

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: P331890-930

Luminaire Tested: **S123DIP-S340D805U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331890-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3400.3 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

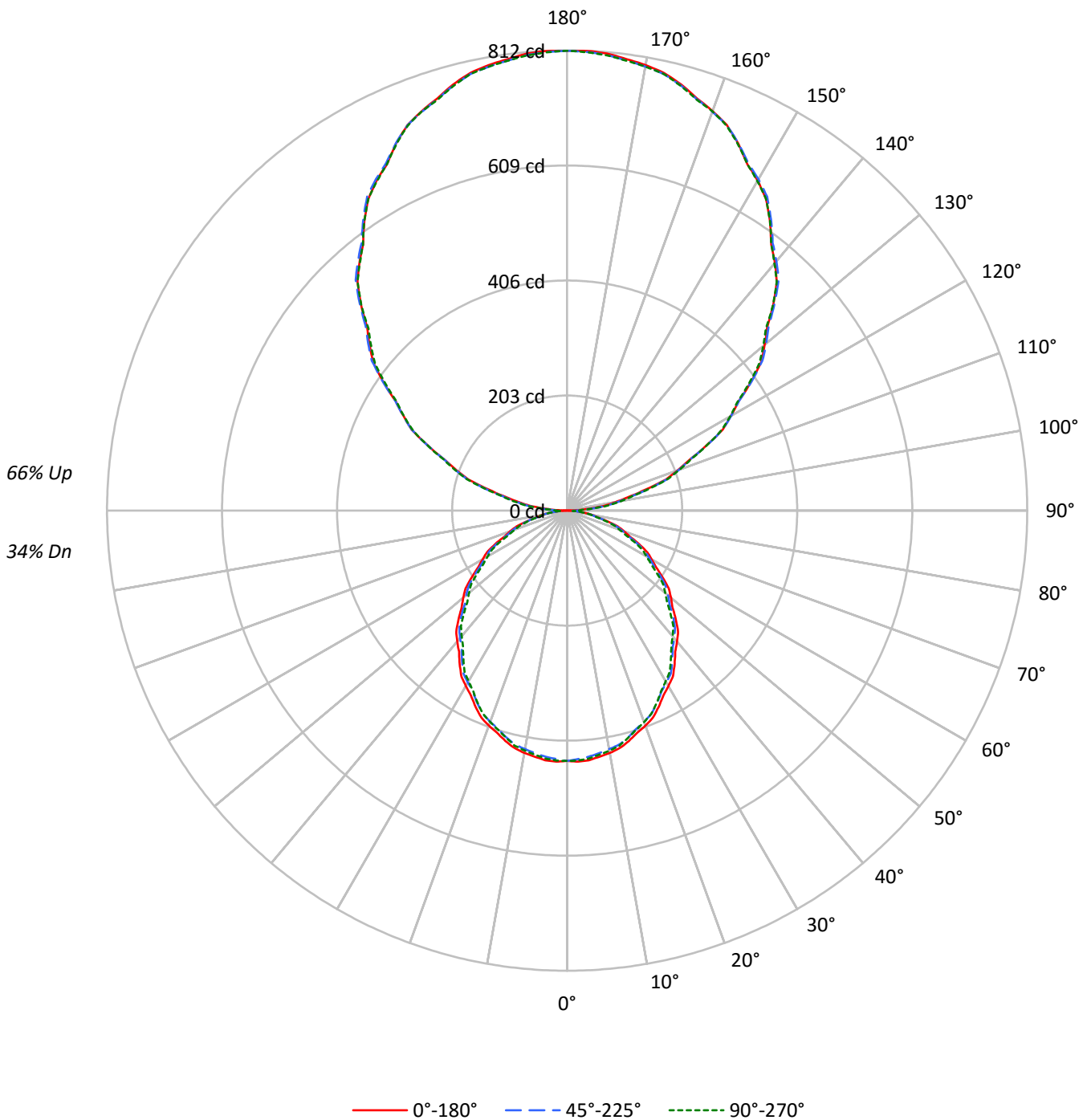
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	36	36	35	28
2	86	78	72	67	77	71	66	62	57	53	50	44	42	39	32	31	29	24
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	26	25	20
4	71	61	53	47	64	55	49	43	44	40	36	35	31	28	25	23	21	17
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	20	19	15
6	60	48	40	35	54	44	37	32	36	31	27	28	24	21	21	18	16	13
7	56	44	36	30	50	40	33	28	32	27	23	25	22	19	19	16	14	12
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	18	21	18	15	16	13	12	9
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4755	4755	4755
5°	4778	4712	4744
10°	4746	4671	4701
15°	4690	4619	4627
20°	4625	4543	4548
25°	4538	4454	4444
30°	4443	4354	4320
35°	4343	4248	4193
40°	4239	4131	4068
45°	4122	4025	3927
50°	4007	3893	3785
55°	3856	3757	3643
60°	3705	3597	3483
65°	3568	3423	3319
70°	3371	3229	3084
75°	3082	2969	2845
80°	2777	2665	2641
85°	2433	2347	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	1.2
10°-20°	117.5	3.5
20°-30°	173.6	5.1
30°-40°	202.8	6.0
40°-50°	203.9	6.0
50°-60°	179.1	5.3
60°-70°	133.4	3.9
70°-80°	76.0	2.2
80°-90°	24.2	0.7
90°-100°	52.9	1.6
100°-110°	158.2	4.7
110°-120°	269.1	7.9
120°-130°	354.0	10.4
130°-140°	397.9	11.7
140°-150°	391.1	11.5
150°-160°	329.2	9.7
160°-170°	219.2	6.4
170°-180°	76.7	2.3
0°-30°	332.7	9.8
0°-40°	535.5	15.7
0°-60°	918.4	27.0
0°-90°	1152.0	33.9
90°-120°	480.2	14.1
90°-150°	1623.1	47.7
90°-180°	2248.0	66.1
0°-180°	3400.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	442	440	436	440	439	42
15°	421	419	414	417	415	119
25°	382	380	375	375	374	176
35°	330	328	323	321	319	207
45°	271	269	264	260	258	209
55°	206	205	200	196	194	184
65°	140	138	134	132	130	138
75°	74	73	71	70	68	79
85°	20	19	19	18	18	22
90°	1	7	15	18	19	3
95°	38	42	47	50	50	42
105°	143	145	150	150	152	154
115°	271	273	272	272	272	268
125°	396	398	397	395	392	353
135°	514	518	518	515	514	396
145°	624	625	627	626	624	390
155°	714	715	715	717	713	329
