

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: P332557-930

Luminaire Tested: **S124DIP-S575D810U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332557-930  
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-S575D810U930-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4220.3 lumens  
Efficiency: N/A  
Efficacy: 109.9 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: General Diffuse

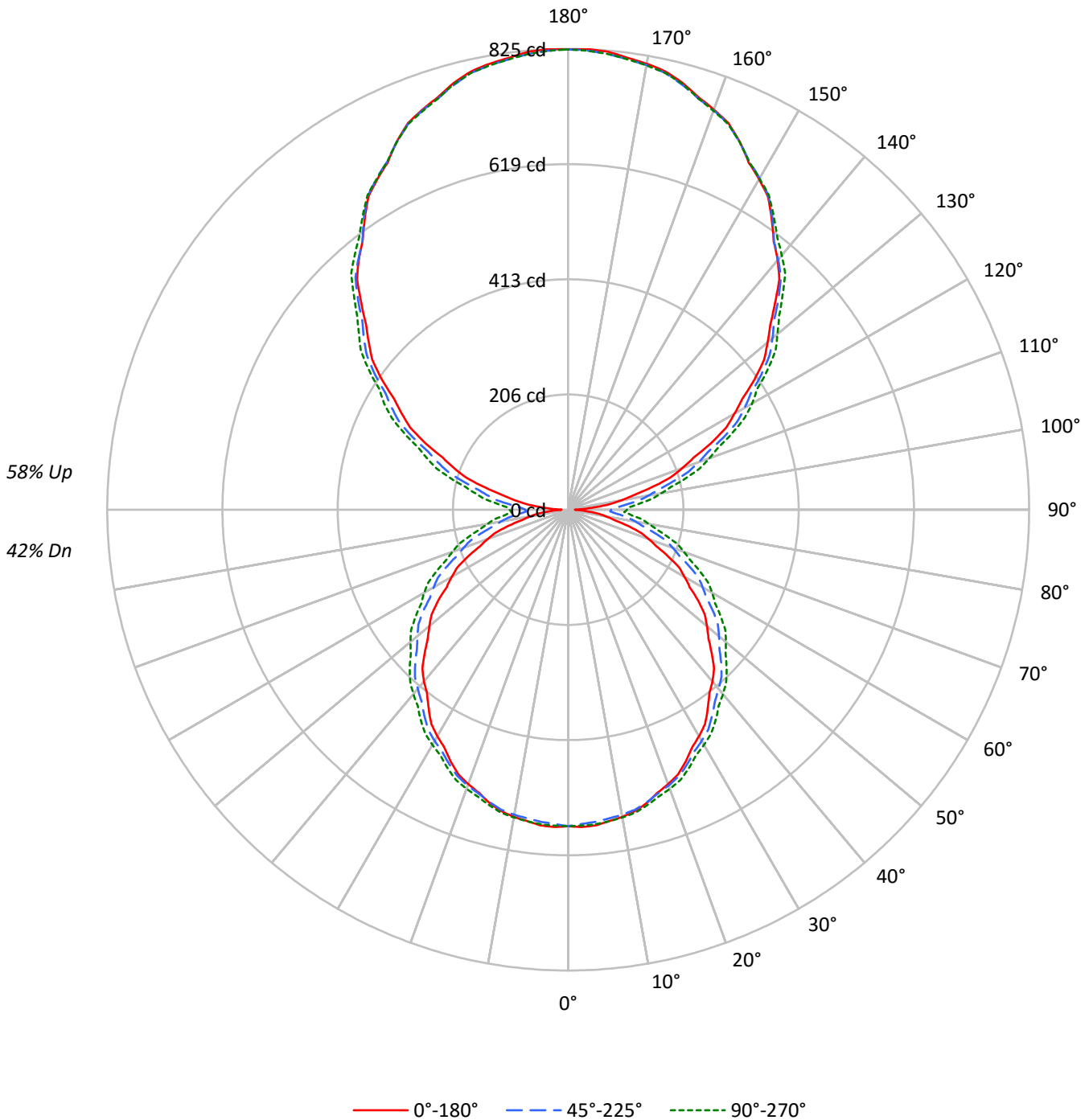
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	91	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	79	72	67	78	72	66	62	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	30	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	45	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	23	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	24	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	27	22	18	22	18	15	18	15	12	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

