

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: P331317-935

Luminaire Tested: **SA2XXDIP-C485D925U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331317-935
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: SA2XXDIP-C485D925U935-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

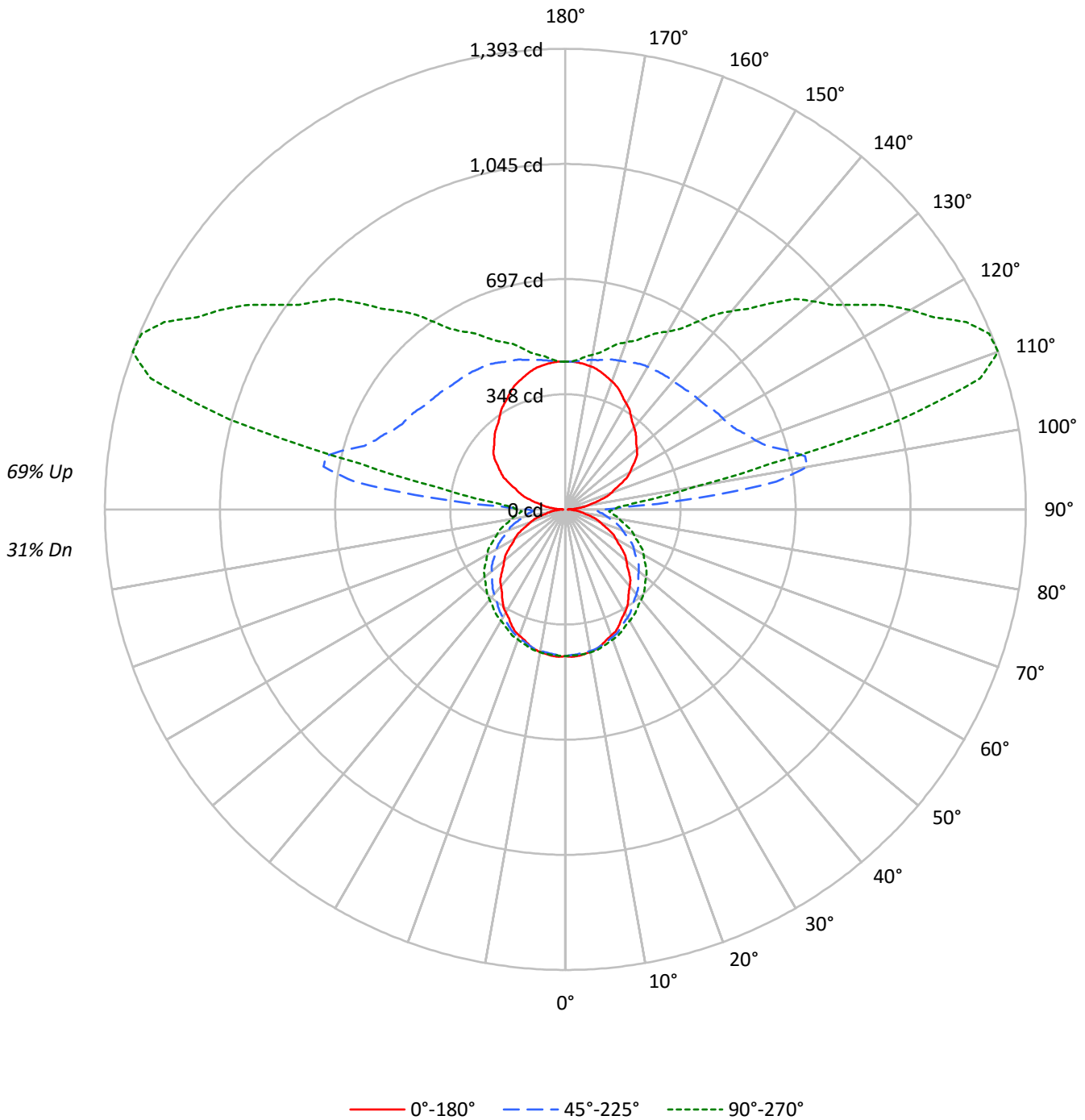
Lumens per Lamp: N/A
Luminaire Lumens: 4806.1 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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	50	30	10	0	
RCR																						
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31	31	31	20	
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24	24	24	24	
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20	20	20	20	
3	76	67	59	53	68	60	54	48	47	43	39	36	33	30	25	23	21	16	16	16	16	
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18	14	14	14	14	
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	17	15	12	12	12	12	
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10	10	10	10	
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9	9	9	9	
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	12	11	8	8	8	8	
9	46	34	27	22	42	31	25	20	25	20	16	19	16	13	14	11	9	7	7	7	7	
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	9	6	6	6	6	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	0.9
10°-20°	120.6	2.5
20°-30°	182.7	3.8
30°-40°	222.5	4.6
40°-50°	239.4	5.0
50°-60°	232.5	4.8
60°-70°	203.0	4.2
70°-80°	156.3	3.3
80°-90°	108.9	2.3
90°-100°	250.9	5.2
100°-110°	659.0	13.7
110°-120°	678.9	14.1
120°-130°	549.7	11.4
130°-140°	434.0	9.0
140°-150°	323.2	6.7
150°-160°	226.1	4.7
160°-170°	133.1	2.8
170°-180°	43.3	0.9
0°-30°	345.3	7.2
0°-40°	567.8	11.8
0°-60°	1039.7	21.6
0°-90°	1507.8	31.4
90°-120°	1588.9	33.1
90°-150°	2895.7	60.3
90°-180°	3298.0	68.6
0°-180°	4806.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	56	114	138	147	6
95°	35	110	411	225	204	36
105°	108	181	692	1215	1053	115
115°	187	244	571	1157	1339	186
125°	259	307	534	929	1079	230
135°	303	362	513	769	882	234
145°	345	397	504	629	691	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°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.8	31.0	39.9	48.7	58.1	68.1	78.4	88.6	97.9	103.6
90°	7.3	18.2	29.9	39.9	49.9	61.2	74.6	89.8	104.1	114.1	119.0
92.5°	16.4	28.8	42.6	54.2	67.7	84.0	112.3	148.4	181.6	191.9	180.2
95°	35.2	45.4	60.7	75.2	95.6	123.9	171.9	255.3	363.5	410.8	374.1
97.5°	53.5	64.1	79.2	96.9	118.6	149.1	207.0	319.3	493.3	643.4	676.9
100°	70.7	78.5	91.5	110.6	133.0	163.8	217.3	330.1	523.7	743.1	872.2
102.5°	85.9	92.6	105.2	123.8	146.5	176.8	226.8	327.7	507.3	743.0	942.7
105°	108.1	115.6	125.8	142.8	165.9	195.7	243.6	327.4	476.6	692.1	925.7
107.5°	132.7	138.7	147.9	163.1	185.1	214.6	260.9	334.7	459.0	638.0	844.7
