

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: P331900

Luminaire Tested: **S123DIP-S340D1025U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331900
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5123.7 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

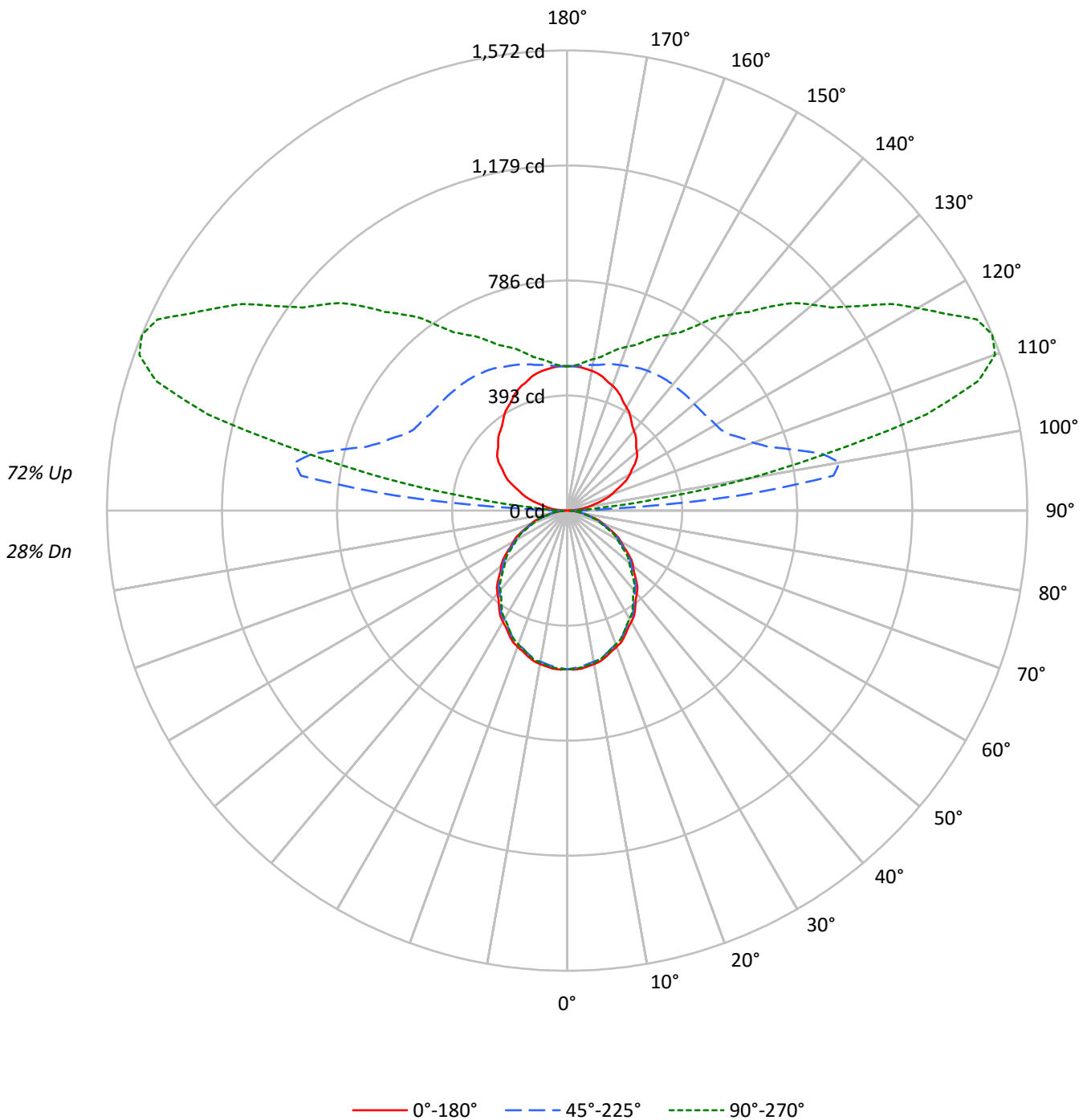
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	52	52	52	36	36	36	28
1	93	89	85	81	83	79	76	73	62	60	58	46	45	43	31	31	30	23
2	84	77	71	66	75	69	64	60	54	51	48	40	38	36	27	26	25	19
3	77	68	61	55	68	61	55	50	48	44	40	36	33	31	24	23	21	16
4	70	60	52	46	63	54	47	42	42	38	34	32	29	26	22	20	18	14
5	64	53	45	40	57	48	41	36	38	33	29	28	25	22	20	18	16	12
6	59	48	40	34	53	43	36	31	34	29	25	26	22	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	17	16	14	12	9
8	51	39	31	26	45	35	28	24	28	23	20	21	18	15	15	13	11	8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	14	11	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5833	5833	5833
5°	5861	5780	5820
10°	5821	5729	5766
15°	5753	5665	5675
20°	5674	5573	5577
25°	5567	5462	5451
30°	5450	5340	5299
35°	5327	5210	5143
40°	5199	5067	4990
45°	5057	4937	4816
50°	4915	4776	4642
55°	4731	4609	4468
60°	4545	4413	4273
65°	4378	4200	4070
70°	4135	3959	3783
75°	3780	3643	3489
80°	3409	3267	3236
85°	2989	2878	2766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	1.0
10°-20°	144.1	2.8
20°-30°	212.9	4.2
30°-40°	248.7	4.9
40°-50°	250.0	4.9
50°-60°	219.6	4.3
60°-70°	163.6	3.2
70°-80°	93.2	1.8
80°-90°	30.6	0.6
90°-100°	274.4	5.4
100°-110°	777.0	15.2
110°-120°	764.4	14.9
120°-130°	609.7	11.9
130°-140°	480.7	9.4
140°-150°	358.8	7.0
150°-160°	250.1	4.9
160°-170°	146.9	2.9
170°-180°	47.8	0.9
0°-30°	408.1	8.0
0°-40°	656.8	12.8
0°-60°	1126.5	22.0
0°-90°	1413.9	27.6
90°-120°	1815.8	35.4
90°-150°	3265.1	63.7
90°-180°	3710.0	72.4
0°-180°	5123.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	540	535	539	539	51
15°	516	514	508	512	509	145
25°	469	466	460	460	459	216
35°	405	402	396	394	391	254
45°	332	330	324	319	316	256
55°	252	251	246	241	238	226
65°	172	170	165	161	160	170
75°	91	89	88	85	84	97
85°	24	23	23	22	22	27
90°	2	12	25	28	29	4
95°	34	110	592	173	116	37
105°	116	171	802	1403	1270	123
115°	205	255	614	1346	1544	203
125°	284	336	573	1038	1218	252
135°	333	398	565	855	987	258
145°	380	436	558	701	772	238