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

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.6	1.3
10°-20°	153.7	3.6
20°-30°	232.4	5.5
30°-40°	281.2	6.7
40°-50°	297.3	7.0
50°-60°	279.8	6.6
60°-70°	232.1	5.5
70°-80°	163.1	3.9
80°-90°	94.7	2.2
90°-100°	109.1	2.6
100°-110°	201.6	4.8
110°-120°	300.5	7.1
120°-130°	375.7	8.9
130°-140°	411.4	9.7
140°-150°	399.1	9.5
150°-160°	334.5	7.9
160°-170°	222.6	5.3
170°-180°	77.9	1.8
0°-30°	439.8	10.4
0°-40°	721.0	17.1
0°-60°	1298.1	30.8
0°-90°	1788.0	42.4
90°-120°	611.2	14.5
90°-150°	1797.3	42.6
90°-180°	2432.0	57.6
0°-180°	4220.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	12	44	77	98	105	9
95°	46	73	104	122	128	49
105°	154	168	194	211	218	164
115°	282	288	306	319	324	278
125°	407	408	422	432	435	363
135°	523	527	532	540	542	405
145°	635	637	637	640	641	397
155°	727	727	726	728	726	334
165°	791	789	788	791	789	223
175°	823	820	819	823	819	78
180°	824	824	824	824	824	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.2	25.2	31.3	37.3	43.5	49.7	56.0	62.5	68.9	75.3	79.5
90°	12.1	19.2	26.5	33.7	40.8	48.0	55.3	62.5	69.6	76.8	81.8
92.5°	23.3	30.2	37.0	43.9	50.7	57.6	64.4	71.3	78.2	85.0	89.5
95°	46.5	52.4	58.4	64.2	70.2	76.6	83.3	90.1	96.9	103.6	107.9
97.5°	74.3	79.3	84.3	89.4	94.4	100.4	107.2	114.1	121.0	127.8	132.1
100°	96.2	100.4	104.7	108.9	113.2	118.6	125.4	132.2	138.9	145.8	149.9
102.5°	119.7	123.1	126.5	130.0	133.5	138.4	145.0	151.5	158.1	164.6	168.7
105°	154.3	157.2	160.1	163.1	166.1	170.5	176.2	182.0	187.8	193.6	197.5
107.5°	191.7	194.2	196.7	199.2	201.6	205.4	210.4	215.4	220.5	225.4	229.3
110°	216.7	218.9	221.2	223.5	225.8	229.3	234.1	238.8	243.6	248.4	251.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.7	244.5	246.3	248.1	249.9	253.1	257.5	262.0	266.4	270.8	273.9
115°	281.7	283.0	284.2	285.5	286.8	289.5	293.8	298.0	302.2	306.5	309.4
117.5°	319.0	319.9	320.8	321.7	322.5	325.0	329.0	333.0	337.0	341.0	343.5
120°	343.6	344.5	345.5	346.5	347.5	349.8	353.5	357.2	360.9	364.4	366.6
122.5°	369.6	369.8	370.1	370.5	370.8	372.8	376.4	380.1	383.8	387.4	389.8
125°	407.2	407.2	407.0	406.8	406.8	408.3	411.7	415.1	418.5	421.8	424.3
127.5°	442.0	442.2	442.5	442.8	443.1	444.5	446.9	449.4	451.9	454.4	456.6
130°	465.9	466.2	466.5	466.8	467.1	468.3	470.6	472.9	475.1	477.4	479.6
132.5°	490.9	491.1	491.2	491.4	491.6	492.5	494.2	495.9	497.6	499.3	501.4
135°	523.3	524.2	525.0	525.9	526.7	527.6	528.6	529.6	530.6	531.6	533.5
137.5°	559.2	559.5	559.8	560.0	560.3	560.8	561.4	562.1	562.9	563.5	565.2
140°	583.2	583.3	583.5	583.7	583.8	583.9	584.1	584.2	584.3	584.5	586.2
142.5°	604.6	604.9	605.1	605.4	605.6	605.7	605.4	605.3	605.1	604.9	606.5
145°	634.9	635.3	635.7	636.1	636.5	636.8	637.0	637.1	637.2	637.4	638.1
147.5°	665.0	665.4	666.0	666.5	667.1	667.3	667.2	667.1	666.9	666.8	666.8
150°	683.3	683.7	684.1	684.5	685.0	685.2	685.2	685.2	685.2	685.2	685.2
152.5°	700.1	700.4	700.7	701.1	701.3	701.6	701.6	701.8	701.9	702.1	702.4
