

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: P332417-930

Luminaire Tested: **S123RDIW-S560D755U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332417-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIW-S560D755U930-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3876.3 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

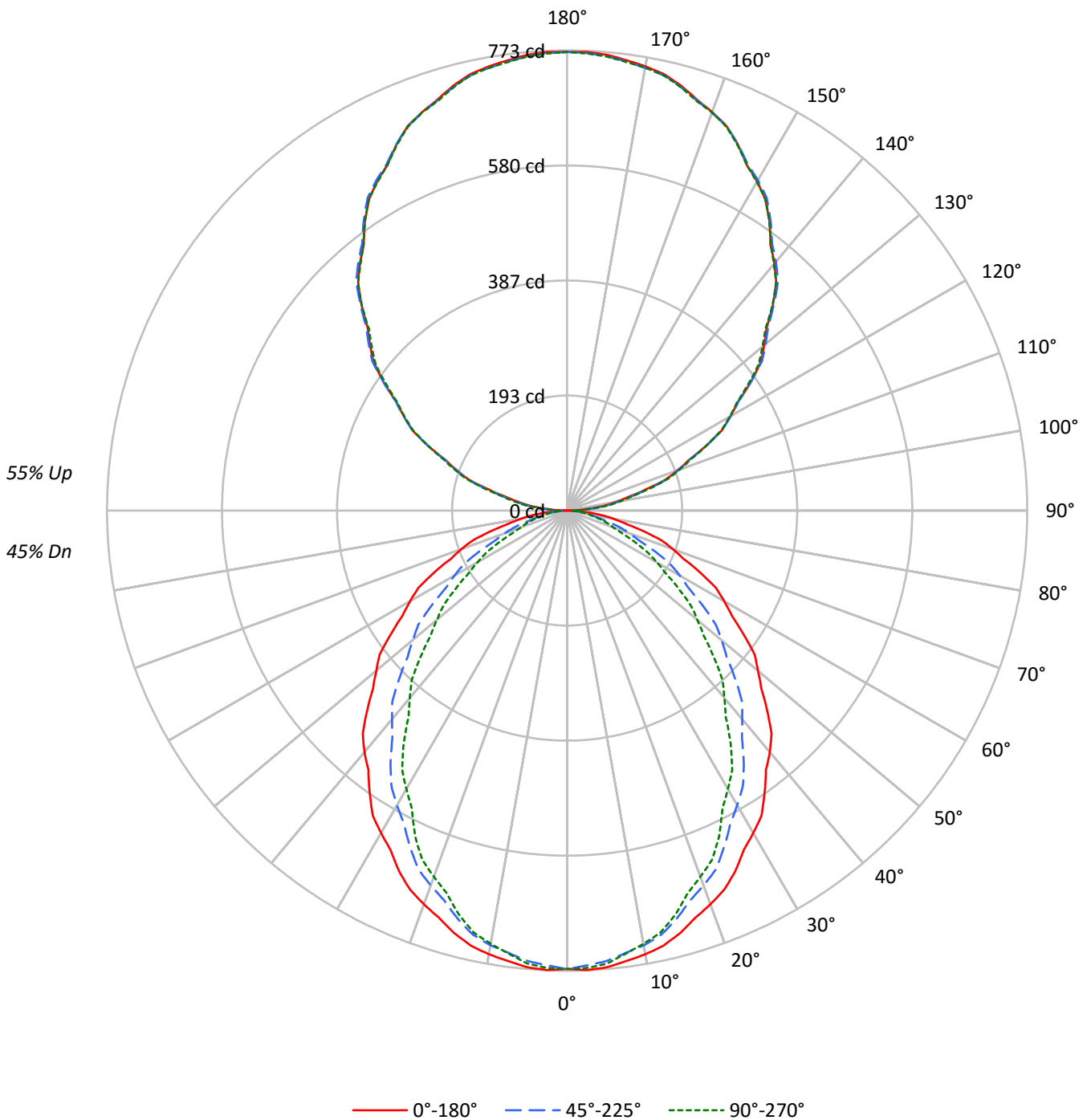
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	51	51	51	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38
2	88	81	75	70	81	75	70	65	63	59	56	51	49	46	41	39	37	33
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	36	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	16	14	12

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

	0°	45°	90°
0°	8289	8289	8289
5°	8321	8206	8253
10°	8273	8103	8075
15°	8184	7913	7830
20°	8062	7676	7497
25°	7936	7410	7172
30°	7771	7102	6714
35°	7599	6795	6294
40°	7442	6433	5774
45°	7234	6075	5305
50°	7006	5668	4779
55°	6775	5204	4290
60°	6562	4706	3750
65°	6283	4167	3212
70°	5936	3500	2593
75°	5427	2753	2441
80°	4841	2442	2244
85°	4088	2149	2001



