

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: P332905-830

Luminaire Tested: **SA4XXRDIP-C575D590U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332905-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D590U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

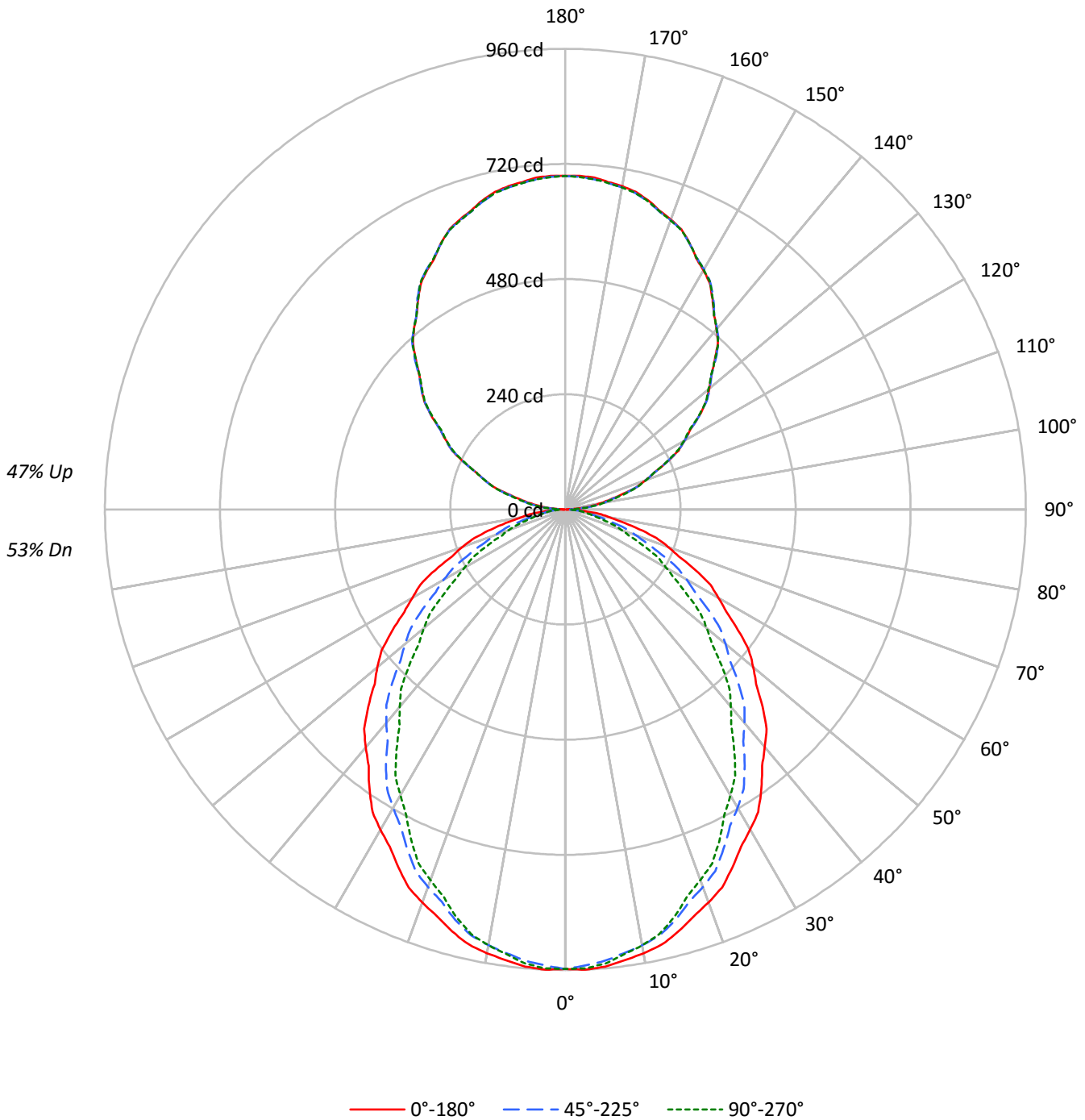
Lumens per Lamp: N/A
Luminaire Lumens: 4143.7 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				53
1	99	95	91	87	91	88	85	82	75	73	71	64	62	60	53	52	51	46				46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39				39
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33				33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	37	35	32	29				29
5	69	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25				25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	27	25	22				22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20				20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	23	20	18				18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18	16				16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16	15				15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	2.2
10°-20°	250.9	6.1
20°-30°	362.3	8.7
30°-40°	410.7	9.9
40°-50°	396.6	9.6
50°-60°	329.8	8.0
60°-70°	227.7	5.5
70°-80°	115.4	2.8
80°-90°	31.7	0.8
90°-100°	45.8	1.1
100°-110°	135.8	3.3
110°-120°	230.5	5.6
120°-130°	304.0	7.3
130°-140°	341.4	8.2
140°-150°	335.4	8.1
150°-160°	282.1	6.8
160°-170°	187.7	4.5
170°-180°	65.7	1.6
0°-30°	703.2	17.0
0°-40°	1113.9	26.9
0°-60°	1840.3	44.4
0°-90°	2215.2	53.5
90°-120°	412.2	9.9
90°-150°	1392.9	33.6
90°-180°	1928.0	46.5
0°-180°	4143.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	2	7	12	15	16	4
95°	32	37	41	42	42	36
105°	125	126	128	130	131	133
115°	234	234	233	233	232	231
125°	341	341	341	340	339	304
135°	440	443	444	442	441	340
145°	535	537	538	537	536	335
155°	613	613	612	614	612	282
165°	667	666	664	667	666	188
175°	694	691	691	694	691	66
180°	695	695	695	695	695	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	13.9	13.0	12.3	11.5	10.7	10.4	10.4	10.5	10.6	10.6	10.6
90°	1.6	2.9	4.2	5.6	6.9	8.0	9.0	9.9	10.8	11.8	12.5
92.5°	11.5	13.0	14.5	16.0	17.5	18.6	19.3	20.0	20.6	21.3	21.7
95°	32.2	33.4	34.4	35.4	36.6	37.5	38.4	39.2	40.1	40.8	41.2
