

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: P331941

Luminaire Tested: **S123DIP-S560D1025U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331941
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-S560D1025U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5887.6 lumens
Efficiency: N/A
Efficacy: 132.3 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: Semi-Indirect

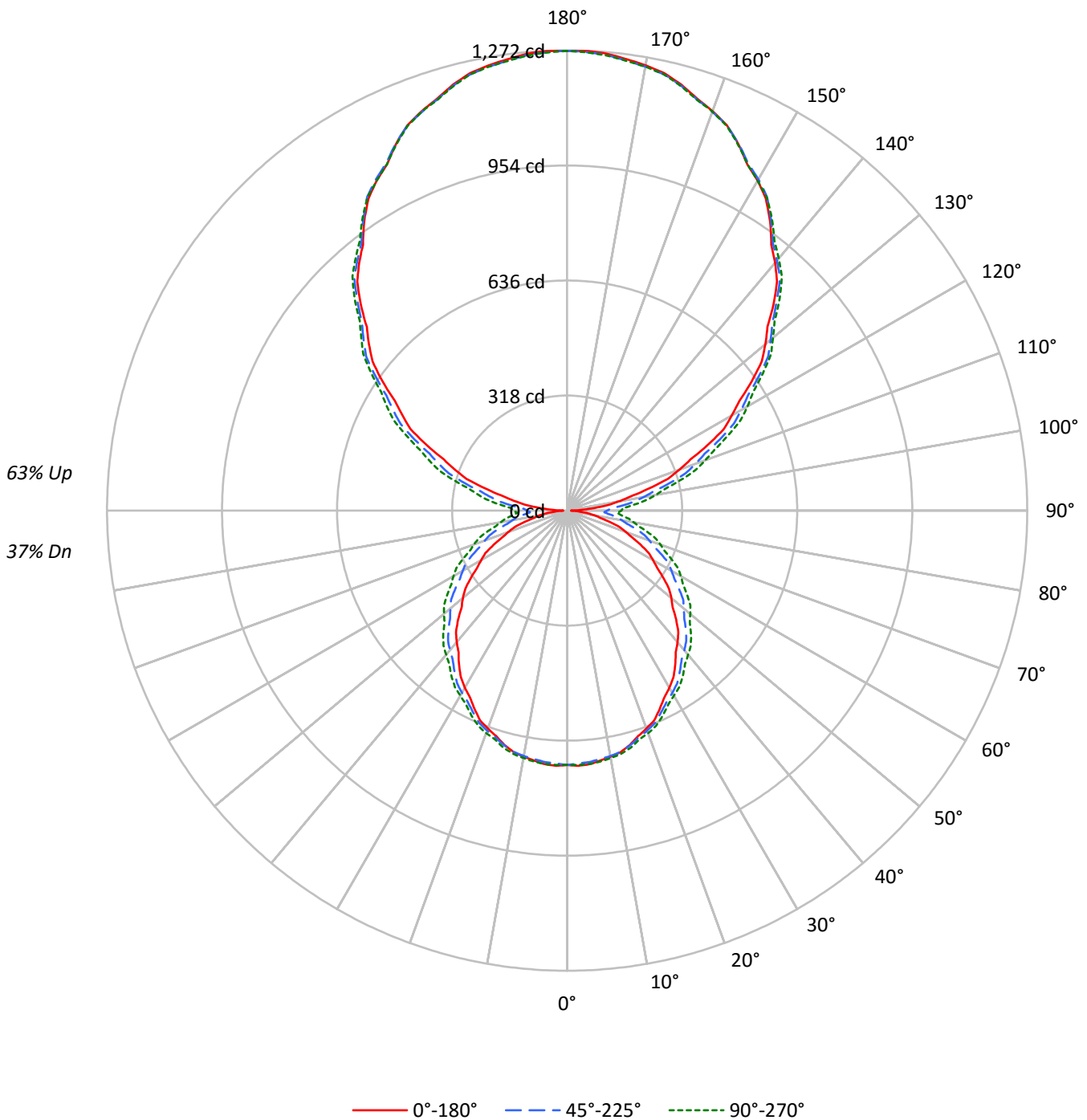
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	94	89	85	82	85	81	78	74	65	63	61	51	49	48	38	37	36	29
2	85	78	71	66	77	70	65	60	57	53	50	44	42	39	33	31	29	24
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20
4	71	60	52	46	64	54	47	42	44	39	35	34	31	28	25	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	19	24	19	16	19	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.1
10°-20°	190.0	3.2
20°-30°	284.2	4.8
30°-40°	339.4	5.8
40°-50°	355.1	6.0
50°-60°	333.2	5.7
60°-70°	278.3	4.7
70°-80°	199.1	3.4
80°-90°	122.5	2.1
90°-100°	157.3	2.7
100°-110°	302.5	5.1
110°-120°	458.0	7.8
120°-130°	575.2	9.8
130°-140°	632.4	10.7
140°-150°	614.4	10.4
150°-160°	515.6	8.8
160°-170°	343.2	5.8
170°-180°	120.2	2.0
0°-30°	540.9	9.2
0°-40°	880.3	15.0
0°-60°	1568.7	26.6
0°-90°	2168.7	36.8
90°-120°	917.8	15.6
90°-150°	2739.9	46.5
90°-180°	3719.0	63.2
0°-180°	5887.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	11	59	110	139	150	10
95°	67	105	150	176	185	73
105°	231	252	293	314	323	247
115°	428	441	466	484	490	424
125°	623	627	646	658	660	556
135°	807	812	820	829	831	622
145°	978	979	982	987	986	610
155°	1119	1119	1120	1123	1117	515
165°	1219	1216	1216	1221	1215	344
175°	1268	1264	1264	1269	1263	120
180°	1271	1271	1271	1271	1271	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.6	29.5	38.4	47.3	56.3	65.3	74.6	83.9	93.1	102.4	108.3
90°	11.0	21.5	32.1	42.6	53.2	64.3	75.8	87.4	99.0	110.5	117.2
92.5°	33.5	42.5	51.6	60.6	69.6	79.2	89.4	99.6	109.8	120.0	126.4
95°	67.3	75.5	83.7	91.9	100.1	109.2	119.4	129.5	139.6	149.7	155.9
97.5°	112.1	119.3	126.4	133.6	140.7	148.9	158.2	167.4	176.7	185.9	192.0
100°	142.7	149.4	156.2	163.0	169.8	177.6	186.6	195.5	204.4	213.4	219.0
102.5°	178.0	183.7	189.4	195.1	200.8	208.2	217.4	226.5	235.7	244.8	250.3
105°	230.7	235.3	239.8	244.3	248.8	255.8	265.1	274.4	283.7	293.0	297.8