155°	432	466	540	614	640	199
165°	472	486	517	548	558	133
175°	492	493	496	503	502	47
180°	493	493	493	493	493	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	543.8	543.4	543.1	542.8	542.4	541.8	540.9	540.0	539.1	538.2	539.0
5°	542.4	541.8	541.3	540.8	540.3	539.5	538.3	537.2	536.0	534.9	535.9
7.5°	537.1	536.5	536.0	535.5	535.0	534.1	533.0	531.8	530.6	529.4	530.3
10°	532.6	532.1	531.5	531.0	530.5	529.6	528.2	526.9	525.5	524.2	525.1
12.5°	526.6	526.2	525.7	525.3	524.9	524.0	522.8	521.5	520.2	519.0	519.7
15°	516.3	515.9	515.4	515.0	514.6	513.7	512.4	511.0	509.7	508.4	509.2
17.5°	504.2	503.7	503.2	502.6	502.1	501.2	499.8	498.5	497.1	495.8	496.3
20°	495.3	494.7	494.1	493.4	492.8	491.8	490.5	489.1	487.8	486.5	486.9
22.5°	485.2	484.6	484.0	483.4	482.8	481.8	480.4	479.1	477.7	476.4	476.7
25°	468.7	468.1	467.5	466.9	466.3	465.3	463.9	462.6	461.2	459.9	460.0
27.5°	451.1	450.5	449.9	449.3	448.7	447.7	446.3	444.8	443.4	441.9	442.0
30°	438.5	437.9	437.4	436.9	436.4	435.4	434.0	432.5	431.1	429.6	429.6
32.5°	425.8	425.1	424.4	423.7	423.1	422.1	421.0	419.9	418.8	417.7	417.1
35°	405.4	404.8	404.1	403.5	402.9	401.9	400.6	399.2	397.9	396.5	395.9
37.5°	384.5	383.7	382.9	382.1	381.4	380.3	378.9	377.5	376.2	374.8	374.1
40°	370.0	369.3	368.7	368.1	367.5	366.4	365.0	363.5	362.1	360.6	359.8
42.5°	355.4	354.7	354.0	353.3	352.6	351.5	350.1	348.6	347.2	345.7	344.9
45°	332.2	331.8	331.4	331.0	330.6	329.7	328.3	327.0	325.6	324.3	323.1
47.5°	309.2	308.6	308.0	307.4	306.8	305.9	304.6	303.3	302.1	300.8	299.6
50°	293.5	293.0	292.5	292.0	291.5	290.5	289.2	287.9	286.5	285.2	284.0
52.5°	277.1	276.8	276.4	276.1	275.7	274.8	273.4	272.0	270.6	269.1	268.2
55°	252.1	252.0	251.9	251.8	251.7	250.9	249.6	248.2	246.9	245.6	244.4
57.5°	228.2	227.9	227.5	227.2	226.8	226.1	225.0	223.9	222.9	221.8	220.8
60°	211.1	211.0	210.9	210.8	210.7	210.0	208.7	207.5	206.3	205.0	204.1
62.5°	195.8	195.5	195.3	195.0	194.7	194.0	192.7	191.5	190.2	189.0	188.1
65°	171.9	171.4	170.9	170.4	169.9	169.1	168.1	167.0	166.0	164.9	164.1
67.5°	146.7	146.2	145.8	145.3	144.9	144.2	143.5	142.7	141.9	141.1	140.4
70°	131.4	130.8	130.2	129.5	128.9	128.3	127.7	127.0	126.4	125.8	125.1
72.5°	115.4	114.9	114.5	114.0	113.5	113.0	112.3	111.6	110.9	110.2	109.5
75°	90.9	90.4	90.0	89.6	89.2	88.8	88.5	88.2	87.9	87.6	87.1
