

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: P332543-927

Luminaire Tested: **S124DIP-S575D365U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332543-927  
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-S575D365U927-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3011.4 lumens  
Efficiency: N/A  
Efficacy: 109.5 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: Semi-Direct

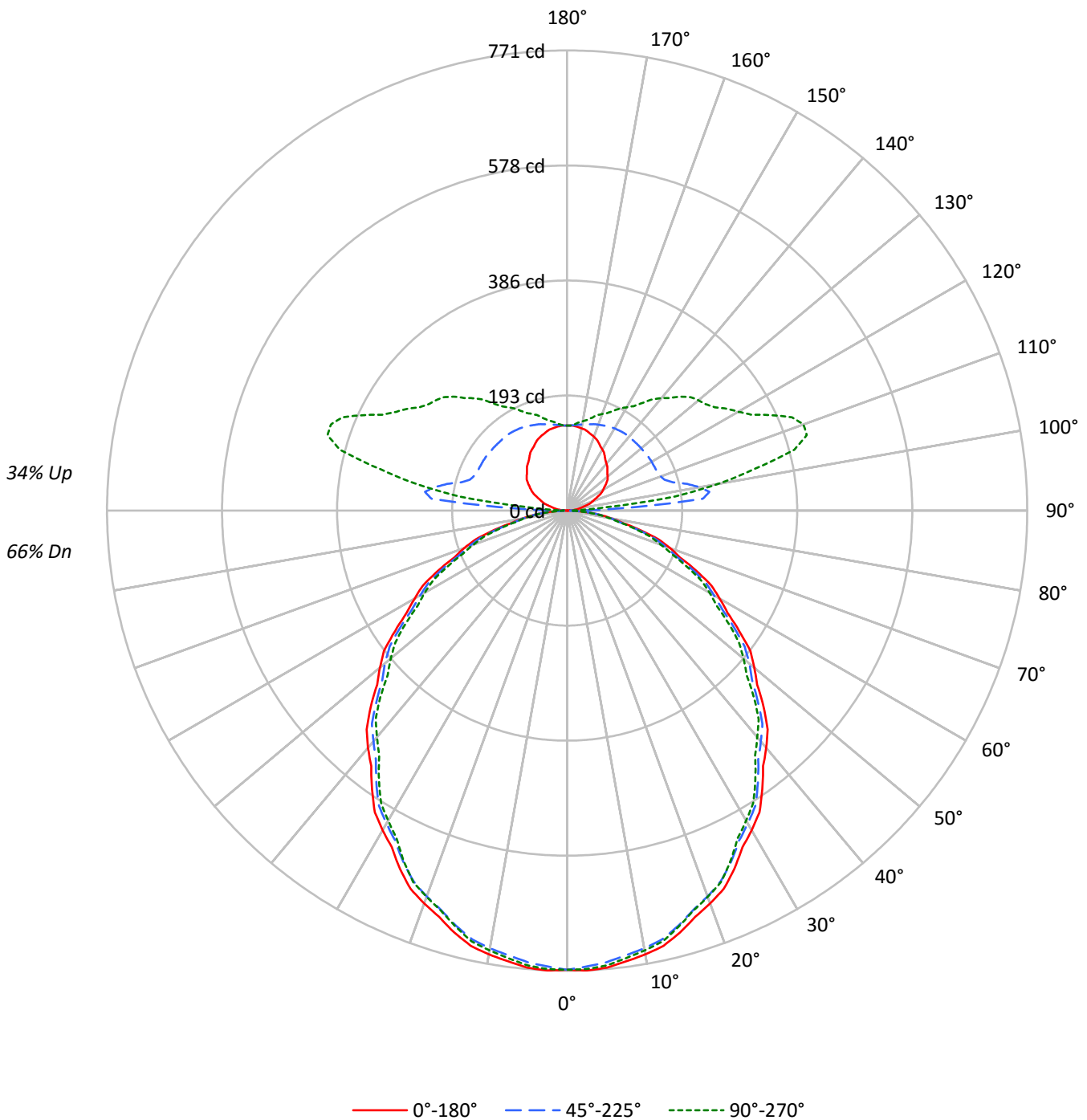
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	66
1	101	97	93	89	95	91	88	84	81	78	76	71	69	67	62	61	59	55
2	92	85	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50	46
3	84	74	67	61	79	70	63	58	62	57	53	55	51	48	49	45	43	39
4	77	66	58	51	72	62	55	49	56	50	45	49	45	41	43	40	37	34
5	71	59	50	44	66	56	48	42	50	44	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	39	34	40	35	31	35	31	28	26
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23
8	56	43	36	30	53	41	34	29	37	31	27	33	28	25	30	26	23	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	23	20	18
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	21	19	17

