

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: P331926

Luminaire Tested: **S123DIP-S560D585U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331926
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-S560D585U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

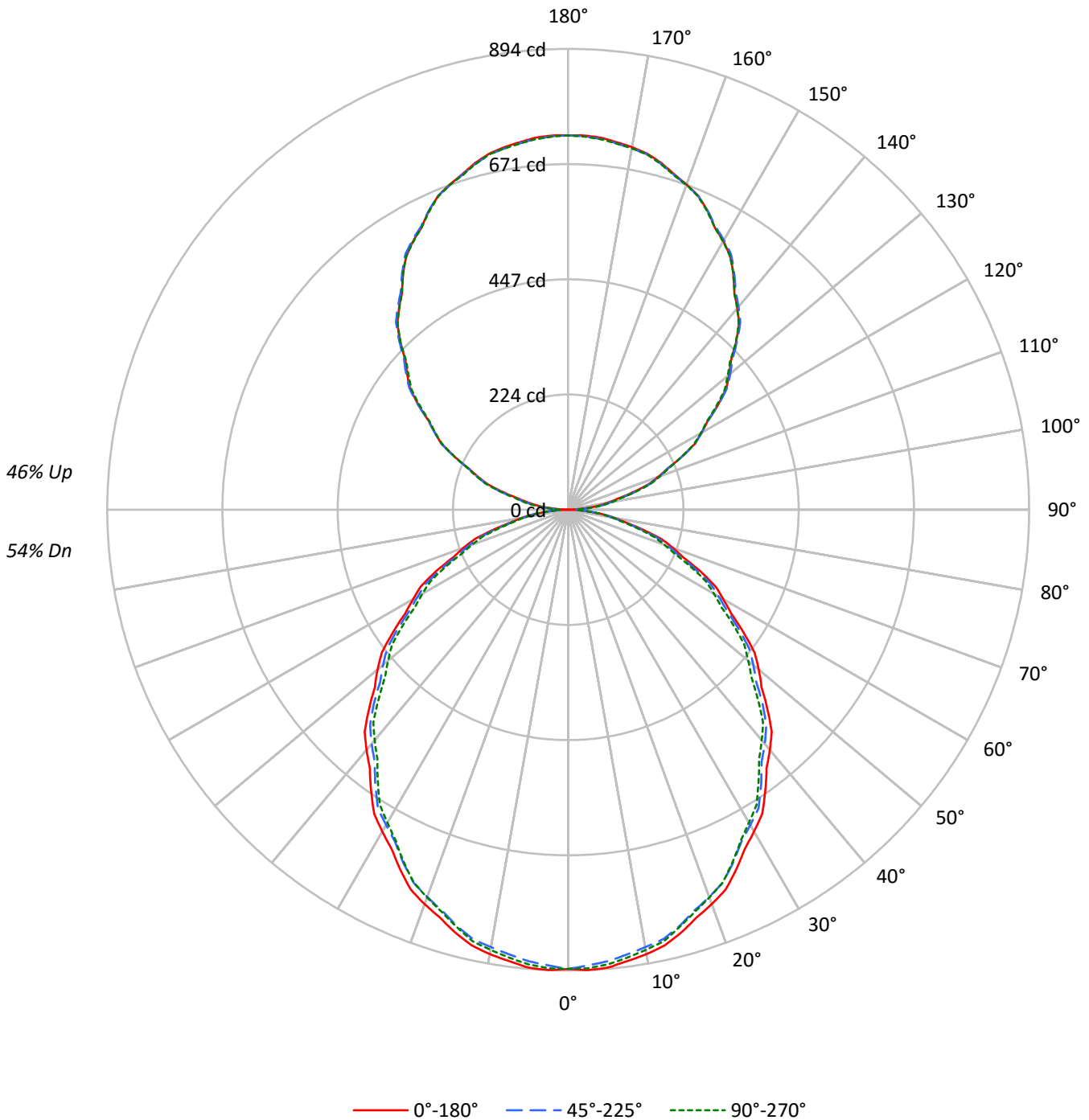
Lumens per Lamp: N/A
Luminaire Lumens: 4332.1 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): 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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	38
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36	32
4	75	64	56	50	69	60	52	47	51	46	41	44	39	36	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	24
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24	21
7	59	46	38	32	54	43	36	31	37	32	27	32	28	24	27	24	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	22	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9590	9590	9590
5°	9634	9502	9568
10°	9570	9419	9477
15°	9458	9313	9331
20°	9328	9160	9170
25°	9152	8980	8961
30°	8959	8779	8712
35°	8757	8566	8456
40°	8546	8331	8202
45°	8315	8115	7917
50°	8081	7850	7633
55°	7777	7576	7345
60°	7470	7255	7025
65°	7200	6907	6691
70°	6798	6508	6219
75°	6213	5989	5735
80°	5604	5368	5318
85°	4915	4730	4545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	1.9
10°-20°	237.0	5.5
20°-30°	350.0	8.1
30°-40°	408.9	9.4
40°-50°	411.1	9.5
50°-60°	361.1	8.3
60°-70°	269.0	6.2
70°-80°	153.3	3.5
80°-90°	46.1	1.1
90°-100°	47.3	1.1
100°-110°	141.6	3.3
110°-120°	240.8	5.6
120°-130°	316.7	7.3
130°-140°	356.0	8.2
140°-150°	349.9	8.1
150°-160°	294.6	6.8
160°-170°	196.1	4.5
170°-180°	68.7	1.6
0°-30°	670.9	15.5
0°-40°	1079.8	24.9
0°-60°	1851.9	42.7
0°-90°	2320.3	53.6
90°-120°	429.7	9.9
90°-150°	1452.4	33.5
90°-180°	2012.0	46.4
0°-180°	4332.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	892	888	879	887	886	84
15°	849	845	836	841	837	239
25°	771	766	756	757	754	355
35°	666	662	652	647	644	417
45°	546	543	533	524	520	421
55°	414	413	404	396	391	371
65°	283	279	271	265	263	279
75°	149	146	144	140	138	160
85°	40	38	38	37	37	44
90°	1	6	14	16	17	4
95°	34	38	42	44	44	38
105°	128	130	135	135	136	137
115°	242	244	243	244	243	240
125°	355	356	355	353	351	316
135°	460	464	463	461	460	355
145°	558	560	561	561	558	349
