

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: P331698-935

Luminaire Tested: **SA2XXRDIP-C675D925U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331698-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D925U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

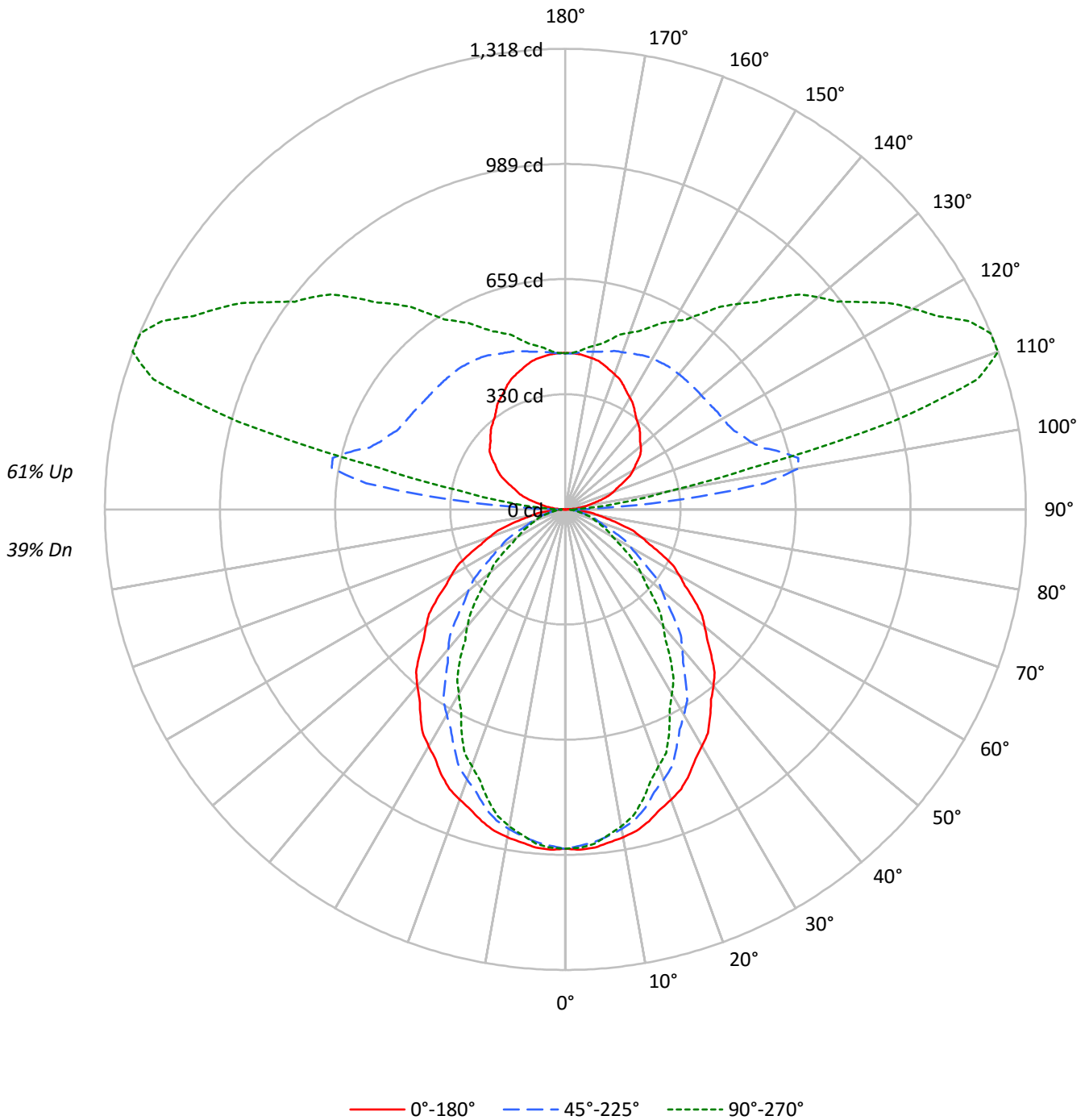
Lumens per Lamp: N/A
Luminaire Lumens: 5111.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 52
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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	92	88	85	87	83	80	78	68	66	64	54	53	51	41	40	40	34
2	87	80	75	70	79	73	68	64	60	57	54	48	46	44	37	35	34	29
3	80	71	64	58	73	65	59	54	53	49	45	43	40	37	33	31	29	25
4	73	63	55	50	66	58	51	46	48	43	39	38	35	32	30	27	26	22
5	67	56	48	43	61	52	45	40	43	38	34	35	31	28	27	24	23	19
6	62	51	43	37	56	46	40	35	39	33	30	31	28	25	25	22	20	17
7	57	46	38	33	52	42	35	30	35	30	26	29	25	22	22	20	18	15
8	53	41	34	29	49	38	32	27	32	27	23	26	22	20	21	18	16	14
9	50	38	31	26	45	35	29	24	29	24	21	24	20	18	19	17	15	12
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.8
10°-20°	249.6	4.9
20°-30°	350.5	6.9
30°-40°	382.2	7.5
40°-50°	351.5	6.9
50°-60°	276.0	5.4
60°-70°	180.0	3.5
70°-80°	92.8	1.8
80°-90°	28.1	0.5
90°-100°	178.7	3.5
100°-110°	606.3	11.9
110°-120°	644.1	12.6
120°-130°	530.2	10.4
130°-140°	425.8	8.3
140°-150°	321.8	6.3
150°-160°	226.1	4.4
160°-170°	133.1	2.6
170°-180°	43.3	0.8
0°-30°	691.1	13.5
0°-40°	1073.3	21.0
0°-60°	1700.8	33.3
0°-90°	2001.6	39.2
90°-120°	1429.1	28.0
90°-150°	2706.8	53.0
90°-180°	3109.0	60.8
0°-180°	5111.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	12	29	28	28	3
95°	30	74	337	127	98	32
105°	105	158	637	1138	968	111
115°	185	233	533	1100	1274	183
125°	258	305	512	891	1034	229
135°	302	361	506	748	857	234
145°	345	397	504	625	684	217
155°	393	424	489	553	575	181
165°	428	441	468	497	504	121
175°	446	446	450	456	455	42
180°	447	447	447	447	447	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.5	10.7	10.2	9.2	8.4	8.2	9.0	10.2	11.3	11.5	11.1
90°	0.9	3.4	6.9	8.6	10.3	12.9	17.2	23.2	28.3	29.2	28.3
92.5°	10.5	15.2	21.4	25.1	30.9	39.0	58.5	85.8	110.1	111.7	94.4
95°	30.0	33.5	42.1	49.9	63.6	84.2	123.7	198.5	298.2	336.8	294.7
97.5°	49.0	53.6	62.8	74.4	90.2	113.6	163.2	267.4	433.1	575.1	603.2
