

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: P332551-830

Luminaire Tested: **SA4XXDIP-C575D590U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332551-830
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: SA4XXDIP-C575D590U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

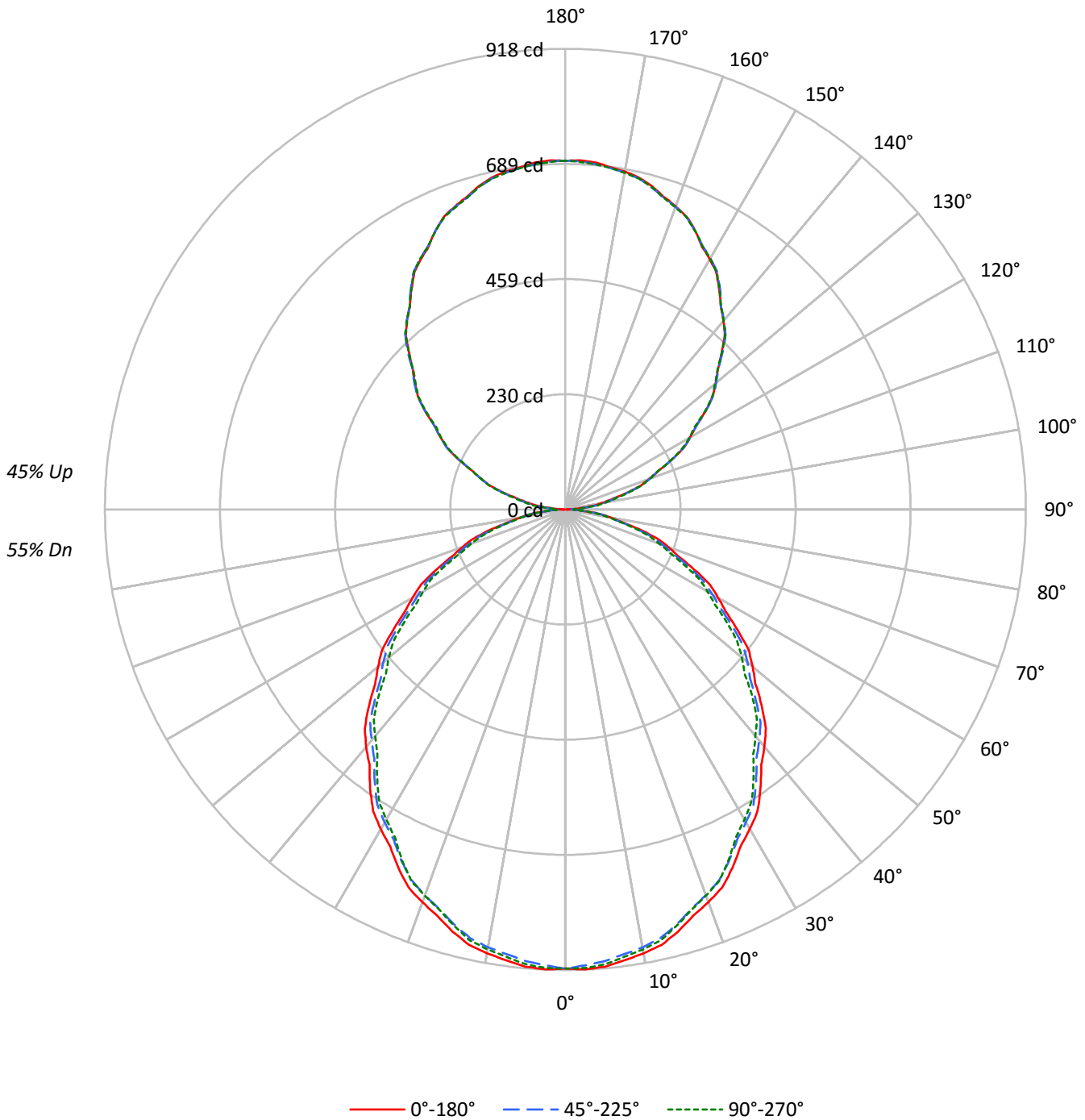
Lumens per Lamp: N/A
Luminaire Lumens: 4279.5 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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	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	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	99	94	91	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39				
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28				
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	28	24				
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	31	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19				
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17				
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15				
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	2.0
10°-20°	242.9	5.7
20°-30°	357.5	8.4
30°-40°	415.6	9.7
40°-50°	415.6	9.7
50°-60°	363.5	8.5
60°-70°	270.0	6.3
70°-80°	153.4	3.6
80°-90°	46.3	1.1
90°-100°	45.8	1.1
100°-110°	135.8	3.2
110°-120°	230.5	5.4
120°-130°	304.0	7.1
130°-140°	341.4	8.0
140°-150°	335.4	7.8
150°-160°	282.1	6.6
160°-170°	187.7	4.4
170°-180°	65.7	1.5
0°-30°	686.6	16.0
0°-40°	1102.1	25.8
0°-60°	1881.3	44.0
0°-90°	2351.0	54.9
90°-120°	412.2	9.6
90°-150°	1392.9	32.5
90°-180°	1928.0	45.1
0°-180°	4279.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
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°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	15.6	15.7	15.8	15.9	16.1	16.2	16.3	16.3	16.4	16.5	16.6
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°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	16.8	16.9	17.1	17.2	17.2	17.2	17.2	17.3
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)