

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: P332760-930

Luminaire Tested: **S124DIW-S575D1050U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332760-930
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-S575D1050U930-4F0-1E-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: 4897.4 lumens
Efficiency: N/A
Efficacy: 108.3 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

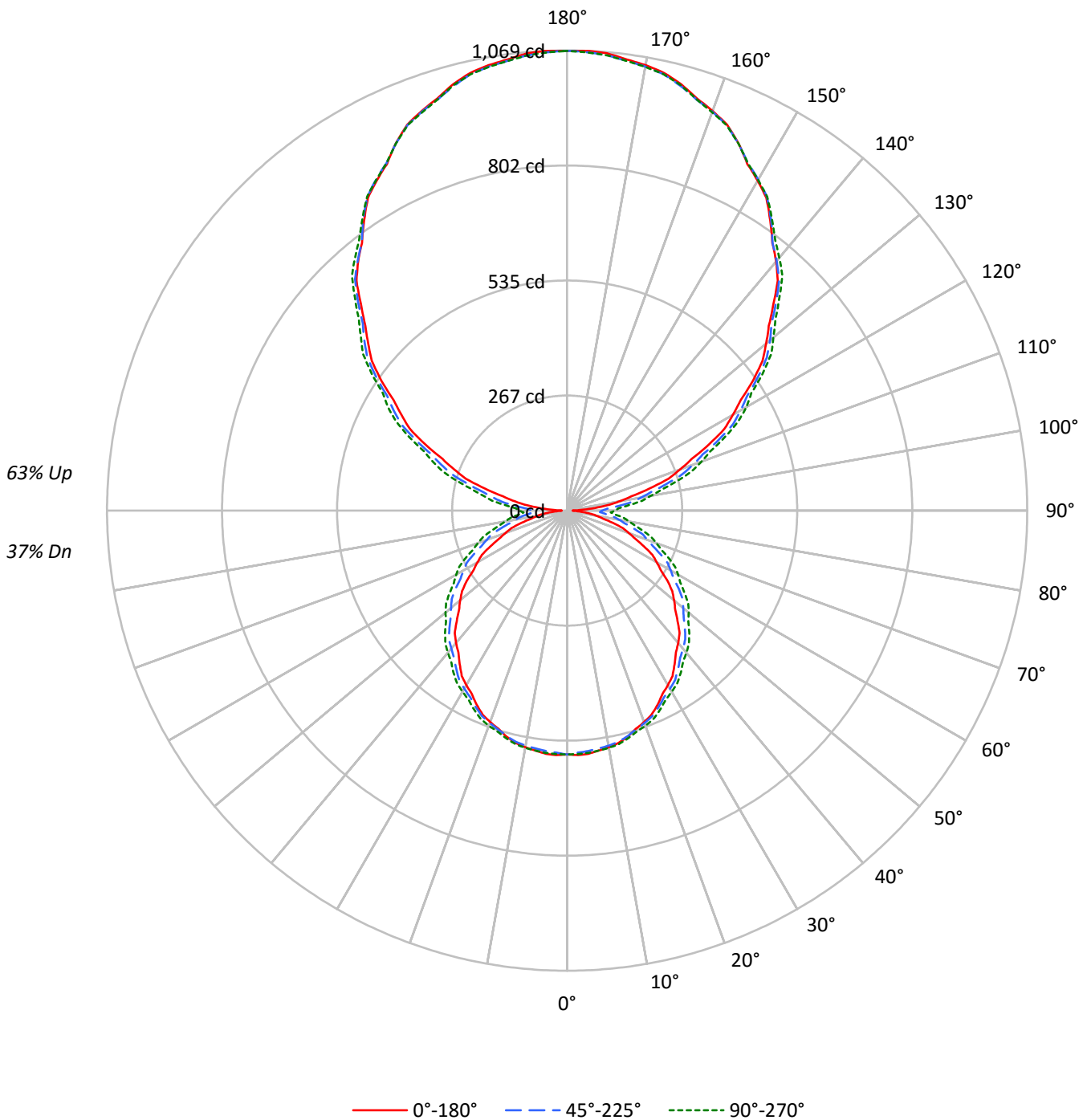
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	1.1
10°-20°	153.7	3.1
20°-30°	232.4	4.7
30°-40°	281.2	5.7
40°-50°	297.3	6.1
50°-60°	279.8	5.7
60°-70°	232.1	4.7
70°-80°	163.1	3.3
80°-90°	95.4	1.9
90°-100°	125.2	2.6
100°-110°	249.2	5.1
110°-120°	381.4	7.8
120°-130°	482.3	9.8
130°-140°	531.1	10.8
140°-150°	516.7	10.6
150°-160°	433.5	8.9
160°-170°	288.4	5.9
170°-180°	101.0	2.1
0°-30°	439.8	9.0
0°-40°	721.0	14.7
0°-60°	1298.1	26.5
0°-90°	1788.7	36.5
90°-120°	755.7	15.4
90°-150°	2285.9	46.7
90°-180°	3109.0	63.5
0°-180°	4897.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	13	47	81	103	111	10
95°	58	86	118	137	143	62
105°	198	212	238	256	264	211
115°	364	370	388	401	405	359
125°	527	527	541	551	554	470
135°	678	683	687	695	697	524
145°	822	825	826	829	829	515
155°	942	942	941	944	941	433
165°	1025	1023	1021	1025	1022	289
175°	1066	1062	1061	1066	1061	101
180°	1068	1068	1068	1068	1068	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.2	25.4	31.6	37.7	43.9	50.2	56.7	63.2	69.6	76.1	80.4
90°	12.6	20.3	28.0	35.6	43.3	50.9	58.4	66.0	73.5	81.0	86.2
92.5°	27.3	34.7	42.1	49.5	56.9	64.1	71.2	78.3	85.4	92.5	97.1
95°	57.8	64.1	70.4	76.7	83.0	89.7	96.8	103.9	110.9	118.0	122.3
97.5°	94.0	99.4	104.7	110.0	115.4	121.6	128.8	136.1	143.3	150.5	154.9
100°	122.6	127.0	131.4	135.8	140.2	146.0	153.1	160.3	167.5	174.6	178.8
102.5°	153.0	156.5	160.0	163.5	167.1	172.3	179.1	186.1	192.9	199.8	204.0
105°	198.1	201.1	204.2	207.2	210.2	214.7	220.6	226.6	232.5	238.5	242.6
107.5°	246.8	249.3	251.8	254.4	256.9	260.7	265.7	270.8	275.8	280.9	284.9
110°	279.3	281.6	284.0	286.3	288.6	292.2	296.9	301.7	306.5	311.2	314.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.2	315.0	316.7	318.6	320.4	323.5	327.9	332.3	336.6	341.0	344.1