110°	148.7	155.0	163.0	177.0	197.9	227.7	272.6	341.4	453.2	611.5	793.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	163.8	169.6	177.9	190.7	210.5	240.6	283.7	348.8	450.7	592.8	757.3
115°	187.4	193.2	199.9	211.8	230.6	257.8	301.2	360.0	449.8	571.4	711.4
117.5°	211.1	215.5	221.7	231.9	249.4	277.0	317.1	372.2	451.2	558.0	680.3
120°	226.2	230.2	235.9	244.3	262.0	289.2	328.5	380.6	452.5	550.1	663.2
122.5°	240.6	243.7	249.0	257.7	275.1	302.6	339.4	387.8	454.5	544.2	648.3
125°	259.1	261.7	266.8	277.2	294.3	320.6	356.2	399.4	457.3	534.0	626.4
127.5°	274.2	277.5	284.6	295.8	312.1	338.6	372.4	410.8	460.9	526.4	606.0
130°	283.1	286.5	294.9	306.8	323.8	349.3	382.4	418.0	464.0	522.0	592.5
132.5°	291.4	295.4	304.5	317.1	334.8	360.0	391.0	425.2	467.1	518.2	581.0
135°	303.2	306.5	316.8	329.8	349.5	374.3	403.2	434.7	470.5	513.2	565.2
137.5°	314.8	318.9	329.2	342.9	362.5	385.1	412.8	441.5	473.5	509.3	553.0
140°	323.7	327.0	337.2	350.8	369.5	392.0	418.0	445.0	474.5	506.5	545.8
142.5°	332.7	335.3	344.7	358.3	376.4	397.4	422.5	448.5	475.7	505.5	539.5
145°	345.4	348.9	357.5	370.4	387.5	406.5	429.6	453.7	477.8	503.5	531.9
147.5°	359.9	362.5	370.7	382.5	396.8	413.7	435.5	456.7	478.5	500.5	524.6
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°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	109.3	114.7	120.9	124.9	126.7	128.5	130.4	132.2
90°	123.8	127.8	135.3	139.8	141.5	143.3	145.0	146.7
92.5°	166.3	161.4	159.7	158.1	159.1	158.0	160.4	160.7
95°	310.0	262.9	232.3	217.0	207.5	202.3	201.5	204.1
97.5°	604.3	514.1	426.5	367.8	328.5	309.0	298.2	292.7
100°	859.5	758.1	645.8	545.2	475.4	440.1	416.7	402.8
102.5°	1025.4	1006.5	925.6	818.8	742.9	681.3	651.8	632.4
105°	1109.3	1211.4	1227.6	1202.6	1150.8	1099.2	1063.8	1053.3
107.5°	1039.1	1190.1	1284.3	1329.0	1337.3	1336.0	1330.2	1315.8
110°	979.8	1138.2	1252.8	1326.3	1364.9	1382.8	1392.1	1392.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	925.4	1077.5	1199.7	1283.6	1336.5	1365.4	1381.6	1387.8
115°	857.5	994.1	1110.9	1202.4	1265.0	1306.1	1330.0	1339.3
117.5°	805.0	925.4	1031.7	1117.6	1181.2	1224.4	1249.5	1257.5
120°	778.1	888.6	983.7	1064.7	1126.4	1168.4	1194.9	1205.1
122.5°	756.2	857.7	947.9	1021.1	1076.4	1117.5	1141.0	1149.5
125°	723.9	816.2	895.7	962.8	1013.9	1047.8	1070.6	1078.7
127.5°	692.0	775.6	850.5	912.4	957.1	988.9	1008.7	1015.5
130°	671.5	748.8	820.1	879.2	922.4	952.8	971.0	979.1
132.5°	651.7	723.4	789.1	844.6	887.2	917.6	934.4	941.8
135°	624.1	683.7	743.5	793.7	831.7	861.3	877.9	882.4
137.5°	601.2	651.3	698.9	742.6	777.3	802.6	817.2	823.4
140°	586.8	630.3	672.1	711.4	739.9	763.0	776.8	782.8
142.5°	575.1	612.1	647.9	680.8	707.7	728.8	741.0	742.8
145°	559.4	588.6	616.1	641.8	663.1	678.5	687.8	691.0
147.5°	547.4	569.9	590.8	609.2	626.6	638.6	644.8	646.7
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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