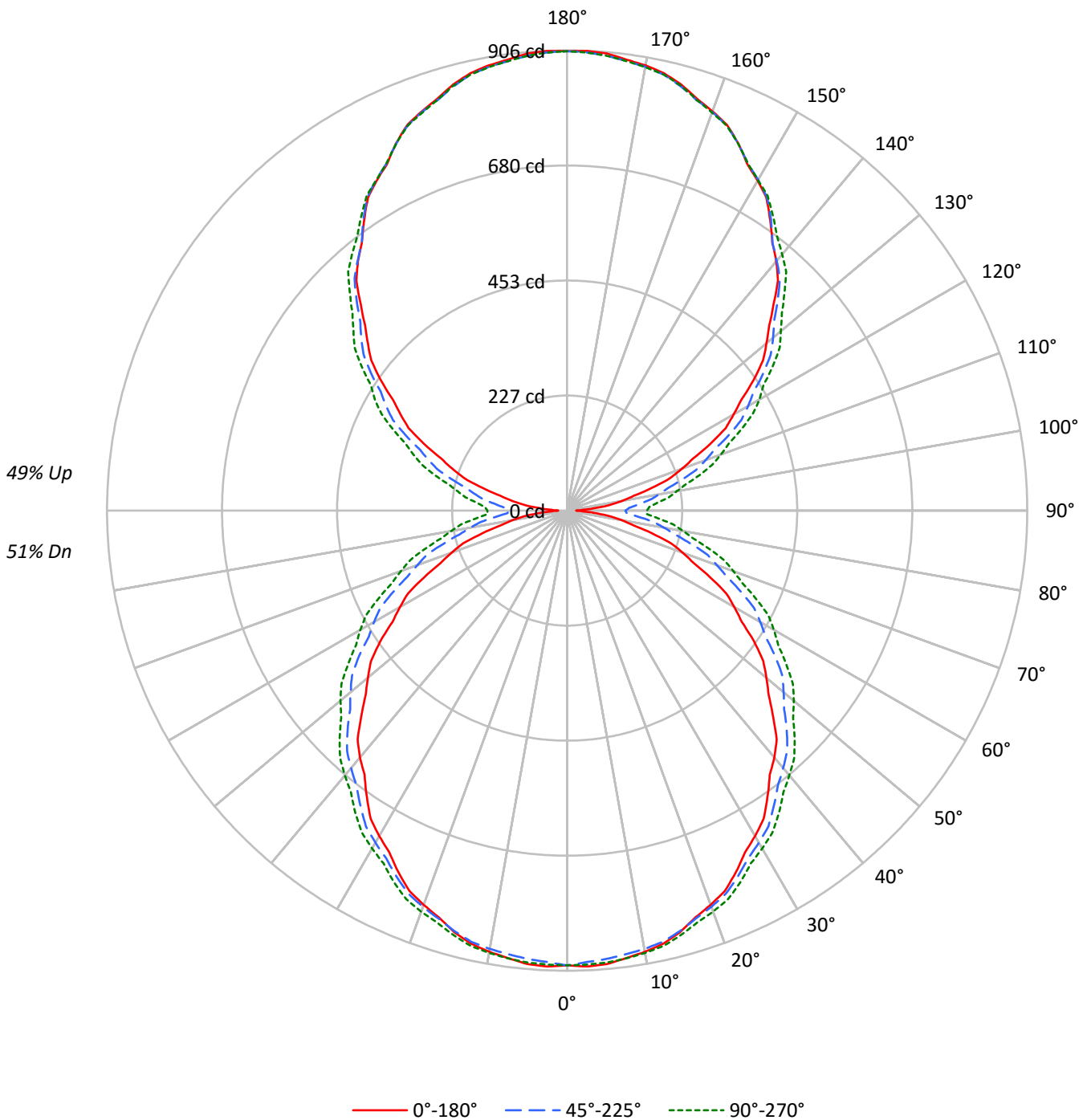
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	67	60	58	56	49	47	46	41
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	33	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	1.5
10°-20°	242.9	4.4
20°-30°	367.3	6.6
30°-40°	444.4	8.0
40°-50°	469.8	8.4
50°-60°	442.2	7.9
60°-70°	366.8	6.6
70°-80°	257.7	4.6
80°-90°	148.4	2.7
90°-100°	146.2	2.6
100°-110°	240.8	4.3
110°-120°	342.9	6.2
120°-130°	419.8	7.5
130°-140°	454.7	8.2
140°-150°	438.6	7.9
150°-160°	367.1	6.6
160°-170°	244.3	4.4
170°-180°	85.5	1.5
0°-30°	695.0	12.5
0°-40°	1139.4	20.5
0°-60°	2051.4	36.9
0°-90°	2824.3	50.8
90°-120°	729.8	13.1
90°-150°	2042.9	36.7
90°-180°	2740.0	49.2
0°-180°	5564.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	18	66	115	147	157	13
95°	55	95	140	168	179	57
105°	172	194	233	259	270	183
115°	311	321	351	371	378	307
125°	448	449	472	488	494	400
135°	575	579	586	600	605	445
145°	697	699	700	705	707	436
155°	798	797	797	799	797	367
165°	868	866	865	868	866	245
175°	903	900	899	903	899	86
180°	904	904	904	904	904	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.1	39.5	48.9	58.4	67.9	77.6	87.6	97.6	107.5	117.5	124.2
90°	18.1	28.7	39.4	50.0	60.6	71.4	82.2	93.0	103.8	114.6	122.1
92.5°	30.3	40.2	50.1	60.1	70.1	80.3	90.8	101.2	111.7	122.2	128.9
95°	55.0	63.7	72.5	81.2	90.0	99.5	109.7	120.0	130.2	140.3	146.8
97.5°	85.1	92.6	100.0	107.4	114.9	123.9	134.1	144.5	154.8	165.1	171.4
100°	109.0	115.4	121.8	128.2	134.6	142.9	153.0	163.1	173.1	183.2	189.5
102.5°	134.7	140.1	145.3	150.7	156.0	163.5	173.3	183.1	192.9	202.7	209.0
105°	172.0	176.6	181.3	185.9	190.5	197.2	206.0	214.9	223.8	232.6	238.7
107.5°	213.1	217.0	220.7	224.6	228.5	234.3	242.2	250.1	258.0	265.9	271.8
110°	240.3	243.7	247.1	250.5	254.0	259.5	267.2	274.8	282.5	290.1	294.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	268.5	271.4	274.2	277.0	279.8	284.8	292.0	299.2	306.3	313.5	318.4
115°	311.0	313.0	315.0	317.1	319.1	323.5	330.3	337.1	343.9	350.7	355.4
