

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: P331433-935

Luminaire Tested: **SA2XXDIP-C1005D530U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331433-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

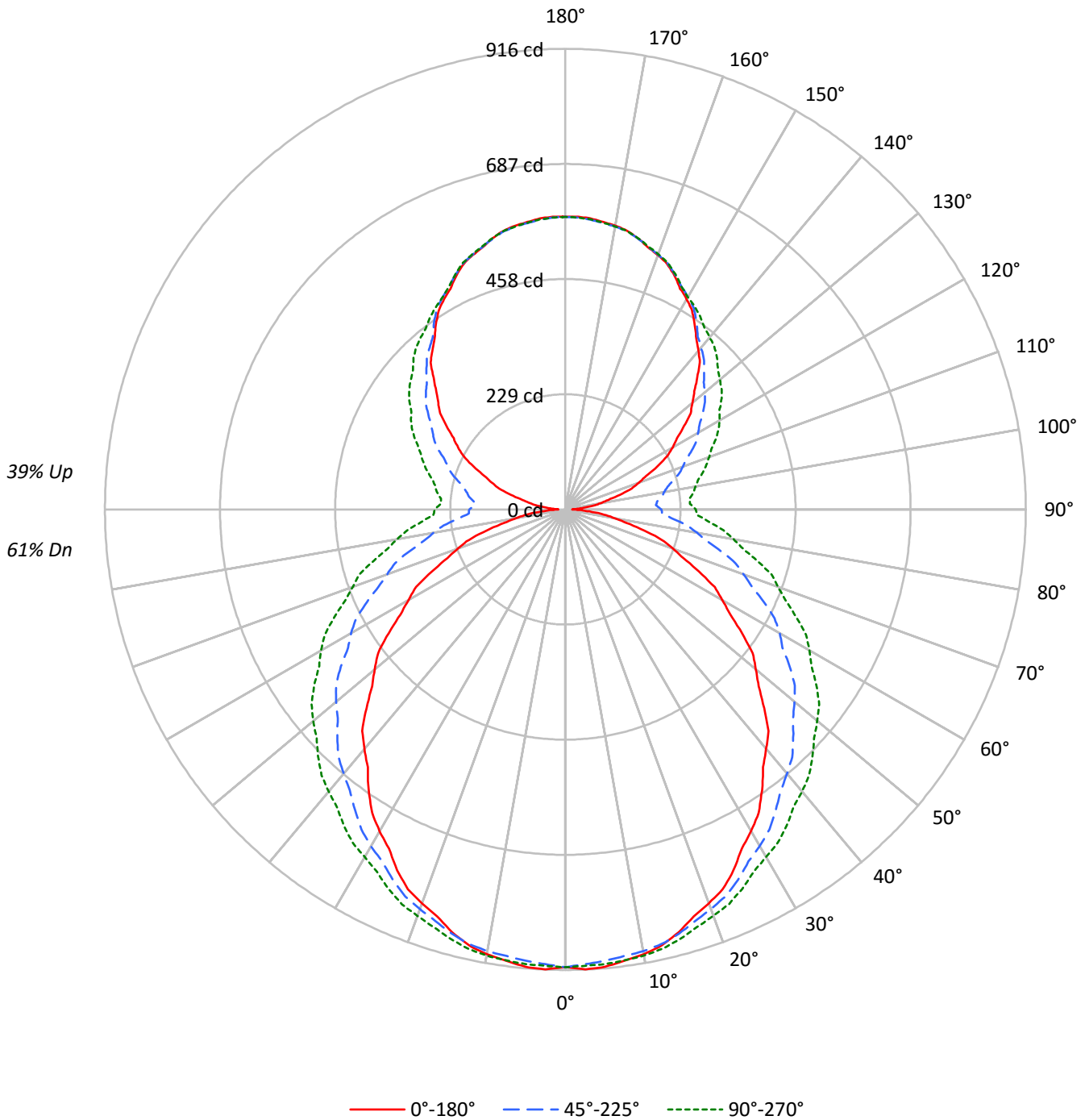
Lumens per Lamp: N/A
Luminaire Lumens: 5102.6 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 55.1
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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	98	93	88	84	92	87	83	79	76	72	70	65	63	60	55	54	52	47
2	89	80	73	67	82	75	69	64	65	60	56	56	52	49	48	45	42	38
3	81	70	62	55	75	65	58	52	57	51	46	49	44	41	42	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	37	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	39	34	30	33	29	26	23
6	62	49	40	34	57	46	38	32	40	34	29	35	30	26	30	26	22	20
7	57	44	36	30	53	41	34	28	36	30	25	32	26	23	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	18	15
9	49	37	29	23	46	34	27	22	30	24	20	27	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14699	14699	14699
5°	14772	14150	14097
10°	14679	13733	13578
15°	14477	13289	13032
20°	14222	12815	12506
25°	13968	12358	12028
30°	13612	11889	11549
35°	13253	11434	11211
40°	12874	11047	10874
45°	12515	10702	10584
50°	12128	10388	10300
55°	11724	10052	10011
60°	11226	9702	9705
65°	10711	9294	9342
70°	10136	8856	8949
75°	9394	8423	8587
80°	8224	7984	8220
85°	7107	7603	7937



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	1.7
10°-20°	247.4	4.8
20°-30°	374.9	7.3
30°-40°	456.6	8.9
40°-50°	491.2	9.6
50°-60°	477.0	9.3
60°-70°	416.5	8.2
70°-80°	320.7	6.3
80°-90°	217.5	4.3
90°-100°	185.1	3.6
100°-110°	222.8	4.4
110°-120°	267.2	5.2
120°-130°	297.3	5.8
130°-140°	305.6	6.0
140°-150°	286.2	5.6
150°-160°	237.6	4.7
160°-170°	157.6	3.1
170°-180°	55.1	1.1
0°-30°	708.5	13.9
0°-40°	1165.2	22.8
0°-60°	2133.4	41.8
0°-90°	3088.2	60.5
90°-120°	675.1	13.2
90°-150°	1564.2	30.7
90°-180°	2014.0	39.5
0°-180°	5102.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	913	909	901	909	908	87
15°	871	873	874	885	884	245
25°	792	801	813	828	833	364
35°	682	705	730	758	768	426
45°	560	596	641	681	695	432
55°	429	478	545	591	610	383
65°	293	358	435	488	507	291
75°	162	237	321	375	394	172
85°	48	129	214	267	288	51
90°	14	97	191	241	260	10
95°	36	104	183	231	248	38
105°	112	154	222	267	283	119
115°	202	221	278	315	330	199
125°	288	295	334	366	379	258
135°	371	377	391	417	427	287
145°	449	452	455	463	468	281
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	915.8	915.1	914.3	913.6	912.9	911.7	910.1	908.4	906.8	905.2	906.4
