

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: P332539-840

Luminaire Tested: **S124DIP-S575D365U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332539-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D365U840-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3673.7 lumens  
Efficiency: N/A  
Efficacy: 133.6 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-Direct

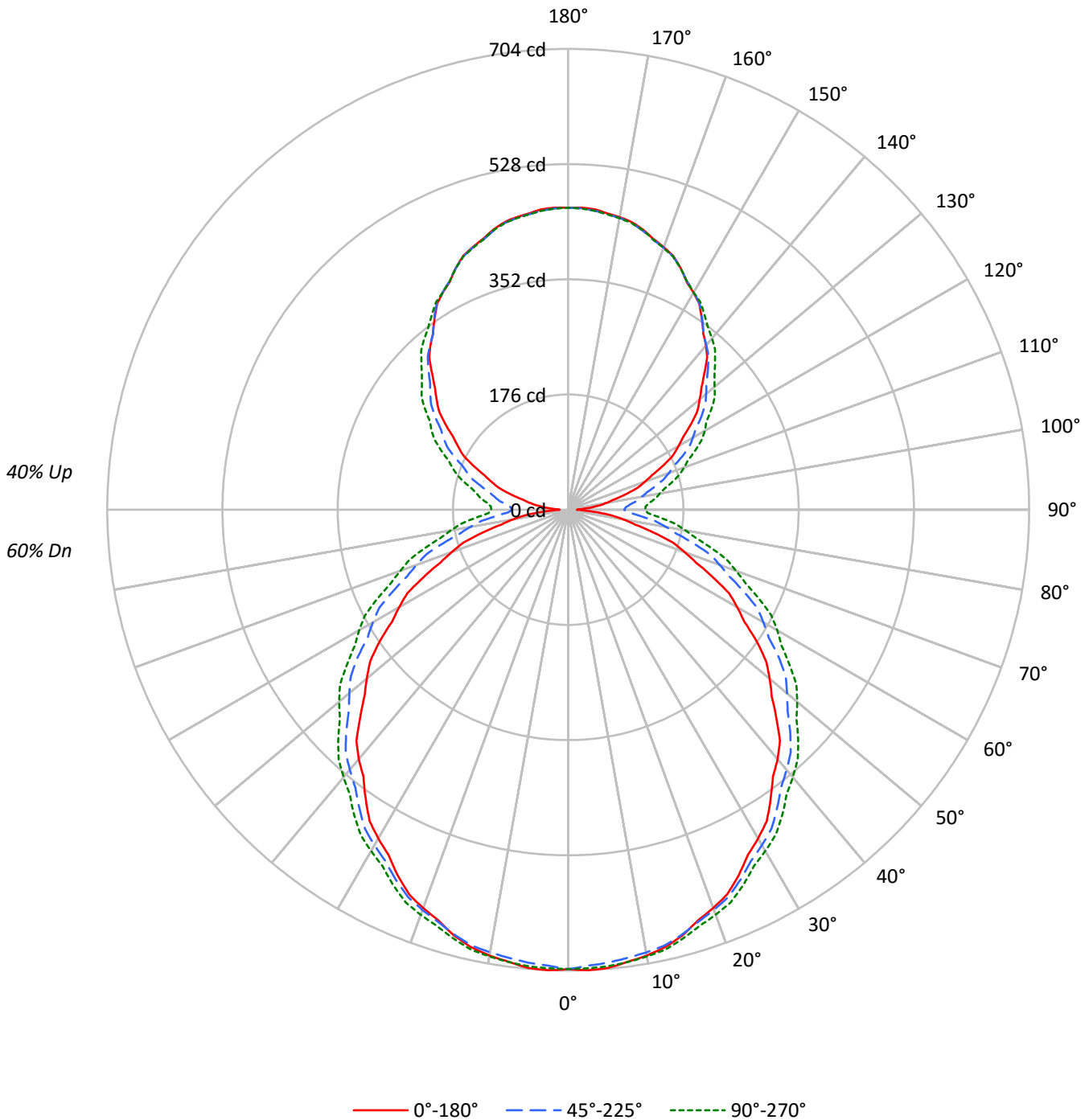
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	99	94	90	86	92	88	84	80	76	73	71	66	64	62	56	54	53	48
2	90	81	75	69	83	76	70	65	66	62	58	57	53	50	49	46	44	39
3	81	71	63	57	76	67	59	54	58	52	48	50	46	42	43	39	37	33
4	74	63	54	48	69	59	51	45	51	45	40	44	40	36	38	34	31	28
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21	18
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19	16
9	50	37	29	24	47	35	28	23	31	25	21	27	22	19	24	20	17	15
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15	13

