

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: P331999-930

Luminaire Tested: **S123DIP-S775D1195U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331999-930
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-S775D1195U930-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 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: 6107.7 lumens
Efficiency: N/A
Efficacy: 107.3 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: General Diffuse

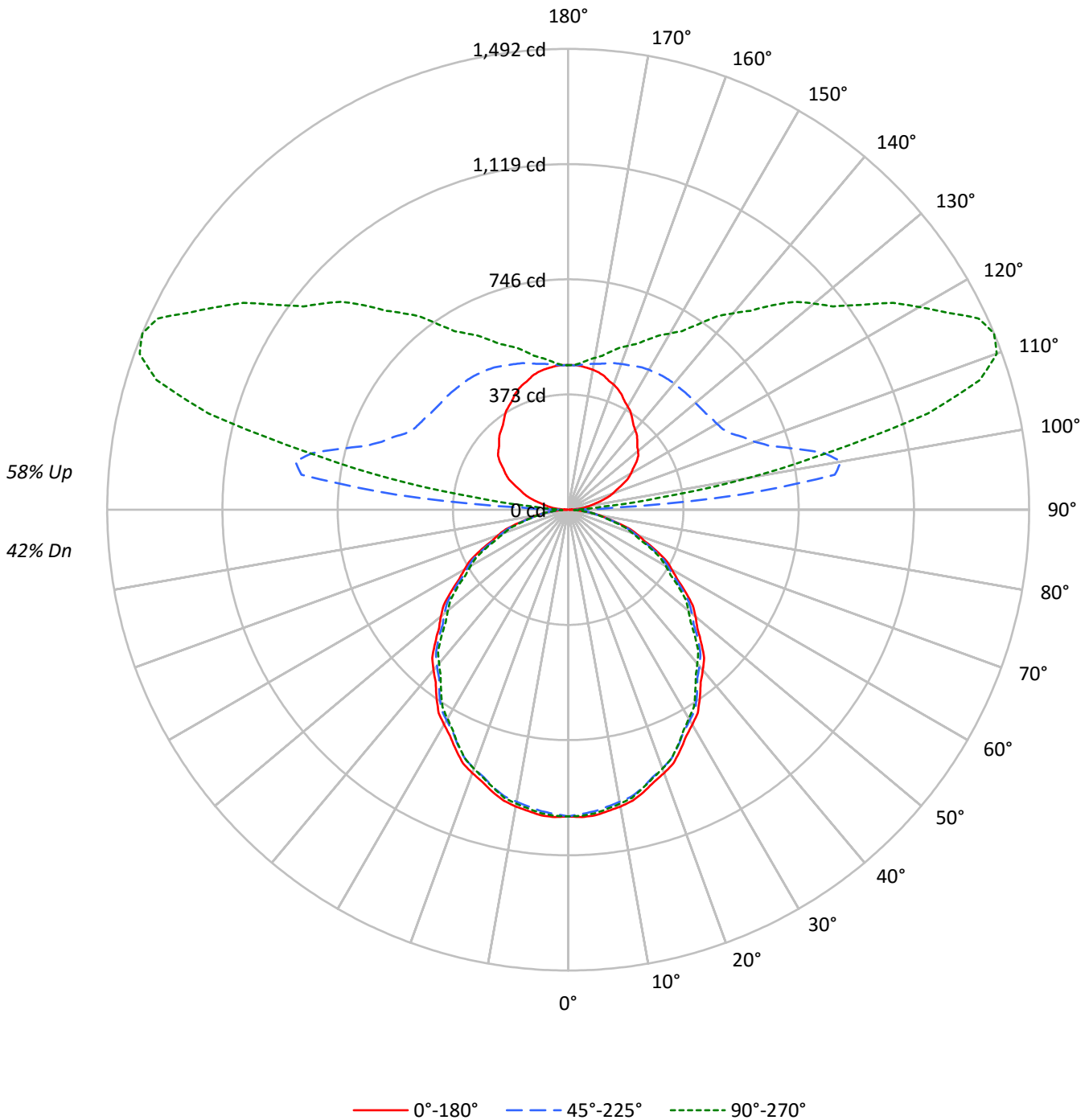
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	96	96	96	96	79	79	79		63	63	63		49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65		56	54	53		43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54		49	46	44		38	36	35	30
3	80	70	63	57	72	64	58	53	53	49	45		43	40	37		34	31	30	25
4	73	62	54	48	66	57	50	45	47	42	38		38	35	32		30	28	25	22
5	67	55	47	41	61	51	44	38	42	37	33		34	31	27		27	24	22	19
6	62	50	42	36	56	46	39	33	38	33	29		31	27	24		25	22	19	16
7	57	45	37	31	52	41	34	29	35	29	25		28	24	21		22	19	17	15
8	53	41	33	28	48	37	31	26	31	26	22		26	22	19		21	18	15	13
9	49	37	30	25	45	34	28	23	29	24	20		24	20	17		19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18		22	18	15		18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10687	10687	10687
5°	10737	10589	10662
10°	10665	10497	10563
15°	10541	10379	10398
20°	10394	10208	10219
25°	10200	10007	9987
30°	9984	9783	9708
35°	9759	9546	9423
40°	9524	9284	9140
45°	9266	9045	8824
50°	9008	8748	8505
55°	8668	8443	8188
60°	8325	8086	7830
65°	8023	7697	7457
70°	7578	7254	6930
75°	6924	6675	6392
80°	6248	5976	5926
85°	5483	5274	5064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	1.5
10°-20°	264.1	4.3
20°-30°	390.1	6.4
30°-40°	455.7	7.5
40°-50°	458.1	7.5
50°-60°	402.4	6.6
60°-70°	299.8	4.9
70°-80°	170.8	2.8
80°-90°	52.7	0.9
90°-100°	260.4	4.3
100°-110°	737.4	12.1
110°-120°	725.4	11.9
120°-130°	578.6	9.5
130°-140°	456.2	7.5
140°-150°	340.5	5.6
150°-160°	237.3	3.9
160°-170°	139.4	2.3
170°-180°	45.4	0.7
0°-30°	747.7	12.2
0°-40°	1203.3	19.7
0°-60°	2063.8	33.8
0°-90°	2587.1	42.4
90°-120°	1723.2	28.2
90°-150°	3098.5	50.7
90°-180°	3521.0	57.6
0°-180°	6107.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	994	989	980	988	987	94
15°	946	942	931	938	933	267
25°	859	853	843	843	841	395
35°	743	737	726	721	717	464
45°	609	605	594	584	580	470
55°	462	460	450	441	436	414
