

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: P332255-940

Luminaire Tested: **S123RDIP-S340D805U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332255-940
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-S340D805U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4021.5 lumens
Efficiency: N/A
Efficacy: 128.9 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: Semi-Indirect

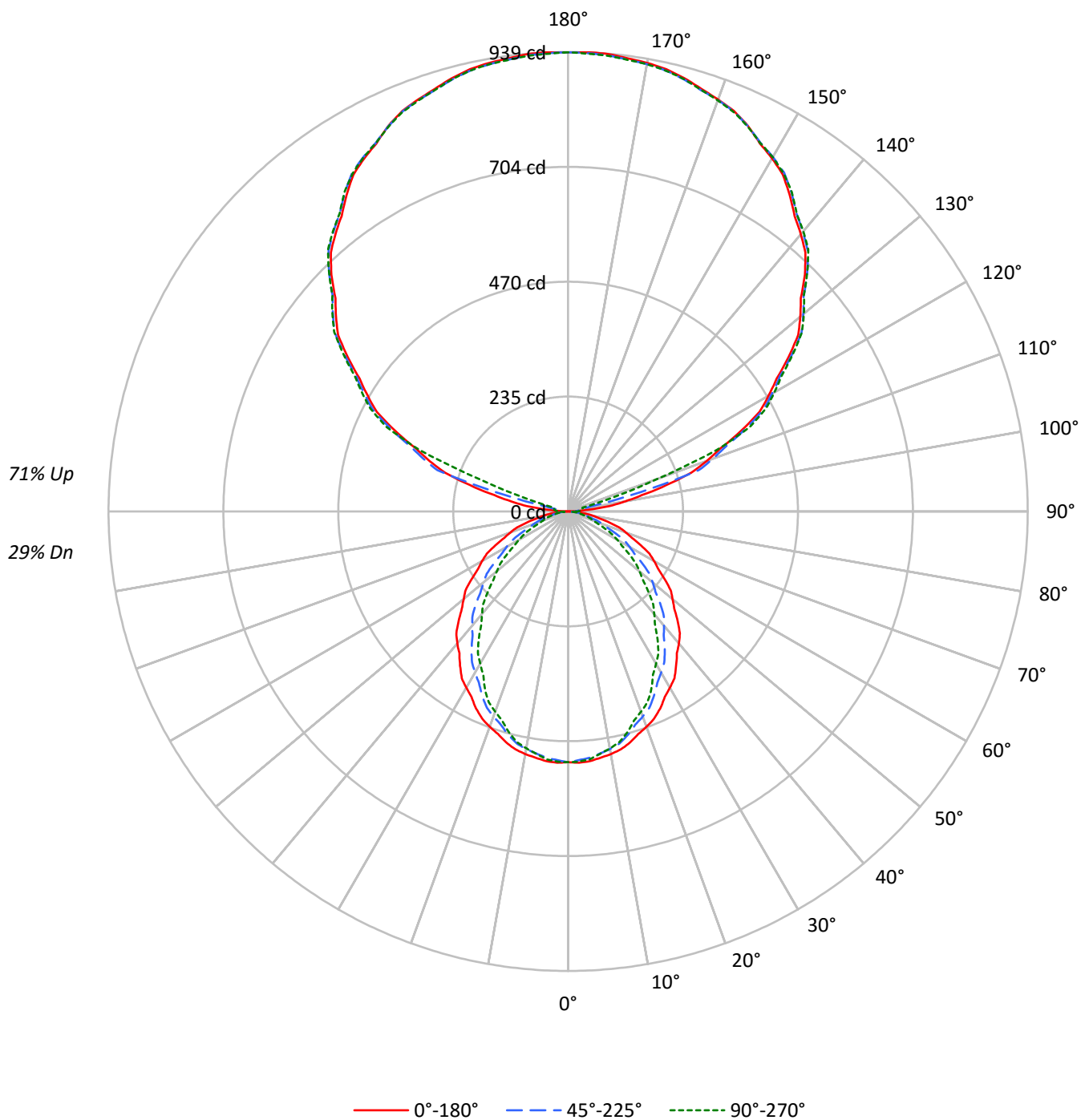
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	102	102	102	102	91	91	91	91	72	72	72		53	53	53		37
1	93	89	85	82	83	80	77	74	63	61	59		47	46	45		33
2	85	78	72	67	76	70	65	61	55	52	49		42	39	38		29
3	78	69	62	56	69	62	56	51	49	45	41		37	34	32		26
4	71	61	53	47	63	55	48	43	43	39	35		33	30	27		23
5	65	54	46	41	58	49	42	37	39	34	30		30	26	24		21
6	60	48	41	35	54	44	37	32	35	30	26		27	23	21		19
7	55	44	36	31	49	39	33	28	32	27	23		24	21	18		17
8	51	39	32	27	46	36	29	25	29	24	21		22	19	16		16
9	48	36	29	24	43	33	26	22	26	22	18		20	17	15		15
10	44	33	26	21	40	30	24	20	24	20	16		19	16	13		14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5514	5514	5514
5°	5535	5459	5491
10°	5503	5391	5372
15°	5446	5264	5209
20°	5363	5108	4987
25°	5280	4930	4772
30°	5169	4724	4467
35°	5056	4520	4188
40°	4950	4279	3842
45°	4813	4042	3529
50°	4662	3771	3178
55°	4506	3462	2852
60°	4366	3130	2495
65°	4182	2774	2137
70°	3950	2326	1725
75°	3614	1834	1626
80°	3217	1624	1494
85°	2717	1433	1334

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	1.2
10°-20°	133.9	3.3
20°-30°	192.7	4.8
30°-40°	217.1	5.4
40°-50°	207.7	5.2
50°-60°	170.1	4.2
60°-70°	114.8	2.9
70°-80°	57.7	1.4
80°-90°	17.9	0.4
90°-100°	34.1	0.8
100°-110°	162.6	4.0
110°-120°	390.6	9.7
120°-130°	497.3	12.4
130°-140°	531.4	13.2
140°-150°	496.9	12.4
150°-160°	400.8	10.0
160°-170°	258.7	6.4
170°-180°	89.2	2.2
0°-30°	374.7	9.3
0°-40°	591.8	14.7
0°-60°	969.6	24.1
0°-90°	1160.0	28.8
90°-120°	587.3	14.6
90°-150°	2112.9	52.5
90°-180°	2862.0	71.2
0°-180°	4021.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	512	510	505	509	508	49
15°	489	484	472	470	467	138
25°	445	434	415	407	402	204
35°	385	369	344	327	319	241
45°	316	297	266	243	232	244
55°	240	219	184	161	152	215
65°	164	141	109	89	84	162
75°	87	67	44	40	39	93
85°	22	13	12	11	11	25
90°	1	8	17	19	21	3