165°	778	776	776	780	776	219
175°	810	807	807	810	806	77
180°	812	812	812	812	812	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	443.4	443.0	442.8	442.5	442.2	441.7	441.0	440.3	439.5	438.8	439.4
5°	442.2	441.7	441.3	440.9	440.5	439.9	438.9	438.0	437.0	436.1	436.9
7.5°	437.9	437.4	437.0	436.6	436.2	435.5	434.6	433.6	432.6	431.6	432.4
10°	434.2	433.8	433.3	432.9	432.5	431.8	430.6	429.6	428.4	427.4	428.1
12.5°	429.3	429.0	428.6	428.3	428.0	427.2	426.2	425.2	424.1	423.1	423.7
15°	420.9	420.6	420.2	419.9	419.6	418.8	417.8	416.6	415.6	414.5	415.2
17.5°	411.1	410.7	410.3	409.8	409.4	408.6	407.5	406.4	405.3	404.2	404.6
20°	403.8	403.3	402.8	402.3	401.8	401.0	399.9	398.8	397.7	396.6	397.0
22.5°	395.6	395.1	394.6	394.1	393.6	392.8	391.7	390.6	389.5	388.4	388.7
25°	382.1	381.6	381.2	380.7	380.2	379.4	378.2	377.2	376.0	375.0	375.0
27.5°	367.8	367.3	366.8	366.3	365.8	365.0	363.9	362.6	361.5	360.3	360.4
30°	357.5	357.0	356.6	356.2	355.8	355.0	353.8	352.6	351.5	350.3	350.3
32.5°	347.2	346.6	346.0	345.4	345.0	344.1	343.2	342.3	341.4	340.6	340.1
35°	330.5	330.0	329.5	329.0	328.5	327.7	326.6	325.5	324.4	323.3	322.8
37.5°	313.5	312.8	312.2	311.5	311.0	310.1	308.9	307.8	306.7	305.6	305.0
40°	301.7	301.1	300.6	300.1	299.6	298.7	297.6	296.4	295.2	294.0	293.3
42.5°	289.8	289.2	288.6	288.0	287.5	286.6	285.4	284.2	283.1	281.8	281.2
45°	270.8	270.5	270.2	269.9	269.5	268.8	267.7	266.6	265.5	264.4	263.4
47.5°	252.1	251.6	251.1	250.6	250.1	249.4	248.3	247.3	246.3	245.2	244.3
50°	239.3	238.9	238.5	238.1	237.7	236.8	235.8	234.7	233.6	232.5	231.5
52.5°	225.9	225.7	225.3	225.1	224.8	224.0	222.9	221.8	220.6	219.4	218.7
55°	205.5	205.5	205.4	205.3	205.2	204.6	203.5	202.4	201.3	200.2	199.3
57.5°	186.1	185.8	185.5	185.2	184.9	184.3	183.4	182.5	181.7	180.8	180.0
60°	172.1	172.0	171.9	171.9	171.8	171.2	170.2	169.2	168.2	167.1	166.4
62.5°	159.6	159.4	159.2	159.0	158.7	158.2	157.1	156.1	155.1	154.1	153.4
65°	140.1	139.7	139.3	138.9	138.5	137.9	137.1	136.2	135.3	134.4	133.8
67.5°	119.6	119.2	118.9	118.5	118.1	117.6	117.0	116.3	115.7	115.0	114.5
70°	107.1	106.6	106.2	105.6	105.1	104.6	104.1	103.5	103.1	102.6	102.0
72.5°	94.1	93.7	93.4	92.9	92.5	92.1	91.6	91.0	90.4	89.8	89.3
75°	74.1	73.7	73.4	73.1	72.7	72.4	72.2	71.9	71.7	71.4	71.0
