

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: P332621-840

Luminaire Tested: **S124DIP-S795D1205U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332621-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S795D1205U840-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7617.2 lumens
Efficiency: N/A
Efficacy: 133.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

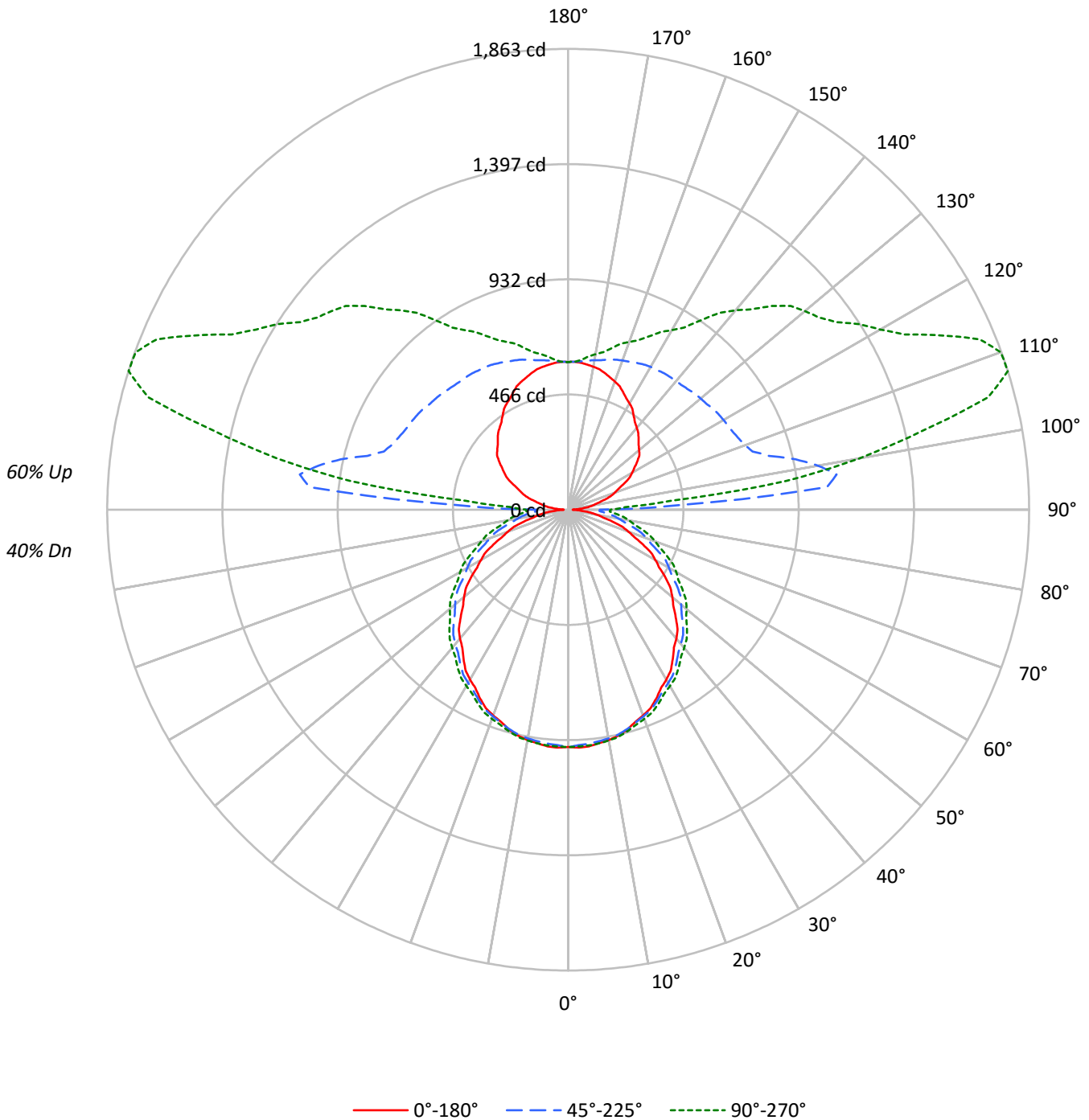
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	78	75	67	64	62	53	51	49	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	22
4	71	60	52	46	64	55	48	43	45	40	36	36	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	35	30	32	28	25	24	21	19	16
6	60	48	40	34	54	44	37	31	36	30	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	30	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.2
10°-20°	260.3	3.4
20°-30°	393.5	5.2
30°-40°	476.1	6.3
40°-50°	503.4	6.6
50°-60°	473.7	6.2
60°-70°	393.1	5.2
70°-80°	276.1	3.6
80°-90°	159.4	2.1
90°-100°	524.1	6.9
100°-110°	966.5	12.7
110°-120°	850.3	11.2
120°-130°	702.5	9.2
130°-140°	575.3	7.6
140°-150°	433.2	5.7
150°-160°	302.9	4.0
160°-170°	178.2	2.3
170°-180°	58.0	0.8
0°-30°	744.6	9.8
0°-40°	1220.8	16.0
0°-60°	2197.9	28.9
0°-90°	3026.4	39.7
90°-120°	2340.8	30.7
90°-150°	4051.8	53.2
90°-180°	4591.0	60.3
0°-180°	7617.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	18	70	127	160	171	13
95°	53	172	1050	595	418	54
105°	147	231	841	1754	1757	157
115°	248	321	737	1392	1667	246
125°	341	405	713	1172	1322	304
135°	402	479	687	1023	1164	311
145°	462	528	674	846	934	290
155°	524	566	655	742	773	242
165°	572	589	628	665	675	161
175°	596	597	602	610	608	57
180°	597	597	597	597	597	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.0	42.2	52.7	62.6	72.6	82.7	94.6	105.0	115.9	126.9	133.6
90°	18.4	30.3	43.3	54.0	64.7	74.6	92.0	102.2	114.8	127.4	133.2
92.5°	29.7	44.4	64.0	86.9	112.7	146.5	216.4	317.7	416.7	473.4	418.0
95°	52.7	64.1	83.7	106.8	142.9	201.0	312.9	515.1	805.4	1049.9	1083.3
97.5°	82.1	89.0	105.8	126.6	157.6	207.1	295.5	464.0	752.6	1094.1	1328.5
100°	101.0	107.2	121.6	141.9	170.5	215.7	294.3	436.2	684.9	1025.1	1331.9
102.5°	119.8	127.1	139.8	158.4	185.2	228.1	299.9	425.7	638.5	941.0	1257.1
105°	146.9	155.2	165.9	184.7	210.7	251.5	316.6	422.8	596.0	840.7	1122.5