5°	913.1	912.2	911.4	910.4	909.6	908.3	906.5	904.7	903.0	901.2	903.0
7.5°	904.9	904.3	903.7	903.2	902.6	901.6	900.3	898.9	897.6	896.2	898.3
10°	898.6	898.0	897.4	896.8	896.2	895.5	894.7	893.7	892.9	892.0	894.3
12.5°	888.0	888.1	888.3	888.4	888.5	888.2	887.6	886.9	886.3	885.6	888.0
15°	870.9	871.5	872.0	872.6	873.2	873.5	873.5	873.5	873.5	873.5	876.2
17.5°	848.7	850.0	851.2	852.4	853.6	854.7	855.7	856.6	857.6	858.5	861.3
20°	834.0	835.4	836.9	838.4	839.8	841.1	842.3	843.4	844.6	845.8	849.0
22.5°	818.1	819.8	821.5	823.2	824.9	826.6	828.2	829.8	831.5	833.1	836.4
25°	791.7	793.8	795.8	797.9	800.0	802.3	804.9	807.5	810.2	812.8	816.3
27.5°	760.0	763.4	766.7	770.1	773.4	776.6	779.7	782.8	785.9	789.1	793.5
30°	738.9	742.7	746.6	750.4	754.1	758.0	761.8	765.6	769.4	773.3	777.9
32.5°	715.7	720.0	724.3	728.6	732.8	737.2	741.8	746.2	750.8	755.3	760.7
35°	682.2	687.2	692.2	697.2	702.1	707.4	713.0	718.5	724.1	729.7	736.2
37.5°	645.8	651.5	657.3	663.0	668.7	675.2	682.4	689.7	696.9	704.1	711.3
40°	621.5	627.9	634.4	640.8	647.3	654.4	662.4	670.3	678.2	686.1	693.8
42.5°	598.3	604.7	611.1	617.6	624.1	631.8	640.9	650.1	659.1	668.2	676.5
45°	559.5	567.4	575.3	583.2	591.2	600.2	610.5	620.8	631.0	641.3	650.4
47.5°	521.2	529.9	538.5	547.1	555.7	566.0	578.1	590.0	602.1	614.1	623.6
50°	494.8	503.9	513.0	522.1	531.2	542.3	555.5	568.7	581.9	595.1	605.1
52.5°	469.5	479.1	488.6	498.2	507.7	519.4	533.3	547.3	561.1	575.1	585.2
55°	428.9	439.4	450.0	460.5	471.1	484.0	499.2	514.4	529.7	544.9	555.5
57.5°	388.7	400.6	412.5	424.5	436.4	450.0	465.6	481.1	496.7	512.2	523.6
60°	360.2	372.8	385.5	398.0	410.7	425.3	442.0	458.7	475.4	492.1	503.3
62.5°	334.9	347.9	361.0	374.1	387.2	402.1	418.8	435.5	452.3	469.0	480.8
65°	292.9	307.3	321.7	336.0	350.4	366.3	383.6	400.8	418.1	435.4	447.5
67.5°	254.4	269.4	284.4	299.5	314.4	330.8	348.5	366.3	383.9	401.7	413.8
70°	227.0	242.2	257.4	272.7	287.9	304.6	322.9	341.0	359.2	377.4	389.9
72.5°	201.6	217.3	233.1	248.7	264.5	281.5	300.0	318.4	336.8	355.2	367.6
75°	162.3	178.7	195.1	211.5	228.0	245.6	264.3	283.1	301.9	320.6	333.2
77.5°	124.3	141.5	158.7	175.8	193.0	211.1	230.2	249.3	268.3	287.4	300.0
80°	98.9	116.8	134.7	152.7	170.5	189.0	208.0	227.1	246.2	265.2	277.5
82.5°	77.8	95.5	113.1	130.8	148.4	166.9	186.2	205.5	224.8	244.1	256.4
85°	47.5	65.7	83.9	102.0	120.2	138.7	157.5	176.2	195.0	213.8	226.1
87.5°	26.0	43.7	61.5	79.2	96.9	115.4	134.7	153.9	173.1	192.4	204.3