95°	42	16	22	26	26	53
105°	208	212	153	36	31	220
115°	390	394	400	407	410	385
125°	549	555	558	559	560	490
135°	684	688	691	693	691	526
145°	789	794	795	797	797	494
155°	869	868	869	872	868	400
165°	917	915	914	919	915	259
175°	938	935	936	940	935	89
180°	938	938	938	938	938	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3
2.5°	514.0	513.6	513.4	513.1	512.8	512.2	511.3	510.4	509.5	508.6	509.4
5°	512.3	511.8	511.4	511.0	510.4	509.7	508.5	507.5	506.3	505.2	506.0
7.5°	507.6	507.0	506.6	506.0	505.6	504.6	503.2	501.8	500.2	498.8	499.3
10°	503.5	502.9	502.3	501.7	501.0	499.8	498.2	496.5	494.8	493.2	493.3
12.5°	497.9	497.2	496.5	495.8	495.1	493.7	491.6	489.6	487.6	485.5	485.4
15°	488.7	487.6	486.6	485.5	484.6	482.8	480.2	477.6	475.0	472.4	472.0
17.5°	476.9	475.7	474.6	473.3	472.2	469.9	466.6	463.3	460.1	456.8	455.8
20°	468.2	466.8	465.3	463.9	462.4	459.9	456.4	452.8	449.3	445.9	444.6
22.5°	458.6	456.9	455.2	453.5	451.8	449.2	445.4	441.7	437.9	434.2	432.7
25°	444.6	442.3	440.0	437.7	435.3	432.0	427.8	423.6	419.3	415.1	413.1
27.5°	427.6	425.0	422.4	419.9	417.3	413.8	409.0	404.2	399.5	394.8	392.1
30°	415.9	413.1	410.4	407.6	404.8	400.8	395.7	390.5	385.3	380.1	377.0
32.5°	404.3	401.1	398.0	394.8	391.7	387.4	381.9	376.5	371.0	365.5	362.1
35°	384.8	381.4	378.1	374.8	371.5	366.9	361.2	355.4	349.7	344.0	340.1
37.5°	365.0	361.2	357.6	353.9	350.2	345.3	339.2	333.1	327.0	320.8	316.4
40°	352.3	348.3	344.2	340.2	336.1	330.7	324.2	317.6	311.1	304.5	299.8
42.5°	338.0	333.9	329.9	325.8	321.8	316.4	309.6	302.8	296.0	289.3	284.0
45°	316.2	312.0	307.9	303.7	299.5	293.9	286.9	279.7	272.6	265.5	260.2
47.5°	294.4	289.8	285.2	280.6	276.1	270.3	263.1	256.0	249.0	241.8	236.1
50°	278.4	274.0	269.7	265.4	261.0	255.1	247.6	240.1	232.6	225.2	219.5
52.5°	264.1	259.4	254.7	249.9	245.2	239.2	231.8	224.4	217.0	209.6	203.7
55°	240.1	235.6	231.1	226.6	222.0	215.9	208.0	200.2	192.3	184.5	179.1
57.5°	218.0	213.1	208.2	203.2	198.3	191.9	184.0	176.1	168.3	160.4	155.3
60°	202.8	197.7	192.6	187.5	182.4	176.1	168.4	160.8	153.1	145.4	140.4
62.5°	187.4	182.4	177.3	172.3	167.2	160.8	153.1	145.4	137.8	130.1	125.5
65°	164.2	159.1	154.0	148.9	143.8	137.7	130.5	123.2	116.1	108.9	104.3
67.5°	140.8	135.6	130.5	125.4	120.2	114.2	107.3	100.4	93.5	86.6	83.2
70°	125.5	120.5	115.5	110.5	105.6	99.8	93.4	86.9	80.4	73.9	70.7