97.5°	56.4	57.2	58.1	58.9	59.8	60.7	61.6	62.7	63.6	64.7	65.0
100°	75.2	75.8	76.3	76.7	77.2	77.9	79.0	80.1	81.2	82.3	82.5
102.5°	95.0	95.2	95.4	95.6	95.8	96.4	97.4	98.3	99.3	100.3	100.7
105°	125.3	125.4	125.5	125.6	125.7	126.0	126.5	127.0	127.4	127.9	128.3
107.5°	156.9	157.1	157.2	157.4	157.6	157.7	157.7	157.8	157.9	158.0	158.3
110°	178.5	178.7	179.0	179.2	179.5	179.5	179.4	179.3	179.2	179.0	178.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	200.9	200.9	201.0	201.0	201.0	201.0	200.8	200.5	200.3	200.1	200.0
115°	234.4	234.4	234.4	234.4	234.4	234.2	234.0	233.8	233.6	233.3	233.2
117.5°	266.0	266.1	266.2	266.3	266.4	266.4	266.2	266.0	265.8	265.7	265.2
120°	287.1	287.6	288.0	288.5	289.0	289.1	288.7	288.3	287.9	287.6	287.0
122.5°	309.0	309.2	309.3	309.5	309.7	309.8	309.6	309.4	309.2	309.2	308.7
125°	341.4	341.4	341.4	341.4	341.4	341.3	341.2	341.1	340.9	340.8	340.5
127.5°	370.7	371.1	371.5	371.8	372.1	372.2	372.0	371.8	371.6	371.5	371.3
130°	391.3	391.7	392.1	392.5	392.8	392.9	392.9	392.9	392.9	392.9	392.8
132.5°	412.5	412.7	412.9	413.2	413.5	413.6	413.5	413.4	413.3	413.2	412.9
135°	440.3	441.0	441.7	442.4	443.2	443.5	443.5	443.5	443.5	443.5	443.3
137.5°	470.6	470.9	471.3	471.6	471.9	472.2	472.4	472.6	472.8	473.0	472.7
140°	490.8	491.1	491.3	491.5	491.7	491.9	491.9	491.9	491.9	491.9	491.7
142.5°	509.3	509.5	509.8	510.0	510.3	510.3	510.2	510.1	510.0	509.9	509.9
145°	534.9	535.4	535.8	536.3	536.8	537.1	537.2	537.3	537.4	537.5	537.4
147.5°	560.2	560.8	561.4	561.9	562.6	562.8	562.7	562.6	562.5	562.4	562.3
150°	575.7	576.3	576.7	577.2	577.7	577.9	577.9	577.9	577.9	577.9	577.9
152.5°	590.4	590.7	591.0	591.3	591.5	591.7	591.8	591.9	592.0	592.1	592.4
155°	612.8	612.8	612.8	612.8	612.8	612.7	612.7	612.6	612.5	612.3	612.7
157.5°	631.8	631.5	631.3	631.1	630.9	630.7	630.7	630.7	630.7	630.7	631.0
160°	642.9	642.8	642.7	642.6	642.4	642.3	642.2	642.2	642.0	641.9	642.2
162.5°	653.3	653.0	652.6	652.3	652.1	651.8	651.7	651.6	651.5	651.3	652.0
165°	667.1	666.8	666.4	666.1	665.7	665.4	665.2	665.0	664.7	664.5	665.2
167.5°	677.8	677.3	676.7	676.3	675.8	675.5	675.5	675.6	675.6	675.6	676.4
170°	683.8	683.2	682.6	682.0	681.4	681.2	681.3	681.4	681.6	681.6	682.4
172.5°	688.1	687.6	687.1	686.6	686.1	685.9	685.9	685.9	685.9	686.0	686.7
