

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: P332760-935

Luminaire Tested: **S124DIW-S575D1050U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332760-935
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: S124DIW-S575D1050U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5171.9 lumens
Efficiency: N/A
Efficacy: 114.4 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: Semi-Indirect

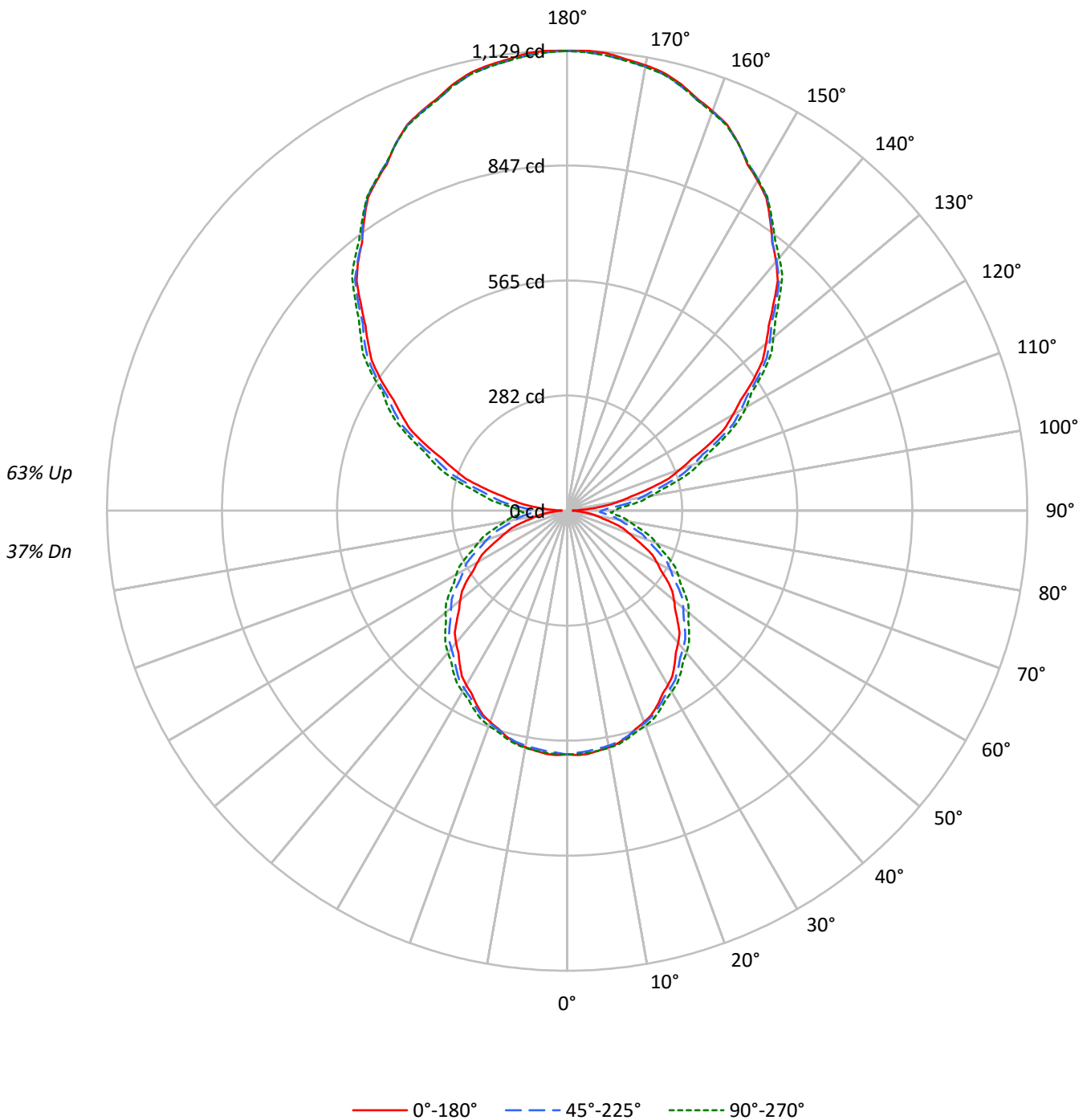
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76		59	59	59		44	44	44	37
1	94	89	85	82	85	81	78	74	65	63	61		51	49	48		37	36	35	29
2	85	78	71	66	77	70	65	60	57	53	50		44	41	39		32	31	29	24
3	78	68	60	55	70	62	55	50	50	45	41		39	35	33		29	26	24	20
4	71	60	52	46	64	54	47	42	44	39	35		34	31	28		25	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30		31	27	24		23	20	18	14
6	60	47	39	34	54	43	36	31	35	30	26		28	24	21		21	18	16	13
7	55	43	35	29	50	39	32	27	32	26	23		25	21	18		19	16	14	11
8	51	39	31	26	46	35	28	24	29	24	20		23	19	16		17	14	12	10
9	47	35	28	23	43	32	26	21	26	21	18		21	17	14		16	13	11	9
10	44	32	25	20	40	29	23	19	24	19	16		19	16	13		15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.1
10°-20°	162.3	3.1
20°-30°	245.5	4.7
30°-40°	297.0	5.7
40°-50°	314.0	6.1
50°-60°	295.5	5.7
60°-70°	245.2	4.7
70°-80°	172.2	3.3
80°-90°	100.7	1.9
90°-100°	132.2	2.6
100°-110°	263.2	5.1
110°-120°	402.7	7.8
120°-130°	509.4	9.8
130°-140°	560.9	10.8
140°-150°	545.7	10.6
150°-160°	457.8	8.9
160°-170°	304.6	5.9
170°-180°	106.6	2.1
0°-30°	464.5	9.0
0°-40°	761.4	14.7
0°-60°	1370.9	26.5
0°-90°	1888.9	36.5
90°-120°	798.1	15.4
90°-150°	2414.0	46.7
90°-180°	3283.0	63.5
0°-180°	5171.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	13	50	86	109	117	10
95°	61	91	125	144	151	65
105°	209	224	252	271	279	222
115°	384	391	410	423	428	379
125°	557	557	572	582	585	496
135°	716	721	726	734	736	554
145°	869	871	872	875	876	543
155°	994	994	994	997	994	457
165°	1082	1080	1078	1083	1080	305
175°	1126	1122	1121	1126	1121	107
180°	1128	1128	1128	1128	1128	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.3	26.9	33.3	39.9	46.3	53.0	59.8	66.7	73.5	80.3	84.9
90°	13.3	21.4	29.5	37.6	45.7	53.7	61.6	69.7	77.6	85.5	91.0
92.5°	28.8	36.7	44.4	52.3	60.1	67.7	75.2	82.7	90.1	97.6	102.5
95°	61.0	67.7	74.4	81.0	87.6	94.7	102.2	109.7	117.1	124.6	129.2
97.5°	99.3	105.0	110.6	116.1	121.8	128.5	136.0	143.7	151.4	158.9	163.6