155°	639	639	640	642	638	294
165°	696	695	695	698	694	196
175°	724	722	722	725	722	69
180°	726	726	726	726	726	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9
2.5°	893.9	893.4	892.9	892.3	891.8	890.7	889.2	887.7	886.3	884.8	886.1
5°	891.6	890.8	889.9	889.1	888.2	886.9	885.0	883.1	881.3	879.4	881.1
7.5°	882.9	882.1	881.2	880.4	879.5	878.1	876.2	874.2	872.3	870.4	871.9
10°	875.6	874.7	873.9	873.0	872.2	870.6	868.4	866.2	864.0	861.8	863.3
12.5°	865.8	865.0	864.3	863.6	862.9	861.5	859.4	857.3	855.3	853.2	854.3
15°	848.7	848.1	847.4	846.7	846.0	844.6	842.4	840.2	837.9	835.7	837.1
17.5°	829.0	828.1	827.2	826.3	825.4	823.9	821.7	819.5	817.3	815.0	816.0
20°	814.3	813.3	812.2	811.2	810.2	808.6	806.4	804.2	801.9	799.7	800.4
22.5°	797.7	796.7	795.7	794.7	793.6	792.0	789.8	787.6	785.4	783.2	783.7
25°	770.6	769.6	768.6	767.6	766.5	764.9	762.7	760.5	758.3	756.1	756.2
27.5°	741.7	740.7	739.7	738.7	737.7	736.0	733.6	731.3	728.9	726.5	726.6
30°	720.8	720.0	719.1	718.3	717.4	715.8	713.4	711.0	708.7	706.3	706.3
32.5°	700.0	698.9	697.7	696.6	695.5	694.0	692.2	690.3	688.5	686.7	685.7
35°	666.4	665.4	664.4	663.4	662.4	660.7	658.5	656.3	654.1	651.9	650.9
37.5°	632.1	630.8	629.5	628.2	626.9	625.2	622.9	620.7	618.4	616.2	615.0
40°	608.2	607.2	606.2	605.2	604.1	602.4	600.0	597.7	595.3	592.9	591.5
42.5°	584.3	583.2	582.0	580.8	579.7	577.9	575.5	573.2	570.8	568.4	567.0
45°	546.2	545.5	544.8	544.1	543.4	542.0	539.8	537.6	535.4	533.1	531.1
47.5°	508.3	507.3	506.4	505.4	504.4	502.8	500.8	498.7	496.6	494.5	492.5
50°	482.6	481.7	480.9	480.0	479.2	477.7	475.4	473.2	471.0	468.8	466.9
52.5°	455.6	455.0	454.5	453.9	453.3	451.8	449.5	447.2	444.8	442.5	440.9
55°	414.4	414.2	414.1	413.9	413.7	412.5	410.3	408.1	405.9	403.7	401.8
57.5°	375.2	374.6	374.0	373.5	372.9	371.7	369.9	368.2	366.4	364.6	363.0
60°	347.0	346.8	346.7	346.5	346.3	345.2	343.2	341.1	339.1	337.0	335.5
62.5°	321.9	321.4	321.0	320.6	320.1	318.9	316.8	314.8	312.7	310.7	309.2
65°	282.7	281.8	281.0	280.1	279.3	278.0	276.3	274.6	272.9	271.2	269.8
67.5°	241.1	240.4	239.6	238.9	238.1	237.1	235.8	234.5	233.2	232.0	230.8
70°	216.0	215.0	214.0	213.0	211.9	210.9	209.9	208.9	207.8	206.8	205.6
72.5°	189.7	188.9	188.2	187.4	186.7	185.7	184.6	183.4	182.2	181.1	180.0
75°	149.4	148.7	148.0	147.3	146.7	146.1	145.5	145.0	144.5	144.0	143.2
