

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: P331940-930

Luminaire Tested: **S123DIP-S560D1025U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331940-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D1025U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5270.0 lumens
Efficiency: N/A
Efficacy: 118.4 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-Indirect

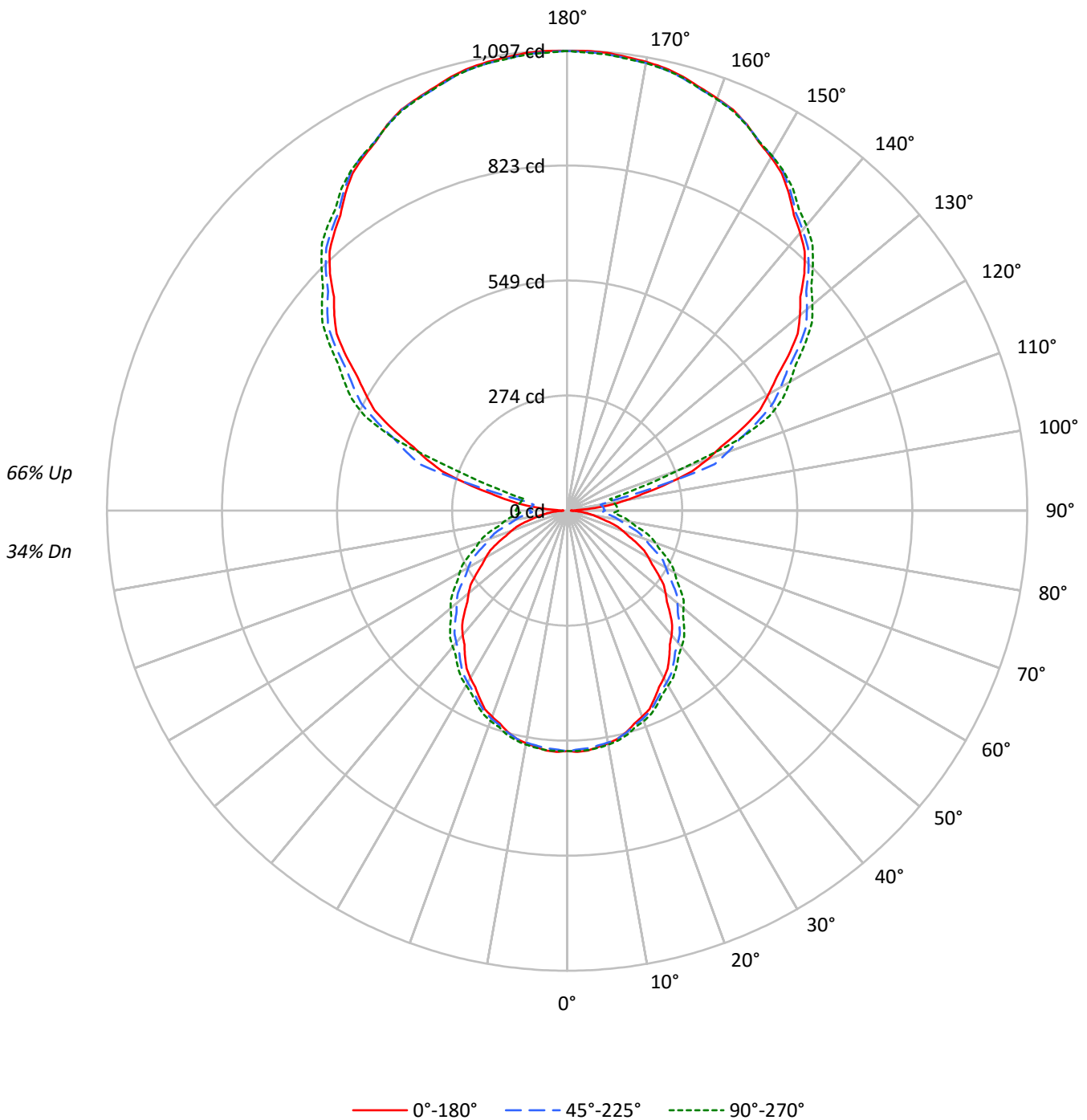
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	93	89	85	81	84	80	77	74	64	61	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	56	52	48	42	40	38	30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	32	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29	30	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	12
7	55	42	35	29	49	39	32	27	31	26	22	24	20	18	18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	19	24	19	15	19	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.0
10°-20°	154.9	2.9
20°-30°	231.7	4.4
30°-40°	276.7	5.3
40°-50°	289.5	5.5
50°-60°	271.7	5.2
60°-70°	226.9	4.3
70°-80°	162.4	3.1
80°-90°	99.9	1.9
90°-100°	100.6	1.9
100°-110°	234.4	4.4
110°-120°	485.7	9.2
120°-130°	597.6	11.3
130°-140°	627.9	11.9
140°-150°	581.7	11.0
150°-160°	467.9	8.9
160°-170°	302.0	5.7
170°-180°	104.1	2.0
0°-30°	441.0	8.4
0°-40°	717.7	13.6
0°-60°	1279.0	24.3
0°-90°	1768.1	33.6
90°-120°	820.7	15.6
90°-150°	2627.9	49.9
90°-180°	3502.0	66.5
0°-180°	5270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	9	48	90	114	122	8
95°	56	50	87	111	118	67
105°	248	268	225	106	106	262
115°	458	471	500	522	532	452
125°	643	650	671	685	692	574
135°	800	804	814	827	828	615
145°	922	927	928	935	938	577
155°	1015	1013	1014	1018	1013	467
165°	1070	1068	1067	1073	1068	302
175°	1095	1092	1092	1097	1091	104
180°	1095	1095	1095	1095	1095	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.8	24.1	31.3	38.6	45.9	53.2	60.8	68.4	75.9	83.5	88.3
90°	9.0	17.5	26.2	34.7	43.4	52.4	61.8	71.3	80.7	90.1	95.6
92.5°	22.7	28.4	34.0	39.6	45.2	52.4	61.2	70.0	78.7	87.4	93.2
95°	56.5	54.5	52.5	50.5	48.5	51.9	60.7	69.5	78.3	87.1	92.6
97.5°	105.9	107.5	109.0	110.6	112.1	109.7	103.1	96.6	90.1	83.6	89.1
100°	143.2	151.2	159.2	167.3	175.4	168.5	146.7	124.8	103.1	81.2	86.7
102.5°	185.6	192.2	198.9	205.5	212.1	203.1	178.6	153.9	129.4	104.8	104.3
