

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: P331325-927

Luminaire Tested: **S122DIP-S485D1080U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331325-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S485D1080U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4610.8 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

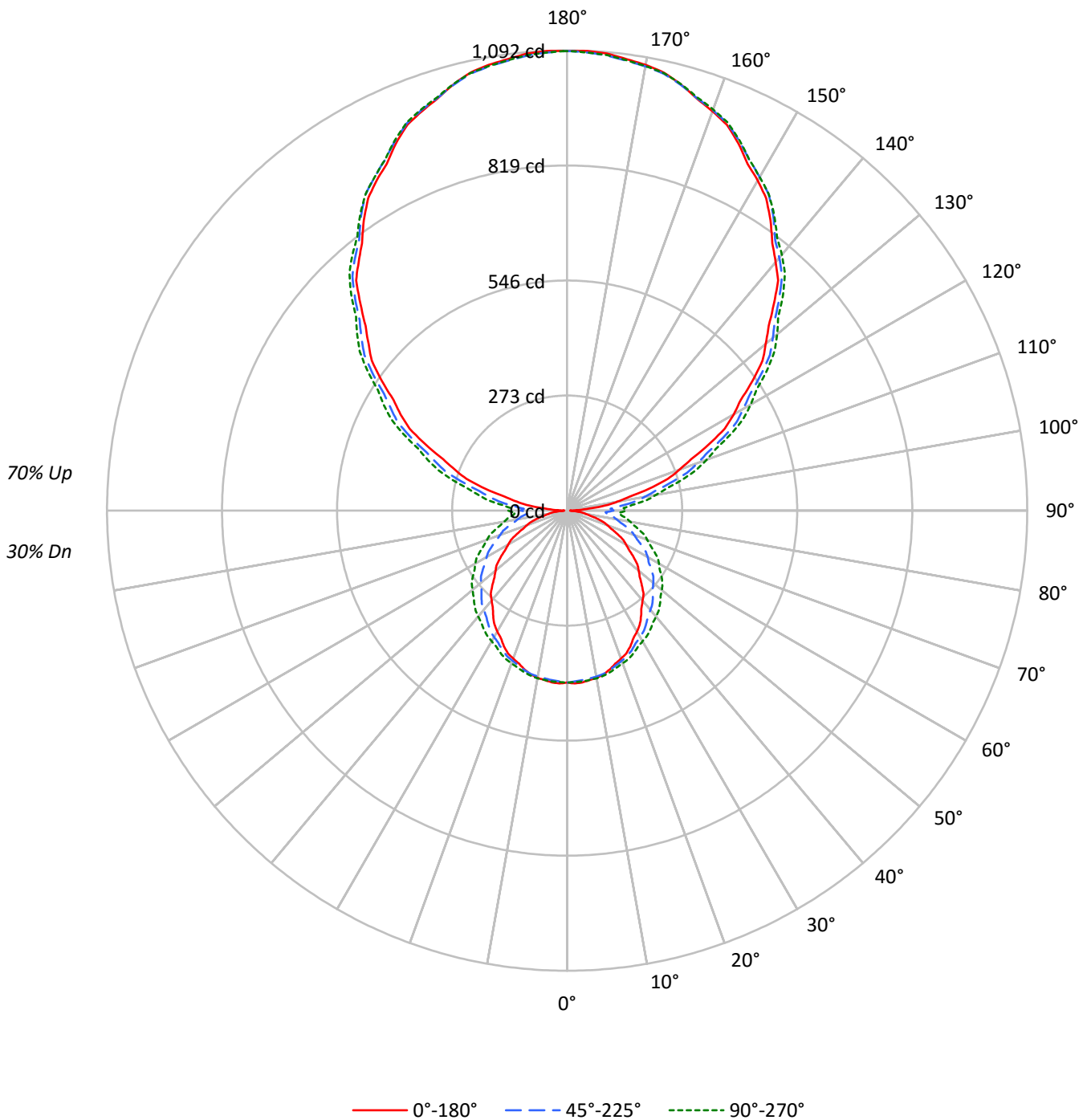
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30
1	92	88	84	80	83	79	75	72	62	59	57	46	45	43	32	31	30	23
2	84	76	70	65	75	68	63	58	54	50	47	40	38	35	28	26	25	19
3	76	67	59	53	68	60	53	48	47	42	39	35	32	29	24	22	21	16
4	69	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	34	37	32	28	28	24	21	19	17	15	11
6	58	46	38	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	13	11	9
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	8
9	46	34	27	22	41	31	24	20	25	20	16	19	15	13	13	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	17	14	11	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.8
10°-20°	110.9	2.4
20°-30°	168.1	3.6
30°-40°	204.7	4.4
40°-50°	220.3	4.8
50°-60°	213.9	4.6
60°-70°	186.8	4.1
70°-80°	143.8	3.1
80°-90°	100.8	2.2
90°-100°	135.6	2.9
100°-110°	263.1	5.7
110°-120°	398.9	8.7
120°-130°	500.3	10.9
130°-140°	548.9	11.9
140°-150°	532.2	11.5
150°-160°	445.3	9.7
160°-170°	295.3	6.4
170°-180°	103.2	2.2
0°-30°	317.7	6.9
0°-40°	522.4	11.3
0°-60°	956.6	20.7
0°-90°	1388.0	30.1
90°-120°	797.6	17.3
90°-150°	2379.0	51.6
90°-180°	3223.0	69.9
0°-180°	4610.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	53	110	131	140	6
95°	53	90	127	148	155	59
105°	201	221	253	275	282	212
115°	370	383	407	423	428	366
125°	537	545	561	574	579	480
135°	694	704	711	722	725	536
145°	841	847	853	857	857	525
155°	962	964	967	971	969	442
165°	1046	1045	1045	1051	1047	295
175°	1089	1086	1084	1090	1085	103
180°	1090	1090	1090	1090	1090	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.8	20.1	28.4	36.8	45.1	53.9	63.2	72.6	81.8	91.2	96.4
90°	6.8	17.0	27.0	37.1	47.1	58.6	71.5	84.4	97.4	110.3	115.2
92.5°	21.8	30.7	39.6	48.5	57.4	66.5	75.6	84.8	94.0	103.1	108.4
95°	52.6	60.8	69.0	77.2	85.5	93.7	102.0	110.4	118.7	126.9	131.9
97.5°	91.6	98.9	106.2	113.4	120.7	128.6	136.9	145.3	153.6	161.9	166.8
100°	121.0	127.5	134.0	140.5	147.0	154.2	162.2	170.2	178.2	186.2	191.0
