

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: P331512-927

Luminaire Tested: **S122DIW-S485D970U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331512-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D970U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4227.8 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

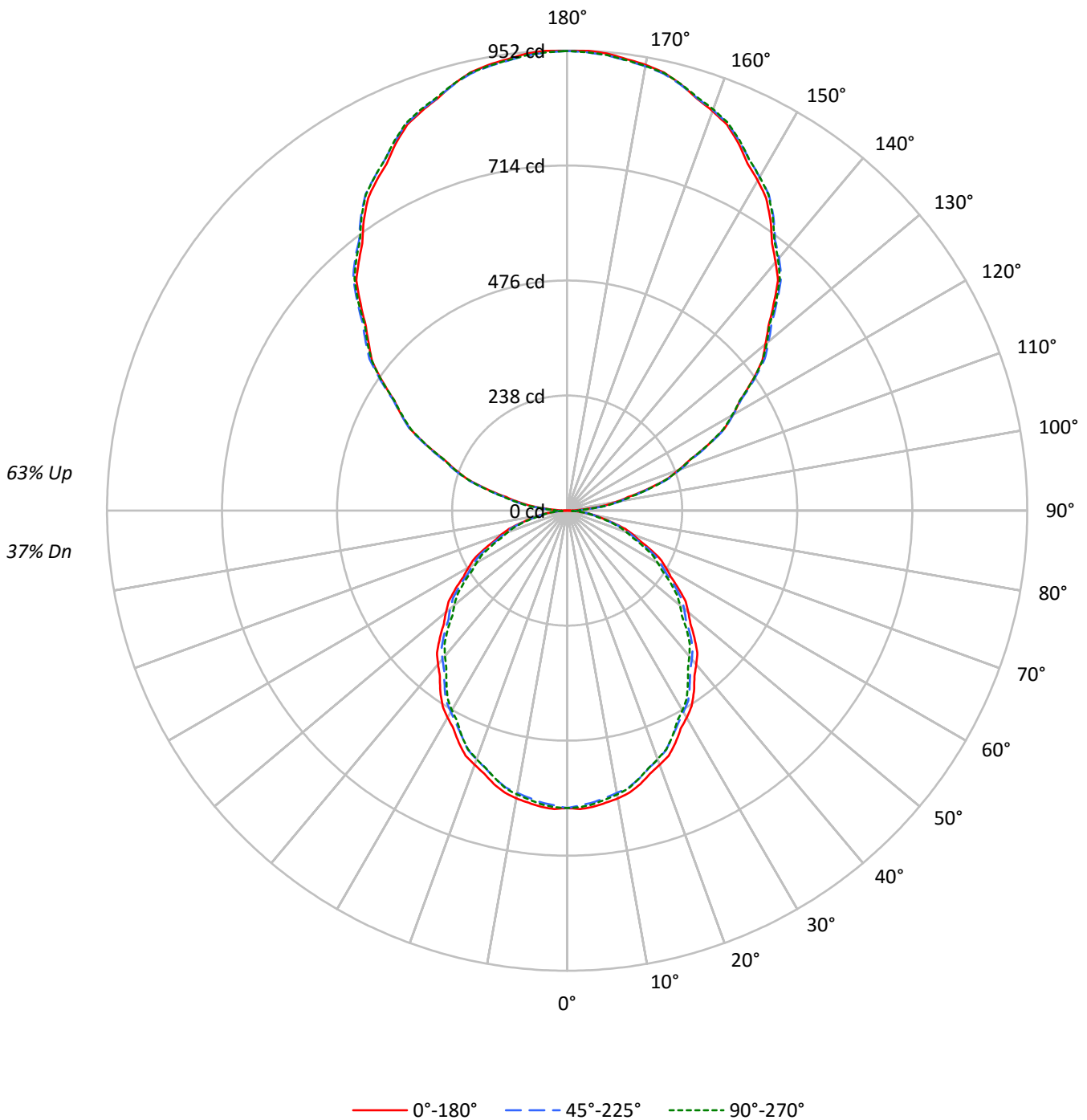
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52	46	43	41	34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43	41	37	35	30	28	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	1.4
10°-20°	162.8	3.9
20°-30°	239.3	5.7
30°-40°	278.0	6.6
40°-50°	277.7	6.6
50°-60°	242.1	5.7
60°-70°	179.0	4.2
70°-80°	101.4	2.4
80°-90°	31.1	0.7
90°-100°	60.2	1.4
100°-110°	187.1	4.4
110°-120°	319.9	7.6
120°-130°	420.6	9.9
130°-140°	472.1	11.2
140°-150°	462.9	10.9
150°-160°	388.3	9.2
160°-170°	257.5	6.1
170°-180°	90.0	2.1
0°-30°	459.9	10.9
0°-40°	737.9	17.5
0°-60°	1257.7	29.7
0°-90°	1569.2	37.1
90°-120°	567.2	13.4
90°-150°	1922.8	45.5
90°-180°	2659.0	62.9
0°-180°	4227.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	1	11	28	27	27	3
95°	42	49	51	51	50	48
105°	172	175	176	178	178	182
115°	321	325	324	323	321	317
125°	467	474	472	470	469	417
135°	604	613	615	614	611	467
145°	733	739	744	744	741	458
155°	838	841	843	847	845	386
165°	912	912	912	917	913	257
175°	949	947	945	950	946	90
180°	951	951	951	951	951	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.7	8.9	9.1	9.3	9.6	10.0	10.5	11.1	11.6	12.3	11.9
90°	0.8	2.9	5.1	7.2	9.3	12.4	16.3	20.2	24.2	28.0	27.7
92.5°	14.3	15.8	17.4	19.0	20.6	21.8	22.7	23.7	24.6	25.5	25.6
95°	41.7	43.5	45.3	47.1	48.9	49.9	50.3	50.6	51.0	51.3	51.3
97.5°	76.2	77.8	79.4	81.0	82.5	83.7	84.3	85.0	85.6	86.3	86.3
100°	101.9	103.3	104.7	106.2	107.6	108.6	109.1	109.6	110.2	110.7	110.7
102.5°	128.9	130.0	131.1	132.3	133.4	134.4	135.0	135.7	136.3	137.0	137.2
105°	172.5	173.0	173.6	174.1	174.7	175.1	175.5	175.8	176.2	176.5	176.9
107.5°	216.5	217.3	218.0	218.8	219.6	220.0	220.0	220.0	220.0	220.0	220.1
