

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: P331909

Luminaire Tested: **S123DIP-S340D1195U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331909
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1195U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5732.7 lumens
Efficiency: N/A
Efficacy: 135.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

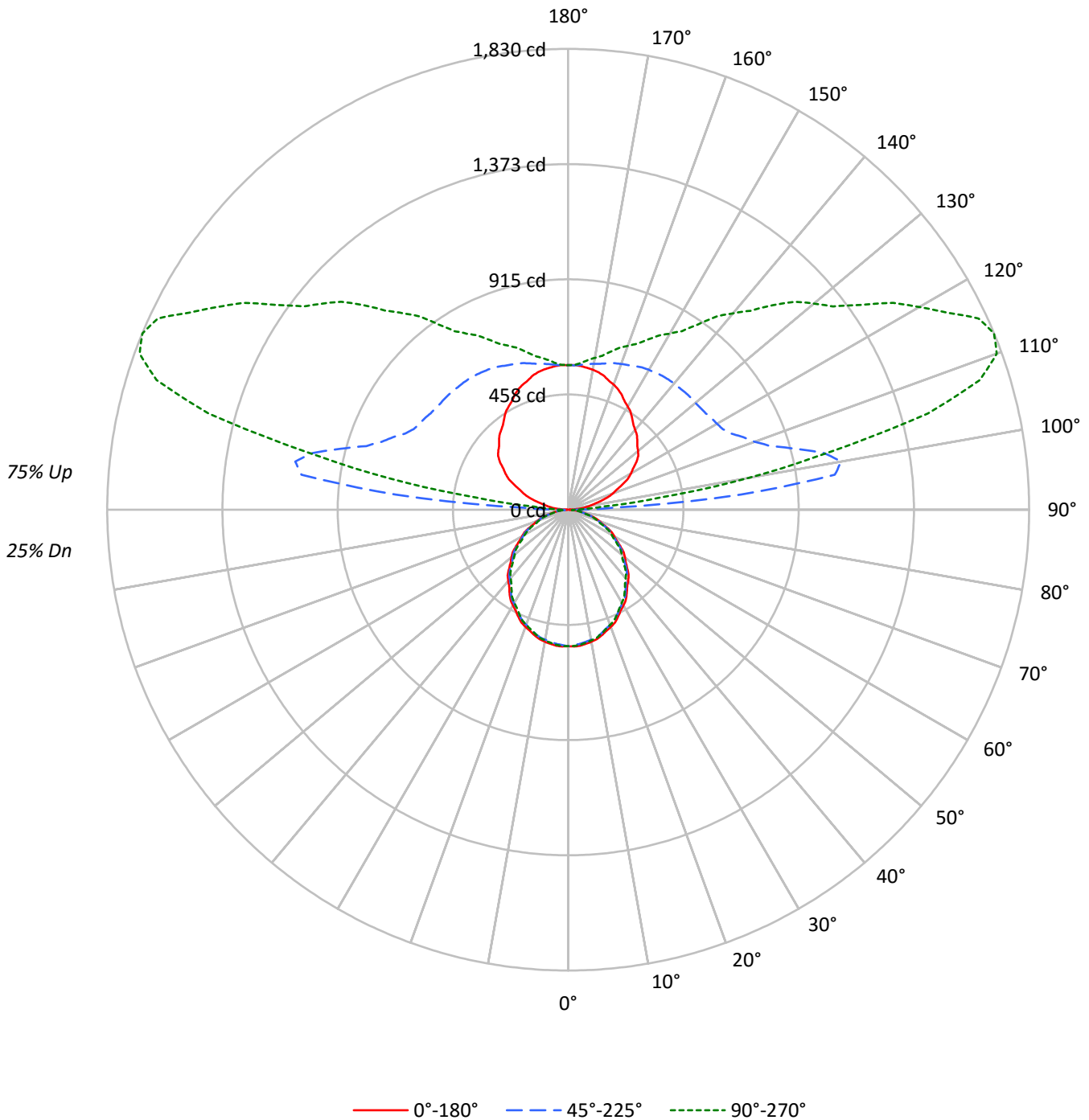
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	33	33	33	25
1	92	88	84	81	82	78	75	72	60	58	57	44	43	42	29	28	28	21
2	84	77	71	66	74	68	63	59	53	50	47	39	37	35	25	24	23	17
3	76	67	60	55	68	60	54	49	47	43	39	34	31	29	22	21	20	15
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	13
5	64	53	45	39	57	47	41	36	37	32	28	27	24	22	18	16	15	11
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	10
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	8
8	50	38	31	26	44	34	28	24	27	22	19	20	17	15	14	12	10	8
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	13	11	9	7
10	43	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5833	5833	5833
5°	5861	5780	5820
10°	5821	5729	5766
15°	5753	5665	5675
20°	5674	5573	5577
25°	5567	5462	5451
30°	5450	5340	5299
35°	5327	5210	5143
40°	5199	5067	4990
45°	5057	4937	4816
50°	4915	4776	4642
55°	4731	4609	4468
60°	4545	4413	4273
65°	4378	4200	4070
70°	4135	3959	3783
75°	3780	3643	3489
80°	3409	3267	3236
85°	2989	2878	2766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	0.9
10°-20°	144.1	2.5
20°-30°	212.9	3.7
30°-40°	248.7	4.3
40°-50°	250.0	4.4
50°-60°	219.6	3.8
60°-70°	163.6	2.9
70°-80°	93.2	1.6
80°-90°	31.2	0.5
90°-100°	319.4	5.6
100°-110°	904.4	15.8
110°-120°	889.7	15.5
120°-130°	709.7	12.4
130°-140°	559.5	9.8
140°-150°	417.6	7.3
150°-160°	291.1	5.1
160°-170°	171.0	3.0
170°-180°	55.6	1.0
0°-30°	408.1	7.1
0°-40°	656.8	11.5
0°-60°	1126.5	19.6
0°-90°	1414.5	24.7
90°-120°	2113.6	36.9
90°-150°	3800.4	66.3
90°-180°	4318.0	75.3
0°-180°	5732.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	540	535	539	539	51
15°	516	514	508	512	509	145
25°	469	466	460	460	459	216
35°	405	402	396	394	391	254
45°	332	330	324	319	316	256
55°	252	251	246	241	238	226
65°	172	170	165	161	160	170
75°	91	89	88	85	84	97
85°	24	23	23	22	22	27
90°	2	14	29	33	34	4
95°	40	128	689	201	135	43
105°	135	199	934	1634	1478	143
115°	238	297	714	1567	1797	236