65°	315	310	302	296	293	311
75°	166	163	160	156	154	178
85°	44	43	43	41	41	49
90°	2	11	24	27	28	5
95°	32	105	562	164	110	35
105°	110	162	762	1332	1205	117
115°	194	242	582	1277	1465	192
125°	270	319	544	985	1156	239
135°	316	378	536	811	937	244
145°	361	414	530	665	732	226
155°	410	442	512	583	607	189
165°	448	461	491	520	530	126
175°	467	468	471	477	476	44
180°	468	468	468	468	468	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	996.2	995.6	995.1	994.4	993.8	992.7	991.0	989.4	987.7	986.0	987.5
5°	993.7	992.7	991.8	990.8	989.9	988.4	986.3	984.2	982.1	980.0	981.9
7.5°	984.0	983.0	982.0	981.1	980.2	978.6	976.4	974.3	972.1	970.0	971.7
10°	975.8	974.8	973.9	972.9	972.0	970.3	967.8	965.3	962.9	960.4	962.1
12.5°	964.8	964.0	963.3	962.5	961.6	960.1	957.8	955.4	953.2	950.8	952.1
15°	945.9	945.1	944.4	943.6	942.8	941.3	938.7	936.3	933.8	931.4	932.9
17.5°	923.8	922.8	921.9	920.9	919.9	918.2	915.7	913.2	910.8	908.3	909.4
20°	907.4	906.3	905.2	904.1	902.9	901.1	898.6	896.2	893.7	891.2	892.0
22.5°	889.0	887.9	886.7	885.6	884.4	882.6	880.2	877.8	875.3	872.8	873.4
25°	858.8	857.7	856.6	855.4	854.3	852.5	849.9	847.5	845.1	842.6	842.8
27.5°	826.6	825.4	824.3	823.2	822.1	820.3	817.6	815.0	812.3	809.6	809.8
30°	803.3	802.3	801.4	800.5	799.5	797.7	795.1	792.4	789.8	787.1	787.1
32.5°	780.1	778.9	777.6	776.3	775.1	773.5	771.4	769.3	767.3	765.2	764.2
35°	742.7	741.6	740.5	739.3	738.2	736.4	733.9	731.4	729.0	726.5	725.4
37.5°	704.4	703.0	701.6	700.1	698.7	696.8	694.2	691.7	689.2	686.7	685.3
40°	677.8	676.7	675.6	674.4	673.3	671.4	668.7	666.1	663.4	660.7	659.3
42.5°	651.2	649.9	648.6	647.3	646.0	644.1	641.4	638.7	636.1	633.4	631.9
45°	608.7	607.9	607.2	606.4	605.6	604.1	601.5	599.1	596.6	594.2	591.9
47.5°	566.5	565.4	564.3	563.2	562.1	560.4	558.1	555.8	553.4	551.1	548.9
50°	537.9	536.9	535.9	535.0	534.0	532.3	529.9	527.4	524.9	522.4	520.4
52.5°	507.8	507.1	506.5	505.8	505.2	503.5	500.9	498.3	495.7	493.1	491.3
55°	461.9	461.6	461.5	461.3	461.1	459.7	457.3	454.9	452.3	449.9	447.8
57.5°	418.2	417.5	416.9	416.2	415.6	414.3	412.3	410.3	408.3	406.3	404.5
60°	386.7	386.5	386.4	386.1	386.0	384.7	382.5	380.2	377.9	375.6	373.9
62.5°	358.7	358.2	357.8	357.3	356.8	355.4	353.1	350.8	348.5	346.3	344.5
65°	315.0	314.1	313.1	312.2	311.2	309.8	307.9	306.0	304.1	302.2	300.7
67.5°	268.7	267.9	267.1	266.2	265.4	264.2	262.9	261.4	259.9	258.5	257.1
