

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: P331326

Luminaire Tested: **SA2XXDIP-C485D1080U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331326
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-C485D1080U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

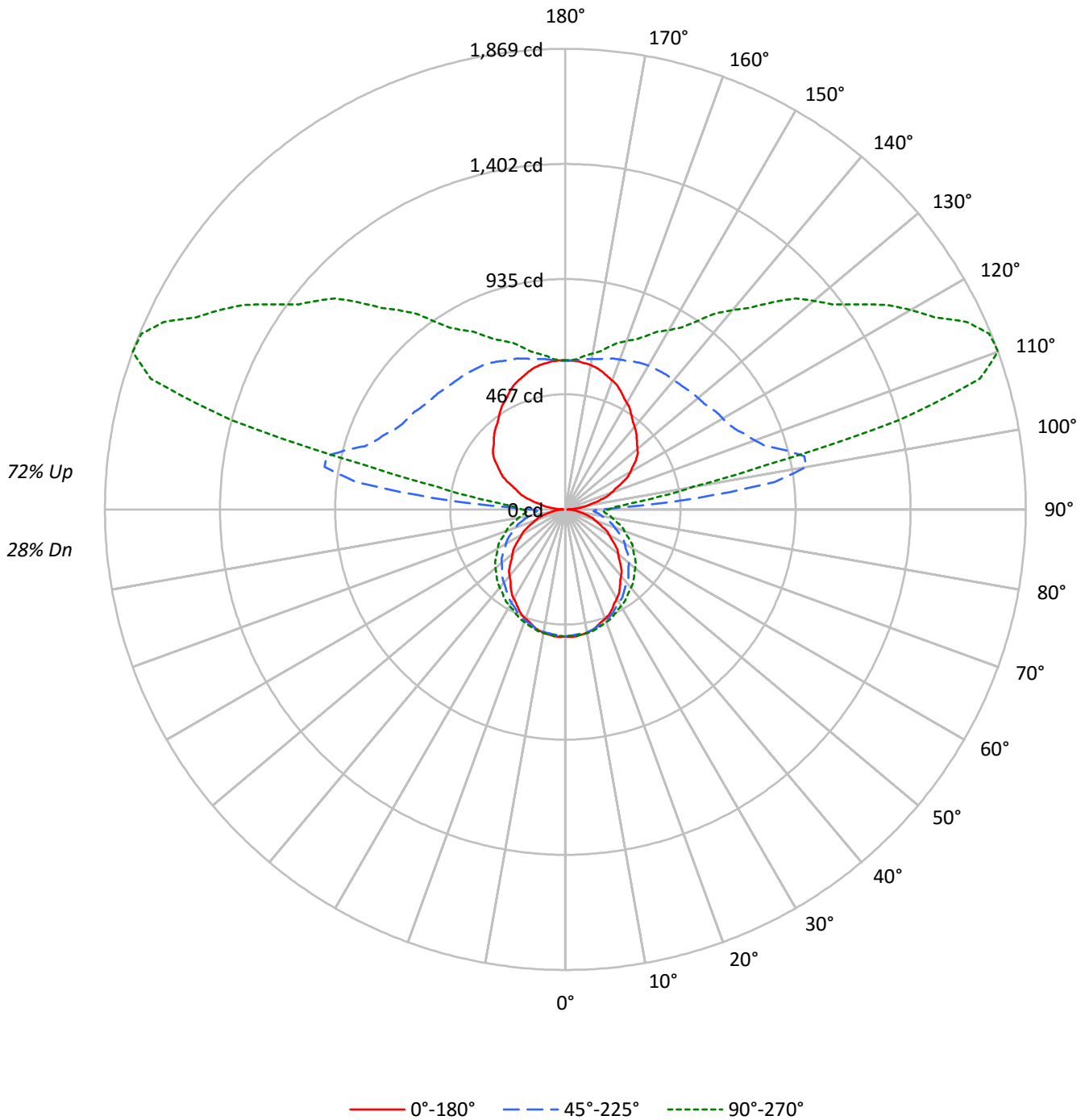
Lumens per Lamp: N/A
Luminaire Lumens: 6174.9 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 49.4
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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.8
10°-20°	140.0	2.3
20°-30°	212.2	3.4
30°-40°	258.4	4.2
40°-50°	278.0	4.5
50°-60°	270.0	4.4
60°-70°	235.8	3.8
70°-80°	181.5	2.9
80°-90°	127.2	2.1
90°-100°	325.5	5.3
100°-110°	880.9	14.3
110°-120°	911.2	14.8
120°-130°	739.4	12.0
130°-140°	585.1	9.5
140°-150°	436.6	7.1
150°-160°	305.7	5.0
160°-170°	180.0	2.9
170°-180°	58.6	0.9
0°-30°	401.0	6.5
0°-40°	659.5	10.7
0°-60°	1207.5	19.6
0°-90°	1752.0	28.4
90°-120°	2117.6	34.3
90°-150°	3878.7	62.8
90°-180°	4423.0	71.6
0°-180°	6174.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	9	67	138	165	176	7
95°	47	142	541	285	256	48
105°	146	240	925	1628	1408	155
115°	253	328	765	1553	1798	250
125°	350	415	718	1249	1450	311
135°	410	489	692	1035	1188	317
145°	467	537	681	850	933	293
155°	531	573	661	748	777	244
165°	578	596	633	671	682	163
175°	603	604	609	616	614	57
180°	604	604	604	604	604	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.9	25.5	36.3	46.6	57.0	67.9	79.7	92.0	104.0	114.8	121.4
90°	8.6	21.7	36.0	48.0	59.9	73.5	90.0	108.7	126.3	138.1	143.6
92.5°	21.0	36.3	53.6	67.7	84.5	105.1	141.5	188.7	231.9	244.2	227.3
95°	46.6	59.1	78.5	96.8	123.1	159.9	223.3	334.3	479.0	541.3	490.6
97.5°	71.4	84.7	103.9	126.6	155.0	194.8	271.5	421.9	655.4	856.9	901.1
100°	94.7	104.3	120.9	145.6	175.0	215.2	286.1	437.1	697.3	992.4	1165.8
102.5°	115.5	123.6	139.7	163.9	193.7	233.5	299.4	434.4	675.8	992.9	1261.9
105°	145.5	154.9	167.9	190.1	220.5	259.7	322.9	435.0	635.3	925.0	1239.8
107.5°	178.8	186.3	198.1	218.0	247.1	286.0	347.2	445.6	612.3	852.9	1131.5
110°	200.5	208.4	218.7	237.1	264.9	304.3	363.5	455.3	605.2	817.7	1063.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.9	228.4	239.0	256.0	282.3	322.1	379.1	465.8	602.3	793.1	1014.7