107.5°	179.2	185.4	195.2	214.1	238.2	277.9	337.9	434.9	583.7	781.8	1012.8
110°	199.9	205.5	214.8	232.2	256.6	294.2	354.2	444.6	582.1	760.6	957.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.6	225.0	234.7	250.9	274.9	312.0	369.8	455.2	583.8	747.9	923.8
115°	248.2	253.9	264.2	278.1	302.6	339.1	393.6	471.7	588.5	737.0	890.1
117.5°	278.9	283.5	292.1	306.3	328.4	365.5	417.2	489.1	594.1	729.3	871.1
120°	298.7	301.8	310.7	324.4	345.0	381.7	433.2	501.2	598.4	725.1	860.1
122.5°	317.5	320.0	328.4	340.4	362.4	397.7	448.8	512.6	603.0	719.8	848.3
125°	341.0	345.6	352.3	365.0	387.1	422.8	471.0	531.0	610.9	713.1	830.2
127.5°	362.6	366.2	374.5	389.0	411.9	447.3	492.6	546.7	615.9	704.0	806.9
130°	374.1	378.5	387.7	405.0	427.1	462.9	506.6	556.2	619.9	698.7	792.2
132.5°	386.3	389.7	401.7	418.2	442.1	475.6	518.6	566.4	623.8	694.4	779.2
135°	402.3	407.0	418.7	438.7	463.3	494.6	535.0	579.0	628.7	686.7	758.6
137.5°	419.4	423.6	436.4	455.0	480.4	509.8	546.7	587.0	630.6	681.6	741.1
140°	431.6	434.9	447.6	467.3	491.7	519.9	555.3	593.1	633.2	678.0	731.6
142.5°	443.9	447.4	459.3	478.3	501.9	529.1	563.2	597.7	635.6	676.3	723.9
145°	462.2	465.5	477.1	493.2	515.2	541.0	571.5	603.2	637.2	673.6	712.6
147.5°	483.1	484.0	494.1	510.8	529.1	552.2	580.9	608.5	638.3	669.3	702.7
150°	496.2	497.3	506.3	520.2	537.6	559.8	585.5	611.4	638.3	666.5	695.9
152.5°	507.7	507.8	517.2	530.3	545.9	566.3	589.4	613.3	636.5	661.9	688.3
155°	524.5	525.7	532.7	544.5	557.4	575.0	594.9	614.9	633.7	654.8	677.1
157.5°	541.2	541.2	547.8	556.9	568.2	582.1	599.0	614.9	630.7	647.5	665.6
160°	551.5	551.5	556.2	564.4	573.8	586.7	600.8	614.9	627.8	641.9	657.1
162.5°	560.9	560.0	563.7	571.0	579.5	589.6	602.7	614.9	625.0	636.2	649.6
165°	571.5	571.5	573.8	579.7	585.5	592.6	603.2	612.6	619.6	627.8	637.2
167.5°	582.1	580.9	582.1	586.5	589.8	595.2	602.9	609.8	614.0	619.4	625.9
170°	586.7	585.5	586.7	590.3	592.6	596.1	602.0	607.8	610.2	613.7	618.4
172.5°	591.4	590.3	590.5	593.1	594.5	597.0	601.1	606.0	606.4	608.0	611.9
175°	596.1	594.9	594.9	596.1	597.3	597.3	599.7	603.2	602.0	602.0	604.3
177.5°	598.2	597.3	596.3	597.3	597.3	597.3	598.2	600.1	598.2	598.2	599.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	140.8	147.9	155.0	159.6	161.9	164.2	166.1	168.2