105°	247.5	252.8	258.1	263.5	268.8	266.3	256.0	245.6	235.4	225.0	197.0
107.5°	312.2	316.6	321.1	325.5	329.9	336.2	344.5	352.7	360.9	369.1	349.4
110°	355.3	359.2	363.2	367.1	371.0	376.8	384.3	391.9	399.4	407.0	404.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	397.0	400.3	403.7	407.0	410.4	415.7	423.1	430.4	437.7	445.0	448.6
115°	458.0	460.8	463.5	466.3	469.0	473.7	480.4	487.0	493.6	500.2	505.3
117.5°	517.6	520.0	522.4	524.7	527.1	531.0	536.5	542.1	547.6	553.1	557.9
120°	554.2	556.6	558.9	561.2	563.5	567.3	572.3	577.5	582.6	587.7	592.4
122.5°	592.0	593.7	595.4	597.1	598.8	602.2	607.2	612.3	617.3	622.3	626.5
125°	643.1	644.6	646.0	647.5	648.9	652.0	656.8	661.5	666.3	671.0	674.3
127.5°	693.2	694.6	695.9	697.2	698.5	701.2	705.5	709.6	713.9	718.0	721.4
130°	724.6	725.9	727.2	728.5	729.8	732.1	735.6	739.2	742.7	746.2	749.5
132.5°	754.0	755.4	756.8	758.2	759.6	761.7	764.6	767.4	770.1	773.0	776.2
135°	799.6	800.5	801.4	802.4	803.4	804.9	807.2	809.4	811.7	814.0	817.0
137.5°	838.5	839.8	841.1	842.3	843.6	844.8	846.1	847.3	848.6	849.9	852.9
140°	864.1	865.1	866.3	867.3	868.4	869.4	870.4	871.3	872.3	873.3	876.0
142.5°	888.1	889.1	890.1	891.0	892.0	892.8	893.5	894.1	894.7	895.4	897.8
145°	921.9	923.0	924.1	925.2	926.3	927.1	927.5	927.8	928.1	928.5	930.0
147.5°	952.9	953.8	954.6	955.4	956.3	956.8	957.2	957.6	958.0	958.3	959.0
150°	972.5	973.1	973.5	974.1	974.6	975.1	975.4	975.8	976.2	976.6	976.9
152.5°	990.0	990.3	990.6	990.8	991.1	991.3	991.5	991.7	992.0	992.1	992.8
155°	1014.8	1014.4	1014.1	1013.7	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9
157.5°	1034.0	1034.0	1034.0	1033.9	1033.9	1033.7	1033.6	1033.4	1033.2	1033.0	1034.1
160°	1045.7	1045.5	1045.4	1045.2	1045.0	1044.8	1044.6	1044.5	1044.2	1044.1	1045.2
162.5°	1056.8	1056.3	1055.8	1055.4	1054.9	1054.6	1054.4	1054.2	1054.0	1053.9	1055.1
165°	1070.2	1069.6	1069.0	1068.5	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3
167.5°	1080.5	1079.9	1079.1	1078.4	1077.7	1077.3	1077.3	1077.3	1077.3	1077.3	1078.7
170°	1086.4	1085.7	1085.0	1084.3	1083.5	1083.1	1083.1	1083.1	1083.1	1083.1	1084.6
172.5°	1090.3	1089.5	1088.6	1087.7	1086.9	1086.5	1086.6	1086.8	1086.9	1087.0	1088.5
175°	1095.4	1094.5	1093.6	1092.7	1091.8	1091.4	1091.5	1091.8	1091.9	1092.1	1093.4
177.5°	1096.7	1095.9	1095.2	1094.5	1093.8	1093.5	1093.6	1093.8	1093.9	1094.1	1095.2