107.5°	291.3	295.0	298.8	302.5	306.3	312.0	319.7	327.5	335.2	343.0	348.2
110°	329.0	332.5	336.0	339.5	343.0	348.4	355.7	362.9	370.2	377.4	382.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	368.9	371.7	374.5	377.3	380.1	384.8	391.4	398.0	404.7	411.3	416.6
115°	428.1	430.8	433.5	436.2	438.9	443.1	448.8	454.5	460.2	465.8	470.1
117.5°	488.2	489.9	491.6	493.3	495.0	498.5	503.6	508.8	514.0	519.2	523.2
120°	525.1	527.3	529.5	531.7	533.9	537.2	541.7	546.2	550.7	555.2	558.9
122.5°	564.3	565.7	567.1	568.5	569.9	573.0	577.8	582.6	587.3	592.1	595.3
125°	623.2	623.8	624.5	625.2	625.8	628.4	632.9	637.4	641.9	646.4	649.1
127.5°	678.3	679.5	680.8	682.0	683.3	685.7	689.3	692.9	696.5	700.1	702.2
130°	715.0	716.6	718.2	719.8	721.4	723.6	726.3	729.1	731.8	734.6	736.9
132.5°	751.1	752.9	754.6	756.4	758.1	760.1	762.3	764.6	766.8	769.0	771.1
135°	807.1	808.2	809.4	810.6	811.7	813.1	814.8	816.4	818.1	819.7	821.9
137.5°	858.8	859.8	860.8	861.8	862.7	864.0	865.7	867.3	868.9	870.6	872.3
140°	894.2	895.3	896.4	897.5	898.6	899.5	900.3	901.0	901.7	902.4	904.8
142.5°	926.9	927.9	928.8	929.8	930.8	931.5	932.0	932.5	933.0	933.5	935.6
145°	978.0	978.3	978.6	978.8	979.1	979.6	980.2	980.9	981.6	982.2	983.4
147.5°	1022.0	1022.8	1023.6	1024.4	1025.2	1025.9	1026.5	1027.1	1027.7	1028.4	1028.8
150°	1053.1	1053.6	1054.0	1054.4	1054.9	1055.3	1055.8	1056.2	1056.7	1057.1	1057.1
152.5°	1078.7	1079.3	1079.9	1080.5	1081.1	1081.6	1081.9	1082.1	1082.4	1082.7	1083.0
155°	1119.0	1119.0	1119.0	1119.0	1119.0	1119.1	1119.3	1119.5	1119.8	1120.0	1120.9
157.5°	1153.3	1153.1	1152.8	1152.5	1152.3	1152.2	1152.4	1152.6	1152.8	1152.9	1153.9
160°	1174.9	1174.4	1174.0	1173.6	1173.1	1172.9	1172.9	1172.9	1172.9	1172.9	1174.0
162.5°	1194.1	1193.4	1192.8	1192.2	1191.6	1191.4	1191.5	1191.7	1191.9	1192.1	1193.2
165°	1218.8	1218.1	1217.5	1216.8	1216.2	1215.8	1215.8	1215.8	1215.8	1215.8	1217.1
167.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1234.7	1234.9	1235.0	1235.2	1235.4	1236.8
170°	1249.8	1248.9	1248.0	1247.1	1246.2	1245.8	1245.8	1245.8	1245.8	1245.8	1247.3
172.5°	1258.5	1257.7	1256.8	1255.9	1255.0	1254.5	1254.5	1254.5	1254.5	1254.5	1255.9
175°	1267.7	1266.8	1265.9	1265.1	1264.2	1263.7	1263.7	1263.7	1263.7	1263.7	1265.1
177.5°	1271.5	1270.8	1270.1	1269.4	1268.7	1268.3	1268.3	1268.3	1268.3	1268.3	1269.4