70°	240.8	239.6	238.5	237.3	236.2	235.1	233.9	232.8	231.6	230.5	229.2
72.5°	211.4	210.5	209.7	208.9	208.1	207.0	205.7	204.4	203.1	201.8	200.6
75°	166.5	165.7	164.9	164.2	163.5	162.7	162.2	161.6	161.0	160.5	159.6
77.5°	126.7	126.3	125.9	125.5	125.0	124.5	123.8	123.1	122.5	121.7	121.1
80°	100.8	100.2	99.6	99.1	98.5	98.0	97.6	97.3	96.9	96.4	96.3
82.5°	75.5	75.3	75.3	75.1	75.0	74.9	74.8	74.8	74.7	74.6	74.3
85°	44.4	44.0	43.6	43.3	42.9	42.7	42.7	42.7	42.7	42.7	42.3
87.5°	18.1	18.1	18.0	18.1	18.0	18.1	18.5	18.9	19.3	19.7	19.4
90°	1.9	3.8	5.7	8.6	10.4	12.3	15.2	18.0	20.9	23.6	22.7
92.5°	11.7	17.4	25.4	32.8	40.8	54.8	79.6	120.3	160.3	145.7	109.9
95°	32.2	35.1	45.5	61.6	86.2	123.1	203.7	344.8	500.2	561.7	455.6
97.5°	55.0	55.8	64.0	78.0	102.3	142.3	219.2	378.3	637.3	870.5	931.3
100°	70.1	71.0	77.7	90.9	113.7	150.6	217.0	357.1	606.3	897.1	1083.7
102.5°	86.0	87.7	93.6	106.1	126.5	160.5	220.0	338.9	560.8	847.8	1091.2
105°	109.9	112.8	118.4	129.8	147.7	177.2	228.3	325.9	504.9	761.6	1033.5
107.5°	135.3	138.1	143.6	154.7	171.6	198.9	243.9	324.9	469.3	685.4	932.3
110°	153.4	156.3	161.0	171.5	187.5	214.1	256.7	328.7	455.6	642.2	868.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.2	173.0	177.7	188.1	204.2	230.0	269.6	336.3	448.1	613.4	813.3
115°	194.2	198.0	203.7	213.1	229.3	254.8	290.8	348.6	445.2	582.5	746.4
117.5°	218.3	222.6	227.3	236.0	254.0	277.8	313.3	364.8	446.9	564.4	706.0
120°	234.9	237.7	242.5	252.0	269.9	293.7	327.8	377.0	450.0	556.0	684.9
122.5°	249.3	252.2	256.9	267.1	284.4	309.6	342.9	388.4	455.3	550.7	667.4
125°	269.9	271.9	277.5	288.0	306.0	331.5	364.7	406.3	463.2	543.7	645.1
127.5°	285.7	288.5	295.5	306.1	326.0	351.6	383.6	421.2	472.3	540.3	625.4
130°	295.5	298.4	306.9	318.3	338.2	363.7	395.0	431.0	478.3	538.0	614.7
132.5°	303.1	306.7	316.0	329.6	349.5	374.4	404.9	440.1	482.9	537.3	605.0
135°	316.4	320.2	330.6	344.8	364.7	390.3	419.6	451.8	489.8	536.1	592.1
137.5°	328.9	332.9	343.1	358.2	378.0	401.6	429.8	460.6	494.3	534.0	580.8
140°	337.2	341.9	351.4	366.6	385.6	409.2	436.7	465.1	497.3	533.3	574.1
142.5°	346.3	350.3	360.5	374.1	393.1	415.3	442.0	469.6	499.6	531.8	567.9
145°	360.9	363.7	372.3	386.5	402.6	424.4	449.0	474.6	501.1	529.5	559.9
147.5°	375.7	377.4	385.7	398.0	413.6	432.1	454.7	477.6	501.1	525.9	551.9
150°	385.6	386.5	394.0	406.3	419.6	436.7	458.4	478.3	501.1	522.9	546.6
152.5°	395.4	395.6	403.2	413.9	425.7	442.0	460.7	479.9	498.8	519.1	540.5
