

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: P332279-927

Luminaire Tested: **S123RDIP-S560D585U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332279-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S560D585U927-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3546.6 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

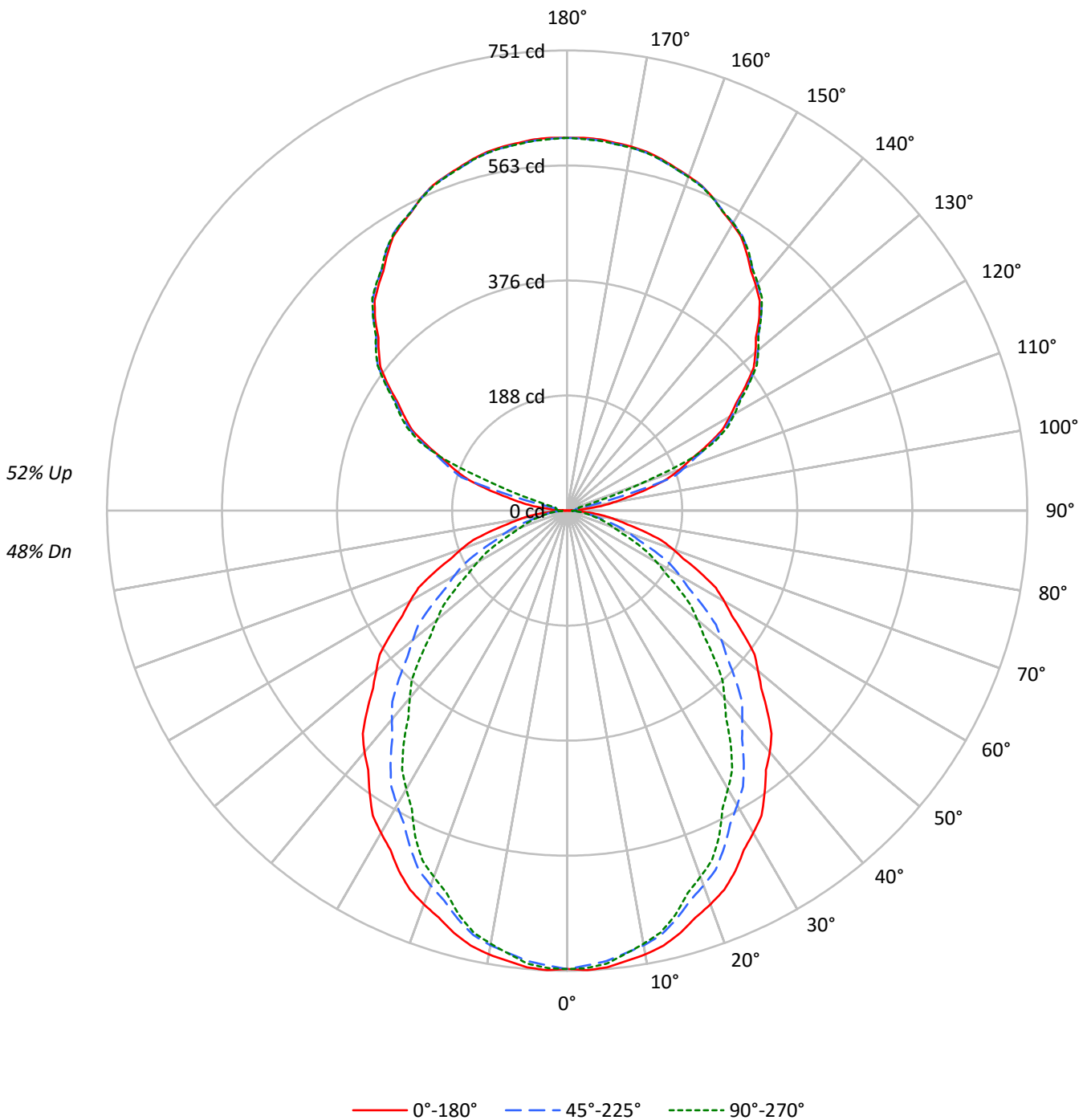
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	50	30	10	0													
RCR																																					
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	48																			
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41																			
2	89	82	76	71	82	76	70	66	64	60	57	53	50	48	43	41	39	35																			
3	81	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30																			
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26																			
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23																			
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20																			
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18																			
8	54	42	35	29	50	39	33	28	34	28	25	29	24	21	24	21	18	16																			
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	14																			
10	47	35	28	24	44	33	27	22	29	23	20	24	20	18	20	17	15	13																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8054	8054	8054
5°	8084	7973	8018
10°	8039	7873	7847
15°	7952	7689	7608
20°	7834	7458	7285
25°	7712	7201	6969
30°	7549	6901	6524
35°	7384	6603	6116
40°	7231	6250	5611
45°	7030	5903	5154
50°	6807	5508	4644
55°	6583	5056	4168
60°	6374	4573	3645
65°	6105	4050	3123
70°	5766	3402	2521
75°	5273	2674	2371
80°	4705	2374	2182
85°	3977	2100	1951



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.3	2.0
10°-20°	195.5	5.5
20°-30°	281.5	7.9
30°-40°	317.1	8.9
40°-50°	303.3	8.6
50°-60°	248.4	7.0
60°-70°	167.6	4.7
70°-80°	84.3	2.4
80°-90°	24.0	0.7
90°-100°	22.1	0.6
100°-110°	105.4	3.0
110°-120°	253.1	7.1
120°-130°	322.3	9.1
130°-140°	344.4	9.7
140°-150°	322.0	9.1
150°-160°	259.8	7.3
160°-170°	167.7	4.7
170°-180°	57.8	1.6
0°-30°	547.2	15.4
0°-40°	864.3	24.4
0°-60°	1416.1	39.9
0°-90°	1692.0	47.7
90°-120°	380.6	10.7
90°-150°	1369.4	38.6
90°-180°	1855.0	52.3
0°-180°	3546.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	745	738	743	742	71
