

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: P331691-935

Luminaire Tested: **SA2XXRDIP-C675D725U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331691-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D725U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

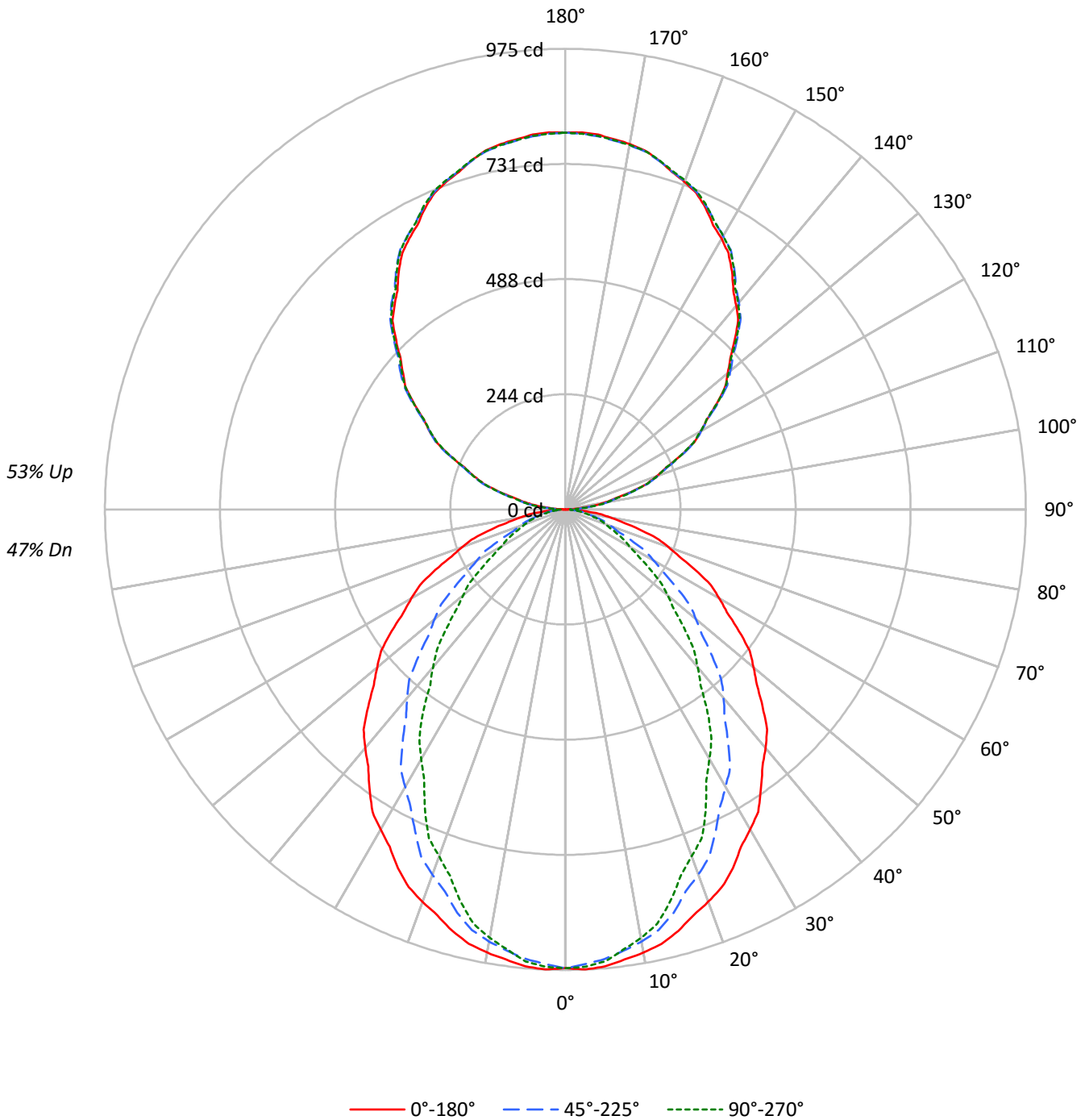
Lumens per Lamp: N/A
Luminaire Lumens: 4230.7 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	50	30	10	0	
RCR																						
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47				47
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46				41	
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40				35	
3	82	73	66	60	75	67	61	56	57	52	48	47	44	41	38	36	34				30	
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	35	32	30				26	
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	31	29	26				23	
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23				20	
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21				18	
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19				17	
9	51	39	32	27	47	37	30	25	32	26	23	27	23	20	22	19	17				15	
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16				14	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	2.1
10°-20°	249.6	5.9
20°-30°	350.5	8.3
30°-40°	382.2	9.0
40°-50°	351.5	8.3
50°-60°	276.0	6.5
60°-70°	180.0	4.3
70°-80°	92.8	2.2
80°-90°	27.3	0.6
90°-100°	50.5	1.2
100°-110°	157.0	3.7
110°-120°	268.3	6.3
120°-130°	352.8	8.3
130°-140°	396.0	9.4
140°-150°	388.3	9.2
150°-160°	325.7	7.7
160°-170°	216.0	5.1
170°-180°	75.5	1.8
0°-30°	691.1	16.3
0°-40°	1073.3	25.4
0°-60°	1700.8	40.2
0°-90°	2000.8	47.3
90°-120°	475.8	11.2
90°-150°	1612.8	38.1
90°-180°	2230.0	52.7
0°-180°	4230.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	9	24	22	23	3
95°	35	41	43	43	42	40
105°	145	147	148	149	149	153
115°	269	273	272	271	269	266
125°	392	397	396	394	393	350
135°	507	514	516	515	513	391
145°	615	620	624	624	622	384
155°	703	705	707	710	709	324
165°	765	765	764	769	766	216
175°	796	794	793	797	794	76
180°	798	798	798	798	798	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.4	10.5	9.6	8.7	7.8	7.7	8.4	9.0	9.6	10.3	10.2
90°	0.7	2.5	4.3	6.0	7.8	10.4	13.7	17.0	20.2	23.6	23.2
92.5°	12.0	13.3	14.6	15.9	17.2	18.3	19.0	19.8	20.7	21.4	21.4
