

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: P332557-927

Luminaire Tested: **S124DIP-S575D810U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332557-927  
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-S575D810U927-4F0-1E-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: 4100.6 lumens  
Efficiency: N/A  
Efficacy: 106.8 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

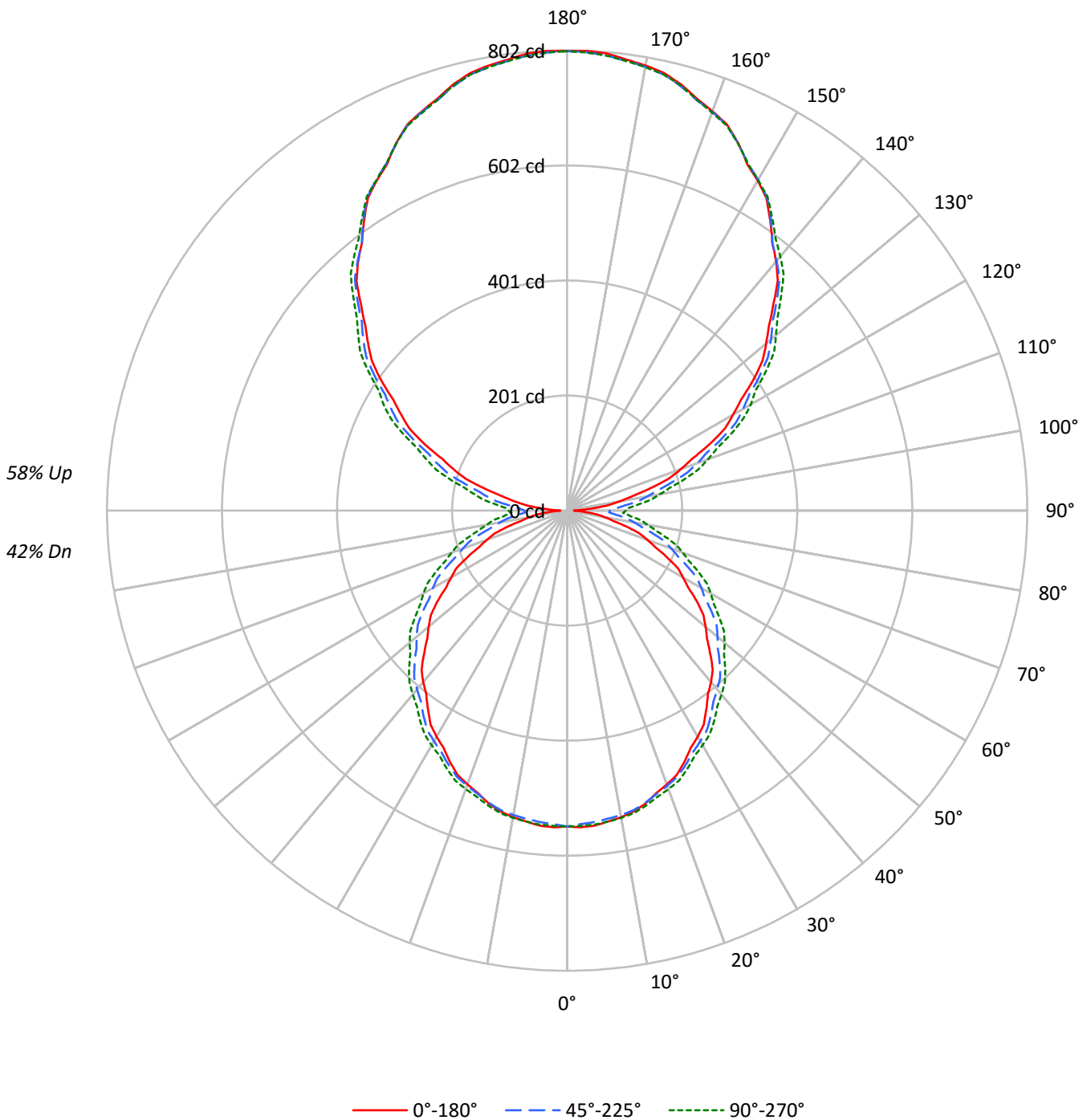
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.3
10°-20°	149.4	3.6
20°-30°	225.8	5.5
30°-40°	273.2	6.7
40°-50°	288.9	7.0
50°-60°	271.9	6.6
60°-70°	225.6	5.5
70°-80°	158.4	3.9
80°-90°	92.0	2.2
90°-100°	106.0	2.6
100°-110°	195.8	4.8
110°-120°	292.0	7.1
120°-130°	365.1	8.9
130°-140°	399.7	9.7
140°-150°	387.7	9.5
150°-160°	325.0	7.9
160°-170°	216.2	5.3
170°-180°	75.7	1.8
0°-30°	427.3	10.4
0°-40°	700.6	17.1
0°-60°	1261.3	30.8
0°-90°	1737.3	42.4
90°-120°	593.8	14.5
90°-150°	1746.3	42.6
90°-180°	2363.0	57.6
0°-180°	4100.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	12	43	75	95	102	9
95°	45	71	101	118	125	48
105°	150	164	188	205	212	159
115°	274	280	298	310	314	270
125°	396	396	410	420	423	353
135°	508	512	516	525	527	393
145°	617	619	619	622	623	386
155°	706	706	705	708	705	325
165°	769	767	766	769	767	217
175°	800	797	796	800	796	76
180°	801	801	801	801	801	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.6	24.5	30.4	36.3	42.2	48.2	54.4	60.7	66.9	73.1	77.2
90°	11.7	18.7	25.7	32.7	39.7	46.7	53.7	60.7	67.7	74.6	79.5
92.5°	22.7	29.3	36.0	42.6	49.3	55.9	62.6	69.2	76.0	82.6	87.0
95°	45.2	50.9	56.7	62.4	68.2	74.4	81.0	87.5	94.1	100.7	104.8
97.5°	72.2	77.1	81.9	86.8	91.7	97.5	104.2	110.9	117.6	124.2	128.3
100°	93.5	97.6	101.7	105.8	110.0	115.3	121.8	128.4	135.0	141.6	145.6
102.5°	116.3	119.6	122.9	126.3	129.7	134.5	140.9	147.2	153.6	159.9	163.9
105°	149.9	152.7	155.6	158.5	161.4	165.6	171.2	176.8	182.4	188.1	191.9
107.5°	186.2	188.7	191.1	193.5	195.9	199.6	204.5	209.3	214.2	219.0	222.8
110°	210.6	212.7	214.9	217.1	219.4	222.8	227.4	232.0	236.7	241.4	244.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	235.8	237.6	239.3	241.1	242.8	245.9	250.2	254.5	258.9	263.2	266.2