125°	331	391	667	1208	1418	294
135°	388	463	658	995	1149	300
145°	443	507	650	816	898	277
155°	503	543	629	715	745	231
165°	550	565	602	638	650	155
175°	573	573	577	586	584	54
180°	574	574	574	574	574	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	543.8	543.4	543.1	542.8	542.4	541.8	540.9	540.0	539.1	538.2	539.0
5°	542.4	541.8	541.3	540.8	540.3	539.5	538.3	537.2	536.0	534.9	535.9
7.5°	537.1	536.5	536.0	535.5	535.0	534.1	533.0	531.8	530.6	529.4	530.3
10°	532.6	532.1	531.5	531.0	530.5	529.6	528.2	526.9	525.5	524.2	525.1
12.5°	526.6	526.2	525.7	525.3	524.9	524.0	522.8	521.5	520.2	519.0	519.7
15°	516.3	515.9	515.4	515.0	514.6	513.7	512.4	511.0	509.7	508.4	509.2
17.5°	504.2	503.7	503.2	502.6	502.1	501.2	499.8	498.5	497.1	495.8	496.3
20°	495.3	494.7	494.1	493.4	492.8	491.8	490.5	489.1	487.8	486.5	486.9
22.5°	485.2	484.6	484.0	483.4	482.8	481.8	480.4	479.1	477.7	476.4	476.7
25°	468.7	468.1	467.5	466.9	466.3	465.3	463.9	462.6	461.2	459.9	460.0
27.5°	451.1	450.5	449.9	449.3	448.7	447.7	446.3	444.8	443.4	441.9	442.0
30°	438.5	437.9	437.4	436.9	436.4	435.4	434.0	432.5	431.1	429.6	429.6
32.5°	425.8	425.1	424.4	423.7	423.1	422.1	421.0	419.9	418.8	417.7	417.1
35°	405.4	404.8	404.1	403.5	402.9	401.9	400.6	399.2	397.9	396.5	395.9
37.5°	384.5	383.7	382.9	382.1	381.4	380.3	378.9	377.5	376.2	374.8	374.1
40°	370.0	369.3	368.7	368.1	367.5	366.4	365.0	363.5	362.1	360.6	359.8
42.5°	355.4	354.7	354.0	353.3	352.6	351.5	350.1	348.6	347.2	345.7	344.9
45°	332.2	331.8	331.4	331.0	330.6	329.7	328.3	327.0	325.6	324.3	323.1
47.5°	309.2	308.6	308.0	307.4	306.8	305.9	304.6	303.3	302.1	300.8	299.6
50°	293.5	293.0	292.5	292.0	291.5	290.5	289.2	287.9	286.5	285.2	284.0
52.5°	277.1	276.8	276.4	276.1	275.7	274.8	273.4	272.0	270.6	269.1	268.2
55°	252.1	252.0	251.9	251.8	251.7	250.9	249.6	248.2	246.9	245.6	244.4
57.5°	228.2	227.9	227.5	227.2	226.8	226.1	225.0	223.9	222.9	221.8	220.8
60°	211.1	211.0	210.9	210.8	210.7	210.0	208.7	207.5	206.3	205.0	204.1
62.5°	195.8	195.5	195.3	195.0	194.7	194.0	192.7	191.5	190.2	189.0	188.1
65°	171.9	171.4	170.9	170.4	169.9	169.1	168.1	167.0	166.0	164.9	164.1
67.5°	146.7	146.2	145.8	145.3	144.9	144.2	143.5	142.7	141.9	141.1	140.4
70°	131.4	130.8	130.2	129.5	128.9	128.3	127.7	127.0	126.4	125.8	125.1
72.5°	115.4	114.9	114.5	114.0	113.5	113.0	112.3	111.6	110.9	110.2	109.5
75°	90.9	90.4	90.0	89.6	89.2	88.8	88.5	88.2	87.9	87.6	87.1
