

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: P331262-930

Luminaire Tested: **SA2XXDIP-C290D725U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331262-930
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: SA2XXDIP-C290D725U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3089.6 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

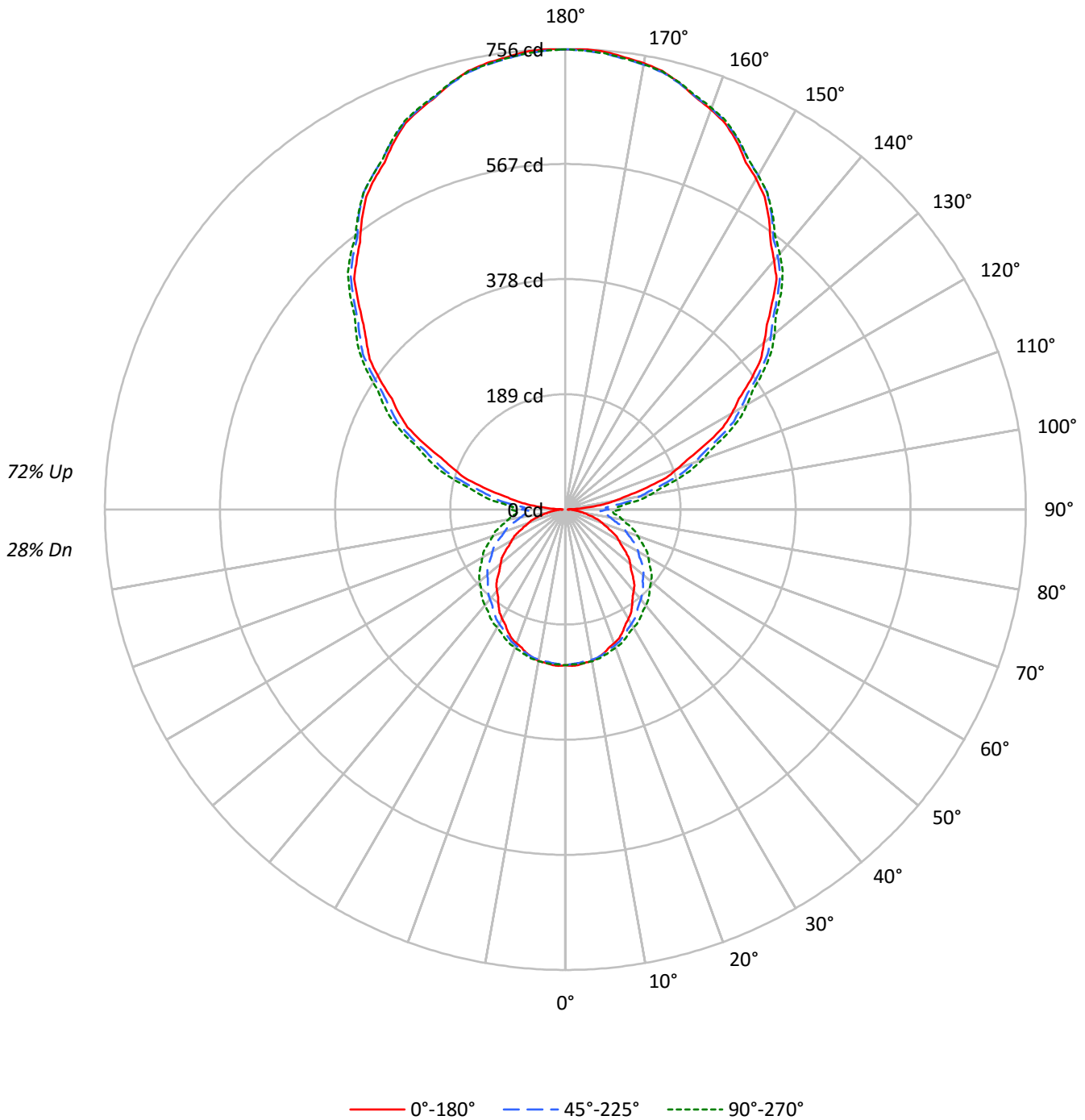
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	87	83	80	82	78	75	72	61	59	56	45	44	42	30	30	29	22				
2	83	76	70	64	74	68	63	58	53	49	46	39	37	34	26	25	23	18				
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15				
4	69	58	51	44	61	52	46	40	41	36	32	30	27	24	20	18	17	12				
5	63	52	44	38	56	46	39	34	36	31	27	27	24	21	18	16	14	11				
6	58	46	38	32	52	41	35	29	33	27	24	24	21	18	16	14	12	9				
7	54	41	34	28	48	37	30	26	29	24	21	22	18	16	15	13	11	8				
8	50	37	30	25	44	34	27	22	27	22	18	20	16	14	14	11	10	7				
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6				
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4127	4127	4127
5°	4146	3973	3957
10°	4121	3855	3812
15°	4063	3730	3659
20°	3992	3597	3511
25°	3922	3468	3376
30°	3821	3336	3241
35°	3720	3209	3148
40°	3615	3101	3051
45°	3512	3004	2971
50°	3404	2917	2891
55°	3289	2822	2810
60°	3151	2723	2724
65°	3006	2608	2622
70°	2844	2485	2512
75°	2639	2365	2410
80°	2312	2240	2305
85°	2005	2134	2226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	0.8
10°-20°	69.4	2.2
20°-30°	105.2	3.4
30°-40°	128.2	4.1
40°-50°	137.9	4.5
50°-60°	133.9	4.3
60°-70°	116.9	3.8
70°-80°	90.0	2.9
80°-90°	63.4	2.1
90°-100°	89.5	2.9
100°-110°	179.0	5.8
110°-120°	274.1	8.9
120°-130°	345.3	11.2
130°-140°	379.7	12.3
140°-150°	368.5	11.9
150°-160°	308.4	10.0
160°-170°	204.5	6.6
170°-180°	71.5	2.3
0°-30°	198.9	6.4
0°-40°	327.1	10.6
0°-60°	598.8	19.4
0°-90°	869.2	28.1
90°-120°	542.6	17.6
90°-150°	1636.0	53.0
90°-180°	2220.0	71.9
0°-180°	3089.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	255	253	255	255	24
15°	244	245	245	248	248	69
25°	222	225	228	232	234	102
35°	192	198	205	213	216	120
45°	157	167	180	191	195	121
55°	120	134	153	166	171	108
65°	82	101	122	137	142	82
75°	46	66	90	105	111	48
85°	13	36	60	75	81	14
90°	4	34	71	84	90	4
95°	36	60	83	97	101	40
105°	139	152	172	186	190	147
115°	256	265	280	290	292	253