15°	714	706	690	687	683	201
25°	649	633	606	594	587	298
35°	562	539	502	477	465	352
45°	462	433	388	354	339	356
55°	351	320	269	236	222	314
65°	240	206	159	130	123	237
75°	127	97	64	58	57	135
85°	32	19	17	16	16	36
90°	0	5	11	13	14	3
95°	28	10	14	17	17	34
105°	135	137	99	24	20	143
115°	252	255	259	264	266	249
125°	356	360	362	362	363	318
135°	443	446	448	449	448	341
145°	511	515	516	516	516	320
155°	563	563	563	565	562	259
165°	594	593	592	596	593	168
175°	608	606	606	609	606	58
180°	608	608	608	608	608	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	750.7	750.2	749.8	749.3	748.9	748.1	746.8	745.4	744.2	742.9	744.1
5°	748.2	747.6	746.9	746.2	745.5	744.4	742.8	741.2	739.5	737.9	739.1
7.5°	741.3	740.6	739.8	739.1	738.4	737.0	734.9	732.8	730.6	728.6	729.2
10°	735.5	734.5	733.6	732.6	731.7	730.0	727.6	725.2	722.7	720.3	720.4
12.5°	727.2	726.2	725.1	724.1	723.0	721.0	718.0	715.1	712.1	709.2	709.1
15°	713.6	712.2	710.7	709.2	707.7	705.0	701.3	697.5	693.7	690.0	689.3
17.5°	696.5	694.8	693.1	691.3	689.6	686.3	681.5	676.8	671.9	667.2	665.7
20°	683.9	681.8	679.6	677.4	675.3	671.6	666.5	661.4	656.2	651.1	649.4
22.5°	669.8	667.3	664.9	662.3	659.9	655.9	650.5	645.0	639.6	634.1	631.9
25°	649.3	645.9	642.5	639.2	635.8	631.1	624.8	618.6	612.4	606.3	603.4
27.5°	624.4	620.7	617.0	613.2	609.5	604.2	597.3	590.4	583.5	576.6	572.7
30°	607.4	603.4	599.4	595.3	591.3	585.4	577.9	570.4	562.8	555.2	550.6
32.5°	590.4	585.9	581.3	576.7	572.1	565.9	557.9	549.9	541.9	533.9	528.9
35°	561.9	557.1	552.2	547.4	542.5	535.9	527.5	519.2	510.8	502.5	496.6
37.5°	533.1	527.7	522.3	516.8	511.4	504.3	495.4	486.5	477.5	468.6	462.0
40°	514.6	508.7	502.7	496.8	490.8	483.1	473.6	464.0	454.4	444.8	437.8
42.5°	493.7	487.7	481.9	475.9	470.0	462.1	452.2	442.3	432.4	422.5	414.8
45°	461.8	455.7	449.6	443.6	437.5	429.3	418.9	408.5	398.2	387.8	380.1
47.5°	429.8	423.2	416.5	409.9	403.2	394.7	384.3	373.9	363.5	353.2	344.8
50°	406.5	400.2	393.9	387.5	381.2	372.6	361.6	350.8	339.8	328.9	320.5
52.5°	385.7	378.8	371.9	365.0	358.2	349.4	338.5	327.7	316.9	306.1	297.4
55°	350.8	344.1	337.5	330.9	324.3	315.3	303.8	292.4	280.9	269.4	261.6
57.5°	318.5	311.2	304.0	296.8	289.6	280.3	268.8	257.3	245.7	234.2	226.9
60°	296.1	288.8	281.3	273.9	266.5	257.1	246.0	234.8	223.6	212.4	205.1
62.5°	273.8	266.4	259.0	251.5	244.2	234.8	223.6	212.5	201.2	190.0	183.2
