

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: P332550-840

Luminaire Tested: **SA4XXDIP-C575D590U840-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332550-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C575D590U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

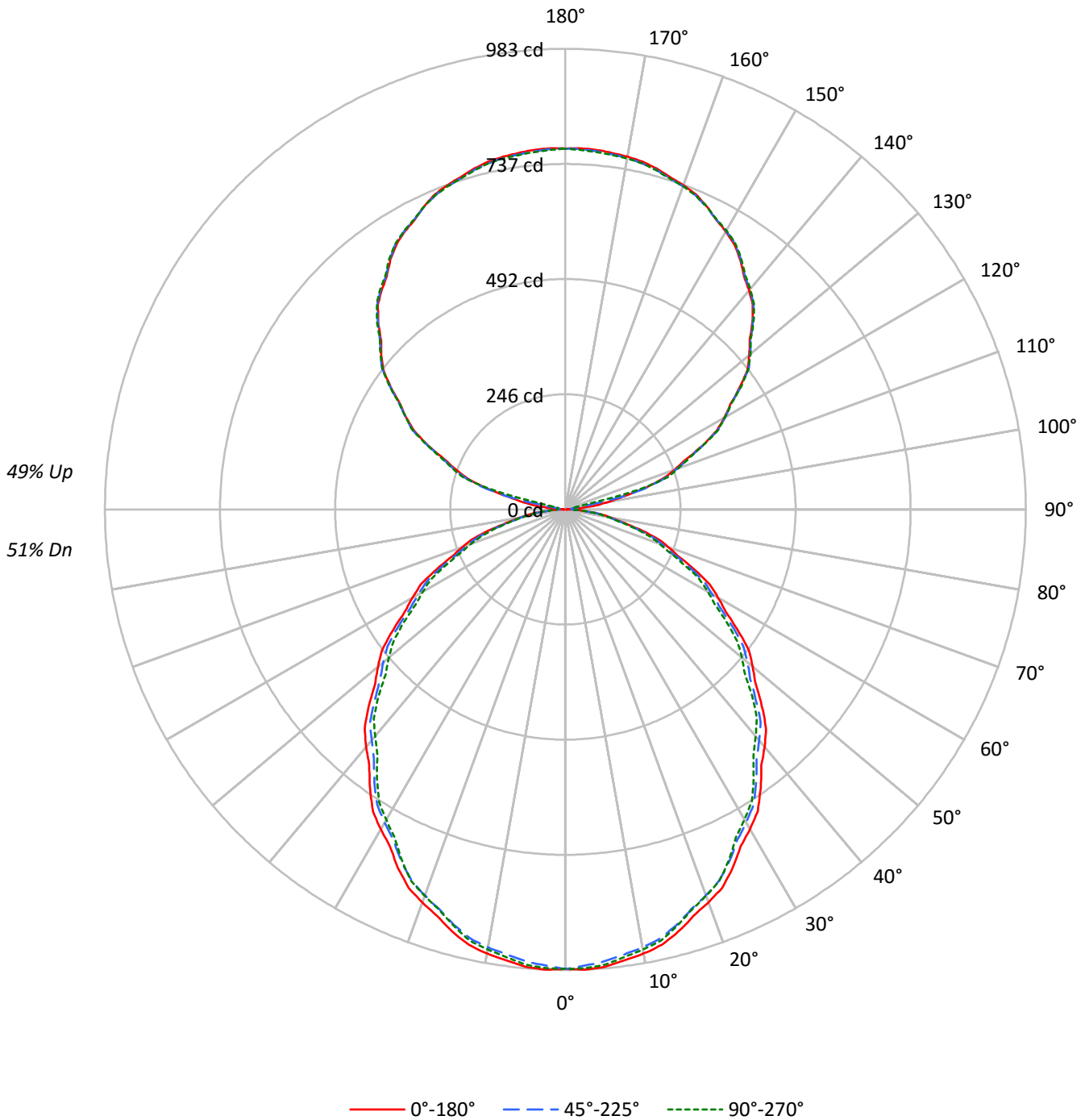
Lumens per Lamp: N/A
Luminaire Lumens: 4901.3 lumens
Efficiency: N/A
Efficacy: 149.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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					
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10		
RCR																						
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	43	43
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	41	40	36	35
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41	36	34	33	31	30
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31	29	28	26	25
4	74	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	24	23	21	20
5	68	57	49	43	63	53	45	40	45	40	35	38	34	31	32	29	26	23	21	20	18	17
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20	18	17	16	15
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18	16	15	14	13
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	14	13	12	11
9	50	38	31	25	47	36	29	24	31	25	22	27	22	19	22	19	16	14	12	11	10	9
10	47	35	28	23	44	33	26	22	29	23	19	25	20	17	21	17	15	13	11	10	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	1.9
10°-20°	260.2	5.3
20°-30°	383.0	7.8
30°-40°	445.3	9.1
40°-50°	445.3	9.1
50°-60°	389.5	7.9
60°-70°	289.3	5.9
70°-80°	164.3	3.4
80°-90°	49.7	1.0
90°-100°	26.3	0.5
100°-110°	168.0	3.4
110°-120°	321.3	6.6
120°-130°	407.9	8.3
130°-140°	436.4	8.9
140°-150°	408.1	8.3
150°-160°	329.1	6.7
160°-170°	212.2	4.3
170°-180°	73.2	1.5
0°-30°	735.6	15.0
0°-40°	1180.9	24.1
0°-60°	2015.7	41.1
0°-90°	2518.9	51.4
90°-120°	515.6	10.5
90°-150°	1767.9	36.1
90°-180°	2382.0	48.6
0°-180°	4901.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	2	8	13	16	17	4
95°	32	13	13	16	17	41
105°	173	177	180	183	164	181
115°	324	325	325	326	326	318
125°	455	457	456	458	459	406
135°	564	564	566	567	569	435
145°	651	653	653	653	654	407
155°	714	714	713	715	713	329
165°	753	750	750	754	749	213
175°	770	767	767	772	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	16.7	16.9	17.0	17.1	17.3	17.4	17.5	17.5	17.6	17.7	17.8