**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	1.8
10°-20°	190.4	5.2
20°-30°	287.9	7.8
30°-40°	348.3	9.5
40°-50°	368.3	10.0
50°-60°	346.6	9.4
60°-70°	287.5	7.8
70°-80°	202.0	5.5
80°-90°	115.6	3.1
90°-100°	98.2	2.7
100°-110°	140.3	3.8
110°-120°	186.7	5.1
120°-130°	220.8	6.0
130°-140°	234.8	6.4
140°-150°	224.3	6.1
150°-160°	187.3	5.1
160°-170°	124.6	3.4
170°-180°	43.6	1.2
0°-30°	544.7	14.8
0°-40°	893.1	24.3
0°-60°	1607.9	43.8
0°-90°	2213.0	60.2
90°-120°	425.3	11.6
90°-150°	1105.2	30.1
90°-180°	1461.0	39.8
0°-180°	3673.7	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	49	86	110	118	10
95°	32	61	96	117	125	32
105°	90	107	137	157	165	96
115°	160	168	192	208	214	158
125°	230	230	248	262	266	205
135°	294	296	301	313	317	227
145°	356	356	357	361	363	223
155°	407	407	406	408	406	187
165°	443	442	441	443	442	125
175°	461	459	459	461	459	44
180°	461	461	461	461	461	



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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°	23.4	30.8	38.1	45.3	52.7	60.2	68.0	75.7	83.5	91.3	96.4
90°	13.6	21.5	29.4	37.3	45.0	53.1	61.2	69.4	77.5	85.6	91.2
92.5°	19.6	26.9	34.1	41.4	48.7	56.4	64.3	72.2	80.2	88.2	93.4
95°	31.6	38.1	44.5	51.1	57.6	64.6	72.3	80.1	87.8	95.5	100.5
97.5°	46.7	52.2	57.8	63.2	68.8	75.4	83.2	90.9	98.7	106.3	111.3
100°	58.6	63.4	68.4	73.2	78.1	84.2	91.8	99.3	106.8	114.3	119.2
102.5°	71.7	75.8	80.0	84.0	88.2	93.9	101.2	108.6	115.8	123.2	127.9
105°	90.2	93.8	97.4	100.9	104.5	109.7	116.4	123.2	130.0	136.8	141.4
107.5°	111.1	114.1	117.0	120.0	123.0	127.5	133.7	139.9	146.0	152.2	156.6
110°	124.7	127.3	130.0	132.6	135.2	139.5	145.5	151.6	157.6	163.6	167.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	139.0	141.2	143.4	145.5	147.7	151.7	157.4	163.1	168.7	174.5	178.3
115°	160.3	161.9	163.4	165.0	166.6	170.1	175.5	181.0	186.4	191.8	195.6
117.5°	181.2	182.2	183.2	184.1	185.1	188.2	193.3	198.4	203.5	208.5	212.0
120°	194.5	195.3	196.2	197.0	197.8	200.7	205.5	210.4	215.2	219.9	223.1
122.5°	209.0	209.2	209.5	209.7	210.0	212.5	217.1	221.8	226.4	231.2	234.4
125°	229.7	229.5	229.4	229.2	229.0	231.1	235.4	239.6	244.0	248.2	251.5
127.5°	249.0	249.1	249.2	249.2	249.3	251.0	254.2	257.4	260.6	263.9	266.9
130°	262.2	262.2	262.3	262.4	262.4	263.9	266.6	269.4	272.3	275.0	278.0
132.5°	276.1	276.1	276.1	276.1	276.1	277.2	279.4	281.6	283.8	285.9	288.7
135°	293.9	294.3	294.8	295.3	295.7	296.6	297.8	299.0	300.2	301.4	304.1
137.5°	314.0	314.0	314.1	314.1	314.2	314.6	315.3	316.0	316.7	317.4	319.7
140°	327.4	327.4	327.3	327.3	327.3	327.4	327.6	327.7	327.9	328.1	330.3
142.5°	339.0	339.1	339.3	339.4	339.5	339.5	339.3	339.1	339.0	338.8	340.8
145°	355.9	356.0	356.2	356.3	356.4	356.6	356.6	356.7	356.8	356.9	357.8
147.5°	372.7	372.9	373.1	373.3	373.5	373.5	373.5	373.4	373.4	373.3	373.4
150°	382.9	383.1	383.2	383.4	383.5	383.6	383.6	383.6	383.6	383.6	383.6
152.5°	392.0	392.2	392.3	392.5	392.6	392.7	392.8	392.9	392.9	393.0	393.2
155°	406.8	406.8	406.8	406.8	406.8	406.8	406.7	406.6	406.6	406.5	406.8
157.5°	419.4	419.2	419.1	419.0	418.8	418.7	418.7	418.7	418.7	418.7	418.9
160°	426.8	426.7	426.7	426.6	426.5	426.4	426.4	426.3	426.2	426.1	426.4
162.5°	433.6	433.4	433.2	433.0	432.8	432.7	432.6	432.5	432.4	432.3	432.8
165°	442.8	442.6	442.4	442.1	441.9	441.7	441.5	441.4	441.2	441.1	441.5
167.5°	449.9	449.6	449.3	448.9	448.6	448.4	448.5	448.5	448.5	448.5	449.0
170°	453.9	453.5	453.1	452.7	452.3	452.2	452.2	452.3	452.4	452.5	452.9
172.5°	456.8	456.5	456.1	455.8	455.4	455.2	455.2	455.3	455.3	455.3	455.9
175°	460.7	460.3	459.9	459.5	459.1	458.9	458.8	458.7	458.7	458.6	459.1
177.5°	462.0	461.7	461.3	461.0	460.7	460.6	460.6	460.6	460.6	460.6	461.0
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4