72.5°	110.2	105.3	100.4	95.4	90.5	85.2	79.3	73.4	67.5	61.6	59.0
75°	86.9	82.4	77.9	73.6	69.1	64.4	59.3	54.2	49.1	44.1	43.2
77.5°	65.5	61.5	57.5	53.5	49.6	45.9	42.6	39.3	36.1	32.8	32.4
80°	51.9	48.2	44.4	40.6	36.8	34.0	32.0	30.1	28.1	26.2	25.9
82.5°	39.0	35.7	32.5	29.2	25.9	23.8	22.9	22.0	21.1	20.2	19.9
85°	22.0	20.0	17.9	16.0	13.9	12.8	12.5	12.2	11.9	11.6	11.4
87.5°	8.1	7.6	7.1	6.6	6.1	6.1	6.4	6.9	7.2	7.7	7.8
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	12.9	12.6	12.1	11.7	11.2	11.8	13.3	14.8	16.3	17.8	18.8
95°	42.5	36.2	29.8	23.5	17.1	14.8	16.5	18.2	19.9	21.6	22.7
97.5°	85.4	82.7	79.8	77.0	74.1	67.1	55.9	44.8	33.6	22.5	23.7
100°	117.8	120.9	124.0	127.1	130.2	119.7	95.5	71.3	47.2	23.0	24.3
102.5°	154.6	156.9	159.1	161.3	163.5	151.5	125.1	98.6	72.2	45.8	42.0
105°	207.8	209.5	211.2	212.9	214.5	208.5	194.5	180.6	166.6	152.7	125.3
107.5°	263.8	265.2	266.5	267.9	269.2	271.0	273.2	275.4	277.6	279.8	259.8
110°	301.1	302.4	303.6	304.9	306.1	307.6	309.3	311.0	312.7	314.4	309.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	338.0	339.1	340.2	341.3	342.7	344.5	346.2	347.9	349.6	349.6
115°	389.7	390.7	391.6	392.5	393.4	394.6	396.0	397.3	398.8	400.2	401.7
117.5°	440.9	442.0	443.2	444.3	445.4	446.4	447.1	447.8	448.5	449.2	450.5
120°	472.7	474.0	475.5	476.8	478.2	479.2	479.7	480.1	480.5	481.0	482.2
122.5°	505.0	506.1	507.3	508.5	509.6	510.4	511.0	511.7	512.2	512.8	513.7
125°	549.4	550.5	551.8	553.0	554.3	555.3	555.9	556.4	557.1	557.7	558.0
127.5°	592.3	593.5	594.8	596.0	597.3	598.2	599.0	599.8	600.5	601.2	601.7
130°	619.0	620.3	621.5	622.8	624.0	624.9	625.5	626.2	626.8	627.4	628.0
132.5°	644.7	646.0	647.2	648.5	649.7	650.5	651.0	651.5	652.0	652.6	653.2
135°	683.9	684.8	685.7	686.7	687.6	688.4	689.0	689.6	690.3	690.9	691.3
137.5°	717.4	718.5	719.7	720.9	722.0	722.8	723.2	723.5	723.8	724.2	725.0
140°	739.7	740.6	741.5	742.4	743.4	744.0	744.6	745.0	745.5	745.9	746.5
142.5°	760.3	761.3	762.1	763.1	764.0	764.7	765.2	765.6	766.1	766.6	767.0
145°	789.2	790.2	791.3	792.4	793.5	794.2	794.5	794.8	795.1	795.4	795.8
147.5°	816.4	817.1	817.8	818.5	819.2	819.7	820.0	820.3	820.6	820.9	821.3
150°	833.0	833.6	834.0	834.5	834.9	835.4	835.6	836.0	836.2	836.6	836.9
152.5°	848.1	848.4	848.6	848.8	849.0	849.2	849.4	849.5	849.8	850.0	850.5