90°	1.7	3.1	4.5	6.0	7.4	8.6	9.6	10.6	11.6	12.6	13.4
92.5°	7.3	7.4	7.4	7.5	7.6	8.1	9.2	10.2	11.2	12.2	13.0
95°	31.7	27.4	23.0	18.6	14.2	12.1	12.3	12.4	12.5	12.6	13.4
97.5°	67.3	70.0	72.7	75.4	78.2	72.3	58.1	43.8	29.5	15.2	15.2
100°	94.4	96.7	99.1	101.4	103.7	96.0	78.4	60.7	43.0	25.3	23.1
102.5°	124.9	126.5	128.3	130.0	131.7	131.4	129.1	126.7	124.4	122.1	98.7
105°	173.4	174.2	174.9	175.7	176.4	177.1	177.8	178.4	179.0	179.8	180.9
107.5°	218.4	218.8	219.2	219.5	219.9	220.6	221.5	222.4	223.2	224.1	224.7
110°	248.8	249.2	249.6	250.0	250.3	251.0	251.8	252.5	253.3	254.1	254.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	278.3	279.0	279.7	280.4	281.1	281.7	282.0	282.4	282.8	283.1	283.1
115°	323.8	324.2	324.5	324.9	325.3	325.4	325.3	325.2	325.0	324.9	325.2
117.5°	364.7	365.2	365.7	366.2	366.7	367.1	367.4	367.7	367.9	368.2	368.2
120°	392.3	392.8	393.3	393.8	394.4	394.6	394.5	394.3	394.2	394.0	394.3
122.5°	418.1	418.4	418.7	419.0	419.3	419.6	419.8	419.9	420.1	420.3	420.4
125°	455.0	455.6	456.2	456.7	457.2	457.3	457.0	456.8	456.5	456.3	456.7
127.5°	490.1	490.2	490.4	490.5	490.6	491.0	491.6	492.1	492.7	493.3	493.2
130°	512.7	512.8	512.9	513.1	513.2	513.4	513.8	514.2	514.6	515.0	515.1
132.5°	533.4	533.6	533.9	534.1	534.3	534.7	535.2	535.6	536.1	536.6	536.7
135°	564.5	564.4	564.3	564.1	564.0	564.2	564.7	565.2	565.7	566.2	566.5
137.5°	592.1	592.1	592.2	592.2	592.3	592.6	593.1	593.7	594.3	594.8	595.1
140°	610.1	610.3	610.6	610.8	611.1	611.3	611.6	611.9	612.1	612.4	612.7
142.5°	626.2	626.6	627.1	627.5	628.0	628.3	628.4	628.6	628.7	628.9	629.2
145°	651.0	651.4	651.7	652.1	652.5	652.7	652.7	652.7	652.7	652.7	652.8
147.5°	670.7	671.4	672.1	672.8	673.5	673.8	673.7	673.6	673.4	673.3	673.4
150°	684.9	685.4	686.0	686.5	687.0	687.2	687.0	686.9	686.8	686.6	686.6
152.5°	696.9	697.3	697.7	698.1	698.5	698.6	698.4	698.2	697.9	697.7	697.9
155°	713.8	713.9	714.0	714.1	714.3	714.1	713.8	713.4	713.0	712.6	713.1
157.5°	727.9	727.8	727.7	727.7	727.6	727.3	726.9	726.5	726.0	725.6	726.3
160°	736.2	735.8	735.4	735.1	734.7	734.4	734.3	734.2	734.0	733.9	734.7
162.5°	743.6	743.1	742.6	742.1	741.6	741.3	741.1	741.0	740.9	740.8	741.5
165°	752.9	752.2	751.6	750.9	750.3	750.0	750.0	750.0	750.0	750.0	751.0
167.5°	760.2	759.6	758.9	758.3	757.6	757.2	757.2	757.1	757.0	756.9	758.1
170°	764.5	763.7	762.9	762.1	761.3	761.0	761.1	761.2	761.4	761.5	762.5
