

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: P332911-830

Luminaire Tested: **SA4XXRDIP-C575D810U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332911-830
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-C575D810U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

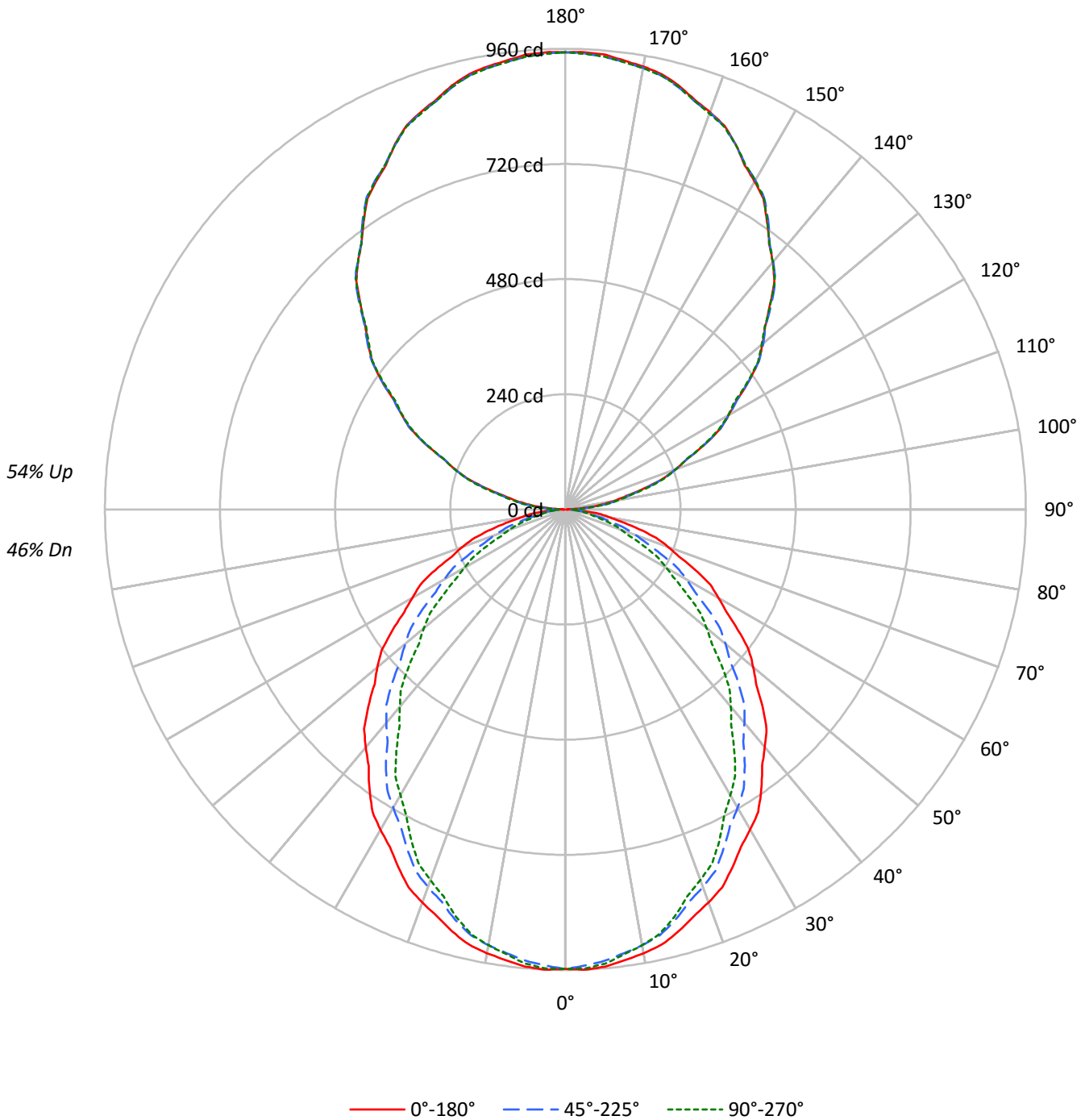
Lumens per Lamp: N/A
Luminaire Lumens: 4859.3 lumens
Efficiency: N/A
Efficacy: 126.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 38.4
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	97	97	97	97	81	81	81	66	66	66	52	52	52	46				46
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44				39	
2	89	81	75	70	81	75	70	65	63	59	56	51	49	47	41	39	38				33	
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	37	34	32				28	
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28				24	
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25				21	
6	63	51	43	37	57	47	40	35	40	35	30	33	29	26	27	24	22				19	
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19				17	
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17				15	
9	50	38	31	26	46	35	29	24	30	25	21	26	21	19	21	18	16				14	
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	14				12	