90°	13.7	32.0	50.3	68.6	87.0	106.7	127.9	149.0	170.2	191.4	202.9
92.5°	20.8	37.7	54.5	71.3	88.1	105.7	124.4	143.0	161.7	180.3	191.8
95°	36.1	51.0	65.9	80.7	95.6	111.9	129.8	147.6	165.3	183.1	194.3
97.5°	55.9	69.1	82.3	95.6	108.7	124.0	141.3	158.6	175.9	193.2	204.1
100°	71.5	83.3	95.1	106.8	118.5	132.7	149.5	166.2	183.0	199.7	210.5
102.5°	87.0	97.6	108.2	118.8	129.5	142.9	159.3	175.7	192.1	208.4	219.1
105°	112.2	121.0	129.8	138.6	147.5	159.6	175.1	190.5	206.0	221.5	232.0
107.5°	138.8	146.1	153.3	160.7	167.9	178.9	193.5	208.1	222.7	237.3	247.2
110°	155.1	161.5	168.1	174.6	181.1	191.6	206.0	220.2	234.6	249.0	258.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.9	179.4	185.0	190.6	196.2	205.8	219.4	232.9	246.5	260.1	269.2
115°	201.6	205.5	209.4	213.3	217.2	225.6	238.6	251.6	264.6	277.5	286.2
117.5°	228.1	231.0	234.0	237.0	240.0	247.3	258.8	270.4	282.1	293.6	302.0
120°	246.5	248.6	250.6	252.6	254.7	261.1	272.0	282.8	293.7	304.5	312.8
122.5°	263.4	264.9	266.4	267.9	269.5	275.4	285.9	296.3	306.7	317.1	324.8
125°	288.3	289.4	290.3	291.4	292.3	297.3	306.4	315.5	324.5	333.6	341.1
127.5°	314.0	315.0	315.9	316.8	317.8	321.8	329.1	336.2	343.4	350.6	357.5
130°	330.1	331.2	332.3	333.5	334.6	338.1	344.1	350.0	355.9	361.9	368.8
132.5°	348.2	349.0	349.9	350.8	351.6	354.5	359.3	364.0	368.9	373.7	380.0
135°	371.0	372.2	373.4	374.6	375.8	378.0	381.2	384.3	387.4	390.6	396.7
137.5°	396.5	397.4	398.3	399.2	400.2	401.4	402.9	404.6	406.1	407.7	413.0
140°	411.8	412.5	413.2	413.9	414.6	415.4	416.6	417.7	418.9	420.0	424.6
142.5°	427.5	428.2	428.9	429.6	430.2	430.8	431.4	431.8	432.3	432.8	436.6
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	457.0
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.4
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	907.5	908.7	909.9	910.2	909.7	909.3	908.8	908.4
5°	904.7	906.5	908.3	909.0	908.7	908.4	908.1	907.8
7.5°	900.4	902.6	904.7	905.6	905.3	905.0	904.7	904.4
10°	896.6	899.1	901.4	902.4	902.1	901.8	901.6	901.2
12.5°	890.4	892.7	895.0	896.0	895.8	895.4	895.2	894.9
15°	878.8	881.4	884.1	885.3	884.9	884.7	884.3	884.1
17.5°	864.0	866.8	869.5	870.9	870.9	870.9	870.9	870.9
20°	852.2	855.5	858.7	860.3	860.3	860.3	860.3	860.3
22.5°	839.6	842.8	846.0	847.9	848.3	848.9	849.3	849.8
25°	819.8	823.4	826.9	829.1	830.0	830.9	831.7	832.6
27.5°	798.0	802.5	806.9	809.4	810.1	810.7	811.4	812.0
30°	782.6	787.3	792.0	794.8	795.7	796.5	797.5	798.3
32.5°	766.1	771.5	776.9	780.3	782.0	783.5	785.1	786.7
35°	742.6	749.1	755.5	759.7	761.8	763.9	765.9	767.9
