

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: P332567-830

Luminaire Tested: **S124DIP-S575D1035U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332567-830  
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-S575D1035U830-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5718.6 lumens  
Efficiency: N/A  
Efficacy: 128.5 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

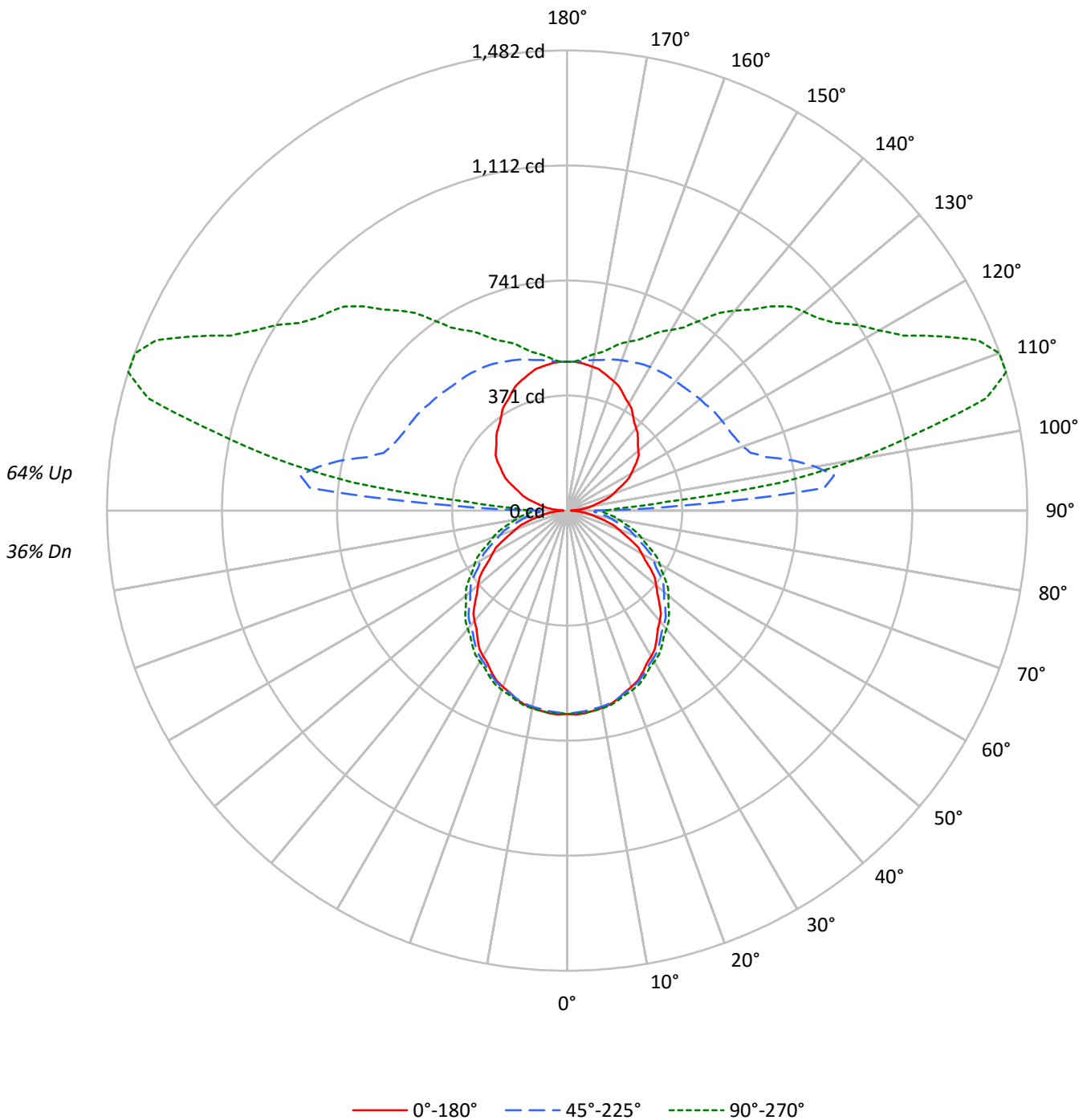
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43
1	94	89	85	82	85	81	77	74	65	63	60	51	49	47	37	36	35
2	85	78	71	66	77	70	65	60	57	53	49	44	41	39	32	31	29
3	77	68	60	55	70	62	55	50	50	45	41	39	35	33	28	26	24
4	71	60	52	46	64	54	47	42	44	39	35	34	31	28	25	23	21
5	65	53	45	39	58	48	41	36	39	34	30	30	27	24	23	20	18
6	60	47	39	34	54	43	36	31	35	30	26	27	24	21	20	18	16
7	55	43	35	29	49	39	32	27	32	26	22	25	21	18	19	16	14
8	51	39	31	26	46	35	28	24	29	24	20	23	19	16	17	14	12
9	47	35	28	23	43	32	25	21	26	21	18	21	17	14	16	13	11
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.0	1.1
10°-20°	177.7	3.1
20°-30°	268.7	4.7
30°-40°	325.1	5.7
40°-50°	343.7	6.0
50°-60°	323.5	5.7
60°-70°	268.4	4.7
70°-80°	188.5	3.3
80°-90°	109.2	1.9
90°-100°	409.2	7.2
100°-110°	766.8	13.4
110°-120°	676.3	11.8
120°-130°	560.2	9.8
130°-140°	460.0	8.0
140°-150°	347.1	6.1
150°-160°	242.9	4.2
160°-170°	142.9	2.5
170°-180°	46.5	0.8
0°-30°	508.4	8.9
0°-40°	833.5	14.6
0°-60°	1500.7	26.2
0°-90°	2066.8	36.1
90°-120°	1852.3	32.4
90°-150°	3219.6	56.3
90°-180°	3652.0	63.9
0°-180°	5718.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	13	49	90	112	120	9
95°	41	132	831	463	320	42
105°	117	182	666	1395	1397	125
115°	198	255	585	1108	1327	197
125°	273	324	568	934	1053	243
135°	322	384	550	817	930	249
145°	370	423	540	678	748	233
155°	421	454	525	595	620	194
165°	458	472	503	533	541	129
175°	478	479	483	489	487	45
180°	479	479	479	479	479	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	21.9	28.9	36.1	43.0	49.9	56.7	64.9	72.1	79.6	87.2	91.7
90°	12.6	21.1	30.4	37.9	45.3	52.1	64.8	71.7	80.7	89.5	93.3
92.5°	21.9	32.6	47.3	64.7	84.3	110.3	165.1	245.2	323.3	367.6	322.3
95°	40.6	48.8	63.6	81.2	109.1	154.7	243.3	404.3	635.8	830.7	856.8
97.5°	64.4	69.0	81.7	97.6	121.7	160.4	230.1	364.1	594.3	867.0	1054.1
100°	79.6	83.8	94.6	110.2	132.3	167.7	229.6	342.2	540.5	812.3	1057.5