100°	66.1	68.7	76.5	90.2	107.5	131.5	177.0	281.9	467.4	678.8	802.6
102.5°	82.0	83.9	91.6	105.4	123.2	147.3	189.4	282.6	454.4	682.3	876.8
105°	104.9	108.3	114.3	127.2	146.1	170.1	210.5	287.0	428.8	636.7	865.3
107.5°	129.6	132.3	138.2	150.1	168.8	193.0	232.2	298.9	416.0	588.0	789.9
110°	146.1	149.6	154.6	165.8	183.9	208.8	246.6	308.5	413.4	564.6	742.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.2	164.6	170.5	181.0	198.3	223.9	260.4	318.8	414.0	549.4	709.5
115°	184.8	189.1	194.2	204.5	221.7	244.9	281.9	334.2	417.6	532.8	668.6
117.5°	209.1	212.6	217.7	226.9	243.3	267.4	301.6	350.8	423.8	524.7	642.7
120°	224.3	227.7	232.9	240.6	257.8	281.9	315.4	361.8	427.9	519.9	629.0
122.5°	238.8	241.4	246.6	255.0	272.2	297.0	328.4	371.3	432.7	517.1	617.3
125°	257.8	260.4	265.5	275.9	293.0	317.1	348.0	386.7	440.0	512.1	600.6
127.5°	272.9	276.4	283.5	294.9	311.4	336.1	366.3	401.0	447.4	509.2	585.2
130°	281.9	285.2	293.9	305.9	323.1	347.2	377.2	409.9	452.9	507.8	574.9
132.5°	290.1	294.2	303.5	316.2	334.1	358.2	386.8	418.8	458.3	507.1	566.6
135°	302.5	305.9	316.2	329.1	348.9	372.9	400.5	430.5	464.9	506.1	555.1
137.5°	314.2	318.3	328.6	342.3	362.0	384.3	411.5	439.5	470.7	505.9	547.0
140°	323.1	326.6	336.8	350.6	369.5	391.8	417.6	444.3	473.5	505.2	542.3
142.5°	332.0	334.8	344.4	358.2	376.3	397.4	422.4	448.4	475.5	505.2	537.4
145°	345.4	348.9	357.5	370.4	387.5	406.5	429.6	453.7	477.8	503.5	531.1
147.5°	359.9	362.5	370.7	382.5	396.8	413.7	435.5	456.7	478.5	500.5	524.5
150°	369.5	372.0	378.9	390.1	403.0	418.4	438.2	458.0	477.8	498.4	519.0
152.5°	379.1	380.3	387.2	397.0	409.2	423.3	441.0	458.7	476.4	495.0	514.2
155°	392.7	393.6	398.7	408.2	417.6	430.5	445.1	459.7	474.3	489.0	505.2
157.5°	404.1	404.9	409.1	417.2	424.8	435.7	448.1	459.7	470.4	482.8	496.9
160°	411.6	412.5	415.9	422.8	429.6	439.1	449.4	459.7	468.3	478.6	490.7
162.5°	419.1	418.6	422.1	427.6	433.8	441.2	450.1	459.0	466.2	475.2	485.2
165°	427.9	427.1	428.8	433.9	438.2	443.4	451.2	457.2	462.3	468.3	476.0
167.5°	435.1	434.1	435.7	438.9	442.0	445.3	451.0	456.0	458.3	462.3	467.1
170°	440.0	438.2	439.1	441.7	443.4	446.0	450.3	454.6	456.3	458.8	462.3
172.5°	442.7	441.7	441.2	443.8	444.8	446.7	449.6	452.5	453.6	454.8	457.5
175°	446.0	445.1	444.3	446.0	446.0	446.9	448.6	450.3	449.4	450.3	451.2