65°	239.7	232.3	224.9	217.5	210.0	201.1	190.5	180.1	169.5	159.0	152.4
67.5°	205.6	198.1	190.6	183.1	175.6	166.8	156.7	146.6	136.6	126.4	121.5
70°	183.2	175.9	168.7	161.4	154.2	145.8	136.3	126.9	117.5	108.1	103.3
72.5°	160.9	153.8	146.6	139.4	132.2	124.4	115.8	107.2	98.6	90.1	86.2
75°	126.8	120.3	113.9	107.4	100.9	94.0	86.6	79.1	71.8	64.3	63.0
77.5°	95.8	89.9	84.1	78.2	72.3	67.0	62.3	57.5	52.7	47.9	47.2
80°	75.9	70.3	64.8	59.3	53.7	49.6	46.7	43.9	41.0	38.3	37.8
82.5°	57.0	52.1	47.4	42.6	37.8	34.8	33.4	32.2	30.8	29.5	29.1
85°	32.2	29.2	26.2	23.3	20.3	18.6	18.2	17.8	17.4	17.0	16.7
87.5°	11.7	10.8	9.7	8.8	7.8	7.4	7.7	7.9	8.2	8.5	8.5
90°	0.5	1.4	2.5	3.5	4.4	5.6	6.9	8.2	9.5	10.9	11.2
92.5°	8.4	8.2	7.8	7.5	7.3	7.6	8.6	9.6	10.6	11.6	12.2
95°	27.6	23.4	19.3	15.2	11.1	9.6	10.7	11.8	12.9	14.0	14.7
97.5°	55.4	53.6	51.7	49.8	48.0	43.5	36.2	29.0	21.8	14.6	15.4
100°	76.4	78.3	80.4	82.4	84.4	77.6	61.9	46.3	30.6	14.9	15.7
102.5°	100.2	101.6	103.1	104.6	106.0	98.2	81.0	63.9	46.8	29.7	27.3
105°	134.7	135.8	136.9	137.9	139.0	135.1	126.0	117.0	108.0	98.9	81.2
107.5°	171.0	171.8	172.8	173.6	174.5	175.6	177.1	178.5	179.9	181.3	168.3
110°	195.2	196.0	196.8	197.6	198.4	199.4	200.4	201.5	202.6	203.7	200.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.3	219.0	219.8	220.5	221.2	222.1	223.2	224.3	225.5	226.6	226.6
115°	252.5	253.2	253.7	254.4	255.0	255.7	256.7	257.5	258.4	259.4	260.4
117.5°	285.7	286.5	287.2	288.0	288.7	289.3	289.8	290.3	290.7	291.1	292.0
120°	306.3	307.2	308.2	309.0	310.0	310.5	310.9	311.2	311.5	311.7	312.6
122.5°	327.3	328.0	328.8	329.5	330.3	330.8	331.2	331.6	332.0	332.4	333.0
125°	356.0	356.9	357.7	358.5	359.3	359.9	360.3	360.7	361.1	361.5	361.6
127.5°	383.9	384.7	385.5	386.3	387.1	387.7	388.2	388.7	389.2	389.7	390.0
130°	401.2	402.0	402.8	403.6	404.4	405.0	405.4	405.8	406.2	406.6	407.0
132.5°	417.9	418.7	419.5	420.3	421.0	421.6	421.9	422.2	422.6	422.9	423.3
135°	443.2	443.9	444.4	445.0	445.7	446.2	446.6	446.9	447.3	447.7	448.1
137.5°	464.9	465.7	466.4	467.2	467.9	468.5	468.7	468.9	469.1	469.4	469.8
140°	479.3	480.0	480.6	481.2	481.8	482.3	482.5	482.8	483.2	483.5	483.9
142.5°	492.7	493.4	494.0	494.6	495.2	495.6	495.9	496.2	496.5	496.9	497.2
145°	511.4	512.1	512.9	513.6	514.3	514.8	514.9	515.2	515.3	515.6	515.7
147.5°	529.1	529.6	530.0	530.4	530.9	531.2	531.5	531.6	531.9	532.1	532.3
