

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: P332924-940

Luminaire Tested: **SA4XXRDIP-C575D1205U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332924-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D1205U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5932.4 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

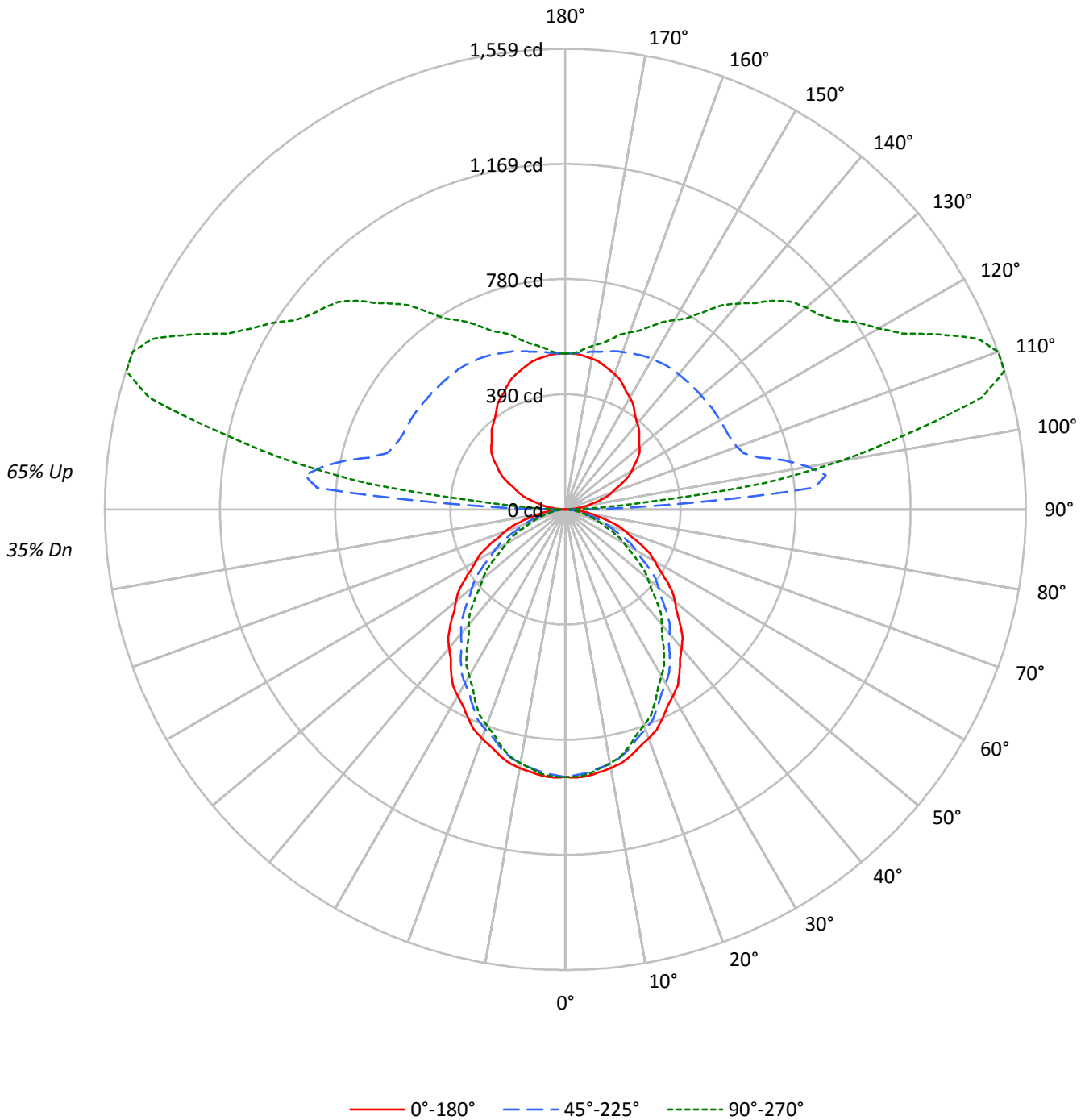
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35				
1	95	91	87	83	85	82	79	76	66	64	62	51	50	49	38	37	36	30				
2	86	79	73	68	78	72	67	63	58	55	52	45	43	41	34	32	31	26				
3	79	70	63	57	71	63	57	52	51	47	44	40	37	35	30	28	26	22				
4	72	62	54	48	65	56	50	45	46	41	37	36	33	30	27	25	23	19				
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	24	22	20	16				
6	61	49	41	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15				
7	56	44	37	31	51	41	34	29	33	28	25	27	23	20	20	18	16	13				
8	52	40	33	28	47	37	30	26	30	25	22	24	21	18	18	16	14	12				
9	49	37	29	25	44	34	27	23	28	23	19	22	19	16	17	15	13	11				
10	45	34	27	22	41	31	25	20	26	21	17	21	17	15	16	13	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7316	7316	7316
5°	7332	7243	7288
10°	7287	7156	7156
15°	7203	7005	6954
20°	7088	6808	6682
25°	6942	6576	6409
30°	6797	6332	6068
35°	6640	6080	5724
40°	6450	5792	5352
45°	6275	5505	4975
50°	6075	5176	4575
55°	5859	4835	4141
60°	5624	4459	3697
65°	5408	3989	3261
70°	5094	3472	2769
75°	4697	2879	2249
80°	4096	2194	2064
85°	3473	1991	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	1.4
10°-20°	237.4	4.0
20°-30°	342.8	5.8
30°-40°	388.6	6.5
40°-50°	375.2	6.3
50°-60°	312.0	5.3
60°-70°	215.4	3.6
70°-80°	109.2	1.8
80°-90°	30.9	0.5
90°-100°	380.9	6.4
100°-110°	792.8	13.4
110°-120°	710.1	12.0
120°-130°	597.3	10.1
130°-140°	498.1	8.4
140°-150°	380.5	6.4
150°-160°	267.5	4.5
160°-170°	157.3	2.7
170°-180°	51.2	0.9
0°-30°	665.3	11.2
0°-40°	1053.9	17.8
0°-60°	1741.1	29.3
0°-90°	2096.7	35.3
90°-120°	1883.9	31.8
90°-150°	3359.8	56.6
90°-180°	3836.0	64.7
0°-180°	5932.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	905	902	894	900	899	86
15°	862	855	838	837	832	243
25°	779	766	738	727	720	359
35°	674	651	617	594	581	421
45°	550	523	482	449	436	424
55°	416	388	344	309	294	372
65°	283	252	209	180	171	279
75°	151	125	92	77	72	159
85°	38	24	22	20	20	42
90°	1	8	19	21	22	4
95°	34	108	844	418	253	38
105°	121	176	680	1464	1458	129
