

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: P332128-940

Luminaire Tested: **S123DIW-S560D755U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332128-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIW-S560D755U940-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 755 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4803.0 lumens  
Efficiency: N/A  
Efficacy: 127.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

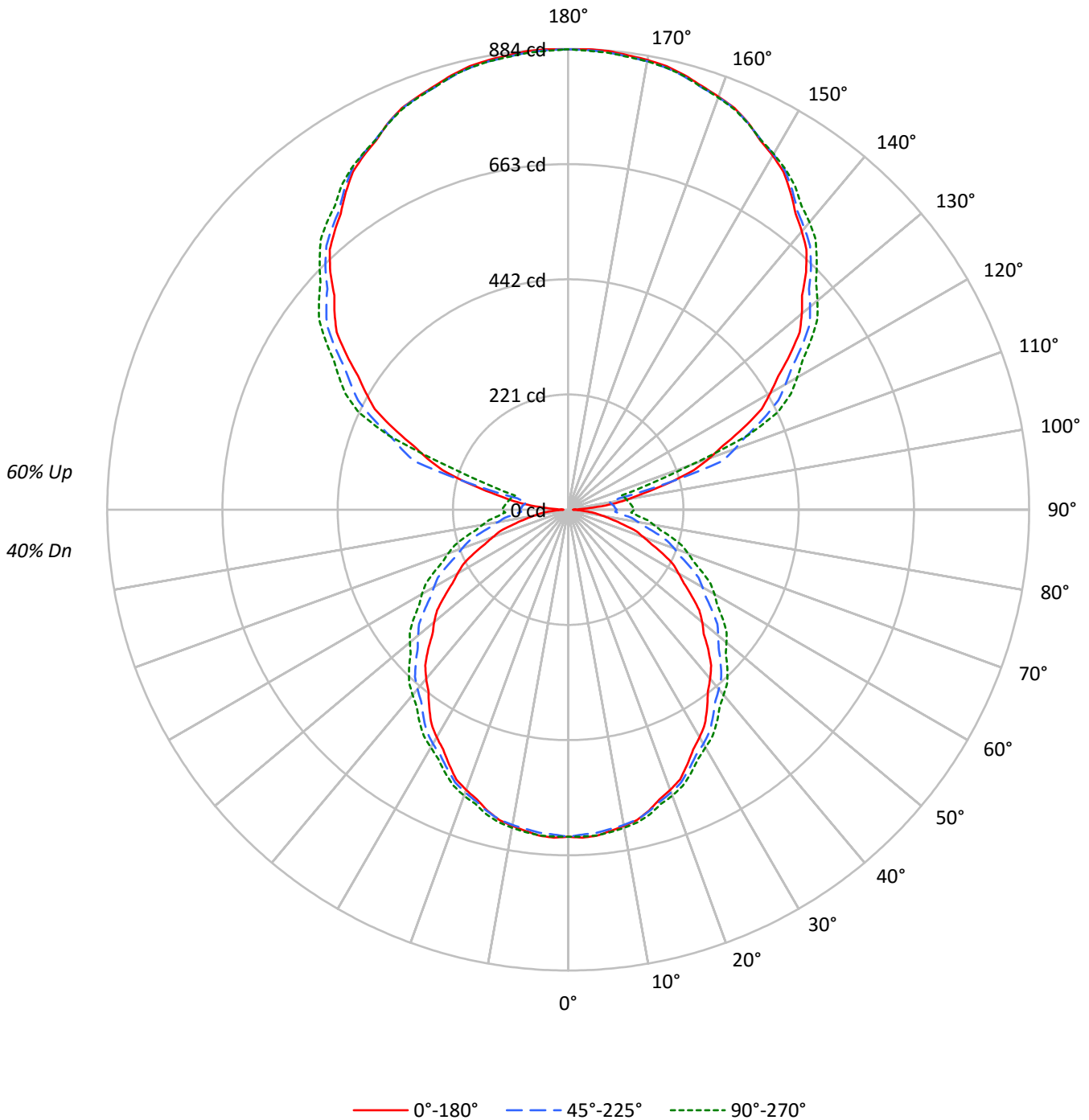
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332128-940

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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	95	90	86	82	86	82	78	75	67	64	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	31	28	26	22
4	71	60	52	46	64	55	48	43	45	40	36	36	32	29	27	25	22	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	30	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

