

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: P331932-930

Luminaire Tested: **S123DIP-S560D805U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932-930
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-S560D805U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP 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: 4177.3 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

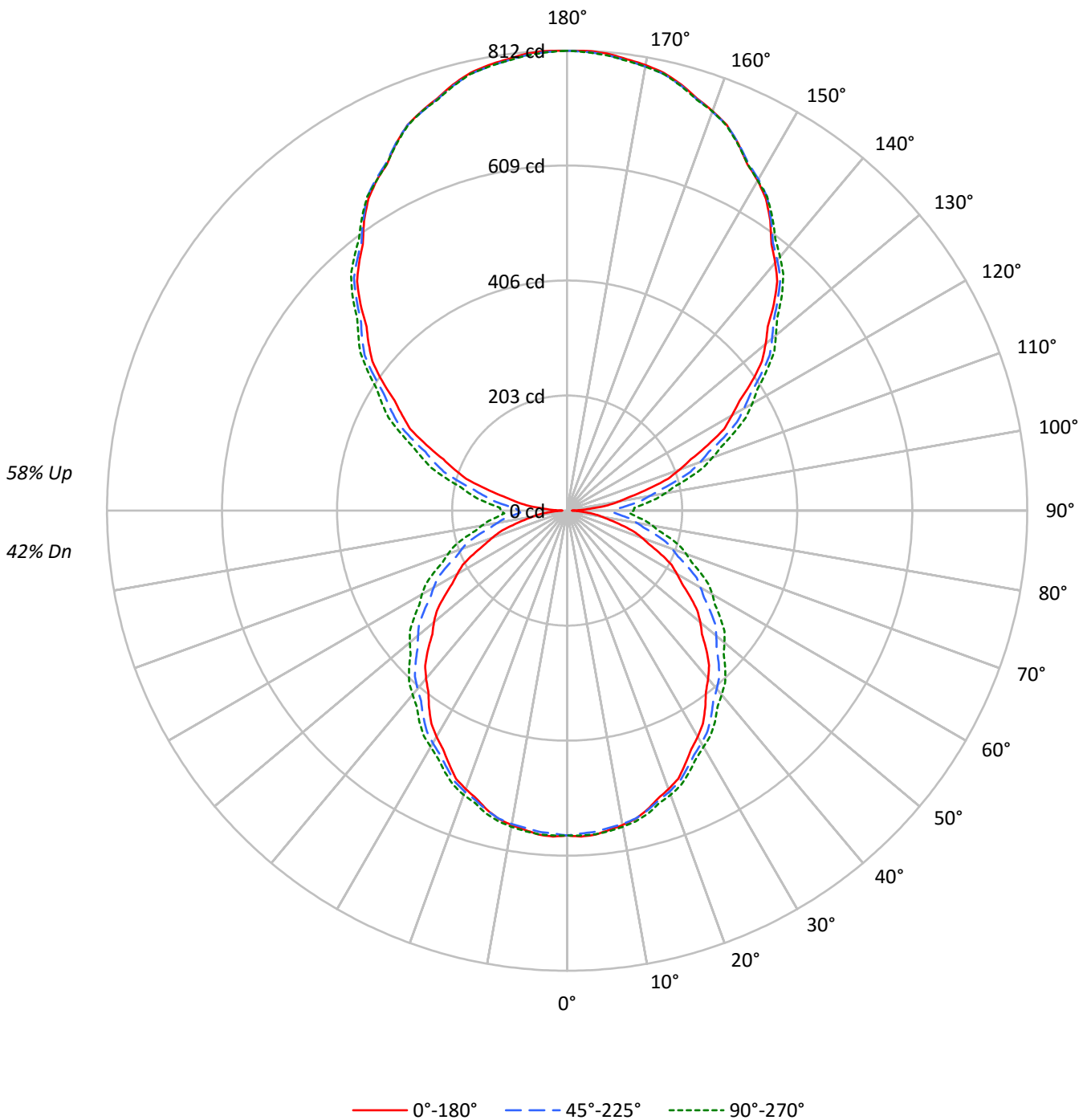
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.3
10°-20°	154.9	3.7
20°-30°	231.7	5.5
30°-40°	276.7	6.6
40°-50°	289.5	6.9
50°-60°	271.7	6.5
60°-70°	226.9	5.4
70°-80°	162.4	3.9
80°-90°	99.2	2.4
90°-100°	113.6	2.7
100°-110°	202.9	4.9
110°-120°	298.9	7.2
120°-130°	371.0	8.9
130°-140°	405.5	9.7
140°-150°	392.7	9.4
150°-160°	329.2	7.9
160°-170°	219.2	5.2
170°-180°	76.7	1.8
0°-30°	441.0	10.6
0°-40°	717.7	17.2
0°-60°	1279.0	30.6
0°-90°	1767.5	42.3
90°-120°	615.4	14.7
90°-150°	1784.6	42.7
90°-180°	2410.0	57.7
0°-180°	4177.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	9	46	86	109	117	8
95°	44	74	109	130	137	48
105°	148	166	197	214	222	159
115°	274	284	305	320	325	271
125°	398	401	417	427	430	355
135°	516	519	525	533	536	397
145°	625	625	627	631	632	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°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.7	24.0	31.1	38.3	45.5	52.8	60.3	67.8	75.2	82.6	87.5
90°	8.7	17.0	25.2	33.4	41.7	50.2	59.1	68.0	77.0	85.9	91.2
92.5°	23.1	30.2	37.3	44.4	51.4	59.0	67.0	75.0	83.0	91.1	96.1
95°	44.5	50.9	57.3	63.7	70.1	77.3	85.2	93.1	101.1	109.0	113.9
97.5°	72.9	78.5	84.1	89.8	95.4	101.9	109.2	116.5	123.8	131.2	135.9
100°	92.3	97.6	102.9	108.2	113.5	119.7	126.8	133.9	141.0	148.1	152.5
102.5°	114.8	119.3	123.8	128.2	132.8	138.7	145.9	153.0	160.3	167.5	171.8
105°	148.4	152.1	155.6	159.2	162.9	168.3	175.5	182.8	190.0	197.3	201.1
107.5°	186.9	190.0	192.9	195.9	198.9	203.5	209.7	215.9	222.0	228.2	232.4
110°	210.9	213.7	216.5	219.2	222.0	226.3	232.2	238.0	243.9	249.7	253.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	236.4	238.6	240.8	243.1	245.3	249.1	254.5	259.9	265.3	270.7	274.8
115°	274.0	276.1	278.2	280.3	282.4	285.8	290.5	295.2	299.9	304.7	308.1
117.5°	312.4	313.7	315.0	316.3	317.6	320.5	324.8	329.1	333.5	337.8	341.0
120°	335.9	337.5	339.0	340.5	342.0	344.8	348.6	352.5	356.4	360.3	363.3
122.5°	360.9	361.8	362.8	363.8	364.8	367.3	371.3	375.3	379.3	383.3	386.0