117.5°	351.9	353.3	354.6	355.9	357.2	361.1	367.6	374.0	380.4	386.8	391.0
120°	378.5	379.8	381.2	382.5	383.7	387.4	393.3	399.4	405.4	411.3	415.0
122.5°	407.1	407.5	407.8	408.2	408.7	411.8	417.6	423.6	429.4	435.4	439.2
125°	448.2	448.0	447.8	447.5	447.3	450.0	455.3	460.7	466.2	471.6	475.5
127.5°	486.3	486.4	486.7	486.9	487.2	489.4	493.3	497.4	501.4	505.5	509.2
130°	512.3	512.6	512.7	513.0	513.2	515.2	518.7	522.3	525.8	529.4	533.1
132.5°	539.7	539.8	540.0	540.1	540.2	541.6	544.3	547.1	549.8	552.5	556.0
135°	575.0	575.9	576.8	577.7	578.6	579.9	581.5	583.1	584.6	586.2	589.4
137.5°	614.3	614.6	614.8	615.0	615.2	615.9	616.9	617.8	618.9	619.9	622.7
140°	640.6	640.7	640.8	640.9	641.0	641.2	641.4	641.7	641.9	642.1	644.8
142.5°	663.9	664.2	664.5	664.8	665.1	665.1	664.8	664.5	664.2	664.0	666.5
145°	697.0	697.5	697.9	698.2	698.6	698.9	699.1	699.3	699.4	699.6	700.7
147.5°	730.1	730.6	731.1	731.6	732.2	732.4	732.3	732.1	732.0	731.9	731.9
150°	750.2	750.6	751.0	751.4	751.8	752.1	752.1	752.1	752.1	752.1	752.1
152.5°	768.5	768.7	769.1	769.4	769.8	770.0	770.1	770.2	770.3	770.4	770.8
155°	797.5	797.5	797.5	797.5	797.5	797.4	797.2	797.1	796.9	796.8	797.4
157.5°	822.1	821.8	821.5	821.2	821.0	820.9	820.8	820.8	820.8	820.7	821.1
160°	836.7	836.5	836.3	836.2	836.0	835.8	835.8	835.6	835.4	835.3	835.8
162.5°	850.1	849.7	849.2	848.9	848.5	848.2	848.0	847.9	847.7	847.5	848.4
165°	868.2	867.7	867.2	866.8	866.3	865.9	865.5	865.3	865.0	864.6	865.5
167.5°	881.9	881.4	880.7	880.1	879.4	879.0	879.1	879.1	879.1	879.2	880.1
170°	889.9	889.0	888.3	887.5	886.7	886.4	886.6	886.7	886.8	887.0	888.0
172.5°	895.4	894.8	894.1	893.4	892.8	892.5	892.5	892.6	892.6	892.6	893.7
175°	903.1	902.3	901.5	900.8	900.0	899.6	899.4	899.2	899.1	898.9	900.0
177.5°	905.6	905.0	904.4	903.8	903.1	902.9	902.9	902.9	902.9	902.9	903.7
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	130.8	137.5	144.1	148.5	150.5	152.5	154.6	156.6
90°	129.4	136.9	144.2	148.9	151.1	153.2	155.2	157.3
92.5°	135.8	142.7	149.5	153.9	155.9	157.9	159.9	161.8