115°	252.7	260.4	269.2	284.9	310.0	346.0	403.4	481.8	601.9	765.0	953.6
117.5°	285.0	290.8	299.0	312.5	336.0	372.6	425.7	499.1	604.7	748.0	912.5
120°	305.4	310.7	318.4	329.5	353.4	389.6	441.5	510.9	607.0	737.9	890.1
122.5°	325.0	328.9	336.2	347.8	371.3	408.0	456.8	521.1	610.3	730.6	870.6
125°	350.0	353.5	360.5	374.4	397.6	432.8	479.9	537.5	614.9	717.7	841.9
127.5°	370.4	374.9	384.5	399.7	421.8	457.3	502.3	553.5	620.5	708.4	815.2
130°	382.5	387.0	398.5	414.6	437.6	471.8	515.9	563.6	625.1	703.0	797.6
132.5°	393.7	399.1	411.5	428.5	452.5	486.3	527.8	573.7	629.8	698.5	782.7
135°	409.7	414.3	428.2	445.7	472.4	505.7	544.6	586.9	635.0	692.4	762.1
137.5°	425.5	431.0	444.9	463.5	489.9	520.5	557.9	596.5	639.5	687.9	746.5
140°	437.5	442.0	455.8	474.2	499.6	529.9	565.1	601.4	641.2	684.6	737.2
142.5°	449.6	453.2	466.0	484.4	508.9	537.2	571.2	606.3	643.1	683.4	728.9
145°	467.0	471.6	483.3	500.7	523.9	549.5	580.8	613.4	645.9	680.7	718.9
147.5°	486.5	490.0	501.1	517.2	536.5	559.2	588.7	617.3	646.8	676.6	709.2
150°	499.5	503.0	512.3	527.4	544.8	565.7	592.5	619.2	645.9	673.8	701.6
152.5°	512.5	514.2	523.4	536.7	553.2	572.2	596.2	620.1	644.0	669.1	695.1
155°	530.9	532.0	539.0	551.8	564.6	582.0	601.7	621.5	641.2	661.0	683.1
157.5°	546.2	547.4	553.0	564.1	574.3	589.0	605.7	621.5	635.9	652.6	671.7
160°	556.4	557.6	562.2	571.5	580.8	593.6	607.6	621.5	633.1	647.1	663.3
162.5°	566.7	566.0	570.6	578.0	586.4	596.4	608.5	620.6	630.3	642.4	655.9
165°	578.5	577.4	579.7	586.6	592.5	599.4	609.9	618.0	625.0	633.1	643.6
167.5°	588.3	586.9	589.0	593.4	597.6	602.0	609.6	616.4	619.6	625.0	631.5
170°	594.8	592.5	593.6	597.1	599.4	602.9	608.7	614.5	616.8	620.3	625.0
172.5°	598.5	597.1	596.4	599.9	601.3	603.8	607.8	611.7	613.1	614.8	618.5
175°	602.9	601.7	600.6	602.9	602.9	604.1	606.4	608.7	607.6	608.7	609.9
177.5°	605.0	603.1	602.2	604.1	604.1	604.1	605.0	606.9	605.0	604.1	605.0
180°	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	127.9	134.2	141.5	146.1	148.3	150.4	152.5	154.6
90°	149.0	153.3	162.3	167.8	169.8	171.8	173.8	175.8
