

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: P331317-840

Luminaire Tested: **SA2XXDIP-C485D925U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331317-840
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-C485D925U840-4F0-1E-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: 5637.1 lumens
Efficiency: N/A
Efficacy: 126.7 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

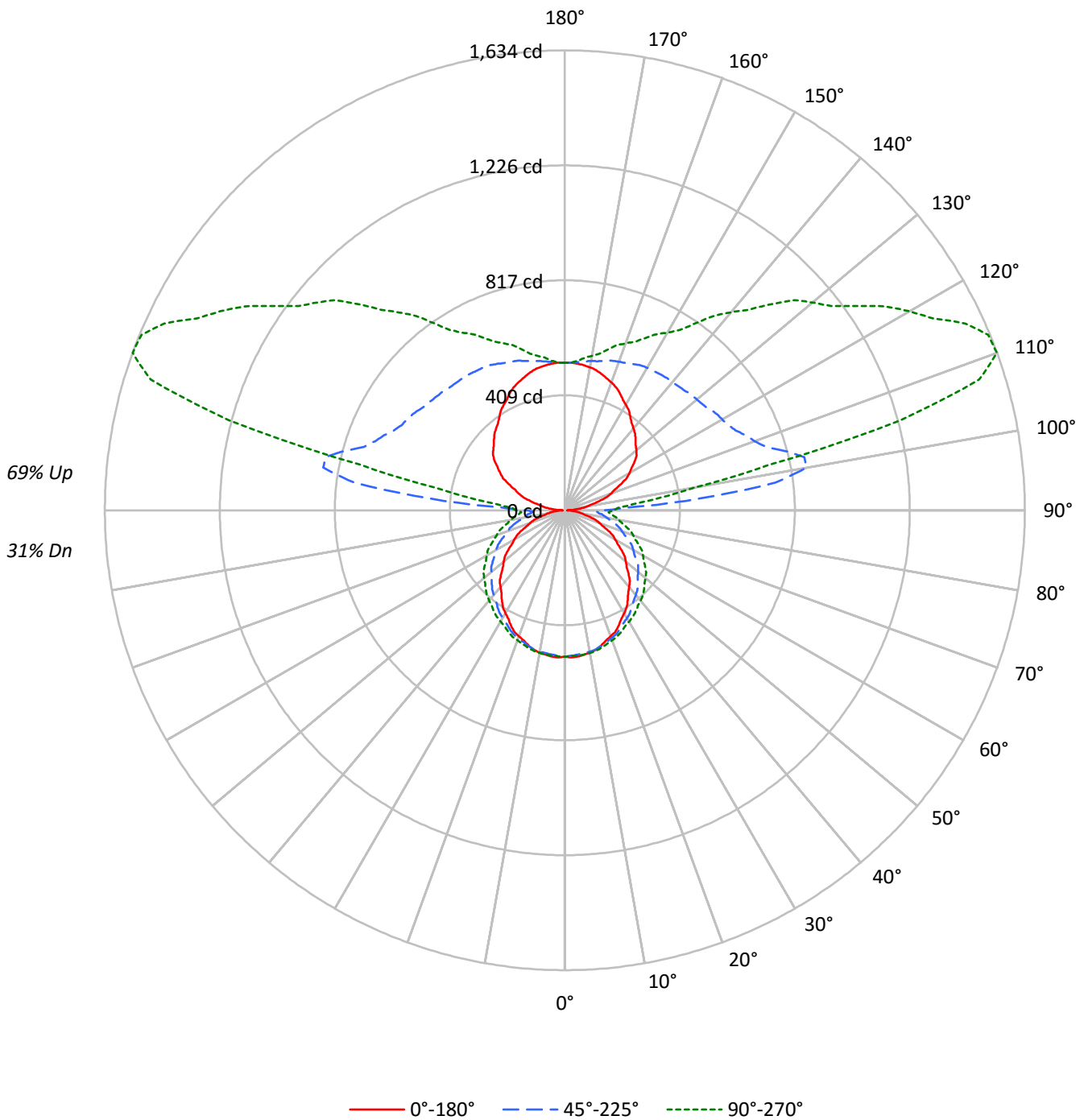
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	0.9
10°-20°	141.4	2.5
20°-30°	214.3	3.8
30°-40°	261.0	4.6
40°-50°	280.8	5.0
50°-60°	272.7	4.8
60°-70°	238.1	4.2
70°-80°	183.3	3.3
80°-90°	127.7	2.3
90°-100°	294.3	5.2
100°-110°	773.0	13.7
110°-120°	796.3	14.1
120°-130°	644.7	11.4
130°-140°	509.0	9.0
140°-150°	379.1	6.7
150°-160°	265.2	4.7
160°-170°	156.1	2.8
170°-180°	50.8	0.9
0°-30°	405.0	7.2
0°-40°	666.0	11.8
0°-60°	1219.4	21.6
0°-90°	1768.6	31.4
90°-120°	1863.6	33.1
90°-150°	3396.4	60.3
90°-180°	3869.0	68.6
0°-180°	5637.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	9	65	134	161	172	7
95°	41	129	482	264	239	42
105°	127	212	812	1425	1236	135
115°	220	286	670	1357	1571	218
125°	304	361	626	1090	1265	270
135°	356	424	602	901	1035	275
145°	405	466	591	738	810	254
155°	461	497	574	649	674	212
165°	502	517	549	583	592	141
175°	523	524	528	535	533	50
180°	524	524	524	524	524	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.9	25.5	36.4	46.8	57.2	68.2	79.9	92.0	103.9	114.8	121.5
90°	8.6	21.3	35.0	46.8	58.5	71.8	87.6	105.3	122.1	133.8	139.6
92.5°	19.2	33.7	50.0	63.5	79.4	98.6	131.7	174.1	213.0	225.1	211.4
95°	41.3	53.2	71.2	88.2	112.1	145.3	201.7	299.4	426.4	481.8	438.8
97.5°	62.7	75.1	92.9	113.6	139.2	174.9	242.8	374.6	578.6	754.7	794.0
100°	82.9	92.1	107.3	129.7	156.0	192.1	254.9	387.2	614.3	871.6	1023.0
102.5°	100.8	108.7	123.4	145.2	171.9	207.4	266.0	384.4	595.0	871.4	1105.7
105°	126.7	135.6	147.5	167.5	194.6	229.5	285.7	384.1	559.1	811.7	1085.7
107.5°	155.6	162.7	173.5	191.3	217.1	251.7	306.0	392.5	538.4	748.3	990.8
110°	174.4	181.8	191.2	207.6	232.1	267.1	319.7	400.4	531.6	717.2	931.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	192.1	198.9	208.6	223.7	246.9	282.3	332.8	409.1	528.7	695.3	888.3