37.5°	718.4	725.6	732.7	737.4	739.5	741.8	743.9	746.1
40°	701.4	709.0	716.6	721.8	724.4	727.0	729.7	732.4
42.5°	684.8	693.2	701.5	707.0	709.6	712.3	714.9	717.6
45°	659.4	668.6	677.6	683.6	686.6	689.5	692.4	695.3
47.5°	633.1	642.6	652.1	658.5	661.7	665.0	668.1	671.4
50°	615.0	625.0	635.0	641.6	644.8	648.0	651.3	654.4
52.5°	595.5	605.6	615.9	622.7	626.1	629.6	633.1	636.5
55°	566.1	576.6	587.2	594.3	598.1	602.0	605.8	609.6
57.5°	535.0	546.4	557.8	565.3	569.2	573.1	577.0	580.8
60°	514.4	525.6	536.7	544.4	548.5	552.6	556.7	560.8
62.5°	492.7	504.5	516.3	524.2	528.1	531.9	535.8	539.7
65°	459.5	471.5	483.5	491.5	495.2	499.0	502.9	506.7
67.5°	425.9	438.1	450.2	458.3	462.3	466.2	470.3	474.2
70°	402.6	415.2	427.8	435.8	439.4	442.9	446.4	450.0
72.5°	380.0	392.4	404.7	413.0	417.2	421.5	425.7	429.9
75°	345.9	358.4	371.1	379.3	383.1	386.9	390.7	394.5
77.5°	312.5	325.0	337.6	345.9	350.0	354.1	358.3	362.3
80°	289.8	302.2	314.5	322.7	326.8	330.9	335.0	339.1
82.5°	268.7	281.0	293.3	301.4	305.3	309.2	313.1	316.9
85°	238.4	250.7	263.0	271.2	275.3	279.5	283.5	287.7
87.5°	216.2	228.2	240.0	247.9	251.7	255.5	259.2	263.0
90°	214.4	225.9	237.4	245.0	248.6	252.2	255.9	259.5
92.5°	203.4	214.9	226.4	234.0	237.5	241.1	244.6	248.1
95°	205.4	216.6	227.7	235.0	238.2	241.6	244.9	248.1
97.5°	214.9	225.8	236.6	243.7	247.2	250.6	254.1	257.5
100°	221.4	232.2	243.1	250.1	253.2	256.3	259.4	262.5
102.5°	229.8	240.6	251.2	258.1	261.2	264.4	267.5	270.6
105°	242.5	253.0	263.4	270.3	273.5	276.7	279.9	283.2
107.5°	257.2	267.1	277.1	283.4	286.1	288.8	291.5	294.3
110°	267.8	277.2	286.5	292.7	295.6	298.5	301.4	304.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.4	287.5	296.6	302.6	305.7	308.6	311.6	314.6
115°	294.9	303.6	312.3	318.1	321.0	323.9	326.7	329.7
117.5°	310.5	318.8	327.3	332.9	335.4	338.1	340.8	343.5
120°	321.0	329.2	337.4	342.9	345.9	348.8	351.6	354.6
122.5°	332.5	340.2	347.9	353.0	355.6	358.1	360.6	363.1
125°	348.7	356.4	363.9	368.9	371.5	374.0	376.6	379.1
127.5°	364.3	371.2	378.1	382.6	384.9	387.1	389.3	391.6
130°	375.6	382.4	389.2	393.6	395.5	397.4	399.2	401.2
132.5°	386.3	392.6	398.9	403.1	405.1	407.1	409.1	411.1
135°	402.7	408.7	414.8	418.9	420.9	422.8	424.9	426.9
137.5°	418.3	423.6	429.0	432.4	433.9	435.5	437.0	438.6
140°	429.4	434.0	438.8	441.8	443.1	444.4	445.7	447.0
142.5°	440.5	444.3	448.2	450.6	451.7	452.8	453.9	455.0
145°	458.9	460.7	462.6	464.1	465.1	466.1	467.2	468.2
147.5°	476.0	476.4	476.9	477.3	477.5	477.9	478.1	478.4
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)