**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	2.4
10°-20°	204.1	6.8
20°-30°	300.5	10.0
30°-40°	349.3	11.6
40°-50°	349.3	11.6
50°-60°	305.5	10.1
60°-70°	226.9	7.5
70°-80°	128.9	4.3
80°-90°	38.0	1.3
90°-100°	102.9	3.4
100°-110°	214.2	7.1
110°-120°	191.9	6.4
120°-130°	161.4	5.4
130°-140°	134.6	4.5
140°-150°	102.8	3.4
150°-160°	72.3	2.4
160°-170°	42.5	1.4
170°-180°	13.8	0.5
0°-30°	577.0	19.2
0°-40°	926.3	30.8
0°-60°	1581.2	52.5
0°-90°	1975.0	65.6
90°-120°	509.0	16.9
90°-150°	907.8	30.1
90°-180°	1036.0	34.4
0°-180°	3011.4	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°	0	2	5	6	6	2
95°	9	29	228	113	68	10
105°	33	47	184	396	394	35
115°	58	72	164	315	378	57
125°	80	96	163	268	302	72
135°	96	114	162	238	270	74
145°	110	126	161	200	220	69
155°	125	135	156	177	184	58
165°	136	141	150	159	161	38
175°	142	142	144	146	145	13
180°	142	142	142	142	142	



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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°	12.9	12.9	12.9	12.9	12.8	12.8	12.9	12.8	12.8	12.8	12.8
90°	0.3	0.9	1.7	2.0	2.2	2.2	3.9	3.9	4.5	5.1	4.8
92.5°	3.2	4.7	7.3	10.7	14.8	20.6	34.9	56.6	77.7	88.8	74.0
95°	9.3	10.1	12.9	16.6	23.2	35.0	59.3	105.3	172.2	228.1	234.6
97.5°	16.6	16.6	19.0	22.3	28.1	37.9	56.7	94.7	161.1	240.3	294.8
100°	21.3	21.3	23.2	26.6	31.9	40.9	57.4	89.0	146.2	225.1	296.8
102.5°	25.7	26.2	28.0	31.1	36.2	44.7	59.7	87.5	136.1	206.0	280.0
105°	32.8	33.6	35.0	38.3	43.4	51.5	65.0	88.2	127.4	183.6	249.5
107.5°	40.5	41.0	42.5	46.0	50.9	58.9	71.1	92.4	125.8	171.1	224.8
110°	45.6	46.2	47.6	50.9	56.0	63.5	75.9	95.5	126.3	166.8	212.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	50.5	51.1	52.8	55.8	60.9	68.4	80.3	98.9	127.6	164.9	205.6
115°	57.7	58.5	60.4	63.3	68.6	76.1	87.4	104.2	130.2	163.8	199.1
117.5°	65.0	65.8	67.6	70.7	75.7	83.5	94.1	109.6	132.9	163.5	196.1
120°	70.0	70.6	72.5	75.6	80.3	88.2	98.9	113.4	135.0	163.5	194.6
122.5°	74.5	75.0	77.0	79.9	85.1	92.7	103.3	117.0	137.0	163.3	192.8
125°	80.3	81.4	83.2	86.3	91.6	99.4	109.5	122.3	140.0	163.0	189.8
127.5°	85.6	86.4	88.5	92.0	97.5	105.4	115.2	127.0	142.4	162.3	185.8
130°	88.5	89.6	91.8	96.0	101.3	109.5	119.0	129.9	144.2	162.1	183.4
132.5°	91.4	92.3	95.2	99.2	105.0	112.6	122.2	132.8	145.8	161.9	181.2
135°	95.5	96.6	99.4	104.2	110.0	117.3	126.5	136.7	148.1	161.5	177.8
137.5°	99.6	100.6	103.7	108.2	114.3	121.3	129.9	139.3	149.5	161.5	174.9
140°	102.5	103.3	106.4	111.1	117.0	123.7	132.1	141.1	150.6	161.3	173.3
142.5°	105.6	106.5	109.3	113.8	119.5	126.0	134.2	142.4	151.5	161.3	172.0
145°	110.0	110.9	113.7	117.6	122.9	129.0	136.3	143.9	152.0	160.7	169.7
147.5°	115.0	115.3	117.8	121.8	126.2	131.7	138.6	145.2	152.3	159.7	167.6
150°	118.1	118.4	120.6	124.1	128.3	133.6	139.7	145.8	152.3	159.0	166.0
152.5°	121.0	121.1	123.3	126.5	130.2	135.1	140.6	146.3	151.9	157.9	164.2
155°	125.2	125.4	127.1	129.9	133.0	137.2	142.0	146.7	151.2	156.2	161.5
157.5°	129.1	129.1	130.7	132.8	135.5	138.9	142.9	146.7	150.4	154.5	158.8
160°	131.6	131.6	132.7	134.7	136.9	140.0	143.4	146.7	149.8	153.1	156.8
162.5°	133.8	133.6	134.5	136.3	138.2	140.7	143.8	146.7	149.1	151.8	155.0
165°	136.3	136.3	136.9	138.3	139.7	141.4	143.9	146.2	147.8	149.8	152.0
167.5°	138.9	138.6	138.9	139.9	140.7	142.0	143.9	145.4	146.5	147.7	149.3
170°	140.0	139.7	140.0	140.9	141.4	142.2	143.6	145.0	145.6	146.4	147.6
172.5°	141.1	140.9	140.9	141.5	141.8	142.4	143.4	144.6	144.7	145.0	146.0
175°	142.2	142.0	142.0	142.2	142.5	142.5	143.1	143.9	143.6	143.6	144.2
177.5°	142.8	142.5	142.3	142.5	142.5	142.5	142.8	143.1	142.8	142.8	143.0
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5