77.5°	113.7	113.3	112.9	112.6	112.2	111.7	111.1	110.5	109.8	109.2	108.7
80°	90.4	89.9	89.4	88.9	88.3	87.9	87.6	87.2	86.9	86.6	86.4
82.5°	67.7	67.6	67.5	67.4	67.3	67.2	67.2	67.1	67.0	67.0	66.6
85°	39.8	39.5	39.2	38.8	38.5	38.3	38.3	38.3	38.3	38.3	38.0
87.5°	16.0	15.9	15.7	15.6	15.4	15.4	15.6	15.8	16.0	16.2	16.2
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	13.8	14.7	15.5	16.4	17.3	18.2	19.1	20.0	21.0	21.9	22.3
95°	33.7	34.5	35.4	36.3	37.2	38.2	39.2	40.2	41.2	42.2	42.7
97.5°	59.8	60.4	61.1	61.8	62.4	63.1	63.8	64.6	65.3	66.1	66.6
100°	77.6	78.3	79.1	79.9	80.6	81.3	81.9	82.6	83.2	83.8	84.2
102.5°	98.1	98.6	99.0	99.5	99.9	100.6	101.4	102.3	103.1	103.9	104.3
105°	128.3	128.6	128.8	129.1	129.4	130.0	131.2	132.3	133.5	134.6	134.6
107.5°	163.5	163.6	163.8	163.9	164.1	164.4	164.8	165.3	165.8	166.2	166.6
110°	185.4	185.6	185.9	186.1	186.4	186.6	186.9	187.2	187.4	187.7	188.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.2	208.3	208.5	208.6	208.8	208.9	209.0	209.0	209.1	209.1	209.7
115°	242.4	242.8	243.2	243.6	243.9	244.0	243.7	243.5	243.2	243.0	243.1
117.5°	276.9	277.1	277.4	277.6	277.9	277.8	277.5	277.2	276.9	276.5	276.5
120°	298.3	299.1	299.8	300.6	301.4	301.4	300.8	300.2	299.5	298.9	298.8
122.5°	320.7	321.2	321.8	322.3	322.9	323.0	322.7	322.4	322.0	321.7	321.4
125°	354.8	355.2	355.5	355.9	356.3	356.4	356.1	355.9	355.6	355.4	354.8
127.5°	386.3	387.1	387.9	388.7	389.5	389.8	389.5	389.2	388.9	388.7	388.0
130°	407.3	408.3	409.3	410.3	411.3	411.6	411.3	410.9	410.5	410.1	409.6
132.5°	428.2	429.3	430.3	431.3	432.3	432.7	432.4	432.1	431.8	431.6	430.9
135°	460.3	461.1	461.8	462.6	463.3	463.7	463.5	463.4	463.3	463.2	462.7
137.5°	490.0	490.6	491.2	491.9	492.5	493.0	493.3	493.6	494.0	494.3	493.8
140°	510.5	511.1	511.8	512.4	513.0	513.4	513.5	513.7	513.8	513.9	513.8
142.5°	529.2	529.8	530.5	531.1	531.7	532.2	532.4	532.6	532.9	533.1	533.0
145°	558.4	558.7	558.9	559.2	559.4	559.7	560.1	560.5	560.9	561.3	561.1
147.5°	584.0	584.4	584.9	585.3	585.8	586.2	586.6	586.9	587.3	587.6	587.6
150°	601.8	602.0	602.3	602.5	602.8	603.0	603.3	603.5	603.8	604.0	604.0
152.5°	616.4	616.7	617.1	617.4	617.8	618.0	618.2	618.3	618.5	618.6	618.8
155°	639.4	639.4	639.4	639.4	639.4	639.5	639.6	639.7	639.9	640.0	640.5