125°	372	378	387	395	398	332
135°	480	487	492	499	500	371
145°	582	587	591	593	593	364
155°	666	668	670	673	671	306
165°	725	724	724	728	725	204
175°	754	752	751	755	751	72
180°	755	755	755	755	755	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	257.1	256.8	256.7	256.4	256.2	255.9	255.4	255.0	254.5	254.0	254.4
5°	256.3	256.1	255.8	255.6	255.3	254.9	254.5	254.0	253.5	253.0	253.5
7.5°	254.0	253.8	253.6	253.5	253.3	253.1	252.7	252.3	251.9	251.5	252.2
10°	252.3	252.1	251.9	251.8	251.6	251.4	251.1	250.9	250.6	250.4	251.0
12.5°	249.2	249.3	249.3	249.4	249.4	249.3	249.2	249.0	248.7	248.6	249.2
15°	244.4	244.6	244.8	244.9	245.1	245.2	245.2	245.2	245.2	245.2	245.9
17.5°	238.2	238.6	238.9	239.3	239.6	239.9	240.2	240.4	240.7	241.0	241.7
20°	234.1	234.5	234.9	235.3	235.7	236.1	236.4	236.8	237.1	237.4	238.3
22.5°	229.7	230.1	230.6	231.1	231.5	232.0	232.4	232.9	233.4	233.8	234.7
25°	222.3	222.8	223.4	224.0	224.5	225.2	225.9	226.7	227.4	228.1	229.1
27.5°	213.4	214.3	215.2	216.1	217.1	218.0	218.8	219.7	220.6	221.5	222.7
30°	207.4	208.5	209.5	210.6	211.7	212.8	213.9	214.9	216.0	217.0	218.3
32.5°	200.9	202.1	203.3	204.5	205.7	206.9	208.2	209.5	210.8	212.0	213.5
35°	191.5	192.9	194.3	195.7	197.1	198.5	200.2	201.7	203.3	204.8	206.6
37.5°	181.2	182.9	184.5	186.1	187.7	189.6	191.6	193.6	195.6	197.6	199.7
40°	174.5	176.3	178.1	179.9	181.6	183.7	185.9	188.2	190.4	192.6	194.7
42.5°	168.0	169.7	171.5	173.3	175.2	177.3	179.9	182.5	185.0	187.5	189.9
45°	157.0	159.2	161.5	163.7	165.9	168.4	171.4	174.2	177.1	180.0	182.5
47.5°	146.3	148.7	151.2	153.5	156.0	158.9	162.2	165.6	169.0	172.4	175.0
50°	138.9	141.5	144.0	146.5	149.1	152.2	156.0	159.6	163.3	167.1	169.8
52.5°	131.8	134.4	137.1	139.8	142.5	145.8	149.7	153.6	157.5	161.4	164.3
55°	120.3	123.4	126.3	129.2	132.2	135.8	140.1	144.4	148.7	153.0	156.0
57.5°	109.1	112.4	115.8	119.1	122.5	126.3	130.7	135.0	139.4	143.8	147.0
60°	101.1	104.7	108.2	111.7	115.3	119.4	124.1	128.7	133.5	138.1	141.3
62.5°	94.0	97.7	101.3	105.0	108.7	112.8	117.6	122.2	126.9	131.7	134.9
65°	82.2	86.3	90.3	94.3	98.3	102.8	107.6	112.5	117.4	122.2	125.6
67.5°	71.4	75.7	79.8	84.1	88.3	92.9	97.8	102.8	107.8	112.8	116.2
70°	63.7	68.0	72.2	76.6	80.8	85.5	90.6	95.7	100.9	105.9	109.5
72.5°	56.6	61.0	65.4	69.8	74.3	79.0	84.2	89.4	94.6	99.7	103.2
