

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: P332784-935

Luminaire Tested: **S124DIW-S795D770U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784-935
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-S795D770U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5082.7 lumens
Efficiency: N/A
Efficacy: 112.9 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

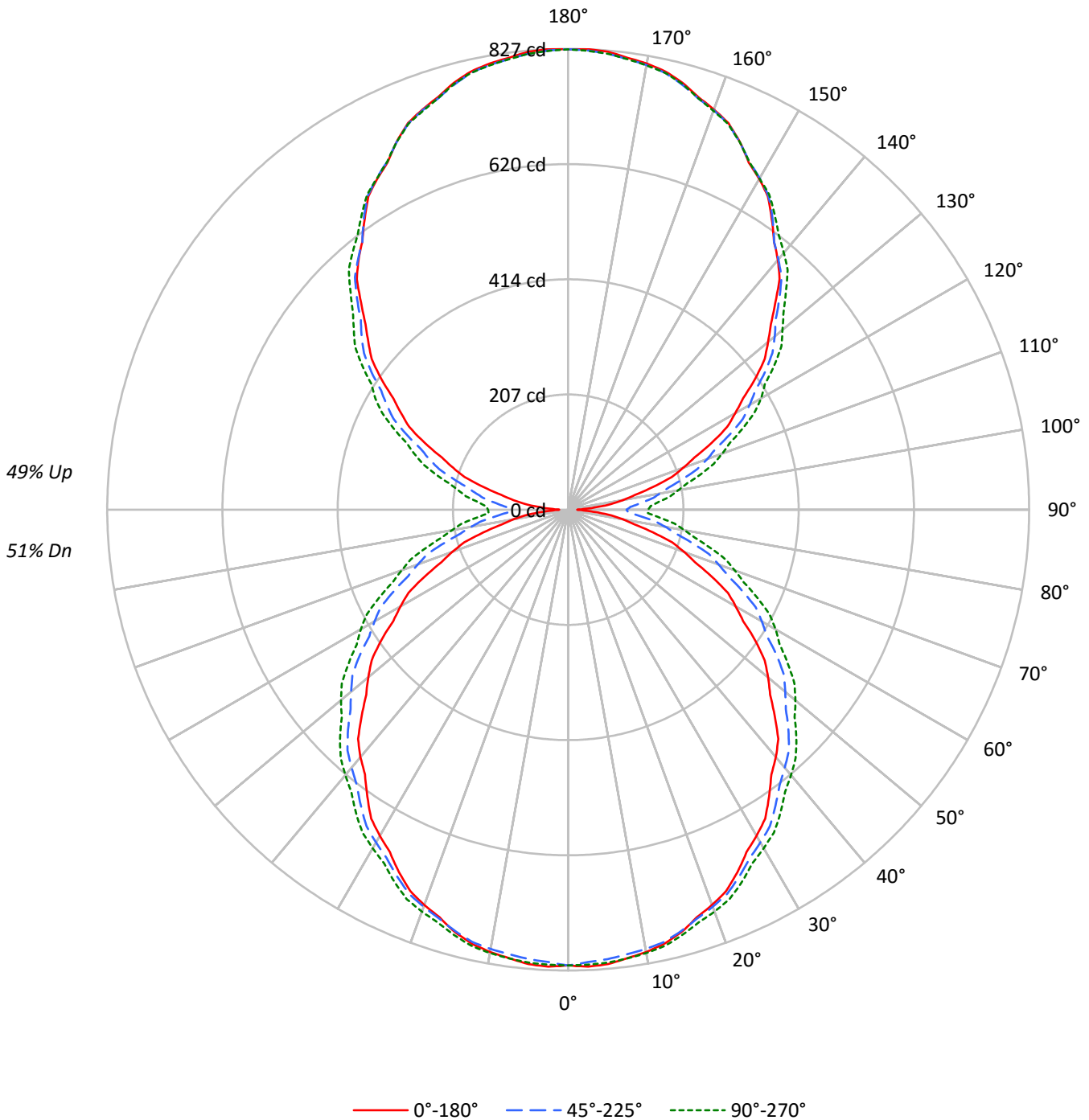
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	67	60	58	56	49	47	46	41
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	33	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.5
10°-20°	221.9	4.4
20°-30°	335.5	6.6
30°-40°	405.9	8.0
40°-50°	429.2	8.4
50°-60°	403.9	7.9
60°-70°	335.1	6.6
70°-80°	235.4	4.6
80°-90°	135.5	2.7
90°-100°	133.5	2.6
100°-110°	219.9	4.3
110°-120°	313.3	6.2
120°-130°	383.5	7.5
130°-140°	415.3	8.2
140°-150°	400.7	7.9
150°-160°	335.4	6.6
160°-170°	223.1	4.4
170°-180°	78.1	1.5
0°-30°	634.9	12.5
0°-40°	1040.8	20.5
0°-60°	1873.9	36.9
0°-90°	2579.9	50.8
90°-120°	666.7	13.1
90°-150°	1866.2	36.7
90°-180°	2503.0	49.2
0°-180°	5082.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	16	60	105	134	144	12
95°	50	87	128	154	163	52
105°	157	177	212	236	247	167
115°	284	293	320	339	346	280
125°	409	410	431	446	451	365
135°	525	529	536	548	552	406
145°	637	638	639	644	646	398
155°	728	728	728	730	728	335
165°	793	791	790	793	791	223
175°	825	822	821	825	821	78
180°	826	826	826	826	826	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.5	36.1	44.7	53.4	62.0	70.9	80.0	89.1	98.2	107.4	113.5
90°	16.5	26.3	36.0	45.7	55.4	65.2	75.1	85.0	94.8	104.7	111.5
92.5°	27.6	36.7	45.8	54.9	64.1	73.4	82.9	92.5	102.0	111.6	117.8
95°	50.3	58.2	66.2	74.2	82.2	90.9	100.2	109.6	118.9	128.2	134.1
97.5°	77.7	84.6	91.4	98.2	105.0	113.1	122.5	132.0	141.4	150.8	156.6
100°	99.5	105.4	111.2	117.1	123.0	130.5	139.7	149.0	158.2	167.4	173.1
102.5°	123.0	127.9	132.8	137.7	142.5	149.4	158.3	167.3	176.2	185.2	190.9
105°	157.1	161.4	165.6	169.8	174.0	180.1	188.2	196.3	204.4	212.5	218.0
107.5°	194.7	198.2	201.6	205.2	208.7	214.0	221.3	228.4	235.7	242.9	248.3