180°	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	114.3	120.3	126.2	130.1	131.9	133.7	135.5	137.3
90°	123.9	130.5	137.2	141.6	143.8	145.9	148.1	150.2
92.5°	132.7	139.1	145.4	149.3	150.6	151.9	153.2	154.5
95°	162.0	168.2	174.4	178.3	180.0	181.7	183.4	185.1
97.5°	198.1	204.2	210.3	214.1	215.8	217.4	219.0	220.6
100°	224.6	230.2	235.8	239.7	241.8	244.0	246.1	248.2
102.5°	255.8	261.2	266.7	270.2	271.9	273.5	275.1	276.7
105°	302.6	307.3	312.1	315.5	317.4	319.4	321.4	323.4
107.5°	353.5	358.8	364.1	367.3	368.5	369.8	371.0	372.2
110°	388.1	393.4	398.7	401.8	402.7	403.6	404.6	405.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	422.0	427.4	432.7	436.1	437.5	438.9	440.3	441.7
115°	474.5	478.8	483.1	485.8	486.9	488.1	489.2	490.3
117.5°	527.2	531.2	535.2	537.6	538.3	539.0	539.7	540.4
120°	562.6	566.3	570.0	572.2	573.0	573.7	574.5	575.2
122.5°	598.5	601.7	604.9	606.8	607.4	607.9	608.5	609.1
125°	651.8	654.5	657.1	658.6	658.9	659.3	659.6	659.9
127.5°	704.4	706.5	708.6	709.7	709.9	710.0	710.2	710.3
130°	739.3	741.6	744.0	744.9	744.3	743.8	743.3	742.7
132.5°	773.1	775.1	777.2	778.2	778.1	778.1	778.0	778.0
135°	824.1	826.3	828.4	829.7	830.1	830.6	831.0	831.4
137.5°	874.1	875.8	877.6	878.5	878.5	878.5	878.5	878.5
140°	907.1	909.4	911.8	912.6	911.9	911.2	910.5	909.8
142.5°	937.7	939.7	941.8	942.6	942.3	941.9	941.6	941.2
145°	984.5	985.7	986.8	987.3	987.1	986.9	986.6	986.4
147.5°	1029.2	1029.6	1030.0	1029.8	1029.1	1028.4	1027.7	1027.0
150°	1057.1	1057.1	1057.1	1056.6	1055.6	1054.6	1053.6	1052.6
152.5°	1083.4	1083.7	1084.1	1083.7	1082.6	1081.5	1080.5	1079.4
155°	1121.8	1122.7	1123.5	1123.2	1121.7	1120.1	1118.5	1117.0
157.5°	1154.8	1155.7	1156.7	1156.5	1155.3	1154.0	1152.8	1151.5
160°	1175.1	1176.2	1177.3	1177.4	1176.6	1175.7	1174.8	1173.9
162.5°	1194.3	1195.4	1196.5	1196.3	1194.9	1193.5	1192.1	1190.7
165°	1218.5	1219.8	1221.1	1221.0	1219.5	1217.9	1216.4	1214.8
167.5°	1238.1	1239.5	1240.9	1240.9	1239.5	1238.1	1236.8	1235.4
170°	1248.9	1250.4	1252.0	1252.0	1250.4	1248.9	1247.3	1245.8
172.5°	1257.3	1258.7	1260.0	1260.0	1258.4	1256.9	1255.3	1253.7
175°	1266.4	1267.7	1269.1	1268.9	1267.4	1265.8	1264.3	1262.7
177.5°	1270.5	1271.5	1272.6	1272.5	1271.3	1270.0	1268.8	1267.5
180°	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7	1270.7

(END OF REPORT)