125°	398.4	398.8	399.2	399.7	400.1	402.1	405.9	409.6	413.4	417.1	419.5
127.5°	433.6	434.3	435.0	435.9	436.6	438.5	441.6	444.6	447.6	450.6	452.6
130°	457.0	458.0	459.0	460.0	461.0	462.7	465.0	467.3	469.7	472.1	474.1
132.5°	480.0	481.0	482.2	483.3	484.4	485.9	487.8	489.7	491.6	493.5	495.4
135°	515.7	516.4	517.1	517.8	518.5	519.6	521.0	522.4	523.7	525.1	527.0
137.5°	548.7	549.3	549.8	550.5	551.1	552.0	553.2	554.4	555.7	556.9	558.5
140°	571.1	571.9	572.6	573.2	574.0	574.6	575.2	575.7	576.3	576.8	578.8
142.5°	592.1	592.6	593.2	593.9	594.4	594.9	595.3	595.6	595.9	596.2	597.9
145°	624.7	624.8	624.9	625.1	625.3	625.5	626.0	626.4	626.8	627.2	628.2
147.5°	652.6	653.1	653.6	654.1	654.7	655.1	655.5	655.9	656.3	656.7	657.0
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°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	92.3	97.1	102.0	105.1	106.6	107.9	109.4	110.9
90°	96.4	101.7	107.0	110.5	112.2	113.8	115.5	117.2
92.5°	101.2	106.2	111.3	114.4	115.5	116.6	117.7	118.8
95°	118.7	123.6	128.5	131.6	133.0	134.4	135.7	137.1
97.5°	140.7	145.5	150.3	153.4	154.7	156.0	157.4	158.7
100°	156.9	161.3	165.8	168.9	170.6	172.3	173.9	175.6
102.5°	176.2	180.5	184.8	187.7	189.0	190.3	191.7	193.0
105°	205.0	209.0	212.8	215.6	217.0	218.6	220.1	221.7
107.5°	236.6	240.8	244.9	247.5	248.6	249.6	250.7	251.8
110°	258.0	262.2	266.4	268.9	269.7	270.5	271.3	272.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.0	283.2	287.4	290.0	291.2	292.4	293.5	294.7
115°	311.6	315.0	318.5	320.7	321.7	322.7	323.7	324.7
117.5°	344.3	347.6	350.8	352.9	353.5	354.2	354.9	355.6
120°	366.3	369.4	372.4	374.3	375.0	375.7	376.3	377.1
122.5°	388.7	391.3	394.1	395.7	396.3	396.9	397.5	398.0
125°	421.8	424.1	426.5	427.9	428.3	428.7	429.1	429.5
127.5°	454.5	456.5	458.4	459.5	459.8	460.1	460.4	460.7
130°	476.2	478.3	480.4	481.3	481.1	480.9	480.8	480.6
132.5°	497.3	499.0	500.9	501.9	502.1	502.3	502.5	502.6
135°	529.0	530.9	532.8	534.0	534.4	534.8	535.2	535.7
137.5°	560.1	561.7	563.3	564.2	564.4	564.5	564.6	564.8
140°	580.7	582.6	584.6	585.4	585.1	584.8	584.5	584.2
142.5°	599.7	601.4	603.2	604.0	603.9	603.8	603.7	603.6
145°	629.2	630.1	631.1	631.6	631.6	631.5	631.5	631.5
147.5°	657.4	657.7	658.0	658.0	657.6	657.3	657.0	656.6
150°	675.1	675.1	675.1	674.7	674.2	673.6	673.0	672.5
152.5°	691.8	692.0	692.3	692.0	691.4	690.6	690.0	689.3
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)