100°	129.5	134.1	138.8	143.4	148.1	154.2	161.7	169.3	176.8	184.3	188.8
102.5°	161.6	165.3	169.0	172.7	176.4	181.9	189.2	196.5	203.7	211.0	215.4
105°	209.2	212.4	215.6	218.8	222.0	226.7	233.0	239.3	245.6	251.8	256.1
107.5°	260.6	263.3	266.0	268.6	271.3	275.3	280.6	285.9	291.3	296.6	300.8
110°	295.0	297.4	299.9	302.4	304.8	308.6	313.6	318.6	323.6	328.6	331.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	330.7	332.6	334.5	336.5	338.4	341.6	346.3	350.9	355.5	360.2	363.3
115°	384.4	385.6	387.0	388.3	389.7	392.5	396.9	401.3	405.7	410.0	413.1
117.5°	435.5	436.4	437.4	438.3	439.3	441.9	446.0	450.2	454.3	458.5	461.0
120°	469.2	470.4	471.6	472.8	474.0	476.5	480.3	484.0	487.7	491.5	493.4
122.5°	504.7	505.1	505.5	505.9	506.3	508.4	512.2	516.0	519.9	523.7	526.0
125°	556.6	556.4	556.2	556.1	555.9	557.7	561.2	564.7	568.3	571.8	574.2
127.5°	604.1	604.5	604.9	605.4	605.8	607.3	609.8	612.3	614.9	617.4	619.7
130°	637.0	637.4	637.8	638.3	638.7	640.2	642.5	644.9	647.3	649.6	651.9
132.5°	671.1	671.5	671.8	672.0	672.3	673.3	675.0	676.8	678.6	680.3	682.5
135°	715.7	716.9	718.0	719.2	720.3	721.4	722.5	723.5	724.6	725.7	727.6
137.5°	764.9	765.3	765.7	766.0	766.5	767.1	767.9	768.7	769.6	770.3	772.0
140°	797.7	797.9	798.1	798.4	798.7	798.8	799.0	799.1	799.3	799.4	801.2
142.5°	827.2	827.5	827.9	828.2	828.6	828.6	828.4	828.2	827.9	827.7	829.3
145°	868.6	869.2	869.8	870.4	871.1	871.4	871.7	871.8	872.0	872.2	873.0
147.5°	909.7	910.5	911.3	912.1	912.8	913.2	913.0	912.8	912.7	912.5	912.5
150°	934.8	935.5	936.1	936.7	937.4	937.6	937.6	937.6	937.6	937.6	937.6
152.5°	958.0	958.5	958.9	959.3	959.8	960.0	960.2	960.4	960.5	960.7	961.1
155°	994.4	994.4	994.4	994.4	994.4	994.3	994.0	993.9	993.7	993.5	994.3
157.5°	1025.0	1024.7	1024.3	1024.0	1023.6	1023.5	1023.4	1023.4	1023.3	1023.3	1023.9
160°	1043.2	1043.0	1042.8	1042.6	1042.4	1042.2	1042.0	1041.8	1041.6	1041.5	1042.0
162.5°	1059.9	1059.5	1058.9	1058.4	1057.9	1057.6	1057.4	1057.2	1057.0	1056.8	1057.8
165°	1082.4	1081.8	1081.2	1080.7	1080.1	1079.6	1079.3	1078.8	1078.5	1078.1	1079.3
167.5°	1099.7	1098.9	1098.1	1097.3	1096.5	1096.1	1096.1	1096.1	1096.1	1096.2	1097.3
170°	1109.5	1108.5	1107.5	1106.6	1105.6	1105.2	1105.4	1105.6	1105.8	1106.0	1107.2
172.5°	1116.5	1115.6	1114.8	1114.0	1113.2	1112.8	1112.8	1112.9	1112.9	1112.9	1114.3
175°	1126.0	1125.1	1124.1	1123.2	1122.1	1121.6	1121.4	1121.2	1121.0	1120.8	1122.1