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

	0°	45°	90°
0°	6750	6750	6750
5°	6771	6579	6584
10°	6710	6428	6396
15°	6624	6256	6191
20°	6501	6059	5966
25°	6348	5833	5729
30°	6191	5629	5489
35°	6016	5414	5298
40°	5848	5218	5093
45°	5664	5030	4929
50°	5480	4845	4748
55°	5278	4654	4586
60°	5080	4461	4419
65°	4879	4255	4221
70°	4575	4025	4016
75°	4191	3760	3810
80°	3748	3499	3575
85°	3332	3319	3435



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.4	1.2
10°-20°	169.5	3.5
20°-30°	253.4	5.3
30°-40°	302.7	6.3
40°-50°	316.7	6.6
50°-60°	297.2	6.2
60°-70°	248.2	5.2
70°-80°	177.6	3.7
80°-90°	108.4	2.3
90°-100°	98.5	2.1
100°-110°	201.9	4.2
110°-120°	400.2	8.3
120°-130°	486.7	10.1
130°-140°	508.5	10.6
140°-150°	469.5	9.8
150°-160°	377.3	7.9
160°-170°	243.5	5.1
170°-180°	83.9	1.7
0°-30°	482.3	10.0
0°-40°	785.0	16.3
0°-60°	1398.8	29.1
0°-90°	1933.0	40.2
90°-120°	700.6	14.6
90°-150°	2165.4	45.1
90°-180°	2870.0	59.8
0°-180°	4803.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	628	626	622	627	627	59
15°	598	600	599	605	605	168
25°	540	546	548	557	557	249
35°	464	475	484	494	497	290
45°	380	396	413	426	432	293
55°	290	312	337	354	361	259
65°	200	227	257	277	284	198
75°	109	141	175	197	206	116
85°	33	68	104	126	134	35
90°	10	50	93	118	127	8
95°	48	50	88	113	121	55
105°	201	222	195	104	105	213
115°	370	383	413	435	444	365
125°	519	525	547	562	569	464
135°	645	649	658	672	674	496
145°	744	747	749	755	758	465
155°	818	817	818	821	817	377
165°	863	861	860	865	861	244
175°	883	880	881	885	880	84
180°	883	883	883	883	883	



