

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: P332576-840

Luminaire Tested: **S124DIP-S575D1205U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332576-840
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-S575D1205U840-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 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: 6739.5 lumens
Efficiency: N/A
Efficacy: 136.4 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

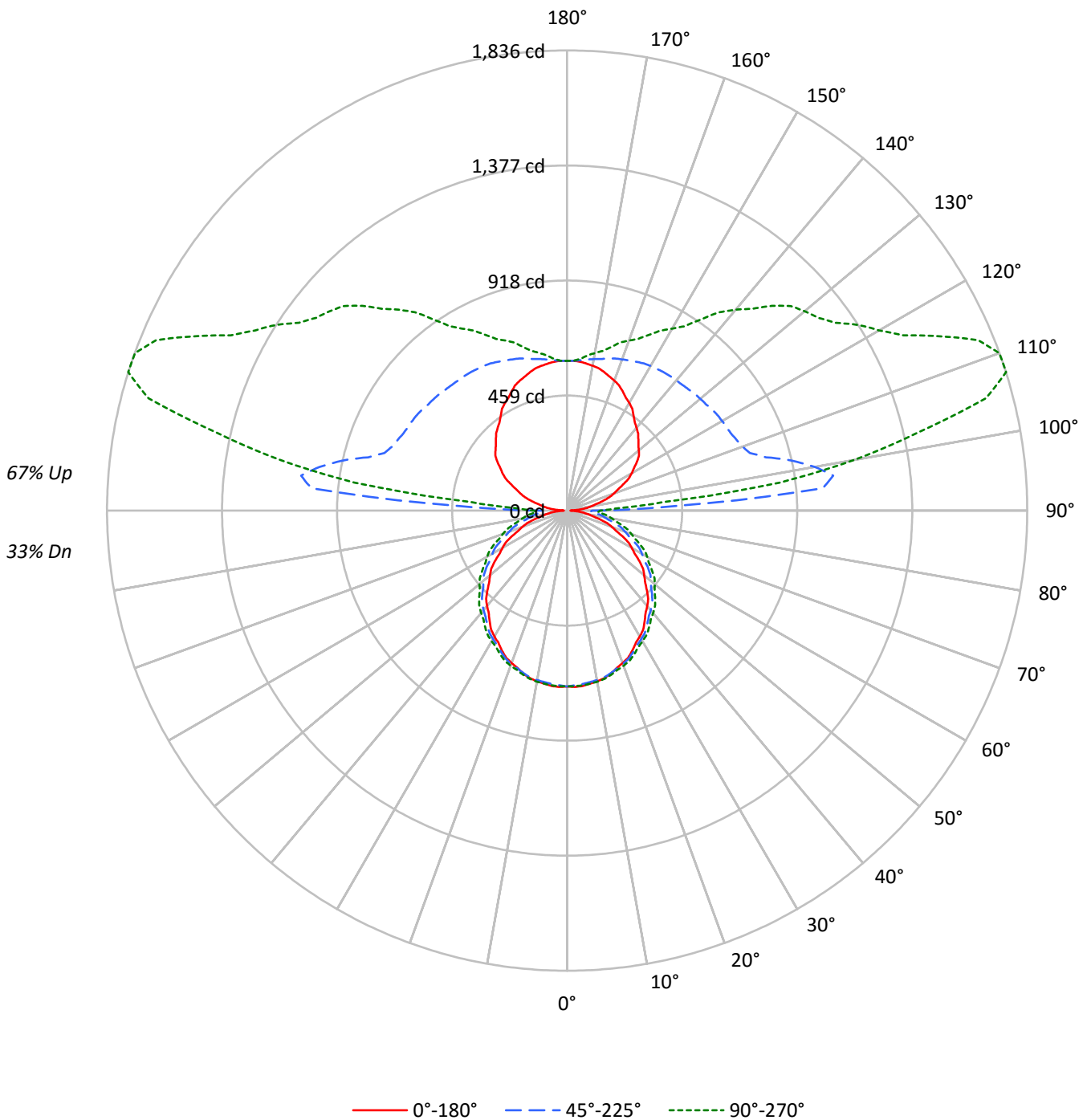
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	93	89	85	81	84	80	77	73	64	61	59	48	47	45	35	34	33	26
2	85	77	71	66	76	70	64	60	55	52	48	42	40	37	30	28	27	21
3	77	67	60	54	69	61	55	49	48	44	40	37	34	31	26	24	23	18
4	70	59	52	46	63	54	47	42	43	38	34	33	29	27	23	21	19	15
5	64	53	45	39	58	48	41	35	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	26	23	20	19	16	15	11
7	55	42	34	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	50	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.0
10°-20°	190.4	2.8
20°-30°	287.9	4.3
30°-40°	348.3	5.2
40°-50°	368.3	5.5
50°-60°	346.6	5.1
60°-70°	287.5	4.3
70°-80°	202.0	3.0
80°-90°	117.5	1.7
90°-100°	499.2	7.4
100°-110°	948.1	14.1
110°-120°	837.9	12.4
120°-130°	695.5	10.3
130°-140°	572.3	8.5
140°-150°	432.6	6.4
150°-160°	302.9	4.5
160°-170°	178.2	2.6
170°-180°	58.0	0.9
0°-30°	544.7	8.1
0°-40°	893.1	13.3
0°-60°	1607.9	23.9
0°-90°	2214.9	32.9
90°-120°	2285.2	33.9
90°-150°	3985.6	59.1
90°-180°	4525.0	67.1
0°-180°	6739.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	14	54	99	123	132	10
95°	49	159	1025	562	383	52
105°	144	222	822	1728	1729	154
115°	246	316	723	1373	1645	245
125°	340	404	705	1159	1307	303
135°	402	478	684	1016	1156	311
145°	462	528	674	845	931	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°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.5	31.1	38.9	46.3	53.6	61.0	70.1	77.8	85.8	93.9	98.8
90°	13.7	23.1	33.6	41.7	49.9	57.2	71.7	79.2	89.1	99.0	102.8
92.5°	25.3	37.7	55.0	75.6	99.1	130.4	197.4	296.1	392.2	446.3	389.0
95°	49.0	58.3	75.7	96.7	130.7	186.4	295.7	495.2	782.8	1024.7	1056.4
97.5°	78.8	83.7	98.8	117.8	146.9	194.3	279.9	446.0	731.8	1070.8	1303.5
100°	97.9	102.4	115.1	133.7	160.6	203.8	279.8	419.3	665.5	1003.2	1308.3
102.5°	116.6	122.5	133.7	150.9	176.2	217.2	286.5	409.8	620.3	920.3	1234.7
105°	144.4	151.4	160.8	178.3	202.9	242.0	304.7	408.6	579.4	821.6	1101.8
107.5°	176.6	181.8	190.6	208.4	231.5	269.5	327.3	422.1	568.6	764.6	993.9
110°	197.5	202.4	210.7	227.2	250.7	286.7	344.5	432.7	567.9	744.2	939.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	217.6	222.1	231.1	246.4	269.6	305.4	360.9	444.2	570.7	732.6	907.1
115°	246.4	251.6	261.4	274.6	298.5	333.8	386.3	462.3	577.0	723.4	875.1
