

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: P332548-940

Luminaire Tested: **S124DIP-S575D590U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332548-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D590U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3938.7 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

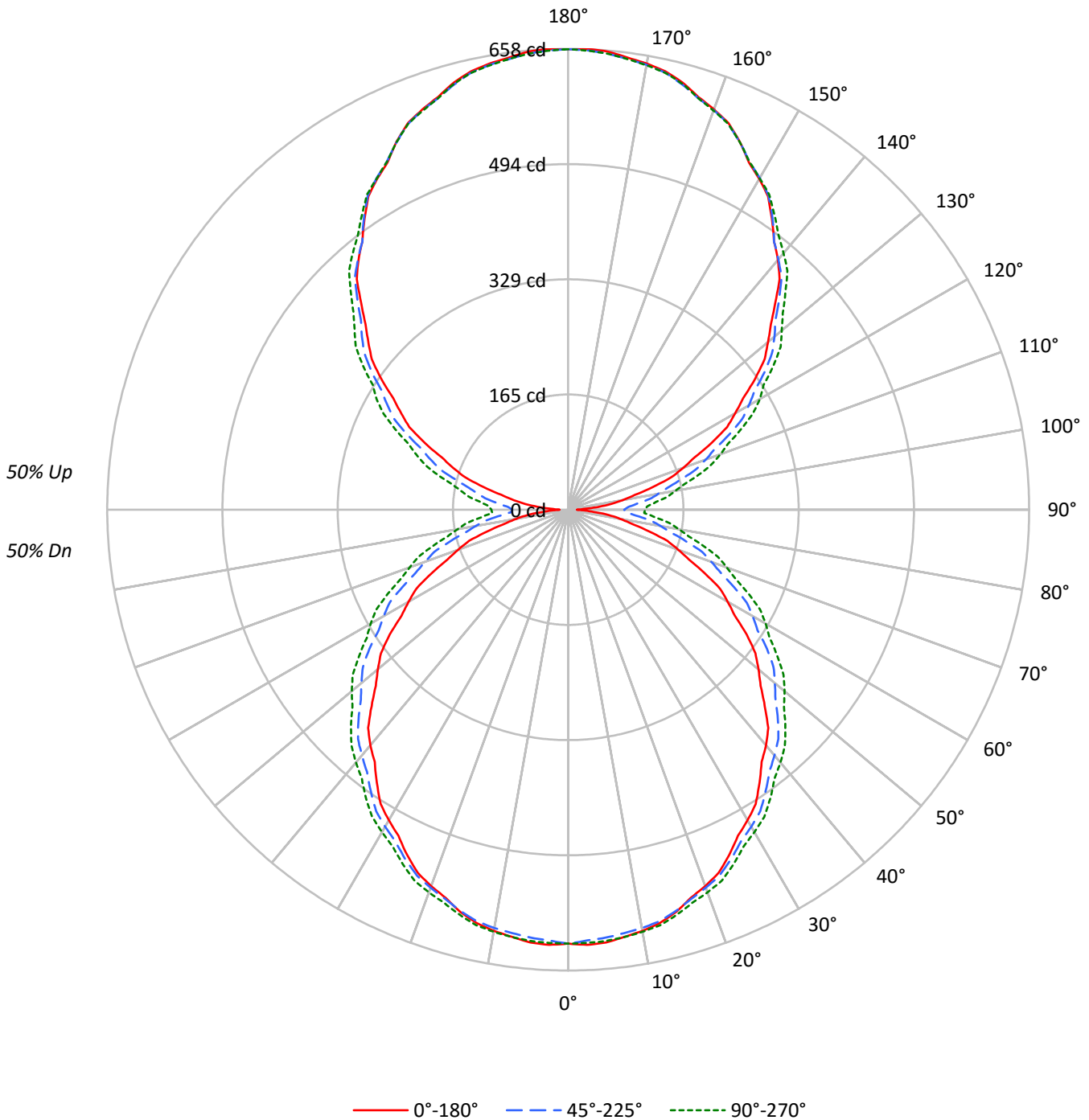
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66		59	57	55		48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54		51	48	45		41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45		45	41	38		36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38		40	36	32		32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32		36	31	28		29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28		32	28	24		26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25		29	25	21		24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22		27	22	19		22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19		24	20	17		20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17		23	18	15		19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	1.5
10°-20°	168.1	4.3
20°-30°	254.2	6.5
30°-40°	307.6	7.8
40°-50°	325.2	8.3
50°-60°	306.0	7.8
60°-70°	253.9	6.4
70°-80°	178.3	4.5
80°-90°	102.8	2.6
90°-100°	103.2	2.6
100°-110°	172.8	4.4
110°-120°	247.8	6.3
120°-130°	304.3	7.7
130°-140°	330.2	8.4
140°-150°	318.8	8.1
150°-160°	266.9	6.8
160°-170°	177.6	4.5
170°-180°	62.2	1.6
0°-30°	481.0	12.2
0°-40°	788.6	20.0
0°-60°	1419.8	36.0
0°-90°	1954.8	49.6
90°-120°	523.9	13.3
90°-150°	1477.2	37.5
90°-180°	1984.0	50.4
0°-180°	3938.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	13	46	80	102	110	9
95°	40	67	99	118	126	41
105°	125	140	167	185	193	133
115°	226	233	253	268	272	223
125°	326	326	342	354	357	290
135°	418	421	426	436	438	323
145°	507	508	508	512	513	317
155°	580	580	579	581	579	267
165°	631	630	629	631	630	178
175°	657	654	654	657	654	62
180°	658	658	658	658	658	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	20.9	27.4	33.9	40.5	47.0	53.8	60.6	67.6	74.5	81.5	86.1
90°	12.7	20.1	27.5	34.9	42.3	49.8	57.2	64.8	72.3	79.9	85.1
92.5°	21.4	28.4	35.4	42.4	49.3	56.4	63.8	71.0	78.2	85.5	90.2
95°	39.5	45.7	51.7	57.9	63.9	70.5	77.7	84.8	91.9	99.0	103.5