102.5°	94.6	99.8	109.4	123.7	144.5	178.0	234.6	334.3	503.9	745.4	998.1
105°	116.7	122.8	130.7	145.2	165.5	197.5	248.6	332.7	470.5	665.6	890.9
107.5°	142.5	147.0	154.5	169.2	188.0	219.1	266.3	343.1	461.3	619.3	803.7
110°	159.2	163.4	170.4	184.0	203.2	232.6	279.7	351.3	460.4	602.6	759.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.2	179.1	186.6	199.2	218.1	247.2	292.6	360.1	462.3	592.9	733.3
115°	198.2	202.6	210.6	221.5	240.8	269.6	312.4	374.1	466.8	584.9	707.1
117.5°	222.9	226.4	233.2	244.4	262.0	291.2	331.9	388.6	471.9	579.6	692.7
120°	238.9	241.3	248.4	259.2	275.7	304.6	345.2	398.8	476.0	576.6	684.4
122.5°	253.9	255.9	262.6	272.3	289.9	317.8	358.0	408.4	480.0	573.0	675.4
125°	273.0	276.5	282.1	292.3	310.0	338.3	376.3	423.6	486.9	568.2	661.6
127.5°	290.3	293.2	299.8	311.5	330.0	358.0	393.9	436.7	491.5	561.7	643.7
130°	299.5	303.1	310.5	324.4	342.1	370.7	405.3	444.6	495.2	558.0	632.4
132.5°	309.3	312.2	321.8	335.0	354.2	381.0	415.0	453.1	498.6	554.9	622.5
135°	322.3	326.1	335.5	351.5	371.3	396.3	428.5	463.5	503.2	549.5	606.7
137.5°	336.1	339.5	349.7	364.8	385.1	408.6	438.2	470.3	505.1	545.9	593.3
140°	345.8	348.6	358.7	374.6	394.2	416.7	445.1	475.4	507.6	543.5	586.1
142.5°	355.8	358.6	368.2	383.3	402.4	424.1	451.5	479.3	509.6	542.2	580.0
145°	370.5	373.2	382.4	395.4	413.1	433.8	458.3	483.6	511.0	540.1	571.2
147.5°	387.3	388.0	396.2	409.5	424.2	442.8	465.8	488.0	511.9	536.7	563.4
150°	397.8	398.6	406.0	417.1	431.0	448.8	469.6	490.2	511.9	534.4	558.0
152.5°	407.0	407.2	414.6	425.2	437.7	454.1	472.6	491.7	510.4	530.7	552.0
155°	420.6	421.5	427.2	436.6	447.0	461.1	477.0	493.0	508.1	525.1	542.9
157.5°	433.9	433.9	439.2	446.6	455.6	466.7	480.2	493.0	505.7	519.2	533.7
160°	442.2	442.2	446.0	452.6	460.1	470.5	481.7	493.0	503.4	514.7	527.0
162.5°	449.8	449.0	452.0	457.9	464.7	472.8	483.2	493.0	501.1	510.2	520.9
165°	458.3	458.3	460.1	464.9	469.6	475.1	483.6	491.2	496.8	503.4	511.0
167.5°	466.7	465.8	466.7	470.3	473.0	477.2	483.4	488.9	492.3	496.6	501.9
170°	470.5	469.6	470.5	473.3	475.1	478.0	482.7	487.4	489.3	492.1	495.9
172.5°	474.2	473.3	473.4	475.5	476.6	478.7	481.9	485.9	486.3	487.6	490.6
175°	478.0	477.0	477.0	478.0	478.9	478.9	480.8	483.6	482.7	482.7	484.6
177.5°	479.7	478.9	478.2	478.9	478.9	478.9	479.7	481.2	479.7	479.7	480.4