150°	540.0	540.3	540.5	540.8	541.1	541.4	541.6	541.8	542.0	542.2	542.4
152.5°	549.7	549.9	549.9	550.1	550.2	550.4	550.5	550.6	550.7	550.9	551.2
155°	563.4	563.2	563.0	562.8	562.6	562.6	562.7	562.8	562.8	563.0	563.5
157.5°	574.1	574.1	574.0	574.0	574.0	573.9	573.9	573.8	573.6	573.5	574.2
160°	580.6	580.5	580.4	580.3	580.2	580.1	580.0	579.9	579.8	579.7	580.3
162.5°	586.8	586.5	586.2	586.0	585.7	585.5	585.4	585.3	585.2	585.1	585.8
165°	594.1	593.8	593.6	593.3	592.9	592.7	592.6	592.6	592.5	592.3	593.2
167.5°	599.9	599.5	599.1	598.7	598.3	598.1	598.1	598.1	598.1	598.1	599.0
170°	603.2	602.8	602.4	602.0	601.6	601.3	601.3	601.3	601.3	601.3	602.2
172.5°	605.4	604.9	604.4	603.9	603.4	603.2	603.3	603.4	603.5	603.6	604.4
175°	608.2	607.7	607.1	606.7	606.2	605.9	606.0	606.2	606.3	606.3	607.0
177.5°	608.9	608.5	608.1	607.7	607.3	607.1	607.2	607.3	607.4	607.4	608.1
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	745.3	746.5	747.7	748.1	747.9	747.7	747.5	747.3
5°	740.3	741.6	742.8	743.2	743.0	742.7	742.4	742.1
7.5°	729.9	730.6	731.3	731.3	730.9	730.5	730.0	729.5
10°	720.6	720.7	720.8	720.6	719.9	719.2	718.6	717.9
12.5°	709.0	708.9	708.8	708.4	707.6	706.8	706.1	705.3
15°	688.6	687.9	687.3	686.4	685.5	684.6	683.7	682.7
17.5°	664.3	662.9	661.4	660.0	658.6	657.2	655.8	654.4
20°	647.6	645.9	644.1	642.5	640.8	639.2	637.5	636.0
22.5°	629.8	627.6	625.4	623.5	622.0	620.5	619.0	617.5
25°	600.6	597.7	594.9	592.7	591.3	589.8	588.3	586.8
27.5°	568.7	564.8	560.9	557.8	555.5	553.3	551.0	548.7
30°	546.1	541.5	536.9	533.5	531.4	529.3	527.0	524.9
32.5°	523.9	518.8	513.8	510.2	507.9	505.6	503.4	501.1
35°	490.8	485.1	479.3	475.2	472.7	470.3	467.9	465.4
37.5°	455.4	448.9	442.3	437.5	434.5	431.5	428.5	425.5
40°	430.8	423.7	416.8	411.7	408.6	405.5	402.4	399.3
42.5°	407.2	399.5	391.8	386.6	383.8	381.0	378.3	375.5
45°	372.4	364.7	357.0	351.6	348.3	345.1	341.8	338.6
47.5°	336.4	328.1	319.7	314.1	311.2	308.3	305.5	302.5
50°	312.2	303.8	295.5	289.7	286.6	283.5	280.4	277.3
52.5°	288.8	280.0	271.3	265.6	262.8	260.1	257.3	254.5
55°	253.8	246.0	238.1	232.9	230.2	227.5	224.8	222.1
57.5°	219.4	212.1	204.7	199.9	197.6	195.3	193.0	190.7
60°	197.8	190.5	183.2	178.5	176.2	173.9	171.6	169.3
62.5°	176.3	169.5	162.6	158.0	155.7	153.2	150.8	148.5
65°	145.8	139.2	132.5	128.5	127.1	125.6	124.1	122.6
67.5°	116.6	111.6	106.7	103.5	101.9	100.3	98.7	97.1
70°	98.5	93.9	89.1	86.0	84.5	83.1	81.6	80.1
