

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: P331506-935

Luminaire Tested: **S122DIW-S485D710U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331506-935
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: S122DIW-S485D710U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3821.4 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

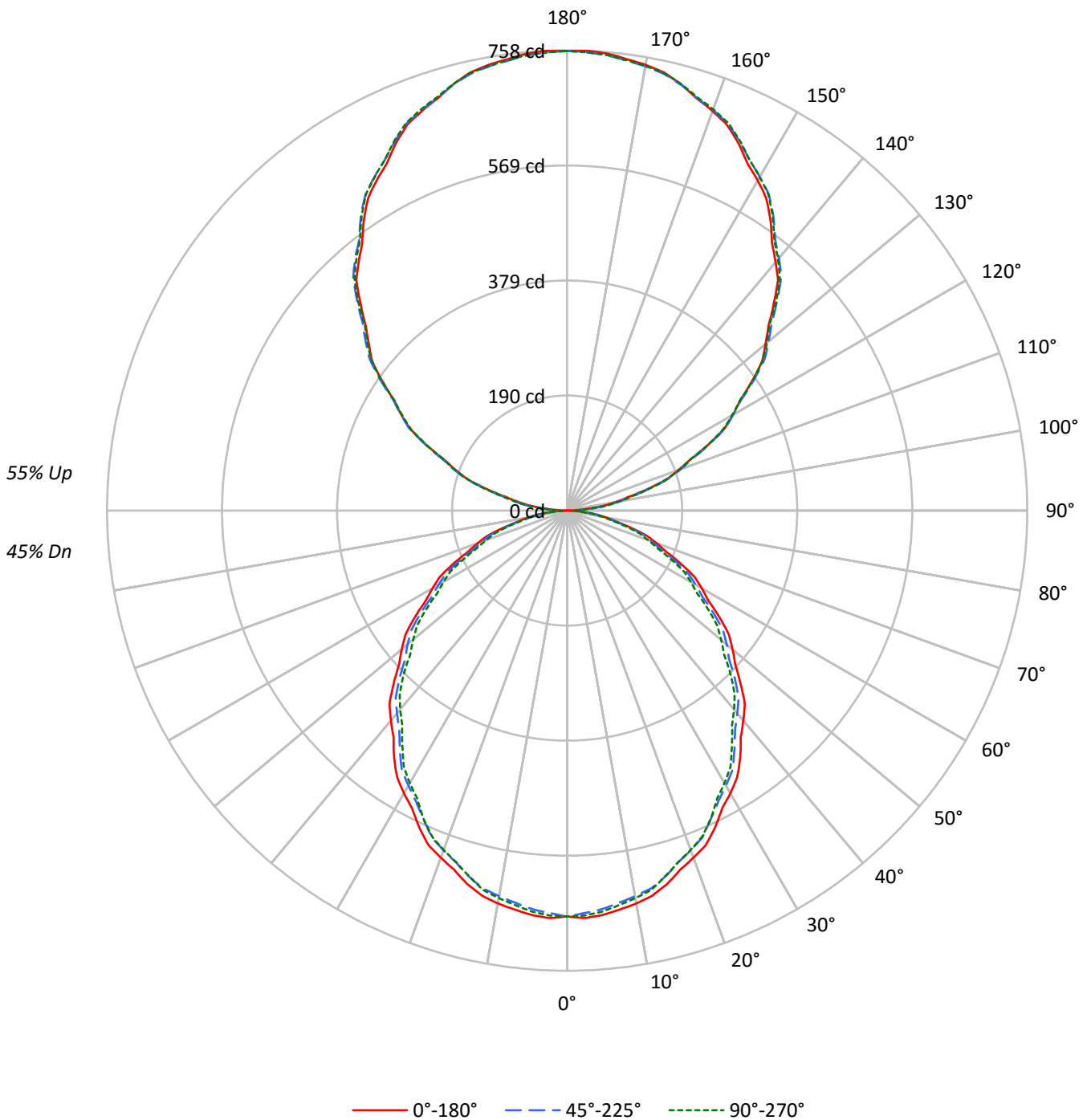
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38				38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	31				31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27				27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27	23				23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20				20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17				17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				15
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14				14
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	12				12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11				11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	1.6
10°-20°	176.9	4.6
20°-30°	260.1	6.8
30°-40°	302.1	7.9
40°-50°	301.8	7.9
50°-60°	263.2	6.9
60°-70°	194.6	5.1
70°-80°	110.2	2.9
80°-90°	32.7	0.9
90°-100°	48.0	1.3
100°-110°	149.0	3.9
110°-120°	254.7	6.7
120°-130°	334.9	8.8
130°-140°	375.9	9.8
140°-150°	368.6	9.6
150°-160°	309.2	8.1
160°-170°	205.1	5.4
170°-180°	71.7	1.9
0°-30°	499.9	13.1
0°-40°	802.0	21.0
0°-60°	1366.9	35.8
0°-90°	1704.4	44.6
90°-120°	451.7	11.8
90°-150°	1531.1	40.1
90°-180°	2117.0	55.4
0°-180°	3821.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
90°	1	9	22	21	22	3
95°	33	39	41	41	40	38
105°	137	139	141	142	142	145
115°	256	259	258	257	256	253
125°	372	377	376	374	373	332
135°	481	488	489	489	487	372
145°	584	588	592	593	590	365
155°	668	670	672	674	673	307
165°	726	726	726	730	727	205
175°	756	754	753	757	753	72
180°	757	757	757	757	757	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.4	9.5	9.6	9.7	9.8	10.1	10.5	10.8	11.3	11.7	11.3
90°	0.6	2.3	4.0	5.8	7.5	9.9	13.0	16.1	19.2	22.4	22.0
92.5°	11.4	12.7	13.9	15.2	16.4	17.4	18.1	18.9	19.5	20.3	20.4
95°	33.2	34.6	36.1	37.5	38.9	39.8	40.0	40.3	40.6	40.9	40.9
97.5°	60.7	61.9	63.2	64.4	65.7	66.6	67.2	67.7	68.2	68.7	68.7