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.3	1.9
10°-20°	201.2	5.2
20°-30°	289.7	7.5
30°-40°	326.3	8.4
40°-50°	312.2	8.1
50°-60°	255.7	6.6
60°-70°	172.5	4.4
70°-80°	86.8	2.2
80°-90°	25.2	0.7
90°-100°	50.2	1.3
100°-110°	150.2	3.9
110°-120°	255.5	6.6
120°-130°	336.1	8.7
130°-140°	377.7	9.7
140°-150°	371.3	9.6
150°-160°	312.6	8.1
160°-170°	208.1	5.4
170°-180°	72.9	1.9
0°-30°	563.2	14.5
0°-40°	889.5	22.9
0°-60°	1457.4	37.6
0°-90°	1741.9	44.9
90°-120°	455.9	11.8
90°-150°	1540.9	39.8
90°-180°	2134.0	55.1
0°-180°	3876.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	770	767	760	765	764	73
15°	734	727	710	707	703	207
25°	668	652	624	611	604	307
35°	578	555	517	491	479	362
45°	475	446	399	365	348	367
55°	361	329	277	242	229	324
65°	247	212	164	134	126	244
75°	130	100	66	60	59	139
85°	33	20	17	16	16	37
90°	1	7	14	17	18	4
95°	36	40	45	47	47	40
105°	136	138	143	143	144	146
115°	257	259	258	258	258	254
125°	376	378	377	375	372	336
135°	488	492	491	489	488	376
145°	592	594	596	595	592	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1
2.5°	772.6	772.1	771.7	771.2	770.8	769.9	768.6	767.2	765.9	764.6	765.8
5°	770.1	769.4	768.7	768.0	767.3	766.1	764.4	762.8	761.1	759.5	760.7
7.5°	763.0	762.2	761.4	760.7	759.9	758.5	756.4	754.2	752.0	749.8	750.5
10°	756.9	755.9	755.0	754.0	753.1	751.3	748.9	746.3	743.8	741.4	741.4
12.5°	748.4	747.4	746.2	745.2	744.1	742.1	739.0	736.0	732.9	729.9	729.8
15°	734.4	733.0	731.4	729.9	728.4	725.6	721.8	717.9	714.0	710.1	709.4
17.5°	716.8	715.1	713.3	711.5	709.7	706.4	701.4	696.5	691.5	686.6	685.2
20°	703.8	701.6	699.4	697.2	695.0	691.2	685.9	680.7	675.4	670.1	668.3
22.5°	689.3	686.8	684.3	681.7	679.1	675.1	669.4	663.8	658.3	652.6	650.4
25°	668.2	664.8	661.3	657.9	654.4	649.5	643.0	636.7	630.3	623.9	621.0
27.5°	642.6	638.8	635.0	631.1	627.3	621.8	614.7	607.6	600.5	593.5	589.4
30°	625.2	621.0	616.9	612.7	608.5	602.5	594.8	587.0	579.2	571.4	566.7
32.5°	607.6	603.0	598.3	593.5	588.8	582.4	574.1	565.9	557.7	549.4	544.3
35°	578.3	573.3	568.3	563.4	558.3	551.5	542.9	534.3	525.7	517.1	511.1
37.5°	548.6	543.1	537.5	531.9	526.4	519.0	509.8	500.7	491.5	482.2	475.5
40°	529.6	523.5	517.4	511.3	505.2	497.2	487.4	477.5	467.7	457.8	450.5
42.5°	508.1	502.0	495.9	489.8	483.7	475.6	465.4	455.2	445.0	434.8	426.9
45°	475.2	469.0	462.8	456.6	450.3	441.8	431.1	420.4	409.8	399.1	391.2
47.5°	442.4	435.5	428.7	421.8	415.0	406.3	395.5	384.8	374.1	363.5	354.9
50°	418.4	411.9	405.4	398.8	392.3	383.4	372.2	361.0	349.8	338.5	329.9
52.5°	397.0	389.9	382.8	375.7	368.7	359.5	348.4	337.3	326.1	315.0	306.1
55°	361.0	354.2	347.4	340.6	333.8	324.5	312.7	300.9	289.1	277.3	269.2
57.5°	327.8	320.3	312.9	305.5	298.1	288.5	276.6	264.8	252.9	241.1	233.5
60°	304.8	297.2	289.5	281.8	274.3	264.6	253.2	241.7	230.1	218.6	211.1
62.5°	281.8	274.2	266.5	258.9	251.3	241.7	230.2	218.7	207.1	195.6	188.6
