

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: P332570-927

Luminaire Tested: **S124DIP-S575D1035U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332570-927  
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-S575D1035U927-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

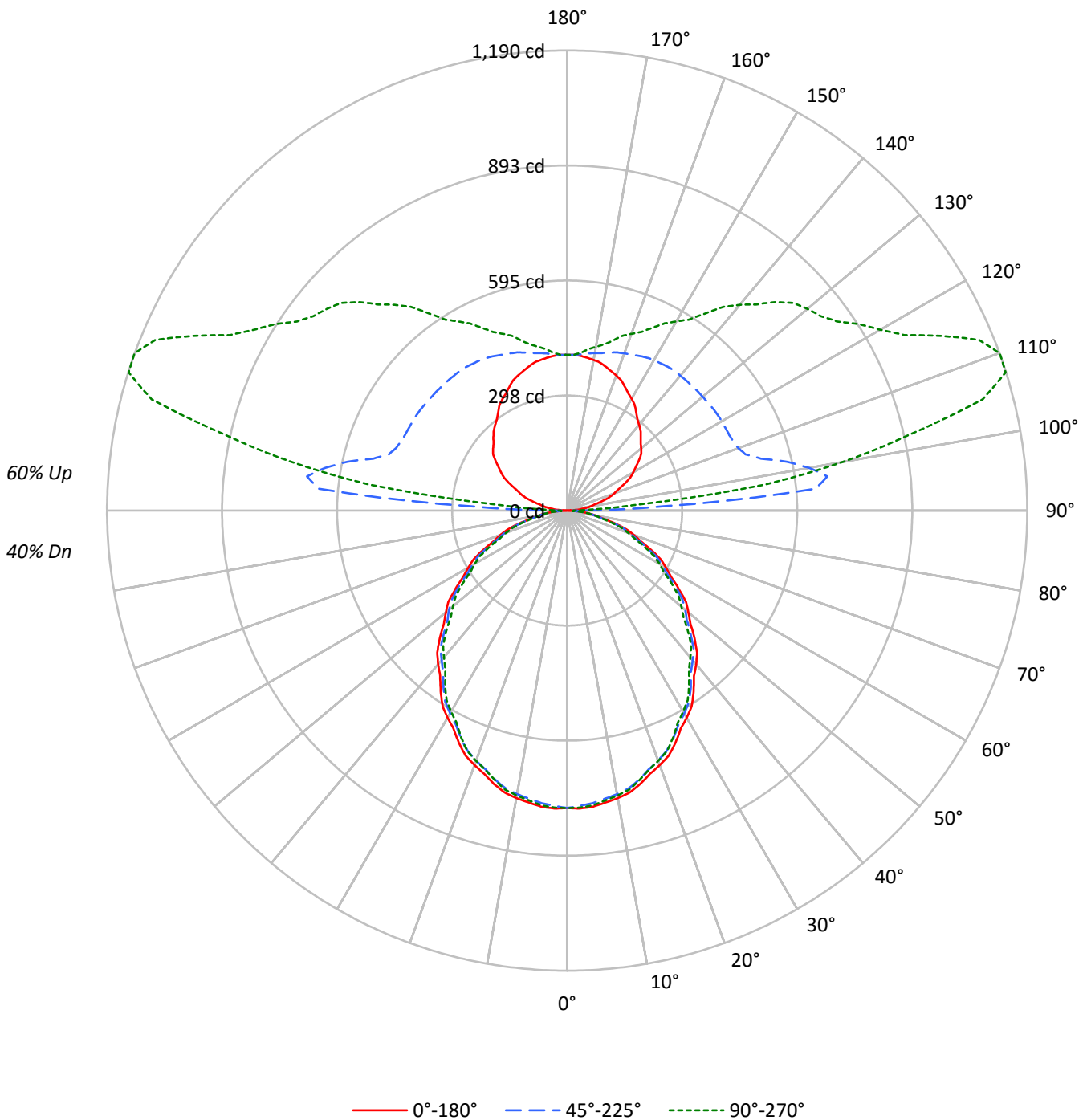
Lumens per Lamp: N/A  
Luminaire Lumens: 4904.0 lumens  
Efficiency: N/A  
Efficacy: 110.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (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	96	91	87	84	87	83	80	77	68	66	64	54	53	51	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	33	28
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	32	30	28	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	50	43	38	42	37	32	34	30	27	26	23	21	18
6	61	49	41	36	56	45	38	33	38	32	28	30	26	23	24	21	19	16
7	57	44	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	13	11
10	46	34	27	22	41	31	25	20	26	21	18	21	18	15	17	14	12	10

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

	0°	45°	90°
0°	6211	6211	6211
5°	6229	6155	6199
10°	6190	6105	6135
15°	6115	6018	6033
20°	6016	5910	5916
25°	5903	5787	5770
30°	5764	5643	5591
35°	5619	5492	5419
40°	5469	5321	5223
45°	5313	5151	5053
50°	5141	5001	4847
55°	4954	4807	4650
60°	4766	4589	4448
65°	4556	4380	4204
70°	4322	4102	3944
75°	3961	3768	3671
80°	3524	3380	3296
85°	3084	2973	2908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.5	1.5
10°-20°	204.1	4.2
20°-30°	300.5	6.1
30°-40°	349.3	7.1
40°-50°	349.3	7.1
50°-60°	305.5	6.2
60°-70°	226.9	4.6
70°-80°	128.9	2.6
80°-90°	39.4	0.8
90°-100°	290.8	5.9
100°-110°	605.1	12.3
110°-120°	542.0	11.1
120°-130°	455.9	9.3
130°-140°	380.1	7.8
140°-150°	290.4	5.9
150°-160°	204.1	4.2
160°-170°	120.1	2.4
170°-180°	39.1	0.8
0°-30°	577.0	11.8
0°-40°	926.3	18.9
0°-60°	1581.2	32.2
0°-90°	1976.4	40.3
90°-120°	1437.9	29.3
90°-150°	2564.4	52.3
90°-180°	2928.0	59.7
0°-180°	4904.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	769	766	760	766	765	73
15°	732	729	720	723	722	206
25°	663	658	650	650	648	305
35°	570	566	557	553	550	356
45°	465	461	451	445	443	359
55°	352	350	342	334	330	315
65°	238	235	229	223	220	236
75°	127	124	121	118	118	135
85°	33	33	32	32	31	37
90°	1	6	14	16	17	3
95°	26	82	644	319	193	29
105°	92	134	519	1117	1113	99
115°	163	204	463	889	1068	162