157.5°	659.0	658.9	658.7	658.6	658.4	658.4	658.5	658.6	658.7	658.8	659.3
160°	671.3	671.1	670.8	670.6	670.3	670.2	670.2	670.2	670.2	670.2	670.8
162.5°	682.3	681.9	681.6	681.2	680.9	680.8	680.9	681.0	681.1	681.2	681.8
165°	696.4	696.1	695.7	695.3	694.9	694.7	694.7	694.7	694.7	694.7	695.5
167.5°	707.7	707.2	706.7	706.2	705.7	705.5	705.6	705.7	705.8	705.9	706.7
170°	714.1	713.6	713.1	712.6	712.1	711.8	711.8	711.8	711.8	711.8	712.7
172.5°	719.1	718.6	718.1	717.6	717.1	716.9	716.9	716.9	716.9	716.9	717.7
175°	724.4	723.9	723.4	722.9	722.4	722.1	722.1	722.1	722.1	722.1	722.9
177.5°	726.6	726.2	725.8	725.3	724.9	724.7	724.7	724.7	724.7	724.7	725.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9
2.5°	887.5	888.8	890.2	890.8	890.7	890.5	890.4	890.3
5°	882.8	884.5	886.2	886.9	886.5	886.2	885.9	885.5
7.5°	873.4	874.9	876.5	877.1	876.9	876.7	876.5	876.3
10°	864.8	866.4	867.9	868.5	868.2	867.8	867.5	867.1
12.5°	855.4	856.6	857.7	858.1	857.9	857.7	857.5	857.3
15°	838.5	839.8	841.2	841.3	840.3	839.3	838.3	837.3
17.5°	817.0	817.9	818.9	819.1	818.8	818.4	818.0	817.6
20°	801.1	801.8	802.4	802.5	802.0	801.5	801.0	800.5
22.5°	784.3	784.8	785.4	785.3	784.7	784.0	783.4	782.7
25°	756.4	756.6	756.7	756.6	756.1	755.6	755.0	754.5
27.5°	726.8	726.9	727.0	726.8	726.1	725.5	724.8	724.2
30°	706.3	706.3	706.3	705.7	704.5	703.3	702.1	700.9
32.5°	684.8	683.8	682.8	682.0	681.4	680.8	680.1	679.5
35°	649.8	648.8	647.8	646.9	646.0	645.2	644.3	643.5
37.5°	613.7	612.5	611.3	610.4	609.9	609.3	608.8	608.2
40°	590.2	588.8	587.5	586.4	585.7	585.1	584.4	583.7
42.5°	565.7	564.3	562.9	561.9	561.2	560.6	559.9	559.2
45°	529.1	527.0	525.0	523.5	522.7	521.8	521.0	520.1
47.5°	490.5	488.5	486.5	485.1	484.4	483.6	482.9	482.1
50°	465.1	463.2	461.3	459.9	458.8	457.8	456.8	455.8
52.5°	439.3	437.7	436.1	434.7	433.7	432.7	431.7	430.7
55°	399.9	398.1	396.2	394.8	394.0	393.1	392.3	391.4
57.5°	361.3	359.6	358.0	356.6	355.6	354.7	353.7	352.7
60°	334.0	332.5	330.9	329.7	328.9	328.0	327.2	326.3
62.5°	307.6	306.1	304.6	303.5	302.9	302.4	301.8	301.2
65°	268.4	267.1	265.7	264.8	264.3	263.8	263.3	262.7
67.5°	229.6	228.4	227.2	226.2	225.5	224.8	224.1	223.4
70°	204.4	203.3	202.1	201.0	200.2	199.3	198.5	197.6
72.5°	179.0	177.9	176.9	176.1	175.7	175.2	174.8	174.3
75°	142.3	141.5	140.6	139.9	139.4	138.9	138.4	137.9