175°	694.0	693.4	692.9	692.2	691.6	691.3	691.2	691.1	690.9	690.8	691.6
177.5°	696.0	695.5	695.0	694.6	694.0	693.8	693.8	693.8	693.8	693.8	694.5
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	10.7	10.7	10.7	10.7	10.9	11.1	11.2	11.4
90°	13.3	13.9	14.7	15.2	15.5	15.6	15.9	16.1
92.5°	22.1	22.6	23.0	23.3	23.5	23.6	23.8	23.8
95°	41.6	41.9	42.3	42.5	42.5	42.5	42.5	42.5
97.5°	65.5	65.9	66.4	66.5	66.5	66.5	66.5	66.5
100°	82.8	82.9	83.2	83.3	83.3	83.3	83.3	83.3
102.5°	100.9	101.3	101.6	101.9	102.0	102.1	102.2	102.3
105°	128.7	129.0	129.4	129.7	130.1	130.4	130.8	131.2
107.5°	158.6	158.9	159.3	159.5	159.4	159.4	159.4	159.4
110°	178.5	178.3	178.0	178.1	178.5	178.8	179.2	179.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	200.0	199.9	199.9	199.9	200.0	200.0	200.1	200.2
115°	233.1	233.0	232.8	232.7	232.6	232.4	232.3	232.2
117.5°	264.9	264.5	264.0	263.7	263.4	263.3	263.0	262.8
120°	286.4	285.8	285.2	285.0	285.3	285.5	285.8	286.0
122.5°	308.3	307.9	307.5	307.1	306.6	306.2	305.8	305.4
125°	340.4	340.1	339.9	339.6	339.4	339.1	338.9	338.7
127.5°	371.0	370.8	370.5	370.3	370.1	369.9	369.8	369.6
130°	392.5	392.3	392.0	391.6	391.2	390.7	390.2	389.7
132.5°	412.7	412.5	412.3	412.0	411.8	411.6	411.4	411.2
135°	443.0	442.8	442.5	442.2	441.9	441.5	441.2	440.8
137.5°	472.3	472.0	471.7	471.6	471.6	471.7	471.8	471.9
140°	491.6	491.5	491.4	491.3	491.2	491.1	491.0	490.8
142.5°	509.9	509.9	509.8	509.8	509.8	509.8	509.7	509.7
145°	537.3	537.2	537.1	536.9	536.5	536.1	535.7	535.5
147.5°	562.2	562.1	562.0	561.9	561.8	561.7	561.6	561.5
150°	577.9	577.9	577.9	577.9	577.7	577.6	577.5	577.4
152.5°	592.7	593.0	593.2	593.2	593.0	592.6	592.3	592.0
155°	613.2	613.7	614.3	614.3	613.7	613.2	612.7	612.3
157.5°	631.4	631.8	632.2	632.1	631.7	631.3	630.8	630.5
160°	642.6	642.9	643.3	643.2	642.6	642.0	641.4	640.8
162.5°	652.6	653.3	653.9	653.9	653.4	652.7	652.1	651.6
165°	665.9	666.6	667.3	667.4	666.9	666.5	666.0	665.5
167.5°	677.0	677.8	678.5	678.4	677.8	677.0	676.3	675.5
170°	683.1	683.8	684.5	684.5	683.6	682.8	681.9	681.1
172.5°	687.6	688.4	689.2	689.2	688.3	687.5	686.6	685.9
175°	692.5	693.3	694.1	694.1	693.3	692.5	691.6	690.8
177.5°	695.1	695.8	696.4	696.4	695.7	694.9	694.1	693.3
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1

(END OF REPORT)