77.5°	69.1	68.9	68.7	68.5	68.2	67.9	67.6	67.2	66.8	66.4	66.1
80°	55.0	54.7	54.4	54.1	53.7	53.5	53.3	53.1	52.9	52.7	52.5
82.5°	41.2	41.1	41.1	41.0	40.9	40.9	40.8	40.8	40.8	40.7	40.5
85°	24.2	24.0	23.8	23.6	23.4	23.3	23.3	23.3	23.3	23.3	23.1
87.5°	10.2	10.4	10.6	11.0	11.3	11.6	12.2	12.8	13.4	14.0	13.7
90°	2.3	4.6	7.0	10.5	12.8	15.1	18.6	22.1	25.6	29.0	27.9
92.5°	14.4	21.4	31.1	40.2	50.0	67.2	97.6	147.6	196.6	178.7	134.8
95°	39.5	43.0	55.8	75.5	105.7	151.0	249.8	422.9	613.5	689.0	558.8
97.5°	67.4	68.5	78.5	95.7	125.5	174.5	268.9	464.0	781.7	1067.7	1142.3
100°	86.0	87.1	95.3	111.5	139.4	184.7	266.1	438.0	743.6	1100.3	1329.2
102.5°	105.5	107.6	114.8	130.1	155.2	196.8	269.8	415.7	687.8	1039.9	1338.4
105°	134.8	138.3	145.2	159.2	181.2	217.3	280.0	399.7	619.3	934.1	1267.6
107.5°	165.9	169.4	176.1	189.8	210.5	244.0	299.1	398.5	575.6	840.7	1143.5
110°	188.2	191.7	197.5	210.3	230.0	262.6	314.9	403.2	558.8	787.7	1065.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.7	212.2	218.0	230.7	250.5	282.1	330.7	412.5	549.6	752.4	997.6
115°	238.2	242.8	249.8	261.4	281.2	312.5	356.7	427.6	546.1	714.5	915.5
117.5°	267.7	273.0	278.8	289.5	311.6	340.7	384.3	447.5	548.2	692.2	866.0
120°	288.1	291.6	297.4	309.1	331.1	360.2	402.0	462.4	551.9	682.0	840.0
122.5°	305.8	309.3	315.1	327.6	348.8	379.7	420.6	476.4	558.4	675.5	818.6
125°	331.1	333.5	340.4	353.2	375.3	406.6	447.3	498.4	568.1	666.9	791.2
127.5°	350.4	353.9	362.5	375.5	399.9	431.3	470.5	516.6	579.3	662.7	767.1
130°	362.5	366.0	376.4	390.4	414.8	446.1	484.5	528.6	586.7	659.9	754.0
132.5°	371.8	376.2	387.6	404.3	428.7	459.2	496.6	539.8	592.3	659.0	742.0
135°	388.1	392.7	405.5	422.9	447.3	478.7	514.7	554.2	600.7	657.6	726.2
137.5°	403.4	408.3	420.8	439.4	463.6	492.6	527.2	564.9	606.3	655.0	712.4
140°	413.6	419.4	431.0	449.6	472.9	501.9	535.6	570.5	610.0	654.1	704.1
142.5°	424.8	429.7	442.2	458.9	482.2	509.4	542.1	576.0	612.8	652.3	696.6
145°	442.7	446.1	456.6	474.0	493.8	520.5	550.7	582.1	614.6	649.5	686.7
147.5°	460.8	462.9	473.1	488.2	507.3	530.0	557.7	585.8	614.6	645.1	676.9
150°	472.9	474.0	483.3	498.4	514.7	535.6	562.3	586.7	614.6	641.3	670.4
152.5°	485.0	485.2	494.5	507.7	522.1	542.1	565.1	588.6	611.8	636.7	663.0
155°	503.1	503.1	510.1	521.7	534.4	550.7	570.5	589.1	608.8	628.6	651.8
157.5°	517.5	518.4	524.0	534.2	545.1	557.7	573.5	590.2	604.9	621.4	639.2