65°	246.7	239.0	231.5	223.8	216.1	206.9	196.1	185.3	174.5	163.6	156.9
67.5°	211.6	203.9	196.2	188.4	180.8	171.7	161.3	150.9	140.6	130.1	125.1
70°	188.6	181.1	173.7	166.2	158.7	150.0	140.3	130.6	120.9	111.2	106.3
72.5°	165.6	158.2	150.8	143.5	136.1	128.0	119.2	110.3	101.5	92.7	88.7
75°	130.5	123.8	117.2	110.6	103.9	96.7	89.1	81.4	73.9	66.2	64.8
77.5°	98.6	92.5	86.5	80.5	74.4	69.0	64.1	59.2	54.2	49.3	48.6
80°	78.1	72.4	66.7	61.0	55.3	51.0	48.1	45.2	42.2	39.4	38.9
82.5°	58.6	53.6	48.8	43.9	38.9	35.8	34.4	33.1	31.7	30.3	29.9
85°	33.1	30.1	27.0	24.0	20.9	19.2	18.8	18.3	17.9	17.4	17.2
87.5°	12.1	11.2	10.2	9.3	8.3	8.0	8.3	8.7	9.0	9.4	9.4
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.3	11.0	12.8	14.5	15.1
92.5°	14.7	15.6	16.5	17.4	18.3	19.2	20.2	21.3	22.3	23.2	23.6
95°	35.7	36.6	37.6	38.6	39.5	40.4	41.6	42.6	43.7	44.8	45.3
97.5°	63.4	64.1	64.8	65.6	66.2	66.9	67.8	68.5	69.3	70.1	70.7
100°	82.3	83.1	83.9	84.7	85.5	86.3	86.9	87.6	88.3	88.9	89.4
102.5°	104.1	104.6	105.1	105.5	106.0	106.7	107.6	108.5	109.3	110.2	110.6
105°	136.2	136.4	136.7	137.0	137.2	137.9	139.2	140.4	141.6	142.8	142.8
107.5°	173.4	173.6	173.7	173.9	174.1	174.4	174.9	175.4	175.9	176.3	176.8
110°	196.7	197.0	197.2	197.5	197.7	198.0	198.3	198.5	198.9	199.1	199.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.9	221.0	221.2	221.4	221.5	221.6	221.7	221.8	221.8	221.8	222.5
115°	257.2	257.6	258.0	258.4	258.8	258.9	258.6	258.4	258.0	257.8	258.0
117.5°	293.8	294.0	294.2	294.6	294.8	294.8	294.4	294.1	293.8	293.3	293.3
120°	316.5	317.3	318.1	318.9	319.8	319.8	319.1	318.5	317.8	317.1	317.0
122.5°	340.2	340.8	341.4	342.0	342.6	342.7	342.3	342.0	341.7	341.3	341.0
125°	376.4	376.8	377.2	377.6	378.1	378.1	377.8	377.6	377.2	377.0	376.5
127.5°	409.8	410.7	411.6	412.4	413.3	413.5	413.3	412.9	412.6	412.4	411.6
130°	432.1	433.2	434.2	435.3	436.3	436.8	436.3	435.9	435.5	435.1	434.6
132.5°	454.4	455.4	456.5	457.5	458.7	459.0	458.8	458.4	458.1	457.9	457.2
135°	488.4	489.2	490.0	490.8	491.5	492.0	491.8	491.6	491.5	491.4	490.8
137.5°	519.8	520.5	521.1	521.9	522.5	523.0	523.3	523.7	524.1	524.4	523.8
140°	541.6	542.3	543.0	543.6	544.3	544.7	544.9	544.9	545.1	545.3	545.1
142.5°	561.5	562.1	562.8	563.5	564.1	564.6	564.8	565.1	565.3	565.6	565.4
145°	592.5	592.7	593.0	593.2	593.5	593.9	594.3	594.7	595.1	595.5	595.3
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.5
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1
2.5°	767.0	768.3	769.5	770.0	769.7	769.5	769.3	769.1
5°	761.9	763.2	764.4	764.9	764.7	764.3	764.1	763.8
7.5°	751.2	751.9	752.6	752.7	752.2	751.8	751.3	750.8
10°	741.6	741.8	741.8	741.6	740.9	740.2	739.6	738.8
12.5°	729.7	729.6	729.5	729.0	728.2	727.4	726.7	725.9
15°	708.7	708.0	707.4	706.5	705.5	704.6	703.6	702.6
17.5°	683.7	682.2	680.7	679.3	677.8	676.4	674.9	673.5
20°	666.5	664.7	662.9	661.2	659.5	657.9	656.2	654.5
22.5°	648.2	645.9	643.7	641.7	640.2	638.6	637.1	635.5