125°	227	270	460	756	852	202
135°	270	321	456	671	762	208
145°	311	356	454	566	622	195
155°	354	382	441	500	521	163
165°	385	397	423	448	455	109
175°	402	402	406	411	410	38
180°	402	402	402	402	402	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	771.3	771.0	770.6	770.3	770.0	769.2	768.0	766.8	765.6	764.4	765.5
5°	768.7	768.2	767.6	767.1	766.5	765.5	764.0	762.5	761.0	759.5	761.0
7.5°	761.5	761.0	760.5	759.9	759.4	758.3	756.6	754.9	753.2	751.5	752.8
10°	755.1	754.6	754.1	753.5	753.0	751.8	750.0	748.2	746.5	744.7	745.8
12.5°	746.8	746.2	745.7	745.1	744.6	743.4	741.5	739.6	737.7	735.8	737.0
15°	731.7	731.2	730.6	730.1	729.5	728.3	726.2	724.1	722.1	720.0	720.8
17.5°	713.6	712.9	712.3	711.5	710.8	709.6	707.6	705.7	703.7	701.8	702.3
20°	700.3	699.6	698.9	698.2	697.5	696.2	694.1	692.1	690.0	687.9	688.3
22.5°	686.0	685.1	684.2	683.3	682.4	680.9	678.8	676.8	674.7	672.6	673.4
25°	662.7	661.7	660.8	659.8	658.9	657.4	655.5	653.6	651.6	649.7	649.9
27.5°	636.0	635.1	634.1	633.1	632.1	630.7	628.9	627.2	625.3	623.6	623.3
30°	618.3	617.2	616.1	615.0	613.9	612.4	610.7	608.9	607.1	605.4	604.8
32.5°	599.5	598.6	597.5	596.6	595.6	594.1	592.3	590.4	588.5	586.6	586.0
35°	570.2	569.3	568.3	567.4	566.4	564.9	563.0	561.1	559.2	557.3	556.3
37.5°	539.2	538.4	537.5	536.6	535.8	534.3	532.3	530.2	528.1	526.1	525.1
40°	519.0	517.9	516.8	515.8	514.7	513.1	511.0	509.0	506.9	504.9	503.5
42.5°	497.3	496.7	496.1	495.4	494.7	493.2	491.0	488.7	486.4	484.2	482.6
45°	465.4	464.5	463.5	462.6	461.6	460.0	457.8	455.6	453.4	451.2	449.7
47.5°	432.0	431.3	430.7	430.0	429.4	428.0	426.0	424.0	421.9	419.9	418.2
50°	409.3	408.8	408.2	407.7	407.1	405.9	404.0	402.0	400.1	398.2	396.3
52.5°	387.1	386.5	385.8	385.2	384.5	383.2	381.1	379.1	377.1	375.0	373.4
55°	352.0	351.6	351.2	350.8	350.4	349.2	347.3	345.3	343.4	341.5	339.8
57.5°	318.5	318.0	317.5	317.0	316.6	315.4	313.5	311.6	309.7	307.8	306.3
60°	295.2	294.6	293.9	293.2	292.6	291.3	289.5	287.7	286.0	284.2	283.0
62.5°	272.6	272.0	271.4	270.8	270.3	269.0	267.2	265.3	263.4	261.5	260.4
65°	238.5	237.9	237.2	236.5	235.8	234.8	233.5	232.0	230.7	229.3	227.9
67.5°	204.3	203.7	203.0	202.4	201.8	200.8	199.5	198.2	196.9	195.5	194.2
70°	183.1	182.1	181.2	180.2	179.3	178.2	177.1	176.0	174.9	173.8	172.8
72.5°	160.4	159.5	158.5	157.5	156.5	155.7	154.8	153.9	153.0	152.1	151.2