77.5°	56.3	56.2	56.0	55.8	55.6	55.4	55.1	54.8	54.5	54.1	53.9
80°	44.8	44.6	44.4	44.1	43.8	43.6	43.5	43.3	43.1	43.0	42.8
82.5°	33.6	33.5	33.5	33.4	33.3	33.3	33.3	33.3	33.3	33.2	33.0
85°	19.7	19.6	19.4	19.2	19.1	19.0	19.0	19.0	19.0	19.0	18.8
87.5°	8.0	8.1	8.2	8.2	8.3	8.6	8.8	9.1	9.5	9.8	9.8
90°	0.7	2.0	3.5	4.9	6.3	7.9	9.8	11.6	13.5	15.3	15.9
92.5°	15.4	16.4	17.4	18.3	19.2	20.3	21.4	22.4	23.4	24.5	24.9
95°	37.6	38.6	39.6	40.6	41.6	42.6	43.8	44.9	46.1	47.2	47.8
97.5°	66.8	67.5	68.2	69.0	69.8	70.5	71.3	72.2	73.0	73.8	74.4
100°	86.7	87.6	88.4	89.3	90.1	90.9	91.6	92.3	93.0	93.7	94.2
102.5°	109.7	110.1	110.6	111.2	111.7	112.4	113.3	114.3	115.2	116.2	116.6
105°	143.4	143.7	144.0	144.3	144.6	145.4	146.6	147.9	149.2	150.4	150.4
107.5°	182.7	182.9	183.0	183.2	183.4	183.7	184.3	184.7	185.2	185.7	186.2
110°	207.2	207.4	207.7	208.0	208.3	208.6	208.9	209.1	209.5	209.7	210.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	232.7	232.8	233.0	233.2	233.3	233.4	233.5	233.6	233.7	233.7	234.4
115°	270.9	271.3	271.7	272.1	272.6	272.7	272.4	272.1	271.8	271.6	271.7
117.5°	309.4	309.7	310.0	310.2	310.5	310.5	310.1	309.7	309.4	309.0	309.0
120°	333.4	334.2	335.1	335.9	336.8	336.9	336.1	335.4	334.8	334.0	333.9
122.5°	358.4	359.0	359.6	360.2	360.9	361.0	360.6	360.3	359.9	359.5	359.1
125°	396.5	396.9	397.3	397.8	398.2	398.3	397.9	397.7	397.4	397.1	396.6
127.5°	431.7	432.6	433.5	434.4	435.3	435.6	435.3	435.0	434.6	434.3	433.6
130°	455.1	456.2	457.4	458.5	459.7	460.0	459.6	459.2	458.8	458.3	457.7
132.5°	478.6	479.7	480.9	482.0	483.1	483.6	483.2	482.9	482.6	482.2	481.6
135°	514.4	515.3	516.1	517.0	517.8	518.2	518.0	517.9	517.7	517.6	517.1
137.5°	547.6	548.3	548.9	549.7	550.4	550.9	551.3	551.6	552.0	552.4	551.8
140°	570.5	571.2	571.9	572.7	573.3	573.7	573.9	574.1	574.2	574.3	574.2
142.5°	591.4	592.2	592.8	593.5	594.3	594.8	595.0	595.3	595.5	595.7	595.6
145°	624.0	624.4	624.6	624.9	625.2	625.5	626.0	626.4	626.8	627.2	627.1
147.5°	652.6	653.1	653.6	654.1	654.7	655.1	655.5	655.9	656.3	656.7	656.7
150°	672.5	672.8	673.0	673.4	673.6	673.9	674.2	674.5	674.7	675.1	675.1
152.5°	688.8	689.2	689.6	690.0	690.4	690.7	690.9	691.0	691.2	691.4	691.6
155°	714.5	714.5	714.5	714.5	714.5	714.6	714.8	714.9	715.1	715.2	715.8
157.5°	736.5	736.3	736.1	736.0	735.8	735.8	735.9	736.1	736.1	736.2	736.9