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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°	12.8	12.9	13.0	13.0	13.0	13.1	13.0	13.0
90°	5.1	5.3	5.6	5.6	5.9	6.2	5.9	5.9
92.5°	55.0	41.4	33.0	27.3	24.0	22.5	21.5	21.5
95°	207.5	164.1	126.5	99.4	85.6	77.0	71.9	68.3
97.5°	306.5	290.4	263.0	233.8	213.7	196.9	188.5	182.6
100°	337.6	343.3	329.5	308.8	284.5	267.4	259.0	256.7
102.5°	336.1	363.8	367.8	359.2	344.3	331.9	323.1	321.2
105°	313.5	362.0	389.8	401.2	401.8	399.5	395.6	394.0
107.5°	281.6	333.2	372.2	397.2	411.0	417.4	420.2	420.9
110°	262.4	310.8	351.4	382.1	402.0	413.8	418.8	421.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	248.2	291.0	329.4	360.2	382.8	397.0	404.1	408.1
115°	234.1	268.5	301.3	328.1	350.2	367.0	376.0	378.3
117.5°	227.1	255.6	281.4	304.2	323.1	337.2	346.2	347.9
120°	223.9	250.0	272.4	292.3	308.2	320.6	327.9	331.0
122.5°	221.3	246.4	266.8	284.2	297.7	308.2	314.4	317.5
125°	216.7	240.7	260.1	275.5	286.7	294.9	300.2	301.8
127.5°	211.1	234.1	253.4	268.0	279.2	286.5	291.0	292.6
130°	206.6	228.8	247.8	262.6	274.1	281.1	285.6	287.2
132.5°	201.9	222.7	241.3	256.1	267.4	275.3	279.6	281.2
135°	195.4	213.7	230.7	244.7	255.9	263.7	268.2	269.9
137.5°	189.6	204.9	219.4	232.0	242.5	250.2	253.9	255.9
140°	186.2	199.3	211.9	223.7	233.5	239.6	243.6	245.8
142.5°	183.1	194.6	205.4	215.6	224.3	230.0	233.5	235.0
145°	178.6	188.1	196.5	204.4	211.4	216.1	219.0	220.3
147.5°	175.0	182.5	189.3	195.4	200.6	204.7	206.8	207.3
150°	172.8	179.2	184.8	189.8	194.3	198.0	199.6	199.9
152.5°	170.3	175.9	181.0	185.1	188.9	191.9	192.9	193.2
155°	166.6	171.0	175.2	178.6	181.4	183.6	184.5	184.5
157.5°	162.6	166.4	169.9	172.6	174.7	176.4	176.9	176.9
160°	160.2	163.2	166.3	168.6	170.2	171.9	172.2	172.2
162.5°	157.7	160.3	162.7	164.8	166.0	167.6	167.9	167.7
165°	154.2	156.0	157.9	159.3	160.4	161.5	161.3	161.0
167.5°	151.0	152.3	153.8	154.6	155.2	156.0	155.9	155.7
170°	148.9	149.8	150.9	151.8	152.3	152.6	152.3	152.3
172.5°	147.2	147.7	148.5	149.1	149.4	149.6	149.4	148.9
175°	144.7	145.0	145.6	145.6	145.6	146.2	145.6	145.0
177.5°	143.1	143.4	143.4	143.6	143.4	143.6	143.1	142.8
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5

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