

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: P331326-930

Luminaire Tested: **SA2XXDIP-C485D1080U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331326-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D1080U930-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

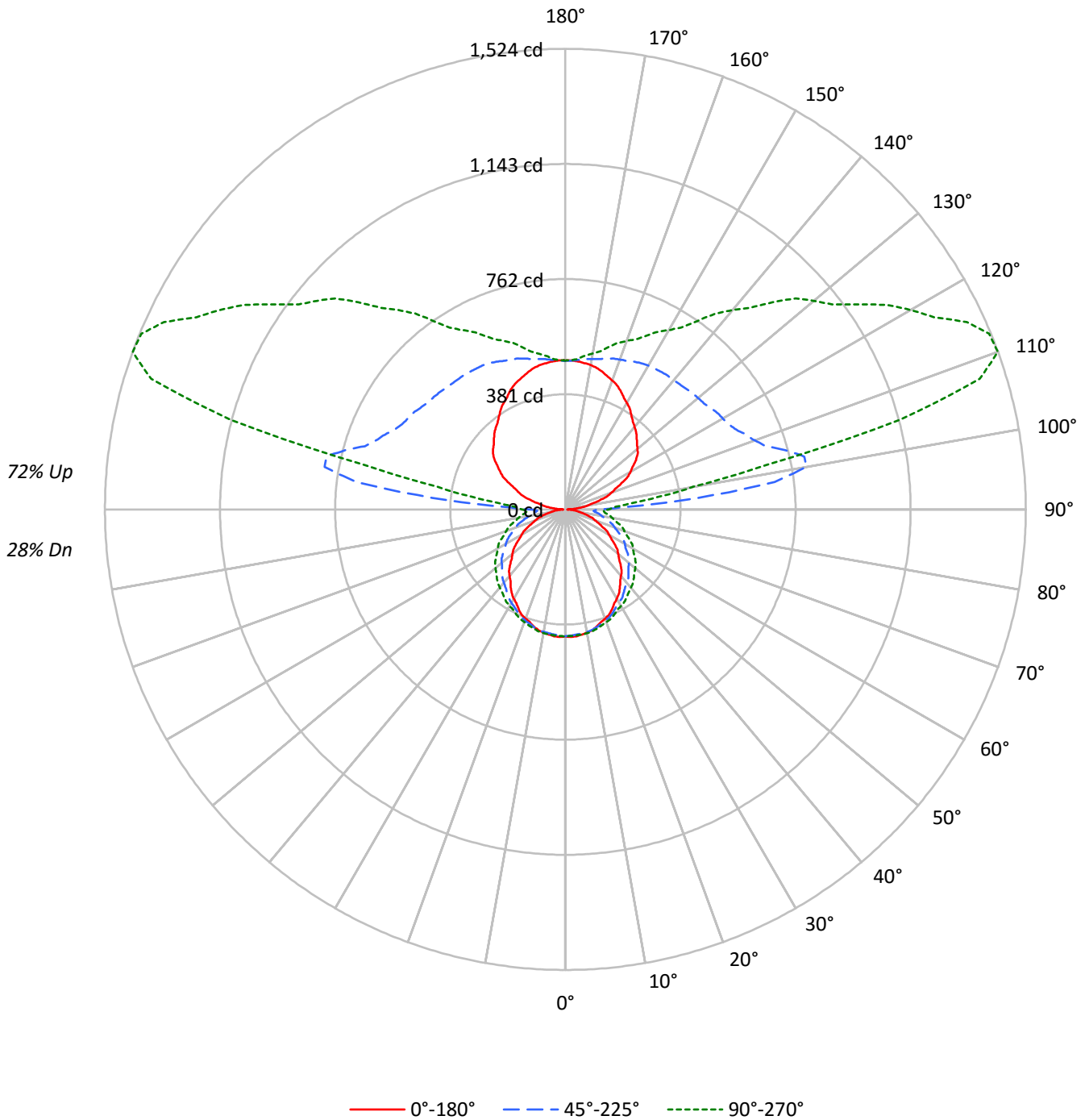
Lumens per Lamp: N/A
Luminaire Lumens: 5034.5 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22				
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18				
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15				
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12				
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11				
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9				
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8				
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7				
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6				
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	0.8
10°-20°	114.2	2.3
20°-30°	173.0	3.4
30°-40°	210.7	4.2
40°-50°	226.7	4.5
50°-60°	220.1	4.4
60°-70°	192.2	3.8
70°-80°	148.0	2.9
80°-90°	103.7	2.1
90°-100°	265.4	5.3
100°-110°	718.2	14.3
110°-120°	742.9	14.8
120°-130°	602.8	12.0
130°-140°	477.0	9.5
140°-150°	356.0	7.1
150°-160°	249.2	5.0
160°-170°	146.7	2.9
170°-180°	47.8	0.9
0°-30°	327.0	6.5
0°-40°	537.7	10.7
0°-60°	984.5	19.6
0°-90°	1428.4	28.4
90°-120°	1726.5	34.3
90°-150°	3162.3	62.8
90°-180°	3606.0	71.6
0°-180°	5034.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	7	54	113	135	143	6
95°	38	115	441	232	208	39
105°	119	196	754	1327	1148	126
115°	206	267	624	1266	1466	204
125°	285	339	585	1018	1182	254
135°	334	399	564	844	969	258
145°	381	438	555	693	761	239
155°	433	467	539	609	634	199
165°	472	486	516	547	556	133
175°	492	492	496	502	501	47
180°	492	492	492	492	492	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.1	20.8	29.6	38.0	46.5	55.4	65.0	75.0	84.8	93.6	99.0
90°	7.0	17.7	29.4	39.1	48.8	59.9	73.4	88.6	103.0	112.6	117.1
92.5°	17.1	29.6	43.7	55.2	68.9	85.7	115.4	153.8	189.1	199.1	185.3
95°	38.0	48.2	64.0	78.9	100.4	130.4	182.1	272.6	390.5	441.3	400.0
97.5°	58.2	69.1	84.7	103.2	126.4	158.8	221.4	344.0	534.3	698.6	734.7
100°	77.2	85.0	98.6	118.7	142.7	175.5	233.3	356.4	568.5	809.1	950.5