77.5°	69.1	68.9	68.7	68.5	68.2	67.9	67.6	67.2	66.8	66.4	66.1
80°	55.0	54.7	54.4	54.1	53.7	53.5	53.3	53.1	52.9	52.7	52.5
82.5°	41.2	41.1	41.1	41.0	40.9	40.9	40.8	40.8	40.8	40.7	40.5
85°	24.2	24.0	23.8	23.6	23.4	23.3	23.3	23.3	23.3	23.3	23.1
87.5°	10.1	10.2	10.4	10.7	10.9	11.1	11.6	12.2	12.7	13.2	12.9
90°	2.0	4.0	6.0	9.0	11.0	13.0	16.0	19.0	22.0	25.0	24.0
92.5°	12.4	18.4	26.8	34.5	42.9	57.7	83.8	126.8	168.9	153.5	115.8
95°	33.9	36.9	47.9	64.9	90.8	129.8	214.6	363.3	527.0	591.9	480.1
97.5°	57.9	58.9	67.5	82.2	107.8	149.9	231.0	398.7	671.6	917.3	981.4
100°	73.9	74.9	81.9	95.8	119.8	158.7	228.6	376.3	638.8	945.3	1141.9
102.5°	90.6	92.4	98.6	111.8	133.4	169.1	231.8	357.1	590.9	893.4	1149.9
105°	115.8	118.8	124.8	136.8	155.7	186.7	240.6	343.4	532.0	802.5	1089.0
107.5°	142.5	145.5	151.3	163.1	180.9	209.6	256.9	342.4	494.5	722.3	982.4
110°	161.7	164.7	169.7	180.7	197.6	225.6	270.5	346.4	480.1	676.8	915.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	182.3	187.3	198.2	215.2	242.4	284.1	354.4	472.1	646.4	857.0
115°	204.6	208.6	214.6	224.6	241.6	268.5	306.4	367.3	469.1	613.9	786.6
117.5°	230.0	234.6	239.6	248.7	267.7	292.7	330.2	384.5	470.9	594.7	744.0
120°	247.5	250.5	255.5	265.5	284.5	309.4	345.4	397.3	474.1	585.9	721.7
122.5°	262.7	265.7	270.7	281.5	299.7	326.2	361.3	409.3	479.7	580.3	703.3
125°	284.5	286.5	292.5	303.4	322.4	349.4	384.3	428.2	488.1	573.0	679.8
127.5°	301.1	304.0	311.4	322.6	343.6	370.5	404.3	443.8	497.7	569.4	659.0
130°	311.4	314.4	323.4	335.4	356.3	383.3	416.2	454.2	504.1	567.0	647.8
132.5°	319.4	323.2	333.0	347.4	368.3	394.5	426.6	463.8	508.9	566.2	637.4
135°	333.4	337.4	348.4	363.3	384.3	411.2	442.2	476.1	516.1	565.0	623.9
137.5°	346.6	350.8	361.5	377.5	398.3	423.2	453.0	485.3	520.8	562.8	612.1
140°	355.4	360.3	370.3	386.3	406.3	431.2	460.2	490.1	524.0	562.0	604.9
142.5°	364.9	369.1	379.9	394.3	414.2	437.6	465.8	494.9	526.4	560.4	598.5
145°	380.3	383.3	392.3	407.3	424.2	447.2	473.1	500.1	528.0	558.0	589.9
147.5°	395.9	397.7	406.5	419.4	435.8	455.4	479.1	503.3	528.0	554.2	581.5
150°	406.3	407.3	415.2	428.2	442.2	460.2	483.1	504.1	528.0	551.0	575.9
152.5°	416.6	416.8	424.8	436.2	448.6	465.8	485.5	505.7	525.6	547.0	569.6
155°	432.2	432.2	438.2	448.2	459.2	473.1	490.1	506.1	523.0	540.0	560.0
157.5°	444.6	445.4	450.2	459.0	468.3	479.1	492.7	507.1	519.7	533.8	549.2