75°	127.0	126.3	125.6	124.9	124.2	123.6	122.9	122.2	121.5	120.8	120.3
77.5°	95.1	94.7	94.4	94.2	93.9	93.4	92.8	92.2	91.6	91.0	90.8
80°	75.8	75.4	75.0	74.6	74.1	73.8	73.6	73.3	73.0	72.7	72.5
82.5°	57.1	56.9	56.7	56.5	56.3	56.2	56.2	56.1	56.0	56.0	55.8
85°	33.3	33.3	33.3	33.3	33.3	33.1	32.9	32.6	32.3	32.1	32.1
87.5°	13.0	13.2	13.5	13.6	13.6	13.5	14.4	14.3	14.5	14.7	14.5
90°	0.8	2.4	4.8	5.5	6.3	6.3	11.1	11.1	12.7	14.3	13.5
92.5°	9.0	13.2	20.6	30.2	41.7	58.2	98.4	159.8	219.5	250.9	209.0
95°	26.1	28.4	36.4	46.7	65.7	98.9	167.6	297.4	486.4	644.5	662.7
97.5°	46.8	46.8	53.6	63.1	79.4	107.3	160.3	267.3	455.2	678.8	832.6
100°	60.1	60.1	65.7	75.1	90.2	115.5	162.2	251.5	412.8	635.8	838.3
102.5°	72.7	74.0	78.9	87.8	102.2	126.2	168.4	247.1	384.4	582.1	790.8
105°	92.5	94.9	98.9	108.4	122.6	145.5	183.5	249.1	359.8	518.8	704.6
107.5°	114.4	116.0	119.9	130.0	143.6	166.2	201.1	260.8	355.4	483.4	635.0
110°	128.9	130.5	134.4	143.9	158.2	179.5	214.3	269.7	356.6	471.3	600.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.8	144.4	149.0	157.9	172.1	193.5	227.0	279.2	360.4	465.6	580.7
115°	163.0	165.2	170.8	178.7	193.8	215.1	246.8	294.2	367.7	462.6	562.3
117.5°	183.8	186.0	190.9	199.6	213.7	235.8	265.9	309.5	375.5	461.8	554.1
120°	197.7	199.3	204.9	213.5	227.0	249.1	279.2	320.3	381.2	461.8	549.6
122.5°	210.4	211.9	217.5	225.5	240.3	261.7	291.8	330.4	386.9	461.2	544.5
125°	227.0	230.1	234.9	243.6	258.6	280.7	309.2	345.6	395.5	460.3	536.2
127.5°	241.7	244.2	249.9	259.8	275.5	297.9	325.3	358.7	402.2	458.5	525.0
130°	249.9	253.1	259.4	271.2	286.3	309.2	336.1	366.9	407.3	457.9	518.0
132.5°	258.1	260.6	268.9	280.1	296.4	318.1	345.0	375.2	411.7	457.2	511.7
135°	269.7	272.8	280.7	294.2	310.8	331.4	357.4	386.0	418.4	456.3	502.2
137.5°	281.2	284.2	292.9	305.7	323.0	342.6	366.9	393.6	422.3	456.1	493.9
140°	289.5	291.8	300.6	313.9	330.6	349.6	373.3	398.5	425.5	455.5	489.6
142.5°	298.3	300.7	308.7	321.5	337.5	355.8	379.0	402.3	428.0	455.5	485.8
145°	310.8	313.1	321.1	332.2	347.2	364.6	385.2	406.5	429.4	453.9	479.3
147.5°	324.9	325.7	332.6	344.0	356.5	372.2	391.5	410.1	430.2	451.1	473.4
150°	333.7	334.5	340.9	350.4	362.2	377.2	394.7	412.0	430.2	449.2	469.0
152.5°	342.0	342.1	348.5	357.3	367.9	381.7	397.2	413.3	429.0	446.0	463.9
155°	353.5	354.3	359.0	366.9	375.7	387.5	400.9	414.4	427.1	441.3	456.3