102.5°	94.2	100.8	113.9	133.6	157.9	190.4	244.1	354.2	551.0	809.5	1028.8
105°	118.6	126.3	136.9	155.0	179.8	211.7	263.3	354.7	518.0	754.2	1010.8
107.5°	145.8	151.9	161.5	177.7	201.5	233.2	283.1	363.3	499.2	695.4	922.5
110°	163.5	169.9	178.3	193.3	216.0	248.1	296.4	371.2	493.4	666.7	867.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.1	186.2	194.9	208.7	230.2	262.6	309.1	379.8	491.1	646.6	827.3
115°	206.0	212.3	219.5	232.3	252.7	282.1	328.9	392.8	490.7	623.7	777.5
117.5°	232.4	237.1	243.8	254.8	273.9	303.8	347.1	406.9	493.0	609.8	744.0
120°	249.0	253.3	259.6	268.6	288.1	317.6	360.0	416.5	494.9	601.6	725.7
122.5°	265.0	268.2	274.1	283.6	302.7	332.6	372.4	424.9	497.6	595.7	709.8
125°	285.4	288.2	293.9	305.2	324.2	352.9	391.3	438.2	501.3	585.1	686.4
127.5°	302.0	305.7	313.5	325.9	343.9	372.8	409.5	451.3	505.9	577.6	664.6
130°	311.9	315.5	324.9	338.0	356.8	384.7	420.6	459.5	509.6	573.2	650.3
132.5°	321.0	325.4	335.5	349.4	368.9	396.5	430.3	467.7	513.5	569.5	638.1
135°	334.0	337.8	349.1	363.4	385.1	412.3	444.0	478.5	517.7	564.5	621.3
137.5°	346.9	351.4	362.7	377.9	399.4	424.4	454.9	486.3	521.4	560.8	608.6
140°	356.7	360.4	371.6	386.6	407.3	432.0	460.7	490.3	522.8	558.2	601.0
142.5°	366.6	369.5	379.9	394.9	414.9	438.0	465.7	494.3	524.3	557.2	594.3
145°	380.7	384.5	394.0	408.2	427.1	448.0	473.5	500.1	526.6	555.0	586.1
147.5°	396.6	399.5	408.5	421.7	437.4	455.9	480.0	503.3	527.3	551.6	578.2
150°	407.2	410.1	417.7	430.0	444.2	461.2	483.1	504.8	526.6	549.3	572.0
152.5°	417.8	419.2	426.7	437.6	451.0	466.5	486.1	505.6	525.1	545.5	566.7
155°	432.8	433.7	439.4	449.9	460.3	474.5	490.6	506.7	522.8	538.9	556.9
157.5°	445.3	446.3	450.9	459.9	468.2	480.2	493.8	506.7	518.4	532.1	547.6
160°	453.6	454.6	458.4	465.9	473.5	484.0	495.4	506.7	516.2	527.6	540.8
162.5°	462.0	461.5	465.2	471.2	478.1	486.2	496.1	506.0	513.9	523.7	534.8
165°	471.7	470.8	472.6	478.3	483.1	488.7	497.3	503.9	509.6	516.2	524.7
167.5°	479.6	478.5	480.2	483.8	487.2	490.8	497.0	502.6	505.2	509.6	514.9
170°	484.9	483.1	484.0	486.8	488.7	491.5	496.3	501.0	502.9	505.7	509.6
172.5°	488.0	486.8	486.2	489.1	490.2	492.3	495.5	498.7	499.9	501.2	504.3
175°	491.5	490.6	489.7	491.5	491.5	492.5	494.4	496.3	495.4	496.3	497.3
177.5°	493.3	491.7	491.0	492.5	492.5	492.5	493.3	494.8	493.3	492.5	493.3