115°	214	268	606	1165	1400	212
125°	297	353	603	991	1117	265
135°	353	421	598	880	999	273
145°	407	466	595	742	816	256
155°	463	500	578	655	683	213
165°	505	520	554	587	596	142
175°	526	527	532	539	537	50
180°	527	527	527	527	527	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	908.5	907.9	907.5	907.0	906.5	905.5	904.2	902.9	901.4	900.1	901.4
5°	904.8	904.2	903.6	902.9	902.4	901.2	899.3	897.4	895.5	893.8	895.3
7.5°	896.6	896.0	895.4	894.7	894.0	892.5	890.1	887.7	885.3	882.9	883.9
10°	888.9	888.1	887.3	886.5	885.8	884.0	881.3	878.4	875.7	872.9	873.5
12.5°	878.9	878.0	877.1	876.2	875.3	873.3	870.0	866.7	863.4	860.1	860.5
15°	861.8	860.4	859.1	857.6	856.2	853.6	849.8	846.0	842.0	838.2	837.9
17.5°	841.2	839.1	837.1	835.1	833.1	829.8	825.2	820.6	815.9	811.3	810.5
20°	825.0	823.0	821.0	819.0	817.0	813.4	808.2	802.9	797.6	792.5	791.2
22.5°	807.3	805.0	802.8	800.5	798.3	794.3	788.7	783.1	777.5	771.9	770.0
25°	779.3	776.5	773.6	770.9	768.1	763.6	757.2	750.9	744.6	738.3	735.7
27.5°	749.8	746.4	742.9	739.4	735.8	730.8	724.0	717.3	710.5	703.7	700.5
30°	729.2	725.4	721.6	717.7	713.9	708.3	701.1	693.8	686.5	679.3	675.5
32.5°	707.7	703.3	698.9	694.6	690.3	684.3	676.8	669.3	661.8	654.3	649.9
35°	673.8	668.9	663.9	659.0	654.1	647.7	640.0	632.3	624.6	616.9	611.6
37.5°	637.6	632.5	627.4	622.3	617.2	610.4	601.8	593.3	584.8	576.2	570.3
40°	612.0	606.9	601.8	596.7	591.7	584.7	576.0	567.1	558.4	549.6	543.1
42.5°	587.5	582.3	576.9	571.6	566.2	559.0	549.8	540.6	531.5	522.4	515.8
45°	549.6	543.9	538.1	532.4	526.7	519.2	510.0	500.8	491.5	482.2	474.7
47.5°	510.3	504.4	498.5	492.6	486.7	478.9	469.3	459.8	450.1	440.5	432.7
50°	483.7	477.6	471.6	465.6	459.6	451.7	441.8	431.9	422.0	412.1	404.5
52.5°	456.5	450.6	444.7	438.8	432.8	424.9	414.7	404.7	394.5	384.4	376.6
55°	416.3	410.2	404.0	397.8	391.6	383.5	373.5	363.6	353.5	343.5	335.5
57.5°	376.7	370.2	363.8	357.4	351.0	342.9	333.0	323.1	313.3	303.4	295.2
60°	348.3	342.1	336.0	329.8	323.7	315.7	305.8	295.9	286.1	276.2	268.1
62.5°	322.8	316.4	310.0	303.5	297.1	288.9	278.7	268.7	258.5	248.4	241.0
65°	283.1	276.5	269.8	263.2	256.5	248.3	238.4	228.6	218.7	208.8	202.2
67.5°	241.9	235.5	229.2	222.8	216.5	208.7	199.6	190.4	181.3	172.1	166.4
70°	215.8	209.3	202.9	196.4	189.9	182.3	173.4	164.7	155.9	147.1	142.0
72.5°	188.1	182.2	176.3	170.5	164.6	157.6	149.3	141.0	132.6	124.3	120.0