100°	81.1	82.3	83.4	84.6	85.7	86.4	86.9	87.3	87.7	88.2	88.2
102.5°	102.6	103.5	104.4	105.3	106.2	106.9	107.5	108.1	108.6	109.1	109.3
105°	137.3	137.8	138.2	138.6	139.1	139.4	139.7	140.0	140.3	140.6	140.9
107.5°	172.4	173.0	173.7	174.3	174.9	175.2	175.2	175.2	175.2	175.2	175.3
110°	194.8	195.7	196.6	197.4	198.3	198.7	198.7	198.7	198.7	198.7	198.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.4	220.2	221.1	222.0	222.8	223.2	223.1	222.9	222.8	222.7	222.4
115°	255.5	256.4	257.3	258.1	259.0	259.2	259.0	258.6	258.4	258.1	258.0
117.5°	291.6	292.7	293.9	295.0	296.1	296.3	295.5	294.7	293.9	293.2	292.8
120°	315.6	316.8	317.9	319.0	320.1	320.1	319.0	317.9	316.8	315.6	315.6
122.5°	337.6	339.0	340.4	341.6	343.0	343.4	342.5	341.7	341.0	340.2	339.8
125°	371.9	373.2	374.4	375.7	376.9	377.4	376.9	376.5	376.1	375.7	375.2
127.5°	405.2	406.8	408.5	410.0	411.6	412.2	411.7	411.2	410.7	410.2	409.7
130°	426.1	428.0	429.8	431.7	433.5	434.3	434.0	433.8	433.4	433.2	432.9
132.5°	449.7	451.2	452.7	454.2	455.6	456.5	456.5	456.6	456.7	456.7	456.1
135°	481.1	482.7	484.2	485.8	487.3	488.3	488.5	488.9	489.1	489.4	489.2
137.5°	514.2	515.5	516.8	518.1	519.3	520.1	520.5	520.9	521.2	521.6	521.5
140°	534.2	535.4	536.7	538.0	539.2	540.2	541.0	541.7	542.3	543.0	543.0
142.5°	554.6	555.9	557.2	558.4	559.6	560.6	561.0	561.5	562.0	562.5	562.6
145°	583.9	585.0	585.9	586.9	588.0	588.8	589.7	590.6	591.4	592.3	592.4
147.5°	610.2	611.3	612.5	613.7	614.9	615.8	616.4	616.9	617.5	618.1	618.4
150°	628.0	628.9	629.7	630.6	631.5	632.1	632.7	633.3	633.9	634.5	634.9
152.5°	643.9	644.7	645.6	646.4	647.3	648.1	648.8	649.5	650.1	650.8	651.3
155°	667.6	668.0	668.5	668.9	669.3	669.8	670.2	670.6	671.1	671.5	672.2
157.5°	687.9	688.3	688.5	688.8	689.1	689.4	689.7	689.9	690.2	690.4	691.4
160°	700.3	700.5	700.8	701.1	701.4	701.6	701.7	701.9	702.0	702.1	703.0
162.5°	711.4	711.5	711.6	711.6	711.7	711.8	712.0	712.1	712.2	712.4	713.3
165°	726.4	726.3	726.2	726.0	725.9	725.8	725.8	725.8	725.8	725.8	726.8
167.5°	739.0	738.6	738.1	737.7	737.3	737.0	737.0	736.9	736.9	736.9	737.9
170°	745.6	745.2	744.8	744.3	743.9	743.6	743.5	743.3	743.2	743.0	744.1
172.5°	750.2	749.8	749.3	748.9	748.5	748.2	748.0	748.0	747.8	747.6	748.6