75°	45.6	50.1	54.8	59.4	64.0	68.9	74.2	79.5	84.7	90.0	93.5
77.5°	34.9	39.7	44.5	49.3	54.2	59.3	64.7	70.0	75.3	80.6	84.2
80°	27.8	32.8	37.8	42.8	47.9	53.1	58.4	63.8	69.1	74.4	77.9
82.5°	21.9	26.8	31.8	36.7	41.7	46.9	52.3	57.7	63.1	68.5	72.0
85°	13.4	18.4	23.6	28.6	33.8	38.9	44.2	49.5	54.7	60.0	63.4
87.5°	7.4	12.6	17.9	23.2	28.4	33.9	39.8	45.7	51.6	57.5	60.8
90°	4.3	10.8	17.3	23.7	30.2	37.7	46.1	54.5	62.8	71.2	74.2
92.5°	14.8	20.5	26.2	31.8	37.5	43.3	49.1	54.9	60.7	66.5	69.8
95°	36.1	41.4	46.6	51.9	57.2	62.5	67.8	73.0	78.2	83.4	86.5
97.5°	63.1	67.8	72.5	77.2	81.9	86.8	92.1	97.4	102.7	107.9	111.0
100°	83.5	87.7	91.9	96.0	100.2	104.8	109.9	114.9	119.9	125.0	128.0
102.5°	104.6	108.4	112.0	115.7	119.4	123.8	128.7	133.8	138.8	143.8	146.9
105°	138.8	141.7	144.5	147.3	150.1	153.8	158.3	162.9	167.5	172.0	175.2
107.5°	173.7	176.3	178.8	181.3	183.8	187.2	191.3	195.3	199.4	203.6	206.4
110°	195.8	198.4	200.8	203.3	205.9	209.1	213.1	217.2	221.2	225.3	227.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.3	222.6	224.8	227.0	229.3	232.2	235.9	239.7	243.4	247.1	249.4
115°	256.4	258.1	259.9	261.6	263.4	266.0	269.5	272.8	276.2	279.6	282.0
117.5°	292.0	293.7	295.4	297.2	298.9	301.0	303.7	306.3	308.9	311.5	313.6
120°	315.9	317.4	318.9	320.3	321.8	323.6	325.7	327.9	330.0	332.2	334.5
122.5°	337.9	339.3	340.8	342.3	343.8	345.7	348.0	350.3	352.6	354.9	356.8
125°	371.6	372.9	374.2	375.4	376.7	378.5	380.7	382.9	385.1	387.3	389.1
127.5°	404.9	406.4	408.0	409.5	411.0	412.6	414.3	415.8	417.4	419.1	420.6
130°	425.8	427.5	429.3	431.0	432.8	434.5	435.9	437.3	438.8	440.2	441.9
132.5°	449.2	450.7	452.1	453.5	454.9	456.3	457.7	459.1	460.5	461.9	463.2
135°	480.2	481.8	483.4	484.9	486.5	487.8	488.9	490.0	491.1	492.2	493.8
137.5°	513.2	514.5	515.8	517.0	518.3	519.3	520.0	520.7	521.5	522.2	523.6
140°	533.1	534.3	535.5	536.7	537.9	538.9	539.8	540.7	541.5	542.4	543.7
142.5°	553.5	554.7	555.9	557.1	558.3	559.1	559.6	560.2	560.7	561.2	562.4
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	591.4
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	616.9
150°	626.5	627.3	628.1	629.0	629.8	630.6	631.1	631.7	632.3	632.8	633.2
152.5°	642.2	643.1	643.9	644.8	645.6	646.4	647.1	647.8	648.4	649.1	649.6
155°	665.9	666.3	666.8	667.2	667.6	668.1	668.5	669.0	669.4	669.8	670.5
