

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

Luminaire Tested: **S124DIW-S795D770U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784
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-S795D770U835-4F0-1E-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: 5903.3 lumens
Efficiency: N/A
Efficacy: 131.2 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

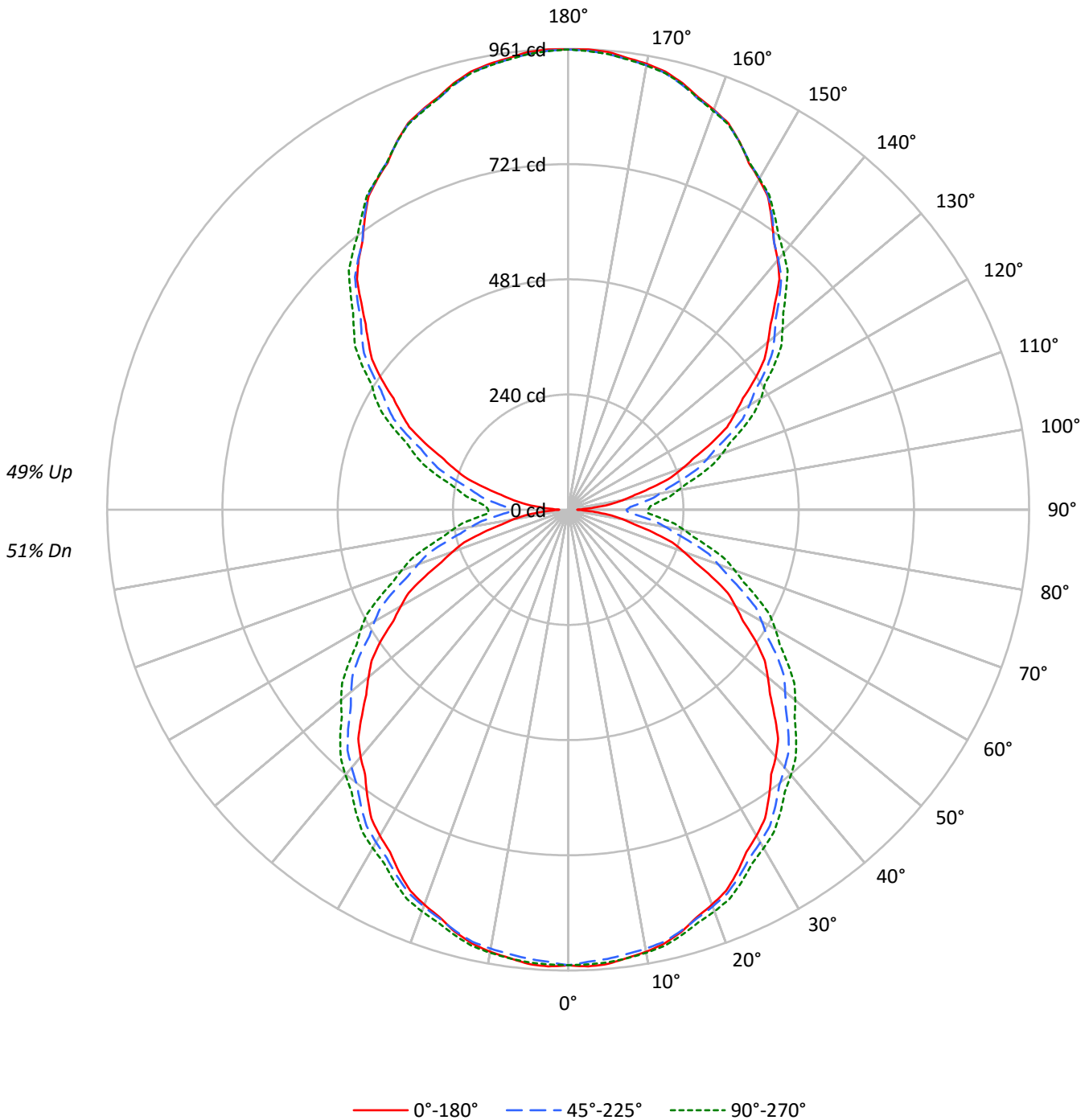
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.5
10°-20°	257.7	4.4
20°-30°	389.7	6.6
30°-40°	471.5	8.0
40°-50°	498.5	8.4
50°-60°	469.1	7.9
60°-70°	389.2	6.6
70°-80°	273.4	4.6
80°-90°	157.4	2.7
90°-100°	155.1	2.6
100°-110°	255.4	4.3
110°-120°	363.8	6.2
120°-130°	445.4	7.5
130°-140°	482.4	8.2
140°-150°	465.4	7.9
150°-160°	389.5	6.6
160°-170°	259.1	4.4
170°-180°	90.7	1.5
0°-30°	737.4	12.5
0°-40°	1208.8	20.5
0°-60°	2176.4	36.9
0°-90°	2996.4	50.8
90°-120°	774.3	13.1
90°-150°	2167.4	36.7
90°-180°	2907.0	49.2
0°-180°	5903.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	19	70	122	156	167	14
95°	58	101	149	179	190	61
105°	182	206	247	275	286	194
115°	330	341	372	394	402	326
125°	476	476	500	518	524	424
135°	610	615	622	637	642	472
145°	740	741	742	748	750	463
155°	846	846	845	848	845	389
165°	921	919	917	921	919	260
175°	958	955	954	958	954	91
180°	960	960	960	960	960	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	31.9	41.9	51.9	62.0	72.0	82.3	92.9	103.5	114.1	124.7	131.8
90°	19.2	30.5	41.8	53.1	64.3	75.7	87.2	98.7	110.1	121.6	129.5
92.5°	32.1	42.6	53.2	63.8	74.4	85.2	96.3	107.4	118.5	129.6	136.8
95°	58.4	67.6	76.9	86.2	95.5	105.6	116.4	127.3	138.1	148.9	155.8
97.5°	90.3	98.2	106.1	114.0	121.9	131.4	142.3	153.3	164.2	175.2	181.9
100°	115.6	122.4	129.2	136.0	142.8	151.6	162.3	173.0	183.7	194.4	201.1
102.5°	142.9	148.6	154.2	159.9	165.5	173.5	183.9	194.3	204.7	215.1	221.7
105°	182.5	187.4	192.3	197.2	202.1	209.2	218.6	228.0	237.4	246.8	253.2
107.5°	226.1	230.2	234.2	238.3	242.4	248.6	257.0	265.3	273.7	282.1	288.4