97.5°	61.5	66.7	71.9	77.0	82.2	88.5	95.7	102.8	110.0	117.2	121.6
100°	78.8	83.3	87.7	92.2	96.7	102.5	109.4	116.5	123.5	130.5	134.9
102.5°	97.6	101.2	105.0	108.6	112.4	117.6	124.4	131.3	138.0	144.9	149.2
105°	124.8	128.0	131.2	134.4	137.5	142.2	148.4	154.5	160.7	166.8	171.0
107.5°	154.6	157.3	160.0	162.6	165.2	169.3	174.8	180.3	185.7	191.2	195.3
110°	174.4	176.8	179.1	181.6	184.0	187.8	193.1	198.3	203.7	208.9	212.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	195.0	197.0	198.9	200.9	202.9	206.3	211.2	216.2	221.1	226.0	229.4
115°	225.9	227.3	228.7	230.1	231.5	234.5	239.2	243.9	248.6	253.3	256.6
117.5°	255.7	256.6	257.5	258.4	259.4	262.1	266.4	270.9	275.4	279.8	282.6
120°	275.1	276.0	276.9	277.8	278.7	281.2	285.3	289.5	293.6	297.7	300.3
122.5°	295.8	296.0	296.3	296.6	296.9	299.1	303.1	307.2	311.3	315.3	318.1
125°	325.7	325.6	325.4	325.3	325.1	326.9	330.6	334.4	338.1	341.9	344.6
127.5°	353.4	353.6	353.7	353.9	354.1	355.6	358.4	361.1	363.9	366.7	369.3
130°	372.3	372.6	372.7	372.9	373.1	374.4	376.8	379.3	381.8	384.2	386.8
132.5°	392.3	392.4	392.4	392.5	392.6	393.6	395.6	397.4	399.3	401.2	403.6
135°	417.9	418.6	419.3	420.0	420.6	421.5	422.6	423.7	424.7	425.8	428.1
137.5°	446.6	446.7	446.9	447.1	447.3	447.7	448.4	449.1	449.8	450.5	452.5
140°	465.7	465.8	465.8	465.9	466.0	466.1	466.3	466.5	466.6	466.7	468.6
142.5°	482.7	482.9	483.0	483.2	483.5	483.5	483.3	483.1	483.0	482.7	484.5
145°	506.8	507.0	507.3	507.7	507.9	508.1	508.3	508.4	508.5	508.5	509.4
147.5°	530.7	531.1	531.5	531.9	532.3	532.4	532.4	532.3	532.2	532.1	532.1
150°	545.4	545.7	546.0	546.3	546.6	546.7	546.7	546.7	546.7	546.7	546.7
152.5°	558.7	558.9	559.2	559.4	559.6	559.8	559.9	560.0	560.1	560.2	560.4
155°	579.8	579.8	579.8	579.8	579.8	579.7	579.6	579.5	579.4	579.3	579.7
157.5°	597.7	597.4	597.3	597.1	596.9	596.7	596.7	596.7	596.7	596.6	597.0
160°	608.2	608.1	608.1	608.0	607.8	607.7	607.6	607.5	607.3	607.3	607.6
162.5°	618.0	617.8	617.4	617.2	616.9	616.6	616.5	616.4	616.4	616.2	616.8
165°	631.2	630.8	630.4	630.2	629.8	629.5	629.3	629.1	628.8	628.7	629.3
167.5°	641.2	640.8	640.2	639.8	639.4	639.1	639.1	639.2	639.2	639.2	639.9
170°	646.9	646.4	645.8	645.2	644.6	644.4	644.5	644.6	644.8	644.9	645.6
172.5°	650.9	650.5	650.1	649.6	649.1	648.9	648.9	648.9	648.9	649.0	649.7