77.5°	108.1	107.5	106.9	106.6	106.6	106.6	106.6	106.6
80°	86.2	86.0	85.9	85.8	85.8	85.8	85.8	85.8
82.5°	66.3	66.0	65.7	65.5	65.4	65.2	65.1	65.0
85°	37.6	37.3	36.9	36.8	36.8	36.8	36.8	36.8
87.5°	16.2	16.1	16.1	16.1	16.1	16.2	16.2	16.3
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	22.7	23.1	23.5	23.7	23.5	23.3	23.2	23.0
95°	43.2	43.7	44.2	44.5	44.5	44.5	44.5	44.5
97.5°	67.2	67.8	68.4	68.6	68.6	68.5	68.5	68.4
100°	84.6	85.0	85.4	85.7	85.9	86.2	86.4	86.7
102.5°	104.7	105.1	105.4	105.6	105.6	105.5	105.5	105.4
105°	134.6	134.6	134.6	134.7	135.0	135.2	135.5	135.8
107.5°	167.0	167.4	167.8	168.0	167.8	167.7	167.5	167.4
110°	188.7	189.2	189.7	189.8	189.6	189.3	189.1	188.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.3	210.9	211.5	211.8	211.8	211.7	211.7	211.6
115°	243.2	243.4	243.5	243.5	243.4	243.2	243.1	243.0
117.5°	276.5	276.4	276.4	276.2	275.9	275.5	275.2	274.8
120°	298.6	298.5	298.4	298.2	297.9	297.7	297.4	297.2
122.5°	321.0	320.7	320.4	320.0	319.7	319.3	319.0	318.6
125°	354.3	353.8	353.3	352.8	352.3	351.8	351.3	350.8
127.5°	387.2	386.5	385.8	385.2	384.6	384.0	383.4	382.8
130°	409.1	408.6	408.1	407.4	406.5	405.6	404.7	403.8
132.5°	430.3	429.7	429.1	428.5	427.8	427.1	426.4	425.7
135°	462.1	461.6	461.1	460.7	460.5	460.2	460.0	459.7
137.5°	493.2	492.7	492.2	491.7	491.2	490.7	490.2	489.7
140°	513.7	513.5	513.4	512.9	512.0	511.1	510.2	509.4
142.5°	532.8	532.7	532.6	532.2	531.5	530.8	530.1	529.4
145°	561.0	560.9	560.8	560.4	559.9	559.4	558.9	558.4
147.5°	587.6	587.6	587.6	587.2	586.5	585.7	585.0	584.2
150°	604.0	604.0	604.0	603.7	602.9	602.1	601.4	600.6
152.5°	619.1	619.3	619.5	619.2	618.6	617.9	617.3	616.6
155°	641.0	641.5	642.0	641.8	640.9	640.0	639.2	638.3
157.5°	659.9	660.4	660.9	660.8	660.1	659.4	658.7	658.0
160°	671.5	672.1	672.7	672.8	672.3	671.8	671.3	670.8
162.5°	682.4	683.1	683.7	683.6	682.8	682.0	681.2	680.4
165°	696.3	697.0	697.8	697.7	696.8	695.9	695.1	694.2
167.5°	707.5	708.3	709.1	709.1	708.3	707.5	706.7	705.9
170°	713.6	714.5	715.4	715.4	714.5	713.6	712.7	711.8
172.5°	718.4	719.2	720.0	720.0	719.1	718.2	717.3	716.4
175°	723.6	724.4	725.2	725.1	724.2	723.3	722.4	721.5
177.5°	726.0	726.6	727.2	727.1	726.4	725.7	725.0	724.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1

(END OF REPORT)