115°	363.9	365.2	366.5	367.7	369.0	371.7	375.9	380.0	384.2	388.2	391.2
117.5°	412.4	413.3	414.2	415.1	416.0	418.4	422.3	426.3	430.2	434.1	436.5
120°	444.3	445.4	446.5	447.7	448.8	451.2	454.8	458.3	461.8	465.4	467.2
122.5°	477.9	478.3	478.7	479.1	479.4	481.4	485.0	488.6	492.3	495.9	498.1
125°	527.0	526.8	526.7	526.6	526.4	528.1	531.4	534.8	538.1	541.4	543.7
127.5°	572.0	572.4	572.8	573.2	573.6	575.0	577.5	579.8	582.3	584.7	586.9
130°	603.2	603.6	604.0	604.4	604.8	606.2	608.4	610.7	612.9	615.1	617.3
132.5°	635.5	635.9	636.1	636.3	636.6	637.6	639.2	640.9	642.5	644.2	646.3
135°	677.7	678.8	679.9	681.0	682.1	683.1	684.1	685.1	686.2	687.1	689.0
137.5°	724.3	724.6	725.0	725.4	725.8	726.4	727.2	727.9	728.7	729.4	731.0
140°	755.4	755.5	755.8	756.0	756.3	756.4	756.6	756.7	756.8	757.0	758.6
142.5°	783.3	783.6	783.9	784.2	784.6	784.6	784.4	784.2	784.0	783.7	785.3
145°	822.5	823.0	823.6	824.2	824.8	825.2	825.4	825.6	825.7	825.9	826.6
147.5°	861.4	862.2	862.9	863.6	864.4	864.7	864.5	864.4	864.2	864.1	864.1
150°	885.2	885.8	886.4	887.0	887.6	887.9	887.9	887.9	887.9	887.9	887.9
152.5°	907.2	907.6	908.0	908.4	908.8	909.1	909.2	909.4	909.5	909.7	910.1
155°	941.6	941.6	941.6	941.6	941.6	941.5	941.3	941.1	940.9	940.8	941.5
157.5°	970.6	970.3	970.0	969.6	969.3	969.1	969.1	969.1	969.0	969.0	969.6
160°	987.8	987.7	987.4	987.2	987.1	986.9	986.7	986.5	986.3	986.2	986.7
162.5°	1003.6	1003.2	1002.7	1002.2	1001.8	1001.4	1001.3	1001.1	1000.9	1000.7	1001.7
165°	1025.0	1024.4	1023.9	1023.4	1022.8	1022.3	1022.0	1021.6	1021.2	1020.8	1022.0
167.5°	1041.3	1040.6	1039.8	1039.0	1038.3	1037.9	1038.0	1038.0	1038.0	1038.0	1039.1
170°	1050.6	1049.7	1048.7	1047.8	1046.9	1046.5	1046.8	1046.9	1047.1	1047.3	1048.4
172.5°	1057.2	1056.4	1055.6	1054.9	1054.1	1053.8	1053.8	1053.9	1053.9	1053.9	1055.2
175°	1066.2	1065.4	1064.5	1063.6	1062.6	1062.1	1061.8	1061.7	1061.5	1061.4	1062.6
177.5°	1069.3	1068.5	1067.8	1067.1	1066.3	1065.9	1065.9	1065.9	1065.9	1065.9	1067.0
180°	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	84.7	89.0	93.4	96.1	97.4	98.7	100.0	101.4