110°	219.5	222.7	225.8	228.9	232.0	237.0	244.1	251.1	258.0	265.0	269.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.3	247.9	250.5	253.0	255.6	260.2	266.7	273.3	279.8	286.4	290.8
115°	284.1	285.9	287.7	289.6	291.4	295.5	301.7	307.9	314.2	320.4	324.7
117.5°	321.5	322.7	323.9	325.1	326.3	329.8	335.8	341.6	347.5	353.4	357.1
120°	345.8	347.0	348.2	349.4	350.5	353.9	359.3	364.8	370.3	375.7	379.1
122.5°	371.9	372.2	372.6	372.9	373.3	376.2	381.5	386.9	392.3	397.7	401.2
125°	409.4	409.2	409.1	408.8	408.6	411.0	415.9	420.9	425.9	430.8	434.4
127.5°	444.2	444.4	444.6	444.8	445.1	447.0	450.6	454.3	458.1	461.8	465.1
130°	468.0	468.2	468.4	468.6	468.8	470.6	473.8	477.1	480.4	483.6	487.0
132.5°	493.0	493.1	493.3	493.4	493.4	494.7	497.2	499.7	502.2	504.7	507.9
135°	525.2	526.1	526.9	527.7	528.6	529.8	531.2	532.6	534.0	535.5	538.4
137.5°	561.2	561.5	561.6	561.8	562.0	562.6	563.5	564.4	565.3	566.3	568.9
140°	585.2	585.3	585.4	585.5	585.6	585.7	585.9	586.2	586.3	586.5	589.0
142.5°	606.5	606.7	607.0	607.3	607.5	607.5	607.3	607.0	606.7	606.6	608.8
145°	636.7	637.1	637.5	637.8	638.2	638.4	638.6	638.8	638.9	639.0	640.1
147.5°	666.9	667.4	667.9	668.3	668.8	669.0	668.9	668.7	668.7	668.6	668.6
150°	685.3	685.7	686.0	686.4	686.7	687.0	687.0	687.0	687.0	687.0	687.0
152.5°	702.0	702.2	702.6	702.8	703.2	703.4	703.4	703.6	703.7	703.8	704.1
155°	728.5	728.5	728.5	728.5	728.5	728.4	728.2	728.1	728.0	727.9	728.4
157.5°	751.0	750.7	750.4	750.2	749.9	749.8	749.8	749.8	749.8	749.7	750.1
160°	764.3	764.1	764.0	763.9	763.7	763.5	763.4	763.3	763.1	763.0	763.4
162.5°	776.5	776.2	775.8	775.4	775.1	774.8	774.6	774.6	774.4	774.2	775.0
165°	793.1	792.6	792.2	791.8	791.3	791.0	790.7	790.4	790.1	789.8	790.7
167.5°	805.6	805.1	804.5	803.9	803.3	803.0	803.1	803.1	803.1	803.1	804.0
170°	812.9	812.1	811.4	810.7	810.0	809.7	809.9	810.0	810.1	810.3	811.1
172.5°	817.9	817.3	816.7	816.1	815.5	815.3	815.3	815.4	815.4	815.4	816.4
175°	825.0	824.2	823.5	822.9	822.2	821.7	821.6	821.4	821.3	821.1	822.2
177.5°	827.2	826.7	826.1	825.6	825.0	824.8	824.8	824.8	824.8	824.8	825.5