117.5°	277.3	281.4	289.7	303.6	325.4	361.3	411.1	481.1	584.2	717.5	858.0
120°	297.3	300.1	308.9	322.3	342.8	378.5	428.1	494.2	589.7	714.4	848.1
122.5°	316.1	318.5	326.8	338.9	360.8	395.2	444.5	506.6	595.2	710.3	837.5
125°	339.9	344.5	351.3	364.1	386.2	421.1	467.8	526.0	604.4	705.0	820.9
127.5°	361.6	365.2	373.4	388.1	411.1	445.8	490.0	542.9	610.8	697.6	799.4
130°	373.1	377.7	386.9	404.3	426.5	461.8	504.5	553.0	615.7	693.6	785.9
132.5°	385.4	389.0	401.0	417.5	441.5	474.6	516.7	563.8	620.3	690.1	773.9
135°	401.7	406.4	418.2	438.1	462.7	493.8	533.8	577.2	626.6	684.2	755.0
137.5°	418.9	423.1	435.9	454.7	480.1	509.5	546.1	586.2	629.4	680.3	738.9
140°	431.0	434.4	447.2	467.0	491.4	519.6	554.9	592.7	632.7	677.5	730.2
142.5°	443.5	447.1	459.0	478.0	501.6	528.8	563.0	597.5	635.5	676.2	723.1
145°	461.9	465.3	476.9	493.1	515.2	541.0	571.5	603.2	637.2	673.6	712.2
147.5°	482.8	483.8	494.0	510.7	529.1	552.2	580.9	608.5	638.3	669.3	702.6
150°	495.9	497.0	506.2	520.1	537.6	559.8	585.5	611.4	638.3	666.5	695.9
152.5°	507.6	507.8	517.2	530.2	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°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	104.1	109.4	114.7	118.0	119.8	121.5	122.8	124.4
90°	109.1	115.3	121.5	124.7	127.3	129.9	130.1	131.5
92.5°	314.4	262.3	231.8	211.4	198.9	194.0	191.5	192.8
95°	947.4	770.1	617.6	507.0	451.0	416.3	396.7	382.9
97.5°	1357.4	1294.3	1184.2	1064.7	981.9	912.8	879.1	856.2
100°	1484.4	1512.6	1459.8	1375.8	1275.1	1204.7	1170.6	1162.6
102.5°	1474.4	1595.4	1616.6	1583.4	1522.1	1471.6	1435.9	1429.8
105°	1374.8	1582.3	1702.8	1753.8	1757.6	1749.5	1734.5	1728.9
107.5°	1236.2	1456.6	1624.5	1731.9	1791.2	1819.2	1832.2	1836.4
110°	1152.4	1359.4	1533.6	1665.4	1750.1	1800.7	1823.2	1835.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1089.7	1273.2	1437.8	1569.5	1665.6	1726.6	1757.6	1776.0
115°	1025.6	1173.8	1314.9	1430.2	1524.1	1595.7	1634.5	1645.1
117.5°	991.4	1114.5	1226.1	1324.1	1404.6	1465.1	1504.6	1513.2
120°	974.8	1087.4	1184.9	1270.6	1338.9	1391.9	1423.8	1438.1
122.5°	960.4	1069.2	1158.2	1233.6	1291.4	1336.8	1363.8	1378.1
125°	936.9	1041.2	1125.4	1192.1	1240.1	1275.3	1298.6	1306.7
127.5°	908.4	1007.9	1091.9	1155.3	1203.7	1235.1	1255.1	1263.2
130°	886.5	982.3	1065.2	1129.5	1178.7	1209.1	1228.9	1237.0
132.5°	863.9	954.0	1034.9	1099.1	1147.4	1181.5	1200.4	1208.5
135°	831.7	910.8	985.2	1045.8	1093.8	1127.7	1147.5	1155.6
137.5°	802.9	870.1	932.9	987.7	1032.5	1065.7	1082.1	1091.4
140°	786.5	843.8	899.0	949.8	991.8	1018.4	1035.7	1046.0
142.5°	771.5	822.0	869.4	913.4	950.6	975.2	990.5	997.8
145°	750.7	791.7	828.0	861.7	891.7	912.4	924.8	931.4
147.5°	733.7	765.5	793.9	820.0	842.1	859.8	869.3	872.0
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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