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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°	101.6	106.7	112.0	115.3	116.8	118.5	120.0	121.6
90°	96.7	102.3	107.9	111.4	112.9	114.4	116.0	117.5
92.5°	98.6	103.8	109.0	112.4	113.8	115.3	116.8	118.4
95°	105.4	110.4	115.3	118.6	120.2	121.7	123.3	124.8
97.5°	116.1	121.0	125.8	129.1	130.5	132.0	133.5	135.0
100°	124.1	129.0	133.8	136.8	138.0	139.3	140.6	141.8
102.5°	132.8	137.5	142.4	145.4	146.9	148.3	149.8	151.2
105°	146.0	150.6	155.2	158.3	160.0	161.6	163.2	164.9
107.5°	161.2	165.7	170.3	173.1	174.3	175.6	176.8	178.0
110°	171.4	175.2	179.0	181.8	183.4	185.1	186.7	188.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	182.2	186.0	189.9	192.5	193.9	195.4	196.8	198.2
115°	199.3	203.1	206.8	209.3	210.5	211.6	212.8	213.9
117.5°	215.3	218.6	222.1	224.3	225.6	226.8	228.0	229.2
120°	226.2	229.2	232.4	234.7	236.2	237.8	239.3	241.0
122.5°	237.5	240.8	244.0	246.1	247.1	248.0	249.0	250.0
125°	254.6	257.7	260.8	262.9	263.8	264.7	265.6	266.5
127.5°	269.8	272.9	275.8	277.8	278.9	279.9	281.0	282.1
130°	280.9	284.0	286.9	288.8	289.5	290.2	290.9	291.8
132.5°	291.5	294.5	297.3	299.1	300.1	301.0	301.9	302.9
135°	306.7	309.4	312.0	313.8	314.6	315.4	316.2	317.0
137.5°	322.1	324.5	326.8	328.4	329.3	330.2	331.1	332.1
140°	332.4	334.7	336.9	338.3	339.1	339.9	340.7	341.5
142.5°	342.7	344.8	346.7	348.1	348.8	349.5	350.2	350.9
145°	358.8	359.7	360.7	361.4	361.9	362.3	362.8	363.2
147.5°	373.4	373.5	373.7	374.0	374.4	374.9	375.4	375.9
150°	383.6	383.6	383.6	383.5	383.5	383.4	383.3	383.2
152.5°	393.4	393.6	393.8	393.7	393.5	393.3	393.1	392.9
155°	407.1	407.4	407.7	407.7	407.4	407.1	406.8	406.5
157.5°	419.1	419.4	419.6	419.6	419.3	419.1	418.8	418.5
160°	426.6	426.8	427.1	427.0	426.6	426.2	425.8	425.4
162.5°	433.2	433.6	434.0	434.0	433.7	433.3	432.9	432.5
165°	442.0	442.5	442.9	443.0	442.7	442.4	442.1	441.8
167.5°	449.5	449.9	450.4	450.4	449.9	449.4	448.9	448.4
170°	453.4	453.9	454.4	454.3	453.8	453.2	452.7	452.1
172.5°	456.5	457.0	457.5	457.5	457.0	456.4	455.9	455.2
175°	459.7	460.2	460.8	460.8	460.2	459.7	459.1	458.6
177.5°	461.4	461.9	462.3	462.3	461.8	461.3	460.8	460.3
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4

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