95°	153.4	159.9	166.4	170.6	172.6	174.6	176.5	178.6
97.5°	177.9	184.3	190.7	194.8	196.7	198.7	200.6	202.5
100°	195.9	202.2	208.5	212.4	214.1	215.6	217.2	218.7
102.5°	215.3	221.5	227.8	231.9	233.8	235.6	237.4	239.3
105°	244.8	250.8	256.8	261.0	263.2	265.4	267.7	269.9
107.5°	277.7	283.6	289.5	293.3	294.8	296.4	298.0	299.5
110°	299.7	304.5	309.3	312.9	315.1	317.4	319.6	321.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	323.3	328.2	333.0	336.4	338.3	340.2	342.0	343.9
115°	360.2	365.0	369.7	372.8	374.2	375.6	377.0	378.4
117.5°	395.0	399.2	403.2	406.0	407.5	409.0	410.5	411.9
120°	418.7	422.4	426.0	429.0	431.0	433.1	435.3	437.3
122.5°	443.2	447.1	451.0	453.6	454.6	455.6	456.7	457.7
125°	479.5	483.3	487.3	489.7	490.8	491.8	492.9	493.9
127.5°	512.8	516.5	520.3	522.7	524.0	525.3	526.5	527.8
130°	536.8	540.5	544.2	546.4	547.1	547.8	548.6	549.3
132.5°	559.6	563.1	566.6	568.9	570.0	571.1	572.1	573.3
135°	592.7	595.9	599.2	601.2	602.1	602.9	603.8	604.7
137.5°	625.6	628.4	631.2	633.3	634.5	635.7	636.9	638.1
140°	647.5	650.4	653.1	654.9	655.8	656.9	657.8	658.7
142.5°	669.0	671.5	674.0	675.7	676.7	677.5	678.4	679.4
145°	701.9	703.0	704.3	705.1	705.5	706.0	706.3	706.8
147.5°	732.0	732.0	732.1	732.4	732.9	733.5	734.1	734.6
150°	752.1	752.1	752.1	752.0	751.8	751.6	751.5	751.3
152.5°	771.2	771.6	771.9	771.9	771.6	771.2	770.7	770.3
155°	798.1	798.6	799.3	799.3	798.6	798.1	797.4	796.8
157.5°	821.6	822.1	822.6	822.6	822.0	821.5	821.0	820.4
160°	836.2	836.7	837.2	837.0	836.2	835.4	834.6	833.9
162.5°	849.2	850.1	850.9	850.9	850.2	849.4	848.7	847.8
165°	866.5	867.4	868.4	868.6	867.9	867.2	866.7	866.0
167.5°	881.1	881.9	882.9	882.9	881.9	881.0	880.1	879.0
170°	888.9	889.9	890.8	890.7	889.6	888.5	887.4	886.4
172.5°	894.8	895.8	896.8	896.8	895.7	894.7	893.5	892.5
175°	901.1	902.2	903.2	903.2	902.2	901.1	900.0	898.9
177.5°	904.6	905.4	906.3	906.3	905.2	904.3	903.2	902.3
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5

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