115°	219.7	226.6	234.5	248.4	270.4	302.4	353.3	422.2	527.6	670.1	834.5
117.5°	247.6	252.8	260.0	272.0	292.6	324.9	371.9	436.6	529.2	654.5	797.9
120°	265.3	270.0	276.7	286.5	307.3	339.2	385.3	446.4	530.7	645.2	777.9
122.5°	282.3	285.8	292.1	302.3	322.7	355.0	398.1	454.8	533.1	638.3	760.4
125°	303.9	306.9	313.0	325.1	345.2	376.1	417.8	468.5	536.3	626.3	734.7
127.5°	321.6	325.5	333.8	346.9	366.1	397.2	436.8	481.8	540.6	617.4	710.7
130°	332.0	336.0	345.9	359.8	379.8	409.7	448.5	490.3	544.2	612.3	694.9
132.5°	341.7	346.5	357.2	371.9	392.7	422.2	458.6	498.8	547.9	607.8	681.5
135°	355.6	359.5	371.6	386.8	409.9	439.0	472.9	509.9	551.9	602.0	662.9
137.5°	369.2	374.1	386.1	402.2	425.2	451.7	484.2	517.9	555.3	597.3	648.6
140°	379.7	383.5	395.5	411.4	433.4	459.8	490.3	521.9	556.5	594.1	640.2
142.5°	390.2	393.2	404.3	420.3	441.5	466.1	495.5	526.0	558.0	592.9	632.8
145°	405.2	409.2	419.3	434.4	454.5	476.8	503.9	532.2	560.4	590.6	623.9
147.5°	422.1	425.2	434.7	448.7	465.4	485.2	510.8	535.6	561.2	587.0	615.3
150°	433.4	436.4	444.4	457.6	472.7	490.8	514.0	537.1	560.4	584.6	608.7
152.5°	444.6	446.1	454.1	465.6	480.0	496.4	517.3	538.0	558.8	580.6	603.1
155°	460.6	461.6	467.7	478.8	489.8	504.9	522.1	539.2	556.3	573.5	592.6
157.5°	473.9	474.9	479.8	489.4	498.3	511.0	525.5	539.2	551.7	566.2	582.8
160°	482.8	483.8	487.8	495.8	503.9	515.0	527.1	539.2	549.3	561.4	575.5
162.5°	491.6	491.0	495.0	501.5	508.8	517.5	528.0	538.4	546.8	557.3	569.1
165°	501.9	500.9	502.9	509.0	514.0	520.1	529.2	536.2	542.2	549.3	558.4
167.5°	510.4	509.2	511.0	514.8	518.5	522.3	529.0	534.8	537.6	542.2	547.9
170°	516.0	514.0	515.0	518.1	520.1	523.1	528.2	533.2	535.2	538.2	542.2
172.5°	519.3	518.1	517.5	520.5	521.7	523.9	527.4	530.8	532.0	533.4	536.6
175°	523.1	522.1	521.1	523.1	523.1	524.1	526.1	528.2	527.1	528.2	529.2
177.5°	524.9	523.3	522.5	524.1	524.1	524.1	524.9	526.5	524.9	524.1	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	128.2	134.5	141.8	146.5	148.7	150.8	152.9	155.1
90°	145.2	149.9	158.6	164.0	166.0	168.0	170.1	172.1