102.5°	151.5	157.2	163.0	168.7	174.4	181.3	189.3	197.2	205.1	213.0	217.9
105°	200.8	205.3	209.6	214.0	218.5	224.3	231.6	238.8	246.1	253.3	258.3
107.5°	251.1	255.1	259.0	262.9	266.9	272.2	278.7	285.3	291.8	298.3	302.9
110°	283.0	286.8	290.7	294.6	298.4	303.6	310.1	316.5	322.9	329.4	333.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	318.4	321.8	325.2	328.7	332.1	336.8	342.8	348.7	354.7	360.7	364.4
115°	370.4	373.1	375.8	378.4	381.1	385.2	390.7	396.2	401.7	407.3	411.0
117.5°	421.8	424.3	426.9	429.5	432.1	435.5	439.8	444.2	448.5	452.8	456.2
120°	456.4	458.5	460.7	462.8	465.0	467.9	471.5	475.2	478.8	482.4	486.1
122.5°	488.0	490.2	492.3	494.6	496.7	499.7	503.5	507.3	511.0	514.8	517.9
125°	536.7	538.6	540.4	542.2	544.1	546.8	550.4	554.0	557.6	561.2	564.1
127.5°	584.8	586.9	589.1	591.4	593.6	596.0	598.7	601.3	604.0	606.7	609.1
130°	615.0	617.5	620.0	622.5	625.0	627.5	629.9	632.2	634.5	636.9	639.7
132.5°	648.8	650.9	652.9	654.9	657.0	659.1	661.3	663.5	665.7	667.9	670.1
135°	693.5	695.8	698.0	700.2	702.5	704.5	706.2	707.9	709.6	711.4	713.9
137.5°	741.2	743.0	744.8	746.6	748.4	749.9	751.0	752.1	753.2	754.3	756.5
140°	769.8	771.6	773.2	775.0	776.7	778.2	779.5	780.8	782.0	783.3	785.4
142.5°	799.3	801.1	802.7	804.5	806.1	807.4	808.1	808.9	809.6	810.4	812.2
145°	841.1	842.5	843.9	845.3	846.8	848.1	849.3	850.6	851.8	853.0	854.0
147.5°	878.8	880.5	882.2	883.9	885.7	886.9	887.7	888.6	889.4	890.2	890.7
150°	904.5	905.8	907.0	908.2	909.4	910.5	911.3	912.1	912.9	913.8	914.3
152.5°	927.3	928.6	929.8	931.1	932.2	933.3	934.4	935.3	936.4	937.3	938.1
155°	961.6	962.2	962.8	963.5	964.1	964.6	965.3	965.9	966.5	967.1	968.1
157.5°	990.9	991.3	991.7	992.0	992.5	992.8	993.2	993.6	994.0	994.3	995.8
160°	1008.5	1008.9	1009.3	1009.7	1010.2	1010.4	1010.7	1010.9	1011.1	1011.3	1012.5
162.5°	1024.7	1024.8	1024.8	1024.9	1025.1	1025.2	1025.4	1025.6	1025.8	1026.0	1027.4
165°	1046.2	1046.1	1045.8	1045.6	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1046.8
167.5°	1064.3	1063.7	1063.0	1062.5	1061.8	1061.5	1061.4	1061.4	1061.4	1061.4	1062.8
170°	1073.9	1073.2	1072.6	1072.0	1071.4	1071.0	1070.8	1070.6	1070.4	1070.2	1071.6
172.5°	1080.5	1079.9	1079.3	1078.6	1078.0	1077.6	1077.4	1077.2	1077.0	1076.8	1078.2
175°	1088.6	1088.0	1087.3	1086.7	1086.2	1085.6	1085.2	1084.8	1084.4	1083.9	1085.4