155°	869.3	869.1	868.7	868.4	868.1	868.0	868.2	868.3	868.4	868.6	869.4
157.5°	885.7	885.7	885.7	885.6	885.6	885.6	885.4	885.3	885.1	884.9	885.9
160°	895.8	895.6	895.5	895.4	895.2	895.0	894.9	894.7	894.6	894.4	895.4
162.5°	905.3	904.9	904.5	904.1	903.7	903.4	903.2	903.1	902.9	902.8	903.8
165°	916.8	916.2	915.8	915.3	914.9	914.5	914.4	914.3	914.1	913.9	915.2
167.5°	925.7	925.1	924.4	923.8	923.2	922.8	922.8	922.8	922.8	922.8	924.1
170°	930.7	930.1	929.4	928.8	928.2	927.9	927.9	927.9	927.9	927.9	929.2
172.5°	934.0	933.3	932.6	931.7	931.0	930.8	930.9	930.9	931.1	931.2	932.5
175°	938.3	937.5	936.8	936.0	935.2	935.0	935.0	935.2	935.4	935.6	936.7
177.5°	939.4	938.9	938.3	937.6	937.0	936.7	936.8	937.0	937.1	937.2	938.3
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3
2.5°	510.2	511.0	511.9	512.2	512.1	511.9	511.8	511.7
5°	506.9	507.7	508.5	508.9	508.7	508.5	508.4	508.2
7.5°	499.8	500.2	500.7	500.8	500.4	500.2	499.8	499.5
10°	493.4	493.5	493.6	493.4	492.9	492.5	492.0	491.5
12.5°	485.4	485.4	485.4	485.0	484.5	483.9	483.4	482.9
15°	471.4	471.0	470.6	470.0	469.4	468.7	468.1	467.4
17.5°	454.9	453.9	452.9	451.9	450.9	450.0	449.1	448.1
20°	443.4	442.2	441.0	439.9	438.7	437.7	436.6	435.4
22.5°	431.2	429.7	428.2	427.0	425.9	424.9	423.8	422.8
25°	411.2	409.3	407.3	405.8	404.8	403.9	402.8	401.8
27.5°	389.4	386.7	384.1	381.9	380.3	378.8	377.3	375.7
30°	373.9	370.8	367.7	365.3	363.8	362.4	360.9	359.4
32.5°	358.6	355.3	351.8	349.3	347.8	346.3	344.6	343.1
35°	336.1	332.1	328.1	325.3	323.7	322.0	320.3	318.7
37.5°	311.8	307.3	302.8	299.5	297.5	295.4	293.4	291.3
40°	295.0	290.2	285.3	281.9	279.7	277.7	275.5	273.4
42.5°	278.7	273.6	268.3	264.7	262.8	260.9	259.0	257.1
45°	254.9	249.7	244.4	240.7	238.5	236.3	234.1	231.8
47.5°	230.3	224.6	218.9	215.1	213.1	211.2	209.1	207.1
50°	213.7	208.0	202.3	198.4	196.3	194.1	192.0	189.8
52.5°	197.7	191.7	185.8	181.9	179.9	178.1	176.2	174.2
55°	173.8	168.4	163.1	159.4	157.7	155.8	153.9	152.0
57.5°	150.3	145.2	140.2	136.8	135.3	133.7	132.2	130.5
60°	135.5	130.5	125.5	122.2	120.6	119.0	117.5	115.9
62.5°	120.7	116.1	111.4	108.2	106.6	105.0	103.3	101.7
65°	99.8	95.3	90.8	88.0	86.9	86.0	85.0	83.9
67.5°	79.8	76.4	73.0	70.8	69.7	68.7	67.6	66.5
70°	67.5	64.3	61.0	58.9	57.9	56.9	55.8	54.8
72.5°	56.4	53.8	51.1	49.6	49.1	48.7	48.3	47.9