160°	750.2	750.0	749.7	749.4	749.1	749.0	749.0	749.0	749.0	749.0	749.7
162.5°	762.5	762.1	761.7	761.3	760.9	760.8	760.9	761.0	761.1	761.2	761.9
165°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.4	776.4	776.4	777.2
167.5°	790.9	790.4	789.8	789.2	788.6	788.5	788.6	788.6	788.8	788.9	789.8
170°	798.1	797.5	797.0	796.4	795.8	795.5	795.5	795.5	795.5	795.5	796.5
172.5°	803.6	803.2	802.6	802.0	801.4	801.1	801.1	801.1	801.1	801.1	802.0
175°	809.5	808.9	808.5	807.9	807.3	807.0	807.0	807.0	807.0	807.0	807.9
177.5°	812.0	811.5	811.1	810.6	810.2	809.9	809.9	809.9	809.9	809.9	810.6
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	440.1	440.8	441.5	441.8	441.7	441.6	441.6	441.5
5°	437.8	438.6	439.5	439.9	439.7	439.5	439.3	439.1
7.5°	433.2	433.9	434.6	435.0	434.9	434.8	434.7	434.6
10°	428.9	429.7	430.4	430.7	430.6	430.4	430.2	430.1
12.5°	424.2	424.8	425.3	425.6	425.5	425.3	425.3	425.2
15°	415.8	416.5	417.2	417.3	416.7	416.2	415.7	415.2
17.5°	405.1	405.6	406.1	406.3	406.0	405.9	405.7	405.5
20°	397.3	397.6	397.9	398.0	397.7	397.5	397.2	397.0
22.5°	388.9	389.2	389.5	389.5	389.1	388.8	388.5	388.2
25°	375.1	375.2	375.3	375.2	375.0	374.7	374.5	374.2
27.5°	360.4	360.5	360.5	360.4	360.1	359.8	359.5	359.1
30°	350.3	350.3	350.3	349.9	349.4	348.8	348.2	347.6
32.5°	339.6	339.1	338.7	338.3	337.9	337.6	337.3	337.0
35°	322.3	321.8	321.2	320.8	320.4	319.9	319.5	319.1
37.5°	304.4	303.8	303.1	302.7	302.5	302.1	301.9	301.7
40°	292.7	292.0	291.3	290.8	290.5	290.2	289.8	289.5
42.5°	280.5	279.8	279.2	278.7	278.3	278.0	277.7	277.3
45°	262.4	261.4	260.3	259.7	259.2	258.8	258.4	258.0
47.5°	243.3	242.3	241.2	240.6	240.2	239.9	239.5	239.1
50°	230.6	229.7	228.8	228.0	227.6	227.1	226.6	226.0
52.5°	217.8	217.0	216.2	215.6	215.1	214.6	214.1	213.6
55°	198.4	197.4	196.5	195.8	195.4	194.9	194.5	194.1
57.5°	179.2	178.3	177.5	176.8	176.3	175.9	175.4	174.9
60°	165.7	164.9	164.1	163.5	163.1	162.7	162.2	161.8
62.5°	152.5	151.8	151.1	150.5	150.3	149.9	149.7	149.4
65°	133.1	132.5	131.8	131.3	131.1	130.8	130.5	130.3
67.5°	113.8	113.2	112.7	112.2	111.9	111.5	111.1	110.8
70°	101.4	100.8	100.2	99.7	99.3	98.9	98.4	98.0
72.5°	88.8	88.2	87.7	87.3	87.2	86.9	86.7	86.4
75°	70.6	70.1	69.7	69.4	69.1	68.9	68.6	68.4
77.5°	53.6	53.3	53.0	52.9	52.9	52.9	52.9	52.9