90°	141.3	149.4	157.5	161.9	165.0	168.0	168.8	170.8
92.5°	345.1	294.8	266.1	246.9	235.0	230.6	228.5	230.5
95°	975.8	800.4	649.6	540.1	484.7	450.5	431.5	418.5
97.5°	1384.0	1322.6	1214.2	1095.8	1013.6	945.0	911.9	889.5
100°	1509.7	1539.6	1488.5	1405.8	1305.4	1235.5	1201.9	1194.3
102.5°	1498.4	1621.1	1644.1	1611.9	1551.2	1501.2	1465.9	1460.3
105°	1397.1	1606.1	1728.2	1780.3	1784.5	1777.1	1762.5	1757.4
107.5°	1256.7	1478.7	1648.2	1756.7	1816.3	1844.8	1858.3	1863.0
110°	1171.7	1380.3	1555.9	1688.7	1773.9	1825.1	1848.2	1860.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1107.9	1292.7	1458.9	1591.5	1688.0	1749.5	1781.0	1800.1
115°	1042.0	1191.6	1334.1	1450.3	1544.6	1616.7	1656.0	1667.0
117.5°	1005.9	1130.3	1243.2	1342.2	1423.2	1484.2	1524.2	1533.4
120°	988.1	1102.0	1200.6	1287.3	1356.0	1409.6	1442.0	1456.8
122.5°	972.5	1082.7	1172.9	1249.1	1307.4	1353.2	1380.8	1395.3
125°	947.5	1052.9	1138.3	1205.9	1254.3	1289.7	1313.4	1321.9
127.5°	917.1	1017.7	1102.8	1167.0	1215.8	1247.7	1268.1	1276.8
130°	893.9	991.0	1075.0	1140.1	1189.6	1220.4	1240.6	1249.1
132.5°	870.4	961.6	1043.6	1108.5	1157.2	1191.7	1210.9	1219.4
135°	836.4	916.5	991.9	1053.2	1101.6	1135.8	1156.1	1164.5
137.5°	806.2	874.1	938.0	993.3	1038.4	1072.0	1088.6	1098.3
140°	788.7	847.0	902.9	954.3	996.5	1023.6	1041.2	1051.8
142.5°	773.1	824.4	872.4	917.0	954.3	979.3	994.8	1002.4
145°	751.5	792.8	829.5	863.5	893.8	914.7	927.5	934.2
147.5°	733.8	765.7	794.1	820.3	842.6	860.6	870.3	873.1
150°	724.1	751.0	774.5	795.6	814.4	829.6	836.7	837.9
152.5°	713.7	736.9	758.5	775.9	791.8	804.3	808.5	809.7
155°	698.2	717.0	734.6	748.7	760.4	769.8	773.4	773.4
157.5°	681.6	697.3	712.1	723.4	732.3	739.3	741.4	741.4
160°	671.3	684.1	697.0	706.4	713.5	720.5	721.6	721.6
162.5°	660.9	672.0	682.1	690.4	695.6	702.7	703.9	702.9
165°	646.6	653.6	661.9	667.7	672.4	677.1	675.9	674.8
167.5°	632.8	638.1	644.7	648.2	650.6	653.6	653.4	652.5
170°	624.3	627.8	632.5	636.0	638.3	639.5	638.3	638.3
172.5°	616.7	619.4	622.2	624.7	626.1	627.3	626.1	624.3
175°	606.7	607.8	610.2	610.2	610.2	612.6	610.2	607.8
177.5°	600.1	601.1	601.1	602.0	601.1	602.0	600.1	598.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3

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