75°	150.6	144.9	139.2	133.5	127.8	121.3	114.0	106.7	99.5	92.3	88.7
77.5°	112.5	107.7	102.9	98.0	93.2	87.8	81.9	76.2	70.3	64.4	62.3
80°	88.1	83.6	79.2	74.7	70.3	65.7	61.1	56.4	51.8	47.2	46.7
82.5°	67.1	63.0	58.9	54.8	50.6	47.3	44.6	41.9	39.3	36.6	36.3
85°	37.5	34.4	31.3	28.2	25.1	23.4	22.9	22.5	21.9	21.5	21.2
87.5°	13.0	12.4	12.0	11.2	10.5	9.9	11.1	10.9	11.2	11.5	11.1
90°	1.1	3.1	6.2	7.2	8.3	8.3	14.5	14.5	16.6	18.6	17.7
92.5°	11.8	17.2	26.9	39.6	54.8	76.2	128.9	209.3	287.7	328.7	273.8
95°	34.2	37.3	47.7	61.2	86.0	129.6	219.6	389.6	637.2	844.5	868.3
97.5°	61.3	61.3	70.3	82.7	104.1	140.5	209.9	350.3	596.4	889.5	1090.9
100°	78.7	78.7	86.0	98.4	118.2	151.3	212.4	329.5	540.9	833.0	1098.3
102.5°	95.3	97.0	103.4	115.0	133.8	165.4	220.7	323.7	503.5	762.6	1036.2
105°	121.3	124.3	129.6	142.0	160.6	190.6	240.4	326.4	471.4	679.8	923.2
107.5°	149.8	151.9	157.1	170.3	188.2	217.8	263.4	341.7	465.7	633.3	832.1
110°	168.9	170.9	176.1	188.6	207.2	235.2	280.8	353.3	467.3	617.6	786.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	189.2	195.2	206.8	225.5	253.4	297.4	365.8	472.3	610.1	760.7
115°	213.5	216.6	223.8	234.2	253.9	281.9	323.2	385.5	481.8	606.2	736.7
117.5°	240.8	243.7	250.1	261.5	280.0	309.0	348.4	405.6	492.0	605.1	725.9
120°	259.0	261.1	268.4	279.7	297.4	326.4	365.8	419.6	499.4	605.1	720.1
122.5°	275.6	277.7	285.0	295.5	314.8	343.0	382.4	432.9	506.9	604.3	713.5
125°	297.4	301.5	307.7	319.1	338.9	367.8	405.1	452.8	518.1	603.1	702.5
127.5°	316.6	319.9	327.4	340.5	361.0	390.2	426.2	470.0	527.0	600.7	687.8
130°	327.4	331.5	339.8	355.4	375.1	405.1	440.4	480.8	533.6	599.9	678.7
132.5°	338.2	341.5	352.3	367.0	388.3	416.8	452.0	491.6	539.4	599.1	670.4
135°	353.3	357.5	367.8	385.5	407.2	434.2	468.3	505.7	548.1	597.9	658.0
137.5°	368.5	372.4	383.8	400.6	423.2	448.9	480.8	515.6	553.3	597.6	647.2
140°	379.2	382.4	393.8	411.3	433.1	458.0	489.1	522.2	557.5	596.8	641.4
142.5°	390.8	394.0	404.5	421.3	442.2	466.3	496.5	527.2	560.8	596.8	636.4
145°	407.2	410.4	420.7	435.2	454.9	477.7	504.6	532.6	562.7	594.8	627.9
147.5°	425.6	426.7	435.8	450.8	467.1	487.6	512.9	537.3	563.7	591.0	620.3
150°	437.3	438.3	446.6	459.1	474.6	494.3	517.0	539.8	563.7	588.5	614.5
152.5°	448.0	448.3	456.6	468.1	482.1	500.1	520.4	541.5	562.0	584.4	607.8
155°	463.2	464.2	470.4	480.8	492.2	507.7	525.3	543.0	559.5	578.2	597.9