157.5°	364.7	364.7	369.2	375.3	382.9	392.3	403.6	414.4	425.0	436.4	448.5
160°	371.7	371.7	374.9	380.4	386.7	395.5	404.9	414.4	423.1	432.6	442.9
162.5°	378.0	377.4	379.9	384.8	390.5	397.4	406.2	414.4	421.2	428.8	437.8
165°	385.2	385.2	386.7	390.7	394.7	399.3	406.5	412.8	417.6	423.1	429.4
167.5°	392.3	391.5	392.3	395.3	397.5	401.1	406.3	410.9	413.8	417.4	421.8
170°	395.5	394.7	395.5	397.8	399.3	401.7	405.7	409.6	411.2	413.6	416.8
172.5°	398.5	397.8	397.9	399.7	400.6	402.3	405.0	408.4	408.7	409.8	412.3
175°	401.7	400.9	400.9	401.7	402.5	402.5	404.1	406.5	405.7	405.7	407.3
177.5°	403.1	402.5	401.9	402.5	402.5	402.5	403.1	404.4	403.1	403.1	403.8
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	766.6	767.7	768.8	769.3	769.1	769.1	769.0	768.8
5°	762.5	764.0	765.5	766.1	765.8	765.6	765.2	765.0
7.5°	754.0	755.2	756.4	756.9	756.8	756.6	756.5	756.2
10°	746.9	748.0	749.1	749.5	749.2	748.9	748.6	748.4
12.5°	738.2	739.4	740.6	741.0	740.6	740.2	739.9	739.5
15°	721.7	722.5	723.3	723.5	723.1	722.7	722.2	721.8
17.5°	702.8	703.3	703.9	703.9	703.7	703.4	703.1	702.9
20°	688.8	689.2	689.6	689.7	689.4	689.1	688.9	688.6
22.5°	674.1	674.9	675.7	675.7	675.3	674.8	674.3	673.8
25°	650.0	650.1	650.3	650.1	649.5	649.0	648.4	647.8
27.5°	623.0	622.6	622.3	621.8	621.1	620.4	619.7	619.0
30°	604.3	603.7	603.2	602.5	601.8	601.2	600.5	599.8
32.5°	585.3	584.6	584.0	583.3	582.7	581.9	581.2	580.6
35°	555.3	554.4	553.4	552.6	551.9	551.2	550.6	549.9
37.5°	524.0	522.9	521.9	520.9	520.1	519.1	518.2	517.3
40°	502.2	500.7	499.4	498.4	497.6	497.0	496.3	495.6
42.5°	481.0	479.3	477.8	476.7	476.3	475.9	475.4	474.9
45°	448.2	446.7	445.2	444.3	443.9	443.5	443.0	442.6
47.5°	416.5	414.8	413.1	411.8	410.7	409.6	408.6	407.6
50°	394.3	392.4	390.5	389.2	388.3	387.5	386.7	385.9
52.5°	371.6	369.9	368.3	366.9	365.8	364.8	363.8	362.7
55°	338.3	336.6	334.9	333.7	332.9	332.1	331.2	330.4
57.5°	304.8	303.2	301.6	300.4	299.6	298.8	298.0	297.2
60°	281.7	280.5	279.2	278.3	277.6	276.9	276.2	275.5
62.5°	259.3	258.1	257.0	256.1	255.4	254.8	254.1	253.3
65°	226.6	225.2	223.9	222.8	222.1	221.4	220.8	220.1
67.5°	192.9	191.6	190.3	189.5	189.3	189.2	188.9	188.8
70°	171.7	170.6	169.4	168.7	168.3	167.9	167.5	167.1
72.5°	150.4	149.5	148.6	148.0	147.6	147.2	146.8	146.3
75°	119.7	119.1	118.7	118.3	118.1	118.0	117.9	117.7
77.5°	90.6	90.5	90.3	90.1	89.7	89.4	89.0	88.6