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	93.2	98.1	102.9	106.1	107.5	109.0	110.5	111.9
90°	101.0	106.4	111.9	115.4	117.2	119.0	120.7	122.5
92.5°	99.0	104.7	110.5	114.1	115.6	117.1	118.5	120.1
95°	98.2	103.8	109.3	112.8	114.2	115.6	117.0	118.4
97.5°	94.7	100.3	105.9	109.4	111.0	112.6	114.1	115.7
100°	92.1	97.6	103.1	106.6	108.2	109.7	111.3	112.8
102.5°	103.7	103.1	102.6	103.1	104.8	106.6	108.3	110.0
105°	168.8	140.7	112.6	99.3	100.9	102.6	104.1	105.7
107.5°	329.6	309.9	290.1	268.8	245.9	223.0	200.1	177.2
110°	402.3	399.9	397.5	384.0	359.2	334.5	309.7	285.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	452.2	455.8	459.4	459.1	454.9	450.6	446.4	442.1
115°	510.5	515.6	520.7	524.2	526.1	527.9	529.8	531.6
117.5°	562.6	567.4	572.1	575.1	576.3	577.6	578.8	580.0
120°	597.0	601.7	606.3	609.1	610.1	611.1	612.0	613.0
122.5°	630.6	634.6	638.7	641.3	642.5	643.6	644.7	645.8
125°	677.6	680.9	684.1	686.4	687.8	689.1	690.4	691.8
127.5°	724.7	728.1	731.3	733.3	733.9	734.5	735.1	735.6
130°	752.8	756.2	759.6	761.5	762.0	762.5	763.0	763.4
132.5°	779.4	782.7	785.9	787.8	788.2	788.6	789.1	789.5
135°	820.0	823.0	826.1	827.7	827.9	828.0	828.2	828.3
137.5°	856.0	859.1	862.1	863.8	864.1	864.5	864.8	865.1
140°	878.9	881.7	884.4	886.1	886.4	886.7	887.0	887.4
142.5°	900.3	902.6	905.1	906.4	906.6	906.8	906.9	907.2
145°	931.5	932.9	934.4	935.5	936.0	936.5	937.1	937.7
147.5°	959.7	960.4	961.1	961.2	960.9	960.6	960.3	959.9
150°	977.3	977.6	978.0	978.0	977.8	977.5	977.2	977.0
152.5°	993.4	994.1	994.7	994.7	993.9	993.2	992.4	991.6
155°	1015.8	1016.7	1017.6	1017.5	1016.4	1015.4	1014.2	1013.2
157.5°	1035.2	1036.2	1037.4	1037.2	1035.8	1034.4	1033.0	1031.6
160°	1046.3	1047.3	1048.4	1048.3	1047.1	1045.8	1044.6	1043.3
162.5°	1056.3	1057.5	1058.7	1058.8	1057.7	1056.5	1055.5	1054.3
165°	1069.8	1071.2	1072.7	1072.8	1071.5	1070.2	1068.9	1067.7
167.5°	1080.2	1081.7	1083.0	1083.0	1081.7	1080.2	1078.7	1077.3
170°	1086.1	1087.5	1088.9	1088.9	1087.5	1086.1	1084.6	1083.1
172.5°	1090.0	1091.4	1092.8	1092.7	1091.2	1089.6	1088.0	1086.4
175°	1094.6	1095.9	1097.1	1097.1	1095.6	1094.2	1092.7	1091.3
177.5°	1096.3	1097.6	1098.7	1098.5	1097.1	1095.7	1094.2	1092.7
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4

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