160°	454.2	454.2	458.2	466.1	473.1	483.1	495.1	507.1	518.1	529.0	542.0
162.5°	461.4	461.4	464.6	470.9	477.1	485.5	495.9	506.3	514.9	524.2	534.8
165°	472.1	471.1	473.1	478.1	482.1	489.1	497.1	504.1	510.1	517.1	525.0
167.5°	480.3	479.1	480.1	483.9	486.7	491.1	496.9	502.5	505.3	509.9	515.7
170°	485.1	483.1	484.1	487.1	489.1	491.1	496.1	500.1	502.1	505.1	510.1
172.5°	488.3	487.1	487.3	489.5	490.7	491.9	496.1	499.3	499.7	501.1	504.5
175°	492.1	491.1	490.1	492.1	492.1	493.1	495.1	497.1	496.1	496.1	498.1
177.5°	493.9	493.1	492.3	493.1	493.1	493.1	493.9	495.5	493.9	493.1	493.9
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	539.8	540.7	541.5	541.9	541.8	541.7	541.6	541.5
5°	537.0	538.0	539.1	539.5	539.3	539.1	538.8	538.6
7.5°	531.3	532.2	533.1	533.5	533.4	533.3	533.2	533.0
10°	526.1	527.0	527.9	528.3	528.1	527.9	527.7	527.5
12.5°	520.3	521.0	521.7	522.0	521.9	521.7	521.6	521.5
15°	510.0	510.8	511.7	511.8	511.1	510.5	509.9	509.3
17.5°	496.9	497.5	498.1	498.3	498.0	497.8	497.6	497.4
20°	487.3	487.7	488.1	488.2	487.8	487.5	487.2	486.9
22.5°	477.0	477.4	477.7	477.7	477.3	476.9	476.5	476.1
25°	460.1	460.2	460.3	460.2	459.9	459.6	459.3	459.0
27.5°	442.1	442.2	442.2	442.1	441.7	441.3	440.9	440.5
30°	429.6	429.6	429.6	429.2	428.5	427.8	427.1	426.3
32.5°	416.5	415.9	415.4	414.9	414.5	414.1	413.7	413.3
35°	395.3	394.7	394.0	393.5	393.0	392.4	391.9	391.4
37.5°	373.3	372.6	371.8	371.3	371.0	370.6	370.3	370.0
40°	359.0	358.2	357.3	356.7	356.3	355.9	355.5	355.1
42.5°	344.1	343.2	342.4	341.8	341.4	341.0	340.6	340.1
45°	321.8	320.6	319.3	318.5	317.9	317.4	316.9	316.4
47.5°	298.4	297.2	295.9	295.1	294.6	294.2	293.7	293.3
50°	282.9	281.7	280.6	279.7	279.1	278.5	277.9	277.2
52.5°	267.2	266.2	265.2	264.4	263.8	263.2	262.6	262.0
55°	243.3	242.1	241.0	240.2	239.7	239.1	238.6	238.1
57.5°	219.8	218.7	217.7	216.9	216.3	215.7	215.1	214.5
60°	203.2	202.2	201.3	200.6	200.0	199.5	199.0	198.5
62.5°	187.1	186.2	185.3	184.6	184.3	183.9	183.6	183.2
65°	163.3	162.5	161.6	161.1	160.8	160.4	160.1	159.8
67.5°	139.6	138.9	138.2	137.6	137.2	136.7	136.3	135.9
70°	124.4	123.6	122.9	122.3	121.8	121.3	120.7	120.2
72.5°	108.9	108.2	107.6	107.1	106.9	106.6	106.3	106.0
75°	86.6	86.0	85.5	85.1	84.8	84.5	84.2	83.9
77.5°	65.7	65.4	65.0	64.9	64.9	64.9	64.9	64.9
80°	52.4	52.3	52.2	52.2	52.2	52.2	52.2	52.2