180°	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	119.5	125.6	131.6	135.6	137.5	139.3	141.2	143.0
90°	118.2	125.0	131.7	136.0	138.0	139.9	141.8	143.7
92.5°	124.1	130.4	136.6	140.6	142.4	144.2	146.0	147.8
95°	140.1	146.0	152.0	155.8	157.6	159.5	161.3	163.2
97.5°	162.5	168.3	174.2	178.0	179.7	181.5	183.2	184.9
100°	178.9	184.7	190.5	194.1	195.5	196.9	198.4	199.8
102.5°	196.7	202.3	208.1	211.8	213.5	215.2	216.9	218.6
105°	223.6	229.1	234.6	238.4	240.4	242.5	244.5	246.6
107.5°	253.7	259.1	264.5	267.9	269.3	270.8	272.2	273.6
110°	273.8	278.2	282.6	285.9	287.8	289.9	292.0	294.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.3	299.8	304.2	307.3	309.0	310.7	312.5	314.2
115°	329.1	333.4	337.7	340.5	341.8	343.1	344.4	345.7
117.5°	360.8	364.6	368.3	370.9	372.2	373.6	375.0	376.3
120°	382.5	385.8	389.2	391.8	393.7	395.6	397.6	399.5
122.5°	404.8	408.5	412.0	414.3	415.3	416.2	417.2	418.1
125°	438.0	441.5	445.1	447.4	448.3	449.3	450.2	451.2
127.5°	468.5	471.8	475.3	477.5	478.6	479.8	481.0	482.2
130°	490.3	493.8	497.1	499.1	499.8	500.4	501.1	501.8
132.5°	511.2	514.4	517.5	519.7	520.6	521.7	522.6	523.7
135°	541.4	544.3	547.3	549.2	550.0	550.8	551.6	552.4
137.5°	571.4	574.0	576.6	578.5	579.6	580.7	581.8	582.9
140°	591.5	594.1	596.6	598.2	599.1	600.0	600.9	601.8
142.5°	611.1	613.4	615.7	617.3	618.1	618.9	619.7	620.6
145°	641.2	642.2	643.3	644.1	644.5	644.9	645.2	645.7
147.5°	668.7	668.7	668.7	669.0	669.5	670.0	670.5	671.1
150°	687.0	687.0	687.0	686.9	686.7	686.6	686.5	686.3
152.5°	704.5	704.8	705.2	705.2	704.8	704.5	704.0	703.7
155°	729.0	729.5	730.1	730.1	729.5	729.0	728.4	727.9
157.5°	750.5	751.0	751.4	751.4	750.9	750.4	749.9	749.4
160°	763.9	764.3	764.7	764.6	763.9	763.1	762.4	761.7
162.5°	775.8	776.5	777.3	777.3	776.6	775.9	775.2	774.5
165°	791.5	792.4	793.2	793.4	792.8	792.2	791.7	791.1
167.5°	804.9	805.6	806.5	806.5	805.6	804.8	803.9	803.0
170°	812.0	812.9	813.7	813.6	812.6	811.7	810.6	809.7
172.5°	817.3	818.3	819.2	819.2	818.2	817.3	816.2	815.3
175°	823.1	824.1	825.1	825.1	824.1	823.1	822.2	821.1
177.5°	826.3	827.1	827.9	827.9	826.9	826.0	825.1	824.2
180°	826.2	826.2	826.2	826.2	826.2	826.2	826.2	826.2

(END OF REPORT)