180°	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	104.3	109.4	115.4	119.1	120.9	122.6	124.3	126.0
90°	121.5	125.0	132.3	136.8	138.4	140.1	141.7	143.3
92.5°	169.2	162.7	160.1	157.7	158.6	157.1	159.6	159.6
95°	328.5	275.8	241.2	223.7	213.0	207.1	205.9	208.5
97.5°	653.9	553.6	456.1	391.0	347.3	325.6	313.4	307.0
100°	935.6	823.2	698.5	587.1	510.0	470.8	444.7	429.2
102.5°	1119.2	1097.6	1007.5	889.2	805.4	737.4	704.5	682.9
105°	1212.6	1324.4	1341.4	1313.2	1256.0	1198.7	1159.5	1147.8
107.5°	1136.0	1301.7	1404.8	1453.6	1462.5	1460.8	1454.1	1438.0
110°	1071.2	1245.1	1370.7	1451.2	1493.5	1513.0	1523.0	1523.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1011.8	1178.8	1312.7	1404.7	1462.8	1494.4	1512.0	1518.6
115°	937.8	1087.7	1215.9	1316.1	1384.9	1430.0	1456.0	1466.1
117.5°	880.8	1012.8	1129.4	1223.5	1293.5	1340.9	1368.2	1376.8
120°	851.7	972.9	1077.1	1165.9	1233.7	1279.7	1308.6	1319.6
122.5°	828.1	939.3	1038.1	1118.4	1179.2	1224.2	1249.9	1259.1
125°	793.3	894.5	981.5	1054.9	1111.1	1148.3	1173.2	1182.0
127.5°	759.0	850.5	932.5	1000.4	1049.5	1084.3	1106.0	1113.3
130°	736.9	821.6	899.6	964.3	1011.8	1045.1	1065.1	1073.7
132.5°	715.5	794.0	865.9	926.8	973.5	1006.8	1025.3	1033.2
135°	685.7	751.1	816.4	871.5	913.3	945.6	963.8	968.7
137.5°	661.3	716.1	768.2	816.1	854.1	881.9	897.8	904.4
140°	645.8	693.4	739.2	782.3	813.4	838.9	853.9	860.4
142.5°	633.3	673.7	713.0	749.0	778.5	801.6	815.0	816.8
145°	616.3	648.3	678.6	706.8	730.2	746.9	757.1	760.6
147.5°	603.3	628.1	651.1	671.4	690.5	703.7	710.5	712.5
150°	594.8	615.6	635.5	652.6	666.8	678.2	683.8	684.8
152.5°	586.4	605.8	622.6	637.4	648.6	658.4	662.6	662.8
155°	574.9	590.0	604.2	614.7	625.1	631.7	635.5	633.7
157.5°	561.4	574.1	586.0	594.2	601.6	607.1	608.8	608.8
160°	553.1	563.5	574.0	580.6	587.2	591.9	592.9	592.9
162.5°	544.8	553.7	562.6	567.7	574.3	577.6	578.5	577.7
165°	532.3	538.9	545.5	549.3	553.1	556.9	556.9	556.0
167.5°	520.3	525.5	530.0	533.5	535.1	537.2	537.0	535.9
170°	514.3	517.1	520.9	522.8	523.7	526.6	525.6	523.7
172.5°	507.4	509.6	512.6	513.7	514.7	516.0	515.0	513.9
175°	500.1	501.0	502.0	502.9	502.9	503.9	502.9	501.0
177.5°	494.8	494.8	495.5	495.5	495.5	495.5	494.8	493.3
180°	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5

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