110°	254.9	258.6	262.2	265.8	269.5	275.3	283.5	291.6	299.7	307.8	312.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.9	287.9	290.9	293.9	296.9	302.2	309.8	317.4	325.0	332.6	337.8
115°	330.0	332.1	334.2	336.4	338.5	343.2	350.4	357.6	364.9	372.1	377.1
117.5°	373.4	374.8	376.2	377.6	379.0	383.1	390.0	396.8	403.6	410.4	414.8
120°	401.6	403.0	404.4	405.8	407.1	411.0	417.3	423.7	430.1	436.4	440.3
122.5°	431.9	432.3	432.7	433.1	433.6	436.9	443.1	449.4	455.6	461.9	466.0
125°	475.5	475.3	475.1	474.8	474.6	477.4	483.1	488.8	494.6	500.3	504.5
127.5°	515.9	516.1	516.4	516.6	516.9	519.2	523.4	527.7	532.0	536.3	540.2
130°	543.5	543.8	544.0	544.3	544.5	546.6	550.3	554.1	557.9	561.7	565.6
132.5°	572.6	572.7	572.9	573.0	573.1	574.6	577.5	580.4	583.3	586.2	589.9
135°	610.0	611.0	612.0	612.9	613.9	615.3	616.9	618.6	620.2	621.9	625.3
137.5°	651.8	652.1	652.3	652.5	652.7	653.4	654.5	655.5	656.6	657.7	660.7
140°	679.7	679.8	679.9	680.0	680.1	680.3	680.5	680.8	681.0	681.2	684.1
142.5°	704.4	704.7	705.0	705.3	705.6	705.6	705.3	705.0	704.7	704.5	707.1
145°	739.5	740.0	740.4	740.8	741.2	741.5	741.7	741.9	742.0	742.2	743.4
147.5°	774.6	775.1	775.7	776.2	776.8	777.0	776.9	776.7	776.6	776.5	776.5
150°	795.9	796.4	796.8	797.2	797.6	797.9	797.9	797.9	797.9	797.9	797.9
152.5°	815.3	815.6	816.0	816.3	816.7	816.9	817.0	817.2	817.3	817.4	817.8
155°	846.1	846.1	846.1	846.1	846.1	846.0	845.8	845.7	845.5	845.4	846.0
157.5°	872.2	871.9	871.6	871.3	871.0	870.9	870.8	870.8	870.8	870.7	871.2
160°	887.7	887.5	887.3	887.2	887.0	886.8	886.7	886.5	886.3	886.2	886.7
162.5°	901.9	901.5	901.0	900.6	900.2	899.9	899.7	899.6	899.4	899.2	900.1
165°	921.1	920.6	920.1	919.6	919.1	918.7	918.3	918.0	917.7	917.3	918.3
167.5°	935.7	935.1	934.4	933.7	933.0	932.6	932.7	932.7	932.7	932.8	933.8
170°	944.1	943.2	942.4	941.6	940.8	940.4	940.6	940.8	940.9	941.1	942.1
172.5°	950.0	949.3	948.6	947.9	947.2	946.9	946.9	947.0	947.0	947.0	948.2
175°	958.2	957.3	956.5	955.7	954.9	954.4	954.2	954.0	953.9	953.7	954.9
177.5°	960.8	960.2	959.5	958.9	958.2	957.9	957.9	957.9	957.9	957.9	958.8
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	138.8	145.9	152.9	157.5	159.7	161.8	164.0	166.1