172.5°	767.2	766.4	765.7	764.9	764.2	763.8	764.0	764.1	764.2	764.3	765.4
175°	770.2	769.4	768.6	767.9	767.1	766.8	766.9	767.1	767.2	767.3	768.4
177.5°	771.5	770.8	770.1	769.4	768.7	768.4	768.6	768.8	769.0	769.2	770.1
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	18.0	18.1	18.3	18.4	18.4	18.5	18.5	18.6
90°	14.2	14.9	15.8	16.3	16.6	16.8	17.1	17.3
92.5°	13.7	14.5	15.2	15.7	15.8	15.8	15.9	15.9
95°	14.2	14.9	15.8	16.2	16.4	16.5	16.6	16.7
97.5°	15.3	15.5	15.6	15.7	15.8	15.9	16.0	16.2
100°	21.0	18.8	16.7	15.7	15.8	15.9	16.0	16.2
102.5°	75.1	51.7	28.2	16.5	16.6	16.6	16.6	16.6
105°	182.1	183.2	184.3	182.6	178.0	173.4	168.7	164.2
107.5°	225.2	225.8	226.3	226.8	227.3	227.8	228.3	228.8
110°	254.6	254.8	255.1	255.4	255.8	256.1	256.5	256.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.0	283.0	282.9	283.1	283.6	284.1	284.6	285.0
115°	325.4	325.7	325.9	326.1	326.1	326.1	326.1	326.1
117.5°	368.1	368.1	368.0	368.0	367.9	367.9	367.8	367.8
120°	394.6	394.8	395.1	395.1	394.8	394.6	394.3	394.0
122.5°	420.6	420.7	420.9	420.8	420.6	420.3	420.1	419.8
125°	457.0	457.4	457.8	458.1	458.2	458.3	458.4	458.6
127.5°	493.2	493.1	493.0	492.9	492.8	492.7	492.6	492.5
130°	515.2	515.3	515.5	515.5	515.5	515.5	515.5	515.5
132.5°	536.9	537.0	537.1	537.1	537.0	536.9	536.8	536.7
135°	566.7	567.0	567.2	567.5	567.7	568.0	568.4	568.6
137.5°	595.4	595.7	595.9	596.0	596.0	595.9	595.8	595.7
140°	613.1	613.5	613.9	614.1	614.3	614.4	614.5	614.6
142.5°	629.4	629.8	630.1	630.3	630.3	630.3	630.3	630.4
145°	652.9	653.1	653.2	653.4	653.6	653.9	654.2	654.4
147.5°	673.5	673.6	673.7	673.8	674.0	674.1	674.2	674.3
150°	686.6	686.6	686.6	686.7	686.8	687.0	687.1	687.2
152.5°	698.1	698.3	698.5	698.6	698.5	698.4	698.3	698.3
155°	713.6	714.1	714.6	714.7	714.3	713.9	713.6	713.2
157.5°	726.9	727.6	728.2	728.2	727.6	726.9	726.3	725.6
160°	735.4	736.2	737.0	737.0	736.2	735.4	734.7	733.9
162.5°	742.4	743.1	743.9	743.9	743.0	742.0	741.2	740.3
165°	752.0	753.1	754.2	754.1	752.9	751.7	750.6	749.4
167.5°	759.2	760.3	761.4	761.3	760.1	758.8	757.5	756.3
170°	763.6	764.6	765.7	765.5	764.3	763.0	761.6	760.4
172.5°	766.4	767.4	768.4	768.2	766.9	765.5	764.1	762.7
175°	769.6	770.7	771.9	771.7	770.2	768.6	767.1	765.6
177.5°	770.9	771.7	772.5	772.3	771.1	769.9	768.6	767.4
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2

(END OF REPORT)