75°	42.2	41.3	40.3	39.8	39.6	39.4	39.2	39.1
77.5°	31.8	31.3	30.9	30.5	30.3	30.1	30.0	29.8
80°	25.6	25.3	25.1	24.9	24.6	24.4	24.3	24.1
82.5°	19.6	19.4	19.1	18.9	18.9	18.8	18.8	18.8
85°	11.2	11.1	10.9	10.8	10.8	10.8	10.8	10.8
87.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	19.8	20.8	21.8	22.4	22.6	22.7	22.9	23.2
95°	23.8	24.9	25.9	26.5	26.5	26.5	26.5	26.5
97.5°	25.0	26.1	27.4	28.1	28.3	28.4	28.5	28.7
100°	25.5	26.8	28.0	28.6	28.8	29.0	29.2	29.2
102.5°	38.2	34.3	30.5	28.7	29.0	29.2	29.5	29.9
105°	97.8	70.4	43.0	29.4	29.8	30.1	30.4	30.7
107.5°	239.6	219.5	199.4	179.0	158.4	137.7	117.0	96.3
110°	304.2	299.1	294.0	280.4	258.2	236.0	213.8	191.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.7	349.8	349.9	347.6	343.0	338.2	333.6	329.0
115°	403.2	404.8	406.4	407.4	408.0	408.7	409.3	409.9
117.5°	451.7	453.0	454.1	454.9	455.0	455.1	455.2	455.4
120°	483.5	484.7	486.0	486.6	486.6	486.6	486.6	486.6
122.5°	514.5	515.4	516.3	516.7	516.9	517.0	517.2	517.3
125°	558.3	558.7	558.9	559.3	559.5	559.9	560.2	560.5
127.5°	602.2	602.7	603.2	603.2	603.0	602.7	602.4	602.1
130°	628.7	629.3	629.9	630.1	629.7	629.5	629.1	628.8
132.5°	653.7	654.3	655.0	655.1	654.7	654.2	653.8	653.4
135°	691.8	692.2	692.7	692.7	692.2	691.8	691.3	690.9
137.5°	725.7	726.4	727.2	727.4	727.1	726.7	726.5	726.1
140°	747.2	747.8	748.4	748.6	748.2	748.0	747.6	747.3
142.5°	767.6	768.0	768.6	768.6	768.1	767.7	767.3	766.9
145°	796.0	796.4	796.7	796.8	796.8	796.8	796.8	796.8
147.5°	821.5	821.9	822.2	822.0	821.3	820.6	819.8	819.1
150°	837.1	837.5	837.8	837.8	837.2	836.8	836.3	835.9
152.5°	851.0	851.6	852.2	852.1	851.4	850.7	850.0	849.3
155°	870.2	870.9	871.7	871.6	870.8	869.8	868.9	867.9
157.5°	886.8	887.7	888.7	888.5	887.3	886.1	884.9	883.7
160°	896.3	897.2	898.1	898.0	897.0	895.9	894.8	893.8
162.5°	904.9	906.0	907.0	907.0	906.1	905.1	904.2	903.2
165°	916.4	917.7	918.9	919.0	917.9	916.8	915.7	914.6
167.5°	925.3	926.6	927.8	927.8	926.6	925.3	924.1	922.8
170°	930.3	931.6	932.8	932.8	931.6	930.3	929.2	927.9
172.5°	933.7	935.0	936.2	936.1	934.8	933.4	932.0	930.7
175°	937.7	938.8	939.9	939.8	938.6	937.4	936.1	934.9
177.5°	939.2	940.2	941.2	941.1	939.9	938.6	937.4	936.1
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

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