92.5°	195.1	189.2	187.3	185.4	186.6	185.3	188.1	188.5
95°	363.6	308.4	272.5	254.5	243.4	237.3	236.3	239.3
97.5°	708.8	603.0	500.2	431.4	385.3	362.4	349.7	343.3
100°	1008.0	889.2	757.4	639.4	557.6	516.1	488.8	472.4
102.5°	1202.6	1180.5	1085.6	960.4	871.3	799.1	764.5	741.7
105°	1301.1	1420.9	1439.9	1410.5	1349.8	1289.2	1247.7	1235.5
107.5°	1218.7	1395.8	1506.3	1558.8	1568.5	1567.0	1560.1	1543.3
110°	1149.2	1335.0	1469.4	1555.6	1600.8	1621.8	1632.7	1633.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1085.4	1263.8	1407.1	1505.5	1567.6	1601.4	1620.4	1627.7
115°	1005.7	1166.0	1303.0	1410.3	1483.7	1531.9	1559.9	1570.8
117.5°	944.2	1085.4	1210.1	1310.8	1385.4	1436.1	1465.5	1474.9
120°	912.6	1042.3	1153.8	1248.8	1321.2	1370.4	1401.5	1413.4
122.5°	887.0	1006.0	1111.8	1197.7	1262.5	1310.7	1338.3	1348.3
125°	849.1	957.4	1050.6	1129.2	1189.2	1229.0	1255.7	1265.3
127.5°	811.6	909.7	997.5	1070.2	1122.6	1159.9	1183.2	1191.1
130°	787.6	878.3	961.9	1031.2	1081.9	1117.5	1138.9	1148.4
132.5°	764.4	848.5	925.5	990.7	1040.6	1076.2	1096.0	1104.7
135°	732.0	801.9	872.0	930.9	975.5	1010.2	1029.7	1035.0
137.5°	705.1	763.9	819.7	871.0	911.7	941.4	958.5	965.7
140°	688.2	739.2	788.3	834.5	867.8	894.9	911.1	918.2
142.5°	674.6	717.9	759.9	798.5	830.1	854.7	869.1	871.2
145°	656.1	690.3	722.7	752.8	777.8	795.8	806.7	810.5
147.5°	642.1	668.4	693.0	714.6	735.0	749.0	756.3	758.5
150°	633.0	655.1	676.3	694.4	709.5	721.6	727.7	728.7
152.5°	624.1	644.6	662.6	678.3	690.1	700.6	705.1	705.3
155°	611.8	627.9	643.0	654.1	665.2	672.3	676.3	674.3
157.5°	597.4	611.0	623.7	632.4	640.2	646.0	647.8	647.8
160°	588.5	599.7	610.8	617.8	624.9	630.0	631.0	631.0
162.5°	579.8	589.2	598.6	604.1	611.2	614.6	615.6	614.8
165°	566.4	573.5	580.6	584.6	588.5	592.6	592.6	591.6
167.5°	553.7	559.2	564.0	567.6	569.5	571.7	571.5	570.3
170°	547.2	550.3	554.3	556.3	557.3	560.4	559.4	557.3
172.5°	540.0	542.2	545.4	546.6	547.6	549.1	548.1	546.8
175°	532.2	533.2	534.2	535.2	535.2	536.2	535.2	533.2
177.5°	526.5	526.5	527.4	527.4	527.4	527.4	526.5	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1

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