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CATALOG NUMBER: S123DIW-S560D755U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	629.8	629.5	629.1	628.7	628.3	627.7	626.7	625.7	624.7	623.8	624.7
5°	627.8	627.4	627.1	626.9	626.5	625.9	625.0	624.1	623.2	622.2	623.5
7.5°	621.6	621.6	621.7	621.8	621.9	621.4	620.5	619.6	618.8	617.9	619.4
10°	616.2	616.4	616.7	617.1	617.3	617.2	616.4	615.6	614.8	614.1	615.6
12.5°	609.6	610.0	610.5	610.8	611.3	611.3	610.7	610.2	609.7	609.1	610.6
15°	597.7	598.2	598.6	599.1	599.5	599.7	599.5	599.3	599.2	599.1	600.6
17.5°	582.6	583.5	584.5	585.4	586.3	586.7	586.7	586.6	586.6	586.5	587.8
20°	571.8	572.7	573.5	574.4	575.3	576.0	576.3	576.6	576.8	577.2	578.5
22.5°	560.3	561.2	562.0	563.0	563.9	564.5	565.0	565.4	565.9	566.2	568.0
25°	539.7	541.2	542.7	544.2	545.7	546.7	547.2	547.6	548.0	548.5	550.5
27.5°	518.9	520.6	522.4	524.1	525.8	527.1	528.1	529.1	530.0	531.0	532.7
30°	504.1	506.0	508.0	510.1	512.0	513.6	514.8	516.0	517.2	518.4	520.3
32.5°	487.7	489.9	492.1	494.4	496.6	498.5	500.1	501.6	503.2	504.8	506.8
35°	464.5	466.9	469.3	471.8	474.2	476.4	478.4	480.4	482.3	484.3	486.6
37.5°	439.9	442.6	445.3	448.1	450.8	453.4	455.8	458.3	460.7	463.2	465.7
40°	423.5	426.2	429.0	431.7	434.4	437.3	440.3	443.4	446.4	449.4	452.0
42.5°	405.5	408.8	412.1	415.4	418.8	422.0	425.3	428.4	431.6	434.7	437.6
45°	379.8	383.4	387.1	390.7	394.3	398.1	401.9	405.6	409.5	413.2	416.2
47.5°	352.8	357.0	361.1	365.2	369.3	373.6	378.0	382.3	386.6	391.0	394.2
50°	335.4	339.7	343.8	348.1	352.4	356.9	361.6	366.3	371.0	375.7	379.2
52.5°	316.8	321.3	325.8	330.3	334.7	339.7	344.8	350.0	355.2	360.4	364.0
55°	289.6	294.6	299.6	304.6	309.7	314.9	320.4	325.8	331.3	336.7	340.8
57.5°	263.1	268.3	273.6	278.7	284.0	289.6	295.6	301.6	307.6	313.5	317.6
60°	244.5	250.0	255.5	260.9	266.4	272.2	278.5	284.7	290.9	297.1	301.4
62.5°	227.0	232.6	238.3	243.8	249.4	255.5	262.1	268.7	275.3	281.9	286.1
65°	200.1	206.1	212.0	217.9	223.8	230.2	236.8	243.4	250.1	256.8	261.4
67.5°	172.8	179.1	185.4	191.6	198.0	204.5	211.3	218.1	224.9	231.7	236.7
70°	153.7	160.2	166.7	173.3	179.8	186.7	193.9	201.3	208.6	215.9	220.7
72.5°	136.2	142.8	149.3	155.8	162.3	169.3	176.8	184.4	191.9	199.5	204.5
75°	108.6	115.7	122.9	130.0	137.1	144.5	152.1	159.7	167.3	174.9	179.9
77.5°	84.5	91.8	99.0	106.1	113.3	120.7	128.4	136.1	143.7	151.4	156.7
80°	67.6	75.1	82.5	90.0	97.4	105.0	112.9	120.8	128.8	136.6	141.8
82.5°	52.9	60.5	67.9	75.5	83.1	90.9	98.9	106.9	114.9	123.0	128.1
85°	33.4	41.0	48.7	56.3	63.8	71.6	79.7	87.7	95.8	103.8	109.0
87.5°	18.3	26.1	34.0	41.8	49.7	57.7	65.8	73.9	82.0	90.2	95.4
90°	9.5	18.5	27.3	36.2	45.1	54.4	64.0	73.7	83.3	92.9	98.7
92.5°	20.5	26.8	33.2	39.4	45.7	53.4	62.5	71.5	80.5	89.6	95.6
95°	47.5	47.4	47.4	47.3	47.3	51.8	60.8	69.9	78.9	87.9	93.7
97.5°	87.1	89.8	92.5	95.1	97.8	97.4	94.0	90.6	87.2	83.8	89.5
100°	117.1	124.8	132.6	140.4	148.1	144.1	128.4	112.6	96.8	81.1	86.7
102.5°	151.1	157.7	164.1	170.6	177.0	171.3	153.3	135.3	117.3	99.3	100.0
105°	201.0	206.3	211.5	216.8	222.0	221.3	214.7	208.1	201.5	194.9	173.3