177.5°	1129.2	1128.4	1127.7	1126.9	1126.1	1125.7	1125.7	1125.7	1125.7	1125.7	1126.8
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	89.5	94.0	98.6	101.5	102.9	104.3	105.6	107.1
90°	96.5	101.9	107.5	111.0	112.5	114.2	115.7	117.3
92.5°	107.5	112.4	117.3	120.4	121.8	123.2	124.7	126.1
95°	133.8	138.4	143.0	145.9	147.3	148.6	150.0	151.3
97.5°	168.2	172.8	177.4	180.3	181.6	182.9	184.2	185.5
100°	193.2	197.6	202.0	204.7	205.8	206.8	207.8	208.9
102.5°	219.9	224.3	228.8	231.6	233.0	234.3	235.6	236.9
105°	260.5	264.8	269.1	272.1	273.8	275.6	277.4	279.1
107.5°	305.0	309.2	313.4	316.1	317.1	318.1	319.2	320.2
110°	334.8	337.8	340.8	343.2	345.0	346.7	348.5	350.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	366.6	369.8	373.1	375.3	376.6	378.0	379.3	380.6
115°	416.2	419.3	422.4	424.3	425.2	426.0	426.9	427.7
117.5°	463.4	465.8	468.3	469.9	470.7	471.5	472.3	473.1
120°	495.4	497.5	499.5	501.3	502.8	504.5	506.0	507.6
122.5°	528.3	530.6	533.0	534.3	534.6	535.0	535.4	535.8
125°	576.6	579.1	581.5	583.0	583.5	584.0	584.5	585.0
127.5°	622.1	624.3	626.6	628.1	628.8	629.6	630.3	630.9
130°	654.3	656.5	658.8	660.0	660.1	660.3	660.4	660.5
132.5°	684.7	686.8	689.0	690.3	691.0	691.6	692.2	692.7
135°	729.6	731.6	733.6	734.8	735.0	735.4	735.7	736.0
137.5°	773.7	775.3	777.1	778.3	779.1	780.0	780.8	781.7
140°	802.9	804.7	806.4	807.5	808.1	808.7	809.2	809.8
142.5°	831.0	832.7	834.3	835.4	836.0	836.6	837.2	837.8
145°	873.7	874.3	875.0	875.4	875.4	875.4	875.5	875.5
147.5°	912.5	912.4	912.4	912.5	912.7	913.1	913.3	913.6
150°	937.6	937.6	937.6	937.5	937.4	937.2	936.9	936.8
152.5°	961.6	962.1	962.5	962.5	962.0	961.5	961.0	960.5
155°	995.1	995.8	996.6	996.6	995.8	995.1	994.3	993.5
157.5°	1024.5	1025.0	1025.6	1025.6	1024.9	1024.2	1023.6	1023.0
160°	1042.6	1043.2	1043.8	1043.5	1042.6	1041.6	1040.7	1039.7
162.5°	1058.9	1059.9	1061.0	1061.0	1060.1	1059.1	1058.1	1057.1
165°	1080.4	1081.6	1082.7	1082.9	1082.1	1081.3	1080.6	1079.8
167.5°	1098.5	1099.7	1100.9	1100.9	1099.7	1098.5	1097.3	1096.1
170°	1108.3	1109.5	1110.6	1110.5	1109.2	1107.8	1106.5	1105.1
172.5°	1115.6	1116.9	1118.3	1118.2	1116.9	1115.5	1114.1	1112.8
175°	1123.5	1124.9	1126.3	1126.3	1124.9	1123.5	1122.1	1120.8
177.5°	1127.9	1128.9	1130.1	1130.0	1128.7	1127.5	1126.3	1125.0
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8

(END OF REPORT)