155°	410.2	410.2	415.9	425.3	435.7	449.0	465.1	480.3	496.4	512.5	531.4
157.5°	421.9	422.7	427.2	435.5	444.4	454.7	467.6	481.2	493.2	506.6	521.1
160°	431.0	431.0	434.8	442.4	449.0	458.4	469.9	481.2	491.6	502.1	514.4
162.5°	437.8	437.8	440.8	446.9	452.8	460.7	470.6	480.5	488.6	497.5	507.5
165°	448.1	447.1	449.0	453.7	457.5	464.1	471.7	478.3	484.0	490.6	498.2
167.5°	455.8	454.7	455.6	459.3	461.9	466.0	471.6	476.9	479.5	483.9	489.3
170°	460.4	458.4	459.4	462.3	464.1	466.0	470.8	474.6	476.5	479.3	484.0
172.5°	463.4	462.3	462.4	464.6	465.7	466.8	470.8	473.9	474.2	475.5	478.7
175°	467.0	466.0	465.1	467.0	467.0	468.0	469.9	471.7	470.8	470.8	472.7
177.5°	468.7	468.0	467.2	468.0	468.0	468.0	468.7	470.2	468.7	468.0	468.7
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	989.0	990.6	992.1	992.8	992.6	992.5	992.3	992.1
5°	983.8	985.7	987.7	988.4	988.0	987.7	987.2	986.8
7.5°	973.4	975.1	976.8	977.5	977.3	977.1	976.8	976.6
10°	963.8	965.5	967.2	967.9	967.5	967.1	966.8	966.4
12.5°	953.3	954.6	955.9	956.3	956.1	955.9	955.7	955.4
15°	934.4	935.9	937.4	937.6	936.5	935.3	934.3	933.1
17.5°	910.4	911.5	912.6	912.9	912.5	912.1	911.7	911.3
20°	892.8	893.5	894.3	894.4	893.8	893.2	892.7	892.1
22.5°	874.0	874.7	875.2	875.1	874.5	873.8	873.0	872.3
25°	842.9	843.2	843.3	843.2	842.6	842.0	841.5	840.9
27.5°	809.9	810.1	810.2	809.9	809.3	808.5	807.8	807.1
30°	787.1	787.1	787.1	786.4	785.1	783.7	782.4	781.1
32.5°	763.1	762.1	761.0	760.1	759.4	758.6	757.9	757.2
35°	724.2	723.1	721.9	720.9	719.9	719.0	718.0	717.1
37.5°	684.0	682.6	681.3	680.3	679.6	679.1	678.4	677.8
40°	657.7	656.2	654.7	653.5	652.8	652.0	651.3	650.5
42.5°	630.4	628.8	627.4	626.2	625.5	624.7	623.9	623.2
45°	589.6	587.3	585.1	583.4	582.5	581.6	580.6	579.7
47.5°	546.7	544.5	542.2	540.6	539.8	539.0	538.2	537.3
50°	518.3	516.2	514.1	512.5	511.4	510.2	509.1	507.9
52.5°	489.5	487.7	485.9	484.5	483.4	482.2	481.1	480.0
55°	445.7	443.6	441.6	440.0	439.0	438.1	437.2	436.3
57.5°	402.6	400.8	398.9	397.5	396.3	395.3	394.1	393.1
60°	372.2	370.5	368.8	367.5	366.5	365.6	364.6	363.7
62.5°	342.8	341.1	339.4	338.3	337.6	337.0	336.3	335.7
65°	299.1	297.7	296.1	295.1	294.5	293.9	293.3	292.8
67.5°	255.8	254.5	253.2	252.1	251.4	250.5	249.7	248.9
70°	227.9	226.5	225.2	224.0	223.1	222.2	221.2	220.2
72.5°	199.4	198.3	197.1	196.2	195.8	195.3	194.8	194.3
75°	158.6	157.7	156.7	156.0	155.4	154.8	154.3	153.7