80°	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6
82.5°	32.9	32.8	32.6	32.4	32.4	32.4	32.3	32.2
85°	18.7	18.5	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	9.9	9.9	9.9	9.9	10.0	10.1	10.1	10.2
90°	16.5	17.0	17.5	18.0	18.3	18.6	18.8	19.2
92.5°	25.4	25.8	26.3	26.4	26.3	26.1	25.9	25.8
95°	48.3	48.8	49.4	49.7	49.7	49.7	49.7	49.7
97.5°	75.1	75.7	76.4	76.7	76.6	76.6	76.6	76.5
100°	94.6	95.0	95.4	95.8	96.0	96.3	96.6	96.9
102.5°	117.0	117.4	117.8	118.1	118.0	117.9	117.9	117.8
105°	150.4	150.4	150.4	150.6	150.8	151.2	151.4	151.7
107.5°	186.6	187.1	187.6	187.7	187.5	187.4	187.2	187.0
110°	210.8	211.4	212.0	212.1	211.8	211.6	211.2	211.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.1	235.7	236.4	236.7	236.7	236.6	236.5	236.5
115°	271.8	272.0	272.1	272.1	272.0	271.8	271.7	271.6
117.5°	309.0	308.9	308.9	308.7	308.3	307.9	307.5	307.1
120°	333.7	333.6	333.5	333.2	333.0	332.6	332.4	332.1
122.5°	358.8	358.4	358.1	357.7	357.3	356.9	356.4	356.0
125°	396.0	395.4	394.8	394.3	393.7	393.1	392.6	392.0
127.5°	432.8	431.9	431.2	430.5	429.8	429.2	428.5	427.9
130°	457.2	456.6	456.1	455.3	454.3	453.3	452.3	451.3
132.5°	480.9	480.2	479.6	478.8	478.1	477.3	476.5	475.8
135°	516.5	515.9	515.4	514.9	514.6	514.4	514.0	513.8
137.5°	551.2	550.7	550.0	549.4	548.9	548.4	547.9	547.3
140°	574.1	573.9	573.7	573.2	572.2	571.2	570.2	569.2
142.5°	595.5	595.3	595.2	594.8	593.9	593.2	592.4	591.7
145°	627.0	626.8	626.6	626.3	625.7	625.2	624.6	624.0
147.5°	656.7	656.7	656.7	656.2	655.4	654.5	653.7	652.9
150°	675.1	675.1	675.1	674.7	673.8	672.9	672.1	671.2
152.5°	691.8	692.0	692.3	692.0	691.3	690.6	689.8	689.1
155°	716.3	716.9	717.5	717.2	716.2	715.3	714.3	713.3
157.5°	737.4	738.0	738.6	738.5	737.8	736.9	736.1	735.3
160°	750.4	751.1	751.8	751.9	751.3	750.7	750.2	749.6
162.5°	762.6	763.4	764.1	763.9	763.0	762.1	761.2	760.3
165°	778.1	778.9	779.8	779.8	778.8	777.7	776.7	775.8
167.5°	790.7	791.5	792.4	792.4	791.5	790.7	789.8	788.9
170°	797.5	798.5	799.5	799.5	798.5	797.5	796.5	795.5
172.5°	802.9	803.8	804.6	804.6	803.6	802.6	801.6	800.6
175°	808.7	809.5	810.4	810.3	809.3	808.4	807.3	806.3
177.5°	811.3	812.0	812.6	812.6	811.8	811.0	810.2	809.4
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5

(END OF REPORT)