157.5°	477.9	477.9	483.7	491.8	501.7	514.0	528.9	543.0	556.9	571.8	587.7
160°	487.0	487.0	491.2	498.4	506.7	518.1	530.5	543.0	554.4	566.8	580.2
162.5°	495.3	494.5	497.8	504.2	511.7	520.6	532.2	543.0	551.9	561.8	573.6
165°	504.6	504.6	506.7	511.8	517.0	523.3	532.6	540.9	547.1	554.4	562.7
167.5°	514.0	512.9	514.0	517.9	520.8	525.6	532.4	538.4	542.2	546.9	552.7
170°	518.1	517.0	518.1	521.2	523.3	526.4	531.5	536.7	538.8	541.9	546.1
172.5°	522.2	521.2	521.4	523.7	525.0	527.2	530.7	535.1	535.5	536.9	540.3
175°	526.4	525.3	525.3	526.4	527.4	527.4	529.5	532.6	531.5	531.5	533.6
177.5°	528.2	527.4	526.6	527.4	527.4	527.4	528.2	529.9	528.2	528.2	529.1
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	902.9	904.2	905.5	906.2	906.1	905.9	905.8	905.7
5°	896.8	898.4	899.9	900.5	900.2	899.9	899.6	899.3
7.5°	884.8	885.8	886.9	887.1	886.6	886.1	885.6	885.1
10°	874.1	874.8	875.4	875.4	874.8	874.1	873.5	872.9
12.5°	860.9	861.2	861.7	861.4	860.5	859.7	858.8	857.9
15°	837.6	837.3	837.0	836.3	835.2	834.1	833.0	832.0
17.5°	809.6	808.7	807.8	806.6	804.9	803.3	801.6	800.0
20°	790.0	788.7	787.5	785.9	783.9	781.9	779.9	777.8
22.5°	768.2	766.3	764.5	762.8	761.1	759.5	757.9	756.2
25°	733.1	730.4	727.8	725.8	724.2	722.6	721.1	719.5
27.5°	697.2	694.0	690.8	688.0	685.8	683.6	681.4	679.2
30°	671.6	667.7	663.9	660.8	658.3	655.8	653.4	650.9
32.5°	645.4	641.0	636.4	633.0	630.7	628.4	626.0	623.7
35°	606.4	601.1	595.9	591.9	589.2	586.3	583.5	580.8
37.5°	564.5	558.7	552.8	548.5	545.6	542.9	540.1	537.3
40°	536.6	530.1	523.6	519.1	516.2	513.4	510.7	507.9
42.5°	509.2	502.6	496.0	491.2	488.3	485.4	482.5	479.7
45°	467.2	459.6	452.0	446.8	444.1	441.3	438.5	435.8
47.5°	424.8	417.0	409.1	403.7	400.6	397.6	394.6	391.5
50°	396.7	389.1	381.3	376.0	373.1	370.1	367.2	364.3
52.5°	368.7	360.9	353.1	347.7	344.6	341.5	338.5	335.5
55°	327.4	319.4	311.4	305.9	303.0	300.1	297.1	294.2
57.5°	287.0	278.9	270.8	265.6	263.4	261.2	259.0	256.7
60°	260.1	252.1	244.1	238.9	236.4	233.9	231.5	229.0
62.5°	233.6	226.2	218.8	214.1	212.1	210.2	208.2	206.3
65°	195.6	189.0	182.4	178.1	176.3	174.4	172.5	170.7
67.5°	160.7	155.0	149.3	145.4	143.4	141.3	139.3	137.2
70°	137.0	131.9	126.7	123.4	121.9	120.4	118.8	117.3
72.5°	115.7	111.3	106.9	104.1	102.6	101.2	99.8	98.4
75°	85.2	81.7	78.1	75.9	74.9	74.0	73.1	72.1
77.5°	60.3	58.2	56.1	54.9	54.7	54.4	54.1	53.9