90°	137.3	145.2	153.0	158.0	160.3	162.5	164.7	166.9
92.5°	144.1	151.4	158.6	163.3	165.4	167.5	169.6	171.7
95°	162.7	169.6	176.5	181.0	183.1	185.2	187.3	189.5
97.5°	188.7	195.5	202.3	206.7	208.7	210.8	212.8	214.8
100°	207.8	214.5	221.2	225.4	227.1	228.7	230.4	232.0
102.5°	228.4	235.0	241.7	246.0	248.0	250.0	251.9	253.9
105°	259.7	266.1	272.5	276.9	279.2	281.6	284.0	286.4
107.5°	294.6	300.9	307.2	311.2	312.8	314.5	316.2	317.8
110°	318.0	323.1	328.2	332.0	334.3	336.7	339.1	341.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	343.0	348.2	353.3	356.9	358.9	360.9	362.9	364.9
115°	382.2	387.2	392.2	395.5	397.0	398.5	400.0	401.5
117.5°	419.1	423.5	427.8	430.8	432.3	433.9	435.5	437.0
120°	444.2	448.1	452.0	455.1	457.3	459.5	461.8	464.0
122.5°	470.2	474.4	478.5	481.2	482.3	483.4	484.5	485.6
125°	508.7	512.8	517.0	519.6	520.7	521.8	522.9	524.0
127.5°	544.1	548.0	552.0	554.6	555.9	557.3	558.6	560.0
130°	569.5	573.5	577.4	579.7	580.5	581.2	582.0	582.8
132.5°	593.7	597.4	601.1	603.6	604.7	605.9	607.0	608.2
135°	628.8	632.2	635.7	637.9	638.8	639.7	640.6	641.6
137.5°	663.7	666.7	669.7	671.9	673.2	674.5	675.7	677.0
140°	687.0	690.0	692.9	694.8	695.8	696.9	697.9	698.9
142.5°	709.8	712.4	715.1	716.9	717.9	718.8	719.8	720.8
145°	744.7	745.9	747.2	748.1	748.5	749.0	749.4	749.9
147.5°	776.6	776.6	776.7	777.0	777.6	778.2	778.8	779.4
150°	797.9	797.9	797.9	797.8	797.6	797.4	797.3	797.1
152.5°	818.2	818.6	819.0	819.0	818.6	818.2	817.7	817.3
155°	846.7	847.3	848.0	848.0	847.3	846.7	846.0	845.4
157.5°	871.7	872.2	872.7	872.7	872.1	871.6	871.0	870.4
160°	887.2	887.7	888.2	888.0	887.2	886.3	885.5	884.7
162.5°	901.0	901.9	902.8	902.8	902.0	901.2	900.4	899.5
165°	919.3	920.3	921.3	921.5	920.8	920.1	919.5	918.8
167.5°	934.8	935.7	936.7	936.7	935.7	934.7	933.7	932.6
170°	943.1	944.1	945.1	945.0	943.8	942.7	941.5	940.4
172.5°	949.3	950.4	951.5	951.5	950.3	949.2	948.0	946.9
175°	956.0	957.2	958.3	958.3	957.2	956.0	954.9	953.7
177.5°	959.7	960.6	961.6	961.5	960.4	959.4	958.3	957.3
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6

(END OF REPORT)