72.5°	82.3	78.5	74.6	72.4	71.8	71.1	70.5	69.9
75°	61.6	60.3	58.9	58.1	57.8	57.6	57.3	57.0
77.5°	46.5	45.8	45.0	44.5	44.3	44.0	43.7	43.4
80°	37.4	37.0	36.6	36.3	36.0	35.7	35.5	35.2
82.5°	28.7	28.3	27.9	27.6	27.6	27.6	27.5	27.4
85°	16.5	16.2	15.9	15.8	15.8	15.8	15.8	15.8
87.5°	8.4	8.4	8.4	8.3	8.2	8.2	8.1	8.1
90°	11.6	12.0	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	12.8	13.5	14.1	14.5	14.7	14.7	14.9	15.0
95°	15.4	16.1	16.8	17.2	17.2	17.2	17.2	17.2
97.5°	16.2	17.0	17.7	18.2	18.3	18.4	18.5	18.6
100°	16.5	17.3	18.1	18.5	18.7	18.8	18.9	19.0
102.5°	24.7	22.3	19.8	18.6	18.8	19.0	19.2	19.3
105°	63.4	45.6	27.9	19.1	19.3	19.5	19.6	19.9
107.5°	155.3	142.3	129.2	116.1	102.6	89.2	75.8	62.4
110°	197.2	193.8	190.5	181.6	167.3	153.0	138.6	124.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	226.6	226.7	226.8	225.3	222.3	219.2	216.2	213.2
115°	261.3	262.4	263.4	264.0	264.4	264.9	265.3	265.7
117.5°	292.8	293.6	294.4	294.9	294.9	295.0	295.1	295.2
120°	313.4	314.2	315.0	315.4	315.4	315.4	315.4	315.4
122.5°	333.5	334.1	334.6	334.9	335.0	335.1	335.2	335.3
125°	361.9	362.0	362.3	362.5	362.7	362.9	363.1	363.3
127.5°	390.3	390.6	390.9	391.0	390.8	390.6	390.4	390.2
130°	407.4	407.8	408.2	408.4	408.1	408.0	407.7	407.6
132.5°	423.7	424.1	424.5	424.6	424.3	424.0	423.7	423.4
135°	448.4	448.7	448.9	448.9	448.7	448.4	448.1	447.7
137.5°	470.3	470.8	471.3	471.4	471.2	471.0	470.8	470.6
140°	484.3	484.7	485.1	485.1	485.0	484.7	484.6	484.3
142.5°	497.5	497.8	498.1	498.1	497.9	497.6	497.3	497.0
145°	515.9	516.1	516.3	516.4	516.4	516.4	516.4	516.4
147.5°	532.5	532.7	532.9	532.7	532.3	531.8	531.4	530.9
150°	542.6	542.8	543.0	543.0	542.6	542.3	542.0	541.8
152.5°	551.6	551.9	552.3	552.2	551.8	551.4	550.9	550.4
155°	564.0	564.5	565.0	564.9	564.4	563.7	563.2	562.5
157.5°	574.7	575.4	576.0	575.8	575.0	574.3	573.5	572.7
160°	580.9	581.5	582.1	582.0	581.4	580.7	580.0	579.2
162.5°	586.5	587.2	587.9	587.9	587.2	586.6	586.0	585.4
165°	594.0	594.8	595.6	595.6	594.9	594.2	593.5	592.8
167.5°	599.8	600.6	601.3	601.3	600.6	599.8	599.0	598.1
170°	603.0	603.8	604.6	604.6	603.8	603.0	602.2	601.3
172.5°	605.1	605.9	606.7	606.7	605.9	605.0	604.0	603.2
175°	607.8	608.5	609.2	609.1	608.3	607.5	606.7	605.9
177.5°	608.7	609.3	610.0	609.9	609.1	608.3	607.5	606.7
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2

(END OF REPORT)