157.5°	686.2	686.5	686.8	687.1	687.4	687.6	687.9	688.1	688.4	688.6	689.6
160°	698.5	698.7	699.0	699.3	699.6	699.8	699.9	700.1	700.3	700.3	701.2
162.5°	709.6	709.7	709.8	709.8	709.9	710.0	710.1	710.3	710.5	710.5	711.5
165°	724.6	724.5	724.3	724.1	724.0	723.9	723.9	723.9	723.9	723.9	725.0
167.5°	737.0	736.6	736.2	735.8	735.4	735.2	735.2	735.1	735.1	735.0	736.1
170°	743.7	743.3	742.8	742.4	742.0	741.7	741.6	741.4	741.3	741.1	742.2
172.5°	748.3	747.9	747.5	747.0	746.6	746.3	746.2	746.0	745.9	745.8	746.7
175°	753.9	753.5	753.0	752.6	752.2	751.9	751.5	751.3	751.0	750.7	751.7
177.5°	756.2	755.9	755.5	755.1	754.8	754.6	754.3	754.1	753.8	753.7	754.3
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	254.7	255.0	255.4	255.5	255.4	255.2	255.1	254.9
5°	254.0	254.5	254.9	255.1	255.0	254.9	254.9	254.8
7.5°	252.7	253.3	254.0	254.2	254.1	254.0	254.0	253.9
10°	251.7	252.3	253.0	253.3	253.2	253.2	253.1	253.0
12.5°	249.9	250.5	251.2	251.5	251.4	251.4	251.3	251.2
15°	246.6	247.4	248.2	248.5	248.4	248.3	248.3	248.2
17.5°	242.6	243.3	244.0	244.4	244.4	244.4	244.4	244.4
20°	239.2	240.1	241.0	241.5	241.5	241.5	241.5	241.5
22.5°	235.7	236.6	237.5	238.0	238.1	238.2	238.4	238.6
25°	230.2	231.1	232.1	232.7	232.9	233.2	233.4	233.7
27.5°	224.0	225.3	226.5	227.2	227.4	227.6	227.7	228.0
30°	219.6	221.0	222.3	223.1	223.3	223.6	223.8	224.0
32.5°	215.0	216.5	218.1	219.1	219.5	220.0	220.4	220.8
35°	208.5	210.3	212.1	213.3	213.9	214.4	215.0	215.6
37.5°	201.6	203.7	205.7	207.0	207.6	208.2	208.8	209.4
40°	196.9	199.0	201.1	202.6	203.3	204.1	204.8	205.5
42.5°	192.2	194.5	196.9	198.4	199.2	199.9	200.6	201.4
45°	185.1	187.7	190.2	191.9	192.7	193.6	194.4	195.2
47.5°	177.7	180.3	183.0	184.8	185.7	186.6	187.5	188.4
50°	172.6	175.5	178.2	180.1	181.0	181.9	182.8	183.7
52.5°	167.1	170.0	172.8	174.8	175.8	176.8	177.7	178.6
55°	158.9	161.8	164.9	166.8	167.9	169.0	170.1	171.1
57.5°	150.2	153.4	156.5	158.7	159.8	160.9	161.9	163.1
60°	144.4	147.6	150.7	152.8	153.9	155.1	156.3	157.4
62.5°	138.3	141.6	145.0	147.2	148.2	149.3	150.4	151.5
65°	129.0	132.3	135.7	137.9	139.0	140.1	141.1	142.2
67.5°	119.5	122.9	126.4	128.7	129.7	130.9	132.0	133.1
70°	113.0	116.5	120.1	122.4	123.4	124.3	125.3	126.3
72.5°	106.6	110.1	113.6	115.9	117.1	118.3	119.5	120.7
75°	97.1	100.6	104.2	106.5	107.5	108.6	109.7	110.7