110°	244.7	245.8	246.8	248.0	249.0	249.5	249.5	249.5	249.5	249.5	249.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.5	276.6	277.7	278.8	279.8	280.3	280.1	280.0	279.9	279.7	279.2
115°	320.9	322.0	323.1	324.2	325.2	325.6	325.2	324.9	324.5	324.2	324.0
117.5°	366.2	367.7	369.1	370.5	371.9	372.1	371.1	370.1	369.2	368.1	367.7
120°	396.4	397.8	399.3	400.7	402.1	402.1	400.7	399.3	397.8	396.4	396.4
122.5°	424.0	425.7	427.4	429.1	430.8	431.2	430.2	429.2	428.2	427.1	426.7
125°	467.0	468.6	470.2	471.8	473.4	474.0	473.4	472.9	472.3	471.8	471.3
127.5°	508.9	510.9	512.9	515.0	517.0	517.7	517.1	516.4	515.8	515.2	514.4
130°	535.2	537.5	539.8	542.2	544.5	545.4	545.1	544.7	544.4	544.0	543.7
132.5°	564.7	566.6	568.5	570.4	572.3	573.2	573.3	573.4	573.5	573.5	572.7
135°	604.2	606.2	608.1	610.1	612.0	613.1	613.5	613.9	614.3	614.6	614.4
137.5°	645.7	647.4	649.0	650.5	652.1	653.2	653.6	654.1	654.6	655.1	654.9
140°	670.7	672.4	674.0	675.6	677.2	678.4	679.4	680.2	681.1	682.0	682.0
142.5°	696.5	698.1	699.7	701.2	702.9	704.0	704.6	705.2	705.8	706.4	706.5
145°	733.3	734.6	735.9	737.1	738.4	739.5	740.6	741.6	742.8	743.8	743.9
147.5°	766.3	767.8	769.3	770.7	772.2	773.3	774.0	774.8	775.5	776.2	776.6
150°	788.7	789.8	790.8	791.9	793.0	793.9	794.6	795.4	796.1	796.8	797.3
152.5°	808.7	809.7	810.8	811.8	812.9	813.9	814.8	815.6	816.4	817.3	817.9
155°	838.4	839.0	839.6	840.1	840.6	841.1	841.7	842.2	842.7	843.3	844.1
157.5°	864.0	864.4	864.7	865.1	865.4	865.8	866.1	866.4	866.7	867.0	868.2
160°	879.4	879.7	880.1	880.4	880.8	881.1	881.3	881.5	881.6	881.8	882.9
162.5°	893.5	893.6	893.7	893.7	893.8	893.9	894.1	894.3	894.5	894.6	895.9
165°	912.3	912.1	912.0	911.7	911.6	911.5	911.5	911.5	911.5	911.5	912.8
167.5°	928.0	927.5	926.9	926.4	925.9	925.6	925.6	925.5	925.5	925.4	926.7
170°	936.4	935.8	935.3	934.8	934.2	933.9	933.7	933.5	933.3	933.2	934.4
172.5°	942.1	941.6	941.0	940.6	940.0	939.6	939.4	939.3	939.1	938.9	940.2
175°	949.2	948.6	948.2	947.6	947.1	946.6	946.3	945.9	945.5	945.2	946.4
177.5°	952.1	951.6	951.3	950.8	950.4	950.0	949.7	949.4	949.2	948.9	949.7
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	11.5	11.1	10.7	10.5	10.4	10.3	10.2	10.2