92.5°	207.5	199.6	196.4	193.4	194.5	192.7	195.7	195.8
95°	402.9	338.3	295.8	274.4	261.3	254.0	252.5	255.7
97.5°	802.0	679.0	559.4	479.6	426.0	399.4	384.4	376.6
100°	1147.6	1009.7	856.7	720.1	625.5	577.4	545.5	526.4
102.5°	1372.7	1346.2	1235.8	1090.7	987.8	904.4	864.1	837.6
105°	1487.3	1624.4	1645.3	1610.7	1540.5	1470.3	1422.2	1407.8
107.5°	1393.3	1596.6	1723.0	1782.9	1793.8	1791.7	1783.5	1763.8
110°	1313.9	1527.2	1681.2	1780.0	1831.8	1855.7	1868.0	1868.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1241.0	1445.9	1610.1	1722.9	1794.2	1832.9	1854.5	1862.6
115°	1150.2	1334.1	1491.3	1614.3	1698.6	1753.9	1785.9	1798.2
117.5°	1080.3	1242.3	1385.2	1500.7	1586.5	1644.7	1678.2	1688.7
120°	1044.6	1193.3	1321.1	1430.0	1513.2	1569.6	1605.1	1618.5
122.5°	1015.7	1152.1	1273.3	1371.8	1446.3	1501.5	1533.1	1544.4
125°	973.0	1097.1	1203.8	1293.9	1362.8	1408.4	1439.0	1449.8
127.5°	930.9	1043.2	1143.8	1227.0	1287.2	1330.0	1356.6	1365.5
130°	903.8	1007.7	1103.4	1182.7	1241.0	1281.8	1306.4	1317.0
132.5°	877.6	973.9	1062.1	1136.7	1194.1	1234.9	1257.6	1267.3
135°	841.1	921.3	1001.4	1068.9	1120.2	1159.8	1182.1	1188.1
137.5°	811.1	878.3	942.2	1001.0	1047.6	1081.7	1101.2	1109.3
140°	792.1	850.5	906.6	959.5	997.7	1028.9	1047.3	1055.3
142.5°	776.8	826.3	874.5	918.7	954.9	983.2	999.6	1001.9
145°	755.9	795.2	832.3	866.9	895.6	916.1	928.6	932.9
147.5°	740.0	770.4	798.6	823.5	846.9	863.1	871.4	873.9
150°	729.5	755.1	779.5	800.4	817.8	831.8	838.7	839.9
152.5°	719.3	743.0	763.7	781.8	795.5	807.6	812.7	812.9
155°	705.1	723.7	741.1	753.9	766.7	774.8	779.5	777.2
157.5°	688.6	704.2	718.8	728.8	737.9	744.6	746.7	746.7
160°	678.4	691.2	704.0	712.1	720.2	726.0	727.2	727.2
162.5°	668.2	679.1	690.0	696.3	704.4	708.4	709.5	708.6
165°	652.9	661.0	669.1	673.8	678.4	683.1	683.1	681.9
167.5°	638.2	644.5	650.1	654.3	656.3	658.9	658.7	657.3
170°	630.8	634.3	638.9	641.2	642.4	645.9	644.7	642.4
172.5°	622.4	625.0	628.7	630.1	631.3	632.9	631.7	630.3
175°	613.4	614.5	615.7	616.8	616.8	618.0	616.8	614.5
177.5°	606.9	606.9	607.8	607.8	607.8	607.8	606.9	605.0
180°	604.1	604.1	604.1	604.1	604.1	604.1	604.1	604.1

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