160°	528.6	528.6	533.3	542.6	550.7	562.3	576.3	590.2	603.0	615.8	630.9
162.5°	537.0	537.0	540.7	548.2	555.4	565.1	577.2	589.3	599.3	610.2	622.5
165°	549.6	548.4	550.7	556.5	561.2	569.3	578.6	586.7	593.7	601.8	611.1
167.5°	559.1	557.7	558.8	563.3	566.5	571.6	578.4	584.9	588.1	593.5	600.2
170°	564.7	562.3	563.5	567.0	569.3	571.6	577.4	582.1	584.4	587.9	593.7
172.5°	568.4	567.0	567.2	569.8	571.2	572.6	577.4	581.2	581.6	583.2	587.2
175°	572.8	571.6	570.5	572.8	572.8	574.0	576.3	578.6	577.4	577.4	579.8
177.5°	574.9	574.0	573.0	574.0	574.0	574.0	574.9	576.7	574.9	574.0	574.9
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	539.8	540.7	541.5	541.9	541.8	541.7	541.6	541.5
5°	537.0	538.0	539.1	539.5	539.3	539.1	538.8	538.6
7.5°	531.3	532.2	533.1	533.5	533.4	533.3	533.2	533.0
10°	526.1	527.0	527.9	528.3	528.1	527.9	527.7	527.5
12.5°	520.3	521.0	521.7	522.0	521.9	521.7	521.6	521.5
15°	510.0	510.8	511.7	511.8	511.1	510.5	509.9	509.3
17.5°	496.9	497.5	498.1	498.3	498.0	497.8	497.6	497.4
20°	487.3	487.7	488.1	488.2	487.8	487.5	487.2	486.9
22.5°	477.0	477.4	477.7	477.7	477.3	476.9	476.5	476.1
25°	460.1	460.2	460.3	460.2	459.9	459.6	459.3	459.0
27.5°	442.1	442.2	442.2	442.1	441.7	441.3	440.9	440.5
30°	429.6	429.6	429.6	429.2	428.5	427.8	427.1	426.3
32.5°	416.5	415.9	415.4	414.9	414.5	414.1	413.7	413.3
35°	395.3	394.7	394.0	393.5	393.0	392.4	391.9	391.4
37.5°	373.3	372.6	371.8	371.3	371.0	370.6	370.3	370.0
40°	359.0	358.2	357.3	356.7	356.3	355.9	355.5	355.1
42.5°	344.1	343.2	342.4	341.8	341.4	341.0	340.6	340.1
45°	321.8	320.6	319.3	318.5	317.9	317.4	316.9	316.4
47.5°	298.4	297.2	295.9	295.1	294.6	294.2	293.7	293.3
50°	282.9	281.7	280.6	279.7	279.1	278.5	277.9	277.2
52.5°	267.2	266.2	265.2	264.4	263.8	263.2	262.6	262.0
55°	243.3	242.1	241.0	240.2	239.7	239.1	238.6	238.1
57.5°	219.8	218.7	217.7	216.9	216.3	215.7	215.1	214.5
60°	203.2	202.2	201.3	200.6	200.0	199.5	199.0	198.5
62.5°	187.1	186.2	185.3	184.6	184.3	183.9	183.6	183.2
65°	163.3	162.5	161.6	161.1	160.8	160.4	160.1	159.8
67.5°	139.6	138.9	138.2	137.6	137.2	136.7	136.3	135.9
70°	124.4	123.6	122.9	122.3	121.8	121.3	120.7	120.2
72.5°	108.9	108.2	107.6	107.1	106.9	106.6	106.3	106.0
75°	86.6	86.0	85.5	85.1	84.8	84.5	84.2	83.9
77.5°	65.7	65.4	65.0	64.9	64.9	64.9	64.9	64.9
80°	52.4	52.3	52.2	52.2	52.2	52.2	52.2	52.2