175°	656.6	656.0	655.5	654.9	654.3	654.0	653.9	653.8	653.6	653.5	654.3
177.5°	658.4	658.0	657.5	657.1	656.6	656.4	656.4	656.4	656.4	656.4	657.0
180°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	90.7	95.3	99.9	102.9	104.3	105.8	107.1	108.5
90°	90.2	95.3	100.5	103.8	105.2	106.7	108.2	109.6
92.5°	95.1	99.8	104.5	107.6	109.0	110.3	111.7	113.1
95°	108.0	112.5	117.0	119.9	121.4	122.8	124.1	125.6
97.5°	126.1	130.5	135.0	137.9	139.2	140.5	141.9	143.2
100°	139.3	143.7	148.1	150.9	151.9	153.0	154.1	155.2
102.5°	153.6	157.9	162.3	165.1	166.4	167.7	169.0	170.3
105°	175.2	179.4	183.6	186.5	188.1	189.7	191.2	192.8
107.5°	199.4	203.5	207.6	210.3	211.3	212.4	213.5	214.5
110°	215.5	218.9	222.2	224.6	226.2	227.7	229.3	231.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	232.8	236.2	239.6	241.9	243.3	244.5	245.8	247.1
115°	259.9	263.1	266.4	268.6	269.6	270.5	271.4	272.4
117.5°	285.4	288.3	291.1	293.0	294.0	295.0	296.0	297.0
120°	302.8	305.3	307.8	309.9	311.3	312.7	314.2	315.7
122.5°	320.7	323.4	326.1	327.8	328.5	329.2	329.9	330.6
125°	347.3	350.0	352.7	354.4	355.1	355.8	356.5	357.2
127.5°	371.8	374.3	376.9	378.6	379.5	380.3	381.2	382.1
130°	389.4	391.9	394.5	396.0	396.5	396.9	397.4	397.9
132.5°	406.0	408.4	410.9	412.4	413.2	413.9	414.7	415.4
135°	430.3	432.6	434.8	436.2	436.8	437.4	438.0	438.5
137.5°	454.4	456.4	458.3	459.8	460.6	461.4	462.3	463.1
140°	470.6	472.4	474.3	475.5	476.3	476.9	477.6	478.2
142.5°	486.2	487.9	489.6	490.9	491.5	492.1	492.8	493.4
145°	510.2	511.0	511.8	512.4	512.6	512.9	513.2	513.4
147.5°	532.2	532.2	532.2	532.4	532.8	533.2	533.6	534.0
150°	546.7	546.7	546.7	546.7	546.5	546.4	546.4	546.3
152.5°	560.7	561.0	561.2	561.2	561.0	560.6	560.4	560.1
155°	580.1	580.6	581.1	581.1	580.6	580.1	579.7	579.3
157.5°	597.4	597.7	598.1	598.0	597.6	597.3	596.8	596.5
160°	608.0	608.2	608.6	608.5	608.0	607.3	606.8	606.3
162.5°	617.4	618.0	618.7	618.7	618.1	617.5	617.0	616.4
165°	630.0	630.6	631.3	631.4	631.0	630.5	630.1	629.6
167.5°	640.5	641.2	641.9	641.9	641.2	640.5	639.8	639.1
170°	646.2	646.9	647.6	647.6	646.8	646.0	645.2	644.4
172.5°	650.5	651.3	652.0	652.0	651.2	650.4	649.6	648.9
175°	655.1	655.9	656.7	656.7	655.9	655.1	654.3	653.5
177.5°	657.6	658.3	658.9	658.9	658.2	657.5	656.7	655.9
180°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6

(END OF REPORT)