80°	46.3	45.8	45.3	45.0	44.9	44.7	44.6	44.4
82.5°	35.9	35.6	35.3	35.0	34.9	34.7	34.6	34.4
85°	20.9	20.6	20.2	20.2	20.2	20.2	20.2	20.2
87.5°	11.2	11.3	11.4	11.4	11.8	12.1	12.0	12.1
90°	18.6	19.7	20.7	20.7	21.8	22.8	21.8	21.8
92.5°	203.5	153.1	121.9	101.1	88.9	83.3	79.8	79.8
95°	767.8	607.2	468.3	367.8	317.1	285.0	266.3	252.8
97.5°	1134.4	1074.7	973.4	865.2	790.8	728.4	697.3	675.8
100°	1249.6	1270.3	1219.6	1142.9	1052.8	989.5	958.5	950.2
102.5°	1243.8	1346.6	1361.3	1329.4	1274.1	1228.2	1195.5	1188.9
105°	1160.5	1339.8	1442.3	1484.8	1486.9	1478.6	1464.1	1457.9
107.5°	1042.1	1233.1	1377.5	1469.9	1521.1	1544.7	1555.1	1557.8
110°	970.9	1150.1	1300.4	1414.3	1487.9	1531.4	1550.2	1559.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	918.6	1077.2	1219.1	1333.1	1416.7	1469.3	1495.4	1510.6
115°	866.2	993.7	1114.9	1214.4	1296.3	1358.4	1391.6	1399.9
117.5°	840.5	946.0	1041.3	1125.7	1195.5	1247.8	1281.3	1287.7
120°	828.9	925.3	1008.2	1081.7	1140.9	1186.4	1213.4	1224.8
122.5°	818.9	912.0	987.5	1052.0	1101.9	1140.9	1163.6	1175.0
125°	802.0	891.1	962.6	1019.6	1061.0	1091.1	1110.8	1117.0
127.5°	781.2	866.5	937.7	991.8	1033.5	1060.2	1076.8	1083.0
130°	764.7	846.6	917.0	972.0	1014.4	1040.3	1056.9	1063.1
132.5°	747.3	824.2	893.0	947.9	989.5	1018.8	1034.5	1040.7
135°	723.3	790.6	853.8	905.6	947.1	976.1	992.7	998.9
137.5°	701.5	758.5	811.7	858.5	897.3	926.0	939.6	947.1
140°	689.0	737.7	784.3	827.9	864.2	887.0	901.4	909.7
142.5°	677.4	720.3	760.4	798.1	830.2	851.3	864.2	870.0
145°	661.1	696.3	727.4	756.4	782.3	800.0	810.3	815.5
147.5°	647.6	675.6	700.4	723.3	742.3	757.4	765.4	767.1
150°	639.4	663.2	683.9	702.5	719.1	732.5	738.8	739.9
152.5°	630.2	650.7	669.8	685.1	699.2	710.2	713.9	715.0
155°	616.5	633.1	648.6	661.1	671.5	679.8	682.9	682.9
157.5°	601.8	615.7	628.7	638.7	646.6	652.8	654.7	654.7
160°	592.7	604.0	615.5	623.8	630.0	636.2	637.2	637.2
162.5°	583.5	593.3	602.3	609.7	614.2	620.5	621.5	620.6
165°	571.0	577.1	584.4	589.6	593.7	597.9	596.8	595.8
167.5°	558.7	563.5	569.3	572.4	574.4	577.1	576.9	576.1
170°	551.3	554.4	558.5	561.6	563.7	564.7	563.7	563.7
172.5°	544.6	546.9	549.4	551.6	552.9	553.9	552.9	551.3
175°	535.7	536.7	538.8	538.8	538.8	540.9	538.8	536.7
177.5°	529.9	530.7	530.7	531.5	530.7	531.5	529.9	528.2
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4

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