90°	91.4	96.5	101.7	105.1	106.6	108.1	109.6	111.0
92.5°	101.7	106.4	111.0	114.0	115.4	116.7	118.1	119.4
95°	126.7	131.0	135.4	138.2	139.5	140.7	142.0	143.2
97.5°	159.2	163.6	168.0	170.7	171.9	173.2	174.4	175.6
100°	183.0	187.1	191.3	193.9	194.9	195.8	196.8	197.8
102.5°	208.2	212.4	216.6	219.3	220.6	221.8	223.1	224.4
105°	246.6	250.7	254.8	257.6	259.3	261.0	262.7	264.3
107.5°	288.8	292.8	296.8	299.3	300.3	301.3	302.2	303.2
110°	317.0	319.8	322.7	325.0	326.7	328.3	330.0	331.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	347.2	350.2	353.3	355.4	356.6	357.9	359.1	360.4
115°	394.1	397.1	400.0	401.8	402.6	403.4	404.2	405.0
117.5°	438.8	441.1	443.4	445.0	445.7	446.5	447.3	448.0
120°	469.1	471.1	473.0	474.7	476.1	477.7	479.2	480.6
122.5°	500.3	502.5	504.7	505.9	506.2	506.6	507.0	507.4
125°	546.0	548.4	550.7	552.0	552.5	553.0	553.5	554.0
127.5°	589.1	591.2	593.4	594.8	595.4	596.1	596.8	597.5
130°	619.5	621.7	623.9	625.0	625.1	625.3	625.3	625.4
132.5°	648.3	650.4	652.4	653.7	654.3	654.8	655.4	655.9
135°	690.9	692.8	694.6	695.8	696.0	696.3	696.7	696.9
137.5°	732.6	734.2	735.8	736.9	737.8	738.6	739.4	740.2
140°	760.3	762.0	763.6	764.7	765.2	765.7	766.2	766.8
142.5°	786.8	788.5	790.0	791.1	791.7	792.2	792.7	793.3
145°	827.3	827.9	828.6	828.9	828.9	828.9	829.0	829.0
147.5°	864.1	864.0	864.0	864.1	864.3	864.6	864.9	865.1
150°	887.9	887.9	887.9	887.8	887.6	887.5	887.2	887.0
152.5°	910.5	911.0	911.4	911.4	910.9	910.4	910.0	909.5
155°	942.2	943.0	943.7	943.7	943.0	942.2	941.5	940.8
157.5°	970.1	970.6	971.2	971.2	970.5	969.9	969.3	968.7
160°	987.2	987.8	988.4	988.1	987.2	986.3	985.5	984.5
162.5°	1002.7	1003.6	1004.7	1004.7	1003.8	1002.9	1001.9	1001.0
165°	1023.0	1024.2	1025.2	1025.4	1024.7	1023.9	1023.2	1022.5
167.5°	1040.2	1041.3	1042.4	1042.4	1041.3	1040.2	1039.0	1037.9
170°	1049.5	1050.6	1051.7	1051.6	1050.4	1049.0	1047.7	1046.4
172.5°	1056.4	1057.6	1058.9	1058.8	1057.6	1056.3	1055.0	1053.7
175°	1063.9	1065.2	1066.5	1066.5	1065.2	1063.9	1062.6	1061.4
177.5°	1068.0	1069.0	1070.1	1070.0	1068.8	1067.6	1066.5	1065.3
180°	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0	1068.0

(END OF REPORT)