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	1.9
10°-20°	250.9	5.2
20°-30°	362.3	7.5
30°-40°	410.7	8.5
40°-50°	396.6	8.2
50°-60°	329.8	6.8
60°-70°	227.7	4.7
70°-80°	115.4	2.4
80°-90°	32.5	0.7
90°-100°	62.8	1.3
100°-110°	186.2	3.8
110°-120°	316.0	6.5
120°-130°	416.6	8.6
130°-140°	467.9	9.6
140°-150°	459.8	9.5
150°-160°	386.7	8.0
160°-170°	257.3	5.3
170°-180°	90.1	1.9
0°-30°	703.2	14.5
0°-40°	1113.9	22.9
0°-60°	1840.3	37.9
0°-90°	2215.9	45.6
90°-120°	565.0	11.6
90°-150°	1909.3	39.3
90°-180°	2643.0	54.4
0°-180°	4859.3	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	10	16	20	22	5
95°	44	51	56	58	58	49
105°	172	173	175	178	180	182
115°	321	321	320	319	318	317
125°	468	468	467	466	464	417
135°	604	608	608	606	604	467
145°	733	736	737	736	734	459
155°	840	840	839	842	839	386
165°	914	912	911	915	912	258
175°	951	948	947	952	947	90
180°	953	953	953	953	953	



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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	13.3	12.5	11.9	11.2	10.9	11.0	11.2	11.3	11.5	11.5
90°	2.2	4.1	5.8	7.6	9.4	10.9	12.3	13.6	14.9	16.2	17.2
92.5°	15.7	17.8	19.9	22.0	24.0	25.5	26.4	27.3	28.3	29.2	29.8
95°	44.2	45.7	47.1	48.6	50.1	51.5	52.6	53.7	54.9	56.0	56.5
97.5°	77.2	78.4	79.6	80.8	81.9	83.2	84.5	85.9	87.2	88.6	89.2
100°	103.2	103.8	104.4	105.1	105.8	106.9	108.3	109.8	111.2	112.7	113.1
102.5°	130.3	130.5	130.8	131.1	131.3	132.1	133.5	134.8	136.2	137.5	138.0
105°	171.7	171.8	172.0	172.2	172.4	172.8	173.4	174.1	174.7	175.4	175.9
107.5°	215.2	215.4	215.6	215.7	215.9	216.1	216.2	216.3	216.4	216.5	217.0
110°	244.7	245.0	245.2	245.6	245.9	246.0	245.9	245.7	245.5	245.3	245.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.3	275.3	275.4	275.5	275.6	275.4	275.1	274.8	274.6	274.3	274.2
115°	321.3	321.3	321.3	321.3	321.3	321.1	320.7	320.5	320.1	319.8	319.6
117.5°	364.6	364.8	364.9	365.0	365.1	365.0	364.9	364.6	364.4	364.2	363.6
120°	393.5	394.2	394.8	395.5	396.2	396.2	395.7	395.2	394.7	394.3	393.4
122.5°	423.6	423.8	424.0	424.3	424.6	424.6	424.4	424.1	424.0	423.7	423.1
125°	467.9	467.9	467.9	467.9	467.9	467.8	467.7	467.5	467.3	467.2	466.8
127.5°	508.1	508.6	509.2	509.6	510.1	510.2	509.9	509.7	509.4	509.2	508.9
130°	536.4	537.0	537.4	537.9	538.4	538.7	538.7	538.7	538.7	538.7	538.3
132.5°	565.3	565.7	566.1	566.4	566.8	566.8	566.8	566.7	566.5	566.4	566.0
135°	603.5	604.5	605.5	606.4	607.5	607.9	607.9	607.9	607.9	607.9	607.6
137.5°	645.1	645.5	645.9	646.4	646.9	647.2	647.5	647.8	648.0	648.3	647.9
140°	672.8	673.1	673.4	673.7	674.1	674.2	674.2	674.2	674.2	674.2	674.1
142.5°	698.1	698.4	698.8	699.1	699.5	699.6	699.4	699.3	699.1	699.0	699.0
145°	733.2	733.9	734.5	735.2	735.8	736.2	736.4	736.5	736.7	736.9	736.7
147.5°	768.0	768.7	769.5	770.3	771.1	771.5	771.3	771.2	771.0	770.9	770.8
150°	789.2	789.9	790.5	791.2	791.8	792.1	792.1	792.1	792.1	792.1	792.1
152.5°	809.3	809.6	810.0	810.4	810.8	811.1	811.2	811.3	811.4	811.6	812.0
155°	840.0	840.0	840.0	840.0	840.0	839.9	839.8	839.6	839.4	839.3	839.9
157.5°	866.0	865.6	865.3	865.1	864.8	864.6	864.6	864.6	864.5	864.5	865.0
160°	881.3	881.1	881.0	880.8	880.6	880.4	880.3	880.1	880.0	879.9	880.3
162.5°	895.4	895.0	894.6	894.2	893.7	893.4	893.2	893.2	893.0	892.8	893.7
165°	914.5	914.0	913.5	912.9	912.5	912.1	911.7	911.4	911.1	910.8	911.7
167.5°	929.1	928.3	927.7	927.0	926.3	926.0	926.0	926.0	926.0	926.0	927.1
170°	937.3	936.5	935.7	934.8	934.1	933.7	933.9	934.1	934.2	934.3	935.3
172.5°	943.2	942.5	941.8	941.1	940.5	940.1	940.2	940.2	940.2	940.3	941.3
175°	951.3	950.5	949.6	948.9	948.0	947.5	947.3	947.2	947.1	946.9	948.0
177.5°	953.9	953.3	952.6	952.0	951.3	951.0	951.0	951.0	951.0	951.0	951.9
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7