77.5°	120.4	119.8	119.1	118.9	118.9	118.9	118.9	118.9
80°	96.1	95.9	95.7	95.6	95.6	95.6	95.6	95.6
82.5°	73.9	73.6	73.2	73.0	72.9	72.7	72.6	72.4
85°	41.9	41.6	41.2	41.0	41.0	41.0	41.0	41.0
87.5°	19.5	19.5	19.6	19.8	19.6	19.8	20.1	19.8
90°	23.6	24.6	25.6	27.5	26.5	27.5	28.5	27.5
92.5°	79.7	63.3	55.8	51.0	49.2	46.4	47.4	45.7
95°	341.0	231.1	180.9	146.8	128.8	120.3	113.7	109.9
97.5°	850.0	680.9	558.7	445.4	375.5	332.9	307.3	299.1
100°	1116.8	1040.1	929.3	794.8	699.0	629.9	593.0	593.9
102.5°	1205.5	1203.0	1138.4	1053.1	978.7	924.0	893.1	871.3
105°	1231.4	1326.2	1344.2	1319.6	1275.9	1240.0	1209.7	1204.9
107.5°	1156.7	1310.6	1393.6	1427.3	1428.1	1415.9	1405.7	1397.0
110°	1085.6	1259.9	1379.2	1445.5	1472.0	1479.6	1477.7	1475.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1015.0	1193.2	1326.9	1412.2	1460.7	1484.2	1491.3	1491.8
115°	921.7	1086.5	1225.7	1329.0	1400.0	1441.7	1460.7	1465.4
117.5°	854.0	996.3	1121.4	1226.1	1300.2	1347.9	1375.2	1381.7
120°	818.4	946.3	1060.0	1155.7	1230.4	1283.5	1306.3	1312.0
122.5°	790.4	906.1	1011.5	1100.3	1166.9	1214.6	1239.6	1246.8
125°	753.1	856.3	947.2	1023.0	1083.7	1125.4	1149.0	1155.7
127.5°	720.5	812.5	894.5	963.5	1017.6	1053.1	1074.6	1080.6
130°	700.0	785.3	862.0	926.4	976.6	1010.7	1030.6	1038.2
132.5°	681.1	759.5	831.0	892.3	939.5	973.5	991.2	996.5
135°	655.5	722.8	784.3	838.3	884.8	913.1	930.2	936.9
137.5°	632.2	687.3	740.4	787.2	826.2	855.0	869.4	873.8
140°	618.6	666.8	712.3	753.1	789.0	815.6	830.7	829.8
142.5°	605.7	647.2	686.6	722.0	752.7	776.2	789.8	788.9
145°	590.1	621.4	651.8	679.1	702.9	722.8	730.3	732.2
147.5°	577.5	602.3	626.7	646.2	664.2	677.7	684.9	685.6
150°	568.3	590.1	610.0	628.0	642.2	652.6	658.4	658.4
152.5°	560.0	578.8	596.4	611.4	622.6	632.2	635.6	635.6
155°	547.5	562.6	576.9	588.2	596.8	604.4	606.3	607.2
157.5°	534.3	547.0	557.9	566.8	574.2	579.9	581.4	581.2
160°	526.7	537.1	546.6	553.2	559.9	565.5	565.5	564.6
162.5°	517.6	526.5	535.2	541.0	545.4	550.3	550.3	549.4
165°	505.8	511.5	518.1	522.9	526.7	530.4	529.5	529.5
167.5°	495.6	499.9	503.8	507.2	508.8	511.5	510.5	510.5
170°	488.8	491.6	495.4	497.3	498.2	500.2	499.2	499.2
172.5°	482.7	484.8	487.9	488.9	489.2	491.1	489.3	488.6
175°	474.6	475.5	477.4	477.4	477.4	478.3	477.4	476.5
177.5°	469.4	470.2	471.0	471.0	470.2	471.0	469.4	469.4
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0

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