177.5°	447.5	446.2	445.5	446.9	446.9	446.9	447.5	448.9	447.5	446.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	10.8	10.3	10.5	10.6	10.6	10.6	10.6	10.6
90°	27.5	25.7	27.5	28.3	28.3	28.3	28.3	28.3
92.5°	74.9	64.3	57.1	51.7	51.1	48.3	49.0	47.6
95°	225.2	172.7	136.6	117.7	106.6	99.7	97.1	98.0
97.5°	525.4	429.8	336.8	274.8	233.8	212.6	200.0	192.9
100°	784.5	678.0	560.3	456.3	385.0	348.0	323.1	307.6
102.5°	954.3	930.3	844.2	734.0	656.5	593.4	562.3	541.4
105°	1044.0	1141.2	1152.4	1123.9	1070.7	1017.4	980.4	968.5
107.5°	979.5	1125.7	1215.0	1256.6	1263.3	1260.4	1253.0	1237.1
110°	923.8	1077.5	1187.6	1258.0	1294.9	1311.3	1319.1	1318.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.9	1020.5	1138.1	1218.8	1270.2	1297.5	1312.2	1316.8
115°	810.3	942.6	1055.2	1143.8	1204.7	1244.2	1266.6	1274.4
117.5°	763.2	879.4	981.5	1064.5	1126.7	1168.5	1192.1	1198.5
120°	739.9	846.4	937.5	1015.7	1075.8	1116.2	1141.2	1149.8
122.5°	721.3	818.9	905.2	975.9	1029.8	1069.4	1091.7	1098.9
125°	694.3	782.8	858.4	922.9	972.8	1005.4	1026.8	1033.7
127.5°	667.7	747.8	819.1	878.6	922.0	952.6	971.2	976.7
130°	650.5	724.4	792.3	849.0	891.1	920.3	937.5	944.3
132.5°	634.0	702.4	764.7	818.0	859.5	888.7	904.5	910.7
135°	611.0	667.7	724.4	772.5	809.4	837.8	853.3	856.7
137.5°	592.5	640.0	685.0	726.9	760.7	785.1	798.7	803.8
140°	580.9	622.2	661.7	699.5	726.9	749.3	762.2	767.3
142.5°	571.3	606.3	640.3	672.0	698.1	718.4	729.9	730.9
145°	557.7	586.1	612.7	637.6	658.2	672.9	681.4	684.0
147.5°	547.2	569.6	590.3	608.6	625.6	637.2	643.1	644.6
150°	539.7	558.5	576.6	592.0	604.9	615.3	620.4	621.3
152.5°	532.1	549.6	564.9	578.3	588.4	597.4	601.2	601.3
155°	521.6	535.4	548.2	557.7	567.1	573.2	576.6	574.9
157.5°	509.4	520.9	531.8	539.2	545.8	550.8	552.3	552.3
160°	501.8	511.3	520.7	526.8	532.8	537.1	538.0	538.0
162.5°	494.3	502.3	510.4	515.1	521.1	524.0	524.9	524.2
165°	482.9	489.0	495.0	498.4	501.8	505.2	505.2	504.4
167.5°	472.1	476.7	480.9	484.0	485.5	487.4	487.2	486.2
170°	466.6	469.2	472.6	474.3	475.2	477.8	476.9	475.2
172.5°	460.4	462.3	465.0	466.1	466.9	468.1	467.3	466.2
175°	453.7	454.6	455.5	456.3	456.3	457.2	456.3	454.6
177.5°	448.9	448.9	449.6	449.6	449.6	449.6	448.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9

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