77.5°	87.7	91.2	94.7	97.1	98.2	99.4	100.5	101.7
80°	81.4	84.8	88.3	90.6	91.7	92.9	94.0	95.1
82.5°	75.4	78.9	82.3	84.6	85.7	86.8	87.9	88.9
85°	66.9	70.4	73.9	76.1	77.3	78.4	79.6	80.7
87.5°	64.1	67.4	70.7	72.9	73.9	75.1	76.1	77.2
90°	77.2	80.2	83.2	85.3	86.4	87.6	88.7	89.8
92.5°	73.1	76.3	79.7	81.8	82.8	83.8	84.8	85.9
95°	89.6	92.8	95.9	97.8	98.5	99.2	100.0	100.6
97.5°	114.1	117.1	120.2	122.1	123.1	124.0	125.0	126.0
100°	131.1	134.1	137.1	139.1	139.8	140.6	141.4	142.1
102.5°	150.0	153.1	156.2	158.1	158.9	159.6	160.4	161.2
105°	178.4	181.6	184.7	186.7	187.7	188.6	189.5	190.4
107.5°	209.3	212.2	215.1	216.6	216.9	217.1	217.4	217.7
110°	230.5	233.1	235.8	237.3	237.8	238.3	238.8	239.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	251.7	254.0	256.3	257.7	258.4	258.9	259.5	260.1
115°	284.3	286.7	289.0	290.4	290.9	291.4	291.8	292.3
117.5°	315.8	317.9	319.9	321.2	321.6	322.0	322.5	322.9
120°	336.8	339.2	341.4	342.8	343.3	343.8	344.3	344.8
122.5°	358.7	360.6	362.5	363.7	364.1	364.6	365.1	365.5
125°	390.9	392.7	394.5	395.7	396.3	396.9	397.5	398.1
127.5°	422.1	423.6	425.2	426.1	426.3	426.6	426.9	427.1
130°	443.6	445.3	446.9	447.8	448.0	448.1	448.2	448.3
132.5°	464.5	465.8	467.0	467.8	468.0	468.2	468.4	468.6
135°	495.4	497.0	498.6	499.5	499.7	499.9	500.2	500.4
137.5°	525.0	526.4	527.8	528.5	528.5	528.5	528.5	528.5
140°	545.0	546.4	547.7	548.3	548.2	548.2	548.1	548.0
142.5°	563.5	564.7	565.9	566.4	566.2	566.1	566.0	565.8
145°	592.0	592.6	593.3	593.5	593.4	593.2	593.0	592.9
147.5°	617.3	617.6	618.0	618.0	617.7	617.3	617.0	616.7
150°	633.7	634.1	634.5	634.5	634.1	633.7	633.2	632.8
152.5°	650.2	650.8	651.3	651.3	650.8	650.2	649.6	649.1
155°	671.2	671.9	672.6	672.8	672.3	671.9	671.5	671.1
157.5°	690.6	691.5	692.5	692.6	691.9	691.3	690.6	689.9
160°	702.1	703.0	703.8	703.9	703.4	702.8	702.2	701.6
162.5°	712.5	713.5	714.4	714.5	713.9	713.2	712.5	711.8
165°	725.9	726.9	727.9	728.1	727.3	726.6	725.9	725.2
167.5°	737.0	738.0	739.0	739.2	738.4	737.7	736.9	736.2
170°	743.1	744.1	745.1	745.2	744.4	743.5	742.7	741.8
172.5°	747.7	748.7	749.7	749.7	748.9	748.0	747.2	746.4
175°	752.7	753.7	754.6	754.7	753.9	753.0	752.2	751.4
177.5°	755.0	755.7	756.4	756.4	755.7	755.0	754.3	753.7
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1

(END OF REPORT)