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	96.6	101.5	106.4	109.5	111.1	112.7	114.0	115.5
90°	99.0	104.6	110.4	113.4	115.6	117.8	118.2	119.5
92.5°	263.1	222.0	198.1	182.3	172.5	168.7	166.8	168.1
95°	769.9	628.4	506.7	418.4	373.7	346.0	330.5	319.8
97.5°	1098.0	1048.0	960.3	864.9	798.7	743.5	716.6	698.5
100°	1199.3	1222.6	1180.8	1114.0	1033.2	977.0	949.9	943.5
102.5°	1190.9	1288.5	1306.1	1279.9	1231.0	1190.6	1162.2	1157.3
105°	1110.4	1277.2	1374.5	1415.8	1419.0	1412.8	1400.9	1396.6
107.5°	998.6	1175.9	1311.1	1397.6	1445.3	1467.9	1478.5	1482.1
110°	930.9	1097.5	1237.7	1343.7	1411.8	1452.6	1470.9	1480.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	880.3	1027.9	1160.5	1266.4	1343.6	1392.7	1417.7	1432.8
115°	828.3	947.6	1061.3	1154.0	1229.5	1287.0	1318.3	1327.0
117.5°	800.1	899.4	989.3	1068.2	1132.9	1181.7	1213.4	1220.6
120°	786.5	877.2	955.7	1024.8	1079.8	1122.5	1148.2	1159.9
122.5°	774.5	862.2	934.0	994.7	1041.2	1077.8	1099.7	1111.2
125°	755.1	839.1	907.1	960.8	999.5	1027.7	1046.6	1053.2
127.5°	731.5	811.7	879.4	930.6	969.5	994.9	1011.1	1017.9
130°	713.5	790.8	857.7	909.5	949.0	973.6	989.6	996.2
132.5°	695.0	767.7	833.0	884.8	923.5	951.0	966.3	973.0
135°	668.6	732.4	792.4	841.2	879.9	907.2	923.2	929.8
137.5°	645.0	699.2	749.9	794.0	830.0	856.8	870.1	877.6
140°	631.4	677.8	722.3	763.3	797.0	818.5	832.5	840.8
142.5°	619.2	660.1	698.2	733.7	763.6	783.4	795.8	801.7
145°	602.3	635.3	664.5	691.6	715.8	732.4	742.5	747.9
147.5°	588.3	613.9	636.6	657.6	675.4	689.8	697.4	699.6
150°	580.6	602.2	621.0	638.0	653.0	665.2	670.9	671.8
152.5°	572.3	590.9	608.2	622.2	635.0	644.9	648.3	649.2
155°	559.9	575.0	589.0	600.3	609.7	617.3	620.1	620.1
157.5°	546.5	559.1	571.0	580.0	587.1	592.8	594.5	594.5
160°	538.2	548.6	558.9	566.5	572.1	577.8	578.7	578.7
162.5°	529.9	538.8	546.9	553.6	557.8	563.5	564.4	563.6
165°	518.5	524.1	530.7	535.4	539.1	542.9	542.0	541.0
167.5°	507.4	511.7	517.0	519.8	521.7	524.1	524.0	523.2
170°	500.6	503.4	507.2	510.0	511.9	512.8	511.9	511.9
172.5°	494.6	496.6	498.9	501.0	502.1	503.0	502.1	500.6
175°	486.4	487.4	489.3	489.3	489.3	491.2	489.3	487.4
177.5°	481.2	481.9	481.9	482.7	481.9	482.7	481.2	479.7
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9

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