177.5°	1091.9	1091.4	1090.9	1090.4	1090.0	1089.5	1089.2	1088.9	1088.5	1088.2	1089.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	101.7	107.0	112.3	115.8	117.5	119.2	121.0	122.7
90°	120.0	124.8	129.7	133.0	134.8	136.6	138.4	140.1
92.5°	113.6	118.8	124.1	127.5	129.0	130.7	132.3	134.0
95°	136.9	141.9	146.9	150.0	151.1	152.3	153.5	154.6
97.5°	171.7	176.6	181.4	184.6	186.1	187.6	189.2	190.7
100°	195.9	200.7	205.6	208.7	209.9	211.1	212.4	213.7
102.5°	222.8	227.8	232.7	235.8	237.0	238.3	239.6	240.7
105°	263.3	268.4	273.4	276.6	278.1	279.5	280.9	282.4
107.5°	307.5	312.1	316.6	319.2	319.7	320.2	320.8	321.2
110°	337.8	342.0	346.2	348.7	349.5	350.4	351.2	352.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	368.0	371.8	375.5	377.9	378.9	379.9	380.9	381.8
115°	414.7	418.5	422.2	424.5	425.3	426.2	427.0	427.9
117.5°	459.6	463.0	466.4	468.5	469.2	469.9	470.7	471.4
120°	489.7	493.5	497.1	499.4	500.2	501.1	501.8	502.7
122.5°	521.0	524.1	527.2	529.2	530.0	530.7	531.5	532.3
125°	567.0	570.0	572.9	574.9	575.8	576.9	577.8	578.8
127.5°	611.6	614.2	616.7	618.2	618.7	619.2	619.7	620.2
130°	642.4	645.2	647.9	649.4	649.6	649.8	650.1	650.3
132.5°	672.2	674.4	676.5	677.8	678.2	678.6	679.0	679.4
135°	716.4	719.1	721.6	723.1	723.5	724.0	724.4	724.8
137.5°	758.8	761.0	763.3	764.5	764.6	764.7	764.7	764.8
140°	787.6	789.6	791.8	792.8	792.7	792.7	792.7	792.7
142.5°	814.0	815.9	817.8	818.6	818.5	818.3	818.2	818.1
145°	855.0	856.0	857.0	857.4	857.2	857.1	856.9	856.7
147.5°	891.3	891.8	892.4	892.5	892.0	891.5	891.0	890.6
150°	915.0	915.6	916.2	916.2	915.6	915.0	914.3	913.8
152.5°	938.9	939.6	940.4	940.4	939.6	938.9	938.1	937.3
155°	969.2	970.2	971.2	971.4	970.8	970.2	969.6	968.9
157.5°	997.1	998.5	999.9	1000.1	999.1	998.1	997.2	996.2
160°	1013.8	1014.9	1016.2	1016.4	1015.6	1014.8	1013.9	1013.1
162.5°	1028.8	1030.2	1031.6	1031.7	1030.8	1029.8	1028.8	1027.9
165°	1048.2	1049.6	1051.1	1051.2	1050.3	1049.2	1048.2	1047.2
167.5°	1064.2	1065.6	1067.1	1067.2	1066.2	1065.1	1064.1	1063.0
170°	1073.0	1074.4	1075.9	1076.0	1074.8	1073.6	1072.3	1071.1
172.5°	1079.7	1081.1	1082.5	1082.6	1081.4	1080.1	1079.0	1077.7
175°	1086.9	1088.3	1089.7	1089.8	1088.6	1087.3	1086.2	1084.9
177.5°	1090.2	1091.2	1092.1	1092.1	1091.2	1090.2	1089.2	1088.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

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