82.5°	40.4	40.2	40.0	39.8	39.8	39.7	39.6	39.5
85°	22.9	22.7	22.5	22.4	22.4	22.4	22.4	22.4
87.5°	13.8	14.0	14.1	14.6	14.3	14.6	14.8	14.6
90°	29.0	30.2	31.4	33.7	32.5	33.7	34.9	33.7
92.5°	97.8	77.6	68.5	62.5	60.4	56.9	58.1	56.0
95°	418.3	283.5	221.9	180.1	158.0	147.6	139.4	134.8
97.5°	1042.6	835.1	685.3	546.3	460.6	408.3	376.9	366.9
100°	1369.8	1275.7	1139.8	974.8	857.4	772.6	727.3	728.5
102.5°	1478.6	1475.5	1396.3	1291.7	1200.4	1133.3	1095.4	1068.7
105°	1510.4	1626.6	1648.7	1618.5	1565.0	1520.9	1483.7	1477.9
107.5°	1418.8	1607.5	1709.3	1750.7	1751.6	1736.7	1724.2	1713.5
110°	1331.5	1545.3	1691.7	1773.0	1805.5	1814.8	1812.5	1810.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1245.0	1463.5	1627.5	1732.1	1791.6	1820.4	1829.2	1829.7
115°	1130.5	1332.6	1503.4	1630.1	1717.2	1768.3	1791.6	1797.4
117.5°	1047.5	1222.0	1375.4	1503.9	1594.8	1653.3	1686.8	1694.7
120°	1003.8	1160.7	1300.1	1417.5	1509.2	1574.3	1602.2	1609.2
122.5°	969.4	1111.4	1240.6	1349.6	1431.2	1489.7	1520.4	1529.2
125°	923.7	1050.3	1161.8	1254.8	1329.2	1380.3	1409.3	1417.5
127.5°	883.7	996.6	1097.2	1181.8	1248.1	1291.7	1318.0	1325.4
130°	858.6	963.2	1057.3	1136.3	1197.9	1239.7	1264.1	1273.4
132.5°	835.4	931.6	1019.2	1094.5	1152.3	1194.1	1215.8	1222.3
135°	804.0	886.5	962.0	1028.2	1085.2	1120.0	1140.9	1149.1
137.5°	775.4	843.0	908.1	965.5	1013.4	1048.7	1066.3	1071.7
140°	758.7	817.9	873.7	923.7	967.8	1000.4	1018.9	1017.8
142.5°	742.9	793.8	842.1	885.6	923.2	952.0	968.7	967.6
145°	723.8	762.2	799.4	833.0	862.1	886.5	895.8	898.1
147.5°	708.3	738.7	768.7	792.6	814.7	831.2	840.0	840.9
150°	697.1	723.8	748.2	770.3	787.7	800.5	807.5	807.5
152.5°	686.9	709.9	731.5	749.9	763.6	775.4	779.6	779.6
155°	671.5	690.1	707.6	721.5	732.0	741.3	743.6	744.7
157.5°	655.3	670.9	684.3	695.2	704.3	711.3	713.1	712.9
160°	646.0	658.8	670.4	678.5	686.7	693.6	693.6	692.5
162.5°	634.8	645.8	656.4	663.6	669.0	675.0	675.0	673.9
165°	620.4	627.4	635.5	641.3	646.0	650.6	649.5	649.5
167.5°	607.9	613.2	617.9	622.1	624.1	627.4	626.2	626.2
170°	599.5	603.0	607.6	610.0	611.1	613.5	612.3	612.3
172.5°	592.1	594.6	598.4	599.7	600.0	602.3	600.2	599.3
175°	582.1	583.2	585.6	585.6	585.6	586.7	585.6	584.4
177.5°	575.8	576.7	577.7	577.7	576.7	577.7	575.8	575.8
180°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0

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