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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°	11.6	11.7	11.7	11.9	12.1	12.3	12.4	12.6
90°	18.2	19.1	20.2	20.8	21.1	21.5	21.8	22.1
92.5°	30.3	30.9	31.6	32.0	32.1	32.3	32.5	32.7
95°	57.0	57.5	58.0	58.2	58.2	58.2	58.2	58.2
97.5°	89.7	90.3	91.0	91.2	91.2	91.2	91.2	91.2
100°	113.4	113.8	114.0	114.2	114.2	114.2	114.2	114.2
102.5°	138.5	138.8	139.3	139.6	139.8	139.9	140.1	140.2
105°	176.3	176.8	177.3	177.9	178.3	178.8	179.3	179.8
107.5°	217.4	217.8	218.3	218.6	218.5	218.5	218.5	218.4
110°	244.7	244.4	244.0	244.1	244.7	245.2	245.6	246.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.1	274.1	274.0	274.0	274.1	274.2	274.3	274.4
115°	319.4	319.3	319.1	319.0	318.9	318.7	318.5	318.3
117.5°	363.1	362.5	361.9	361.5	361.2	360.8	360.5	360.1
120°	392.6	391.7	391.0	390.7	391.1	391.3	391.7	392.0
122.5°	422.5	422.1	421.5	420.9	420.3	419.7	419.1	418.6
125°	466.6	466.2	465.9	465.5	465.2	464.9	464.6	464.2
127.5°	508.5	508.2	507.8	507.6	507.3	507.1	506.8	506.5
130°	538.0	537.6	537.3	536.9	536.2	535.6	534.9	534.2
132.5°	565.7	565.3	565.1	564.8	564.5	564.2	563.9	563.7
135°	607.3	606.9	606.6	606.1	605.7	605.2	604.7	604.3
137.5°	647.4	647.1	646.6	646.4	646.5	646.6	646.7	646.9
140°	673.9	673.7	673.5	673.4	673.3	673.1	672.9	672.8
142.5°	698.9	698.9	698.9	698.8	698.8	698.8	698.7	698.7
145°	736.5	736.4	736.2	735.8	735.4	734.9	734.4	734.0
147.5°	770.6	770.5	770.3	770.2	770.1	769.9	769.8	769.6
150°	792.1	792.1	792.1	792.0	791.9	791.7	791.5	791.4
152.5°	812.4	812.8	813.1	813.1	812.8	812.3	811.9	811.4
155°	840.6	841.2	841.9	841.9	841.2	840.6	839.9	839.3
157.5°	865.4	866.0	866.5	866.4	865.9	865.3	864.8	864.2
160°	880.8	881.3	881.7	881.7	880.8	880.0	879.2	878.4
162.5°	894.6	895.4	896.4	896.4	895.5	894.8	893.9	893.1
165°	912.8	913.7	914.7	914.8	914.2	913.5	912.9	912.3
167.5°	928.0	929.1	930.0	930.0	929.0	927.9	927.0	926.0
170°	936.3	937.3	938.3	938.2	937.1	935.9	934.7	933.6
172.5°	942.4	943.6	944.7	944.7	943.6	942.4	941.2	940.1
175°	949.1	950.3	951.5	951.5	950.3	949.1	948.0	946.9
177.5°	952.8	953.8	954.7	954.6	953.6	952.5	951.5	950.4
180°	952.7	952.7	952.7	952.7	952.7	952.7	952.7	952.7

(END OF REPORT)