95°	35.0	36.5	38.0	39.5	41.0	41.8	42.2	42.4	42.8	43.0	43.0
97.5°	64.0	65.3	66.6	67.8	69.2	70.2	70.7	71.3	71.8	72.4	72.4
100°	85.5	86.7	87.8	89.0	90.2	91.1	91.5	92.0	92.4	92.9	92.9
102.5°	108.1	109.0	110.0	111.0	111.9	112.7	113.2	113.8	114.3	114.9	115.0
105°	144.7	145.2	145.6	146.0	146.5	146.9	147.1	147.5	147.7	148.1	148.4
107.5°	181.6	182.3	182.9	183.6	184.2	184.5	184.5	184.5	184.5	184.5	184.7
110°	205.3	206.1	207.1	207.9	208.9	209.3	209.3	209.3	209.3	209.3	209.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	231.1	232.0	232.9	233.8	234.7	235.1	235.0	234.9	234.7	234.6	234.3
115°	269.2	270.1	271.0	271.9	272.8	273.1	272.8	272.5	272.2	271.9	271.7
117.5°	307.1	308.3	309.5	310.7	311.9	312.1	311.3	310.5	309.6	308.8	308.4
120°	332.4	333.6	334.8	336.0	337.3	337.3	336.0	334.8	333.6	332.4	332.4
122.5°	355.6	357.1	358.5	359.9	361.4	361.6	360.8	360.0	359.1	358.3	357.9
125°	391.7	393.0	394.3	395.7	397.1	397.5	397.1	396.6	396.1	395.7	395.3
127.5°	426.8	428.5	430.2	432.0	433.6	434.2	433.7	433.2	432.6	432.0	431.5
130°	448.9	450.8	452.8	454.7	456.7	457.4	457.2	456.8	456.6	456.3	456.0
132.5°	473.6	475.3	476.8	478.4	480.0	480.8	480.9	481.0	481.0	481.0	480.4
135°	506.8	508.4	510.1	511.7	513.3	514.3	514.6	514.9	515.2	515.5	515.4
137.5°	541.7	542.9	544.3	545.7	547.0	547.9	548.3	548.6	549.1	549.4	549.3
140°	562.7	564.0	565.3	566.6	568.0	569.0	569.8	570.6	571.3	572.0	572.0
142.5°	584.2	585.5	586.9	588.2	589.5	590.5	591.0	591.5	592.0	592.5	592.6
145°	615.1	616.1	617.3	618.3	619.3	620.3	621.2	622.1	622.9	623.9	624.1
147.5°	642.7	643.9	645.2	646.4	647.7	648.7	649.3	649.9	650.5	651.1	651.3
150°	661.6	662.5	663.3	664.3	665.1	665.9	666.5	667.1	667.7	668.3	668.7
152.5°	678.2	679.2	680.0	681.0	681.8	682.6	683.4	684.1	684.8	685.5	686.0
155°	703.3	703.7	704.2	704.6	705.1	705.5	705.9	706.5	706.9	707.3	708.1
157.5°	724.7	725.0	725.3	725.6	725.9	726.2	726.4	726.7	726.9	727.2	728.2
160°	737.6	737.9	738.2	738.5	738.8	739.0	739.2	739.3	739.5	739.6	740.5
162.5°	749.4	749.5	749.6	749.6	749.7	749.8	749.9	750.1	750.3	750.4	751.4
165°	765.2	765.1	764.9	764.7	764.6	764.5	764.5	764.5	764.5	764.5	765.6
167.5°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.3	776.3	776.2	777.3
170°	785.4	785.0	784.5	784.0	783.6	783.3	783.2	783.0	782.8	782.6	783.8
172.5°	790.2	789.8	789.4	788.8	788.4	788.2	788.0	787.8	787.7	787.6	788.6