175°	755.8	755.4	755.0	754.6	754.1	753.8	753.5	753.2	752.9	752.6	753.6
177.5°	758.1	757.8	757.4	757.1	756.7	756.5	756.2	756.0	755.8	755.5	756.2
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	10.8	10.5	10.1	9.8	9.7	9.6	9.6	9.5
90°	21.8	21.5	21.3	21.2	21.3	21.4	21.6	21.7
92.5°	20.4	20.5	20.6	20.6	20.6	20.7	20.7	20.7
95°	40.9	40.9	40.9	40.7	40.5	40.2	39.9	39.6
97.5°	68.7	68.7	68.7	68.7	68.7	68.7	68.6	68.6
100°	88.2	88.2	88.2	88.1	88.0	87.8	87.6	87.6
102.5°	109.3	109.4	109.6	109.6	109.4	109.3	109.2	109.0
105°	141.1	141.4	141.7	141.8	141.8	141.8	141.8	141.8
107.5°	175.4	175.6	175.6	175.4	174.7	174.1	173.4	172.8
110°	198.7	198.7	198.7	198.5	198.0	197.6	197.2	196.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.1	221.7	221.4	221.0	220.8	220.4	220.1	219.8
115°	257.9	257.7	257.5	257.3	256.8	256.4	256.0	255.5
117.5°	292.5	292.1	291.8	291.4	290.9	290.5	290.1	289.6
120°	315.6	315.6	315.6	315.4	315.0	314.5	314.1	313.7
122.5°	339.5	339.1	338.8	338.5	338.1	337.9	337.5	337.3
125°	374.8	374.4	373.9	373.7	373.6	373.4	373.2	373.2
127.5°	409.1	408.6	408.1	407.7	407.2	406.7	406.3	405.9
130°	432.7	432.3	432.0	431.6	431.0	430.5	429.9	429.4
132.5°	455.5	454.8	454.2	453.7	453.2	452.7	452.3	451.9
135°	489.1	489.0	488.9	488.5	488.1	487.7	487.2	486.8
137.5°	521.3	521.2	521.2	520.8	520.2	519.7	519.1	518.5
140°	543.0	543.0	543.0	542.8	542.3	541.7	541.1	540.5
142.5°	562.7	562.8	562.9	562.7	562.1	561.5	561.0	560.4
145°	592.5	592.7	592.8	592.6	592.0	591.5	590.9	590.4
147.5°	618.7	619.0	619.3	619.2	618.7	618.1	617.6	617.1
150°	635.2	635.7	636.1	636.1	635.7	635.2	634.9	634.5
152.5°	651.9	652.4	653.0	653.0	652.4	651.9	651.3	650.8
155°	672.9	673.6	674.3	674.5	674.1	673.6	673.2	672.8
157.5°	692.3	693.3	694.2	694.4	693.7	693.0	692.3	691.6
160°	703.9	704.7	705.6	705.7	705.2	704.6	704.0	703.4
162.5°	714.3	715.3	716.3	716.4	715.7	715.1	714.4	713.7
165°	727.8	728.8	729.8	730.0	729.2	728.5	727.8	727.1
167.5°	738.9	739.9	740.9	741.0	740.3	739.5	738.8	738.0
170°	745.0	746.1	747.0	747.1	746.2	745.4	744.5	743.6
172.5°	749.7	750.6	751.7	751.7	750.9	750.0	749.2	748.3
175°	754.6	755.6	756.6	756.6	755.8	755.0	754.1	753.3
177.5°	756.9	757.6	758.3	758.3	757.6	756.9	756.2	755.5
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1

(END OF REPORT)