107.5°	253.0	257.3	261.7	266.1	270.5	276.8	285.1	293.3	301.6	309.9	295.0
110°	287.6	291.5	295.3	299.3	303.2	309.0	316.6	324.3	332.0	339.7	338.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	321.2	324.5	327.8	331.1	334.4	339.7	347.1	354.5	362.0	369.4	373.4
115°	370.2	372.9	375.6	378.3	381.0	385.8	392.5	399.3	406.1	412.9	417.9
117.5°	418.2	420.4	422.7	424.8	427.0	431.1	436.8	442.6	448.4	454.2	459.1
120°	447.6	449.7	451.7	453.8	455.9	459.7	465.1	470.6	476.0	481.4	486.1
122.5°	478.0	479.6	481.0	482.5	483.9	487.3	492.7	498.0	503.3	508.6	512.8
125°	519.2	520.3	521.5	522.6	523.8	526.8	531.8	536.8	541.8	546.8	550.3
127.5°	559.5	560.5	561.6	562.6	563.6	566.2	570.6	575.0	579.3	583.6	587.1
130°	584.7	585.8	586.7	587.8	588.8	591.1	594.8	598.3	602.0	605.6	609.0
132.5°	608.3	609.5	610.6	611.7	612.9	614.9	617.8	620.7	623.6	626.5	629.8
135°	645.1	645.8	646.5	647.2	648.0	649.4	651.7	654.0	656.2	658.4	661.6
137.5°	676.5	677.4	678.4	679.4	680.4	681.5	682.8	684.0	685.3	686.5	689.6
140°	696.9	697.8	698.7	699.5	700.3	701.2	702.1	703.0	703.9	704.8	707.7
142.5°	716.3	717.0	717.8	718.5	719.3	720.0	720.5	721.0	721.6	722.1	724.6
145°	743.5	744.3	745.2	746.1	747.0	747.5	747.8	748.1	748.4	748.7	750.2
147.5°	768.4	769.0	769.7	770.3	771.1	771.5	771.9	772.1	772.4	772.7	773.4
150°	784.2	784.5	785.0	785.4	785.9	786.2	786.6	786.8	787.1	787.4	787.7
152.5°	798.3	798.5	798.7	798.9	799.2	799.3	799.5	799.7	799.9	800.0	800.5
155°	818.2	818.0	817.7	817.3	817.1	817.0	817.2	817.3	817.4	817.6	818.3
157.5°	833.7	833.7	833.7	833.7	833.7	833.6	833.4	833.2	833.1	832.9	833.8
160°	843.2	843.0	842.9	842.8	842.6	842.5	842.3	842.1	842.0	841.9	842.8
162.5°	852.1	851.8	851.3	851.0	850.6	850.3	850.2	850.1	849.9	849.7	850.8
165°	862.9	862.5	862.0	861.6	861.1	860.9	860.7	860.5	860.4	860.2	861.4
167.5°	871.3	870.7	870.1	869.5	869.0	868.6	868.6	868.6	868.6	868.6	869.8
170°	876.0	875.4	874.9	874.2	873.7	873.3	873.3	873.3	873.3	873.3	874.5
172.5°	879.1	878.4	877.7	877.1	876.4	876.0	876.2	876.3	876.4	876.6	877.7
175°	883.2	882.4	881.7	881.0	880.3	880.0	880.1	880.3	880.5	880.6	881.6
177.5°	884.2	883.7	883.1	882.5	881.9	881.7	881.8	881.9	882.1	882.2	883.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	625.7	626.7	627.7	628.1	627.9	627.9	627.8	627.6
5°	624.7	625.9	627.1	627.7	627.5	627.3	627.2	627.1
7.5°	620.9	622.4	624.0	624.6	624.5	624.3	624.1	623.9
10°	617.2	618.7	620.2	620.7	620.5	620.2	619.8	619.6
12.5°	612.0	613.3	614.7	615.3	615.0	614.7	614.4	614.1
15°	602.1	603.6	605.1	605.8	605.6	605.5	605.4	605.2
17.5°	589.2	590.6	591.9	592.5	592.3	592.1	591.9	591.7
20°	580.0	581.3	582.6	583.4	583.5	583.7	583.9	584.0
22.5°	569.7	571.5	573.2	574.0	573.9	573.8	573.7	573.6
25°	552.4	554.5	556.4	557.4	557.4	557.4	557.4	557.4
27.5°	534.4	536.1	537.8	538.8	538.9	539.0	539.1	539.2
30°	522.1	523.9	525.8	526.6	526.6	526.6	526.6	526.6
32.5°	508.6	510.6	512.6	513.7	514.1	514.4	514.8	515.1
35°	488.8	491.2	493.4	494.8	495.4	496.1	496.7	497.3
37.5°	468.2	470.8	473.4	475.0	475.5	475.9	476.4	476.9
40°	454.6	457.2	459.8	461.4	462.0	462.6	463.2	463.8
42.5°	440.3	443.2	446.0	447.8	448.7	449.5	450.4	451.2