175°	796.2	795.7	795.2	794.8	794.4	794.0	793.7	793.4	793.1	792.8	793.8
177.5°	798.6	798.2	797.9	797.5	797.1	796.9	796.6	796.3	796.1	795.9	796.6
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	9.9	9.7	9.5	9.4	9.4	9.5	9.5	9.5
90°	23.0	22.6	22.4	22.3	22.5	22.6	22.7	22.9
92.5°	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.8
95°	43.0	43.0	43.0	43.0	42.6	42.4	42.0	41.8
97.5°	72.4	72.4	72.4	72.4	72.4	72.3	72.3	72.2
100°	92.9	92.9	92.9	92.8	92.6	92.5	92.4	92.2
102.5°	115.2	115.3	115.5	115.4	115.3	115.1	114.9	114.8
105°	148.7	149.0	149.3	149.4	149.4	149.4	149.4	149.4
107.5°	184.8	184.9	185.0	184.8	184.1	183.4	182.7	182.0
110°	209.3	209.3	209.3	209.1	208.6	208.2	207.8	207.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.8	233.5	233.2	232.8	232.5	232.1	231.9	231.5
115°	271.6	271.5	271.3	271.0	270.5	270.1	269.7	269.2
117.5°	308.1	307.7	307.3	306.9	306.5	306.0	305.6	305.1
120°	332.4	332.4	332.4	332.3	331.7	331.3	330.9	330.5
122.5°	357.6	357.2	356.9	356.5	356.2	355.9	355.5	355.2
125°	394.9	394.3	393.9	393.6	393.5	393.3	393.2	393.0
127.5°	431.0	430.4	429.9	429.4	429.0	428.4	428.0	427.5
130°	455.7	455.4	455.1	454.6	454.0	453.5	452.9	452.3
132.5°	479.7	479.1	478.5	477.9	477.3	476.9	476.4	476.0
135°	515.2	515.1	514.9	514.6	514.2	513.8	513.2	512.8
137.5°	549.2	549.1	549.0	548.6	548.0	547.4	546.8	546.2
140°	572.0	572.0	572.0	571.7	571.2	570.6	570.0	569.4
142.5°	592.7	592.9	593.0	592.7	592.1	591.5	591.0	590.4
145°	624.1	624.3	624.5	624.2	623.6	623.0	622.4	621.8
147.5°	651.7	652.0	652.4	652.3	651.7	651.1	650.6	650.0
150°	669.2	669.6	670.1	670.1	669.6	669.2	668.7	668.3
152.5°	686.6	687.3	687.8	687.8	687.3	686.6	686.0	685.5
155°	708.8	709.6	710.3	710.5	710.0	709.6	709.1	708.7
157.5°	729.3	730.3	731.3	731.4	730.7	730.0	729.3	728.6
160°	741.4	742.4	743.2	743.4	742.8	742.2	741.6	741.0
162.5°	752.4	753.5	754.5	754.6	753.9	753.2	752.4	751.7
165°	766.6	767.7	768.7	768.9	768.1	767.3	766.6	765.9
167.5°	778.3	779.4	780.4	780.6	779.8	779.0	778.3	777.5
170°	784.8	785.8	786.9	787.0	786.1	785.1	784.3	783.3
172.5°	789.6	790.7	791.7	791.8	790.9	790.0	789.1	788.2
175°	794.9	795.9	796.9	797.0	796.2	795.2	794.4	793.5
177.5°	797.3	798.1	798.7	798.7	798.1	797.3	796.6	795.9
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5

(END OF REPORT)