80°	72.2	71.9	71.6	71.5	71.3	71.1	71.1	70.9
82.5°	55.6	55.5	55.3	55.1	55.1	54.9	54.7	54.6
85°	32.1	32.1	32.1	32.0	31.8	31.7	31.6	31.4
87.5°	14.7	14.8	15.0	15.0	15.1	15.3	15.1	15.1
90°	14.3	15.1	15.8	15.8	16.6	17.4	16.6	16.6
92.5°	155.3	116.9	93.0	77.2	67.9	63.6	60.9	60.9
95°	586.0	463.4	357.4	280.7	242.0	217.5	203.3	193.0
97.5°	865.9	820.2	742.9	660.4	603.6	556.0	532.3	515.8
100°	953.8	969.6	930.8	872.3	803.5	755.3	731.5	725.2
102.5°	949.4	1027.8	1039.0	1014.6	972.4	937.5	912.5	907.4
105°	885.7	1022.5	1100.8	1133.3	1134.9	1128.5	1117.5	1112.7
107.5°	795.4	941.1	1051.4	1121.9	1160.9	1179.0	1186.9	1189.0
110°	741.0	877.8	992.5	1079.5	1135.7	1168.9	1183.1	1190.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	701.2	822.1	930.5	1017.5	1081.2	1121.4	1141.4	1152.9
115°	661.2	758.4	851.0	926.9	989.4	1036.8	1062.1	1068.4
117.5°	641.5	722.1	794.8	859.2	912.5	952.4	977.9	982.9
120°	632.6	706.2	769.5	825.6	870.7	905.5	926.1	934.8
122.5°	625.1	696.1	753.7	802.9	841.0	870.7	888.1	896.8
125°	612.1	680.1	734.7	778.2	809.8	832.7	847.8	852.5
127.5°	596.3	661.3	715.7	757.0	788.8	809.2	821.8	826.6
130°	583.7	646.1	699.9	741.8	774.2	794.0	806.7	811.4
132.5°	570.4	629.1	681.5	723.5	755.3	777.5	789.6	794.3
135°	552.0	603.4	651.6	691.2	722.9	745.0	757.6	762.4
137.5°	535.4	578.9	619.6	655.3	684.8	706.7	717.2	722.9
140°	525.9	563.1	598.7	631.8	659.6	677.0	688.0	694.3
142.5°	517.1	549.8	580.4	609.1	633.6	649.7	659.6	664.0
145°	504.5	531.5	555.2	577.3	597.1	610.5	618.5	622.4
147.5°	494.2	515.6	534.6	552.0	566.6	578.1	584.2	585.5
150°	488.0	506.1	522.0	536.2	548.8	559.1	563.9	564.7
152.5°	481.0	496.6	511.2	522.9	533.7	542.0	544.9	545.7
155°	470.6	483.2	495.0	504.5	512.5	518.8	521.2	521.2
157.5°	459.3	469.9	479.9	487.5	493.5	498.2	499.6	499.6
160°	452.3	461.1	469.8	476.1	480.9	485.6	486.4	486.4
162.5°	445.4	452.8	459.6	465.3	468.8	473.6	474.4	473.7
165°	435.8	440.5	446.0	450.0	453.1	456.3	455.5	454.7
167.5°	426.4	430.1	434.5	436.9	438.5	440.5	440.4	439.7
170°	420.7	423.1	426.3	428.6	430.2	431.0	430.2	430.2
172.5°	415.7	417.4	419.3	421.0	422.0	422.8	422.0	420.7
175°	408.8	409.6	411.2	411.2	411.2	412.8	411.2	409.6
177.5°	404.4	405.0	405.0	405.7	405.0	405.7	404.4	403.1
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5

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