45°	419.0	421.9	424.8	426.9	428.0	429.3	430.5	431.7
47.5°	397.5	400.7	403.9	406.1	407.0	408.0	408.9	409.8
50°	382.6	386.2	389.7	391.9	393.0	394.0	395.1	396.2
52.5°	367.7	371.2	374.9	377.3	378.6	379.9	381.2	382.5
55°	344.9	349.0	353.1	355.8	357.0	358.2	359.4	360.7
57.5°	321.8	325.9	330.0	332.8	334.2	335.6	337.1	338.5
60°	305.7	309.9	314.1	317.1	318.8	320.4	322.1	323.8
62.5°	290.3	294.6	298.8	301.8	303.3	304.8	306.4	307.9
65°	265.9	270.5	275.1	278.1	279.6	281.2	282.7	284.2
67.5°	241.7	246.6	251.6	254.8	256.0	257.3	258.6	259.8
70°	225.6	230.4	235.3	238.4	240.0	241.5	243.0	244.5
72.5°	209.4	214.4	219.4	222.7	224.2	225.7	227.2	228.7
75°	184.9	189.9	194.9	198.3	200.1	202.0	203.8	205.6
77.5°	161.9	167.2	172.5	175.8	177.3	178.6	180.0	181.5
80°	147.0	152.1	157.3	160.6	162.1	163.6	165.1	166.7
82.5°	133.3	138.4	143.6	147.0	148.5	150.0	151.5	153.0
85°	114.1	119.3	124.5	127.8	129.3	130.8	132.3	133.8
87.5°	100.8	106.0	111.3	114.7	116.3	117.9	119.4	121.0
90°	104.4	110.1	115.9	119.7	121.5	123.3	125.1	126.9
92.5°	101.6	107.5	113.5	117.3	118.9	120.4	122.0	123.6
95°	99.4	105.1	110.8	114.5	116.0	117.5	119.0	120.6
97.5°	95.2	100.9	106.6	110.3	111.9	113.6	115.3	116.9
100°	92.2	97.8	103.3	107.0	108.6	110.3	112.0	113.6
102.5°	100.7	101.3	102.0	103.2	105.0	106.7	108.5	110.3
105°	151.8	130.3	108.7	98.7	100.4	102.1	103.7	105.4
107.5°	280.1	265.3	250.4	233.9	215.8	197.7	179.6	161.5
110°	338.0	337.1	336.2	325.9	306.3	286.7	267.1	247.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	377.3	381.2	385.1	385.5	382.5	379.4	376.3	373.3
115°	423.0	428.1	433.3	436.7	438.5	440.3	442.1	443.9
117.5°	463.8	468.6	473.4	476.4	477.7	479.0	480.3	481.6
120°	490.8	495.4	500.1	502.9	504.0	505.1	506.1	507.2
122.5°	517.0	521.2	525.4	528.1	529.2	530.4	531.6	532.8
125°	553.8	557.2	560.7	563.1	564.5	565.9	567.2	568.6
127.5°	590.6	594.1	597.5	599.7	600.4	601.1	601.9	602.6
130°	612.5	616.0	619.5	621.5	622.1	622.8	623.4	623.9
132.5°	633.2	636.5	639.9	641.9	642.5	643.1	643.7	644.4
135°	664.8	668.0	671.1	672.9	673.2	673.5	673.9	674.1
137.5°	692.8	695.9	698.9	700.7	701.2	701.7	702.1	702.6
140°	710.5	713.5	716.3	717.9	718.5	718.9	719.3	719.8
142.5°	727.1	729.6	732.1	733.5	733.9	734.2	734.6	734.9
145°	751.7	753.2	754.7	755.8	756.3	757.0	757.6	758.2
147.5°	774.0	774.7	775.3	775.6	775.4	775.3	775.3	775.1
150°	788.0	788.3	788.5	788.6	788.5	788.4	788.3	788.1
152.5°	801.0	801.6	802.1	802.1	801.5	800.8	800.2	799.6
155°	819.0	819.7	820.6	820.5	819.6	818.7	817.8	816.9
157.5°	834.7	835.5	836.4	836.3	835.2	834.0	832.9	831.8
160°	843.6	844.5	845.3	845.3	844.3	843.3	842.2	841.2
162.5°	851.8	852.7	853.7	853.7	852.8	851.9	851.0	850.2
165°	862.6	863.7	864.9	865.0	864.0	862.9	861.9	860.9
167.5°	870.9	872.2	873.3	873.3	872.2	870.9	869.8	868.6
170°	875.7	876.9	878.1	878.1	876.9	875.7	874.5	873.3
172.5°	878.9	880.0	881.2	881.1	879.9	878.6	877.3	876.0
175°	882.6	883.7	884.7	884.6	883.4	882.3	881.1	879.9
177.5°	884.0	884.9	885.9	885.7	884.6	883.4	882.3	881.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2

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