82.5°	40.4	40.2	40.0	39.8	39.8	39.7	39.6	39.5
85°	22.9	22.7	22.5	22.4	22.4	22.4	22.4	22.4
87.5°	13.0	13.1	13.3	13.6	13.4	13.6	13.8	13.6
90°	25.0	26.0	27.0	28.9	27.9	28.9	29.9	28.9
92.5°	84.0	66.7	58.9	53.7	51.9	48.9	49.9	48.1
95°	359.3	243.6	190.7	154.7	135.8	126.8	119.8	115.8
97.5°	895.8	717.5	588.7	469.3	395.7	350.8	323.8	315.2
100°	1176.9	1096.0	979.2	837.5	736.7	663.8	624.9	625.9
102.5°	1270.3	1267.7	1199.6	1109.8	1031.3	973.6	941.1	918.1
105°	1297.6	1397.5	1416.4	1390.5	1344.5	1306.6	1274.7	1269.7
107.5°	1219.0	1381.1	1468.5	1504.1	1504.9	1492.1	1481.3	1472.1
110°	1143.9	1327.6	1453.3	1523.2	1551.2	1559.2	1557.2	1555.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1069.6	1257.3	1398.2	1488.1	1539.2	1563.9	1571.5	1571.9
115°	971.2	1144.9	1291.6	1400.4	1475.3	1519.2	1539.2	1544.2
117.5°	900.0	1049.9	1181.6	1292.0	1370.1	1420.4	1449.2	1455.9
120°	862.4	997.2	1117.0	1217.8	1296.6	1352.5	1376.5	1382.5
122.5°	832.9	954.9	1065.9	1159.5	1229.6	1279.9	1306.2	1313.8
125°	793.6	902.4	998.2	1078.0	1141.9	1185.8	1210.8	1217.8
127.5°	759.2	856.2	942.7	1015.3	1072.2	1109.8	1132.3	1138.7
130°	737.7	827.5	908.3	976.2	1029.1	1065.1	1086.0	1094.0
132.5°	717.7	800.3	875.6	940.3	990.0	1025.9	1044.5	1050.1
135°	690.7	761.6	826.5	883.4	932.3	962.2	980.2	987.2
137.5°	666.2	724.3	780.2	829.5	870.6	901.0	916.1	920.7
140°	651.8	702.7	750.6	793.6	831.5	859.4	875.4	874.4
142.5°	638.2	682.0	723.5	760.8	793.2	817.9	832.3	831.3
145°	621.9	654.8	686.7	715.7	740.6	761.6	769.6	771.6
147.5°	608.5	634.6	660.4	681.0	699.9	714.1	721.7	722.5
150°	598.9	621.9	642.8	661.8	676.8	687.7	693.7	693.7
152.5°	590.1	609.9	628.5	644.2	656.0	666.2	669.8	669.8
155°	576.9	592.9	607.9	619.9	628.9	636.8	638.8	639.8
157.5°	563.0	576.3	587.9	597.3	605.1	611.1	612.7	612.5
160°	555.0	566.0	575.9	582.9	589.9	595.9	595.9	594.9
162.5°	545.4	554.8	564.0	570.2	574.8	579.9	579.9	578.9
165°	533.0	539.0	546.0	551.0	555.0	559.0	558.0	558.0
167.5°	522.2	526.8	530.8	534.4	536.2	539.0	538.0	538.0
170°	515.1	518.1	522.0	524.0	525.0	527.0	526.0	526.0
172.5°	508.7	510.9	514.1	515.3	515.5	517.5	515.7	514.9
175°	500.1	501.1	503.1	503.1	503.1	504.1	503.1	502.1
177.5°	494.7	495.5	496.3	496.3	495.5	496.3	494.7	494.7
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

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