115°	273.7	275.0	276.2	277.4	278.7	281.3	285.4	289.5	293.7	297.8	300.6
117.5°	310.0	310.9	311.7	312.6	313.4	315.8	319.6	323.5	327.5	331.4	333.7
120°	333.8	334.8	335.7	336.7	337.6	339.9	343.5	347.1	350.6	354.1	356.2
122.5°	359.1	359.3	359.7	360.0	360.3	362.2	365.8	369.3	372.9	376.4	378.7
125°	395.7	395.6	395.5	395.3	395.2	396.7	400.1	403.3	406.6	409.9	412.3
127.5°	429.4	429.7	430.0	430.2	430.6	431.9	434.3	436.7	439.1	441.5	443.7
130°	452.7	453.0	453.3	453.5	453.8	455.0	457.2	459.5	461.6	463.8	466.0
132.5°	477.0	477.1	477.3	477.4	477.7	478.6	480.2	481.8	483.5	485.1	487.2
135°	508.4	509.3	510.1	511.0	511.7	512.6	513.6	514.6	515.6	516.5	518.4
137.5°	543.4	543.6	543.9	544.2	544.4	544.9	545.5	546.2	546.9	547.6	549.2
140°	566.6	566.8	567.0	567.1	567.2	567.4	567.5	567.6	567.8	567.9	569.6
142.5°	587.5	587.7	588.0	588.2	588.4	588.5	588.3	588.1	588.0	587.7	589.3
145°	616.9	617.3	617.7	618.1	618.5	618.8	618.9	619.0	619.2	619.3	620.0
147.5°	646.1	646.6	647.1	647.6	648.2	648.4	648.2	648.2	648.0	647.9	647.9
150°	663.9	664.3	664.7	665.1	665.6	665.7	665.7	665.7	665.7	665.7	665.7
152.5°	680.2	680.6	680.9	681.2	681.4	681.7	681.8	681.9	682.0	682.1	682.5
155°	706.0	706.0	706.0	706.0	706.0	705.9	705.8	705.7	705.5	705.4	705.9
157.5°	727.9	727.5	727.3	727.1	726.8	726.7	726.7	726.7	726.6	726.6	727.0
160°	740.7	740.5	740.5	740.3	740.1	740.0	739.9	739.7	739.6	739.5	739.9
162.5°	752.6	752.3	751.9	751.5	751.1	750.9	750.8	750.7	750.5	750.4	751.1
165°	768.6	768.2	767.8	767.3	766.9	766.6	766.3	766.0	765.7	765.5	766.3
167.5°	780.9	780.2	779.7	779.1	778.6	778.2	778.2	778.3	778.3	778.3	779.2
170°	787.7	787.1	786.4	785.7	785.1	784.7	784.9	785.1	785.1	785.3	786.1
172.5°	792.7	792.2	791.5	791.0	790.4	790.1	790.2	790.2	790.2	790.3	791.2
175°	799.5	798.8	798.1	797.5	796.8	796.4	796.2	796.1	796.0	795.8	796.8
177.5°	801.8	801.2	800.7	800.1	799.5	799.3	799.3	799.3	799.3	799.3	800.0
180°	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	81.4	85.6	89.7	92.4	93.6	94.9	96.2	97.4