90°	27.3	27.0	26.6	26.5	26.8	26.9	27.1	27.3
92.5°	25.7	25.7	25.8	25.8	25.9	25.9	26.0	26.0
95°	51.3	51.3	51.3	51.2	50.8	50.5	50.1	49.7
97.5°	86.3	86.3	86.3	86.3	86.3	86.3	86.2	86.2
100°	110.7	110.7	110.7	110.7	110.4	110.3	110.1	110.0
102.5°	137.4	137.4	137.6	137.6	137.4	137.2	137.0	136.9
105°	177.2	177.6	177.9	178.2	178.2	178.2	178.2	178.2
107.5°	220.3	220.5	220.5	220.2	219.4	218.6	217.8	217.0
110°	249.5	249.5	249.5	249.3	248.7	248.2	247.6	247.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.5	278.0	277.6	277.2	276.8	276.4	276.0
115°	323.8	323.6	323.4	323.1	322.6	322.0	321.5	320.9
117.5°	367.3	366.9	366.4	365.9	365.4	364.9	364.3	363.8
120°	396.4	396.4	396.4	396.1	395.5	395.1	394.5	394.0
122.5°	426.4	425.9	425.5	425.1	424.7	424.3	423.9	423.5
125°	470.7	470.2	469.7	469.3	469.1	469.0	468.7	468.6
127.5°	513.8	513.2	512.5	511.9	511.4	510.8	510.2	509.7
130°	543.3	543.0	542.6	542.0	541.3	540.6	539.9	539.2
132.5°	572.0	571.2	570.4	569.7	569.2	568.5	568.0	567.4
135°	614.3	614.1	613.9	613.5	613.0	612.4	612.0	611.4
137.5°	654.7	654.7	654.5	654.0	653.3	652.6	651.9	651.2
140°	682.0	682.0	682.0	681.7	681.0	680.2	679.5	678.8
142.5°	706.7	706.9	706.9	706.7	706.0	705.3	704.6	703.9
145°	744.2	744.3	744.5	744.3	743.5	742.8	742.1	741.4
147.5°	777.0	777.4	777.8	777.6	777.0	776.3	775.6	774.9
150°	797.8	798.4	798.9	798.9	798.4	797.8	797.3	796.8
152.5°	818.6	819.4	820.0	820.0	819.4	818.6	817.9	817.3
155°	845.1	846.0	846.8	847.0	846.5	846.0	845.4	844.9
157.5°	869.5	870.7	871.9	872.0	871.2	870.4	869.5	868.6
160°	883.9	885.0	886.1	886.3	885.6	884.9	884.2	883.4
162.5°	897.1	898.3	899.5	899.7	898.8	897.9	897.1	896.3
165°	914.0	915.2	916.5	916.6	915.8	914.9	914.0	913.1
167.5°	928.0	929.2	930.4	930.6	929.7	928.8	927.8	926.9
170°	935.6	936.9	938.2	938.3	937.2	936.1	935.0	934.0
172.5°	941.4	942.7	943.9	944.0	942.9	941.9	940.8	939.8
175°	947.7	949.0	950.1	950.3	949.2	948.2	947.1	946.0
177.5°	950.6	951.4	952.3	952.3	951.4	950.6	949.7	948.9
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8

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