25°	618.1	615.1	612.3	610.0	608.5	607.0	605.4	603.9
27.5°	585.3	581.3	577.2	574.1	571.7	569.4	567.0	564.7
30°	562.0	557.3	552.6	549.1	546.9	544.7	542.4	540.2
32.5°	539.2	533.9	528.8	525.1	522.8	520.4	518.0	515.8
35°	505.2	499.2	493.3	489.0	486.5	484.0	481.5	479.0
37.5°	468.7	461.9	455.2	450.3	447.2	444.1	441.0	437.9
40°	443.4	436.1	428.9	423.7	420.5	417.4	414.2	410.9
42.5°	419.1	411.2	403.2	397.9	395.0	392.2	389.3	386.5
45°	383.3	375.4	367.5	361.8	358.5	355.1	351.8	348.5
47.5°	346.3	337.7	329.1	323.3	320.3	317.3	314.4	311.4
50°	321.3	312.7	304.1	298.2	295.0	291.8	288.6	285.4
52.5°	297.2	288.2	279.2	273.4	270.5	267.7	264.8	262.0
55°	261.2	253.2	245.1	239.7	236.9	234.2	231.4	228.6
57.5°	225.8	218.3	210.7	205.7	203.3	201.0	198.6	196.2
60°	203.6	196.1	188.6	183.7	181.3	179.0	176.6	174.2
62.5°	181.5	174.5	167.4	162.7	160.2	157.7	155.2	152.8
65°	150.0	143.2	136.4	132.2	130.8	129.2	127.7	126.1
67.5°	120.0	114.9	109.8	106.5	104.8	103.2	101.6	100.0
70°	101.4	96.6	91.7	88.5	87.0	85.5	84.0	82.4
72.5°	84.7	80.8	76.8	74.5	73.9	73.2	72.6	71.9
75°	63.4	62.0	60.7	59.8	59.5	59.3	58.9	58.7
77.5°	47.9	47.1	46.3	45.8	45.6	45.2	45.0	44.7
80°	38.5	38.1	37.7	37.3	37.1	36.8	36.5	36.2
82.5°	29.5	29.1	28.7	28.5	28.4	28.4	28.3	28.2
85°	17.0	16.6	16.4	16.2	16.2	16.2	16.2	16.2
87.5°	9.4	9.4	9.4	9.4	9.3	9.2	9.2	9.1
90°	15.6	16.1	16.7	17.0	17.4	17.6	17.9	18.2
92.5°	24.1	24.5	24.9	25.1	24.9	24.8	24.6	24.5
95°	45.8	46.4	47.0	47.2	47.2	47.2	47.2	47.2
97.5°	71.3	71.9	72.6	72.8	72.8	72.7	72.6	72.6
100°	89.8	90.2	90.6	90.9	91.2	91.5	91.7	92.0
102.5°	111.0	111.5	111.9	112.0	112.0	111.9	111.9	111.9
105°	142.8	142.8	142.8	142.9	143.2	143.5	143.7	144.1
107.5°	177.2	177.7	178.1	178.2	178.1	177.9	177.7	177.6
110°	200.2	200.7	201.2	201.4	201.1	200.8	200.6	200.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	223.1	223.8	224.5	224.7	224.7	224.6	224.5	224.5
115°	258.0	258.2	258.4	258.4	258.2	258.0	258.0	257.8
117.5°	293.3	293.3	293.3	293.1	292.7	292.3	292.0	291.6
120°	316.8	316.7	316.6	316.3	316.1	315.8	315.5	315.3
122.5°	340.6	340.2	339.9	339.6	339.2	338.8	338.4	338.0
125°	375.9	375.4	374.9	374.3	373.8	373.2	372.7	372.2
127.5°	410.8	410.1	409.4	408.6	408.1	407.4	406.8	406.2
130°	434.1	433.5	432.9	432.2	431.3	430.3	429.4	428.4
132.5°	456.6	455.9	455.3	454.6	453.9	453.1	452.4	451.7
135°	490.3	489.8	489.3	488.9	488.5	488.3	488.0	487.7
137.5°	523.3	522.7	522.2	521.6	521.1	520.6	520.1	519.6
140°	544.9	544.9	544.7	544.1	543.2	542.3	541.4	540.4
142.5°	565.3	565.2	565.0	564.6	563.9	563.1	562.4	561.7
145°	595.2	595.1	594.9	594.6	594.0	593.5	593.0	592.5
147.5°	623.5	623.5	623.5	623.1	622.2	621.4	620.6	619.8
150°	640.8	640.8	640.8	640.4	639.6	638.9	638.1	637.2
152.5°	656.8	657.0	657.2	657.0	656.2	655.6	654.8	654.2
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

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