155°	726.6	726.6	726.6	726.6	726.6	726.5	726.4	726.3	726.1	726.0	726.5
157.5°	749.1	748.8	748.5	748.3	748.0	747.9	747.9	747.9	747.8	747.8	748.2
160°	762.3	762.1	762.1	761.9	761.7	761.6	761.5	761.3	761.2	761.1	761.5
162.5°	774.5	774.2	773.8	773.5	773.1	772.8	772.7	772.6	772.4	772.3	773.1
165°	791.0	790.6	790.2	789.7	789.3	789.0	788.6	788.4	788.1	787.8	788.6
167.5°	803.6	803.0	802.4	801.8	801.3	801.0	801.0	801.0	801.0	801.0	801.9
170°	810.7	810.1	809.3	808.6	808.0	807.6	807.8	808.0	808.0	808.2	809.0
172.5°	815.9	815.3	814.6	814.1	813.5	813.2	813.3	813.3	813.3	813.3	814.2
175°	822.9	822.1	821.4	820.8	820.0	819.6	819.5	819.3	819.2	819.0	820.0
177.5°	825.2	824.6	824.0	823.5	822.9	822.6	822.6	822.6	822.6	822.6	823.4
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	83.8	88.1	92.3	95.1	96.4	97.7	99.0	100.3
90°	86.7	91.6	96.6	99.8	101.2	102.6	104.0	105.4
92.5°	94.0	98.5	103.0	105.8	107.1	108.4	109.7	111.0
95°	112.1	116.3	120.6	123.3	124.6	125.9	127.1	128.4
97.5°	136.3	140.5	144.7	147.4	148.6	149.9	151.1	152.2
100°	153.9	158.0	162.1	164.6	165.6	166.6	167.6	168.6
102.5°	172.8	176.9	181.0	183.6	184.8	186.1	187.3	188.5
105°	201.5	205.5	209.4	212.1	213.7	215.2	216.8	218.3
107.5°	233.2	237.1	240.9	243.4	244.3	245.3	246.3	247.3
110°	254.3	257.3	260.2	262.5	264.1	265.6	267.2	268.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	277.0	280.1	283.2	285.3	286.5	287.7	288.9	290.2
115°	312.3	315.4	318.3	320.2	321.1	321.9	322.7	323.6
117.5°	345.9	348.4	350.8	352.5	353.3	354.2	355.0	355.9
120°	368.7	370.8	372.9	374.7	376.1	377.5	379.0	380.3
122.5°	392.1	394.4	396.8	398.2	398.7	399.3	399.7	400.2
125°	426.6	429.1	431.5	432.9	433.5	434.1	434.6	435.2
127.5°	458.9	461.1	463.4	464.9	465.6	466.4	467.1	467.8
130°	481.8	484.1	486.4	487.6	487.9	488.2	488.4	488.8
132.5°	503.6	505.7	507.8	509.2	509.9	510.5	511.1	511.7
135°	535.5	537.4	539.5	540.6	541.0	541.5	541.9	542.3
137.5°	567.0	568.7	570.3	571.6	572.3	573.2	574.0	574.7
140°	587.8	589.5	591.3	592.4	593.0	593.5	594.0	594.6
142.5°	608.1	609.6	611.2	612.3	612.9	613.4	613.9	614.5
145°	638.8	639.5	640.2	640.7	640.7	640.9	641.1	641.2
147.5°	666.8	666.8	666.8	667.0	667.3	667.6	667.9	668.2
150°	685.2	685.2	685.2	685.1	685.0	684.9	684.7	684.5
152.5°	702.7	703.0	703.4	703.4	703.0	702.6	702.3	701.9
155°	727.1	727.7	728.2	728.2	727.7	727.1	726.5	726.0
157.5°	748.6	749.1	749.5	749.4	749.0	748.5	748.0	747.5
160°	761.9	762.3	762.7	762.6	761.9	761.2	760.5	759.8
162.5°	773.8	774.5	775.3	775.3	774.6	774.0	773.2	772.5
165°	789.5	790.4	791.2	791.3	790.8	790.2	789.6	789.1
167.5°	802.7	803.6	804.5	804.5	803.6	802.7	801.8	801.0
170°	809.9	810.7	811.6	811.5	810.6	809.6	808.5	807.6
172.5°	815.2	816.2	817.2	817.2	816.2	815.1	814.2	813.2
175°	821.0	822.0	823.0	823.0	822.0	821.0	820.0	819.0
177.5°	824.2	825.0	825.8	825.7	824.8	823.9	823.0	822.1
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1

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