90°	84.3	89.0	93.9	97.0	98.3	99.7	101.1	102.4
92.5°	91.3	95.7	100.1	102.8	104.1	105.4	106.6	107.9
95°	108.9	113.0	117.2	119.8	121.0	122.3	123.5	124.8
97.5°	132.5	136.5	140.6	143.2	144.4	145.6	146.8	147.9
100°	149.6	153.5	157.5	159.9	160.9	161.9	162.9	163.8
102.5°	167.9	171.9	175.9	178.4	179.6	180.8	182.0	183.2
105°	195.7	199.6	203.4	206.1	207.6	209.1	210.6	212.1
107.5°	226.6	230.4	234.1	236.5	237.4	238.4	239.3	240.3
110°	247.1	250.0	252.9	255.1	256.6	258.1	259.6	261.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.2	272.1	275.1	277.2	278.4	279.6	280.7	281.9
115°	303.5	306.4	309.3	311.1	312.0	312.8	313.5	314.4
117.5°	336.1	338.5	340.9	342.5	343.3	344.1	344.9	345.8
120°	358.2	360.3	362.3	364.1	365.4	366.8	368.2	369.6
122.5°	381.0	383.3	385.6	386.9	387.4	387.9	388.4	388.9
125°	414.5	416.9	419.2	420.6	421.2	421.8	422.3	422.9
127.5°	445.9	448.1	450.3	451.7	452.4	453.1	453.8	454.6
130°	468.2	470.4	472.6	473.8	474.0	474.4	474.6	474.9
132.5°	489.3	491.4	493.5	494.8	495.4	496.0	496.6	497.2
135°	520.3	522.2	524.2	525.3	525.7	526.2	526.6	527.0
137.5°	550.9	552.5	554.1	555.4	556.1	556.9	557.7	558.4
140°	571.2	572.8	574.5	575.6	576.2	576.7	577.2	577.7
142.5°	590.8	592.3	593.9	594.9	595.5	596.0	596.5	597.1
145°	620.7	621.4	622.0	622.5	622.6	622.7	622.9	623.0
147.5°	647.9	647.9	647.9	648.1	648.4	648.7	649.0	649.3
150°	665.7	665.7	665.7	665.7	665.6	665.4	665.3	665.1
152.5°	682.8	683.1	683.4	683.4	683.1	682.7	682.4	682.0
155°	706.5	707.0	707.6	707.6	707.0	706.5	705.9	705.4
157.5°	727.4	727.9	728.3	728.2	727.8	727.3	726.8	726.4
160°	740.3	740.7	741.1	741.0	740.3	739.6	738.9	738.2
162.5°	751.9	752.6	753.4	753.4	752.7	752.0	751.3	750.6
165°	767.1	767.9	768.8	768.9	768.3	767.8	767.2	766.8
167.5°	780.0	780.9	781.6	781.6	780.8	779.9	779.1	778.2
170°	787.0	787.7	788.6	788.5	787.6	786.6	785.6	784.7
172.5°	792.1	793.1	794.0	794.0	793.1	792.0	791.1	790.1
175°	797.7	798.7	799.7	799.7	798.7	797.7	796.8	795.8
177.5°	800.8	801.6	802.4	802.3	801.5	800.6	799.7	798.8
180°	800.7	800.7	800.7	800.7	800.7	800.7	800.7	800.7

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