

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: P332417-927

Luminaire Tested: **S123RDIW-S560D755U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332417-927
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-S560D755U927-4F0-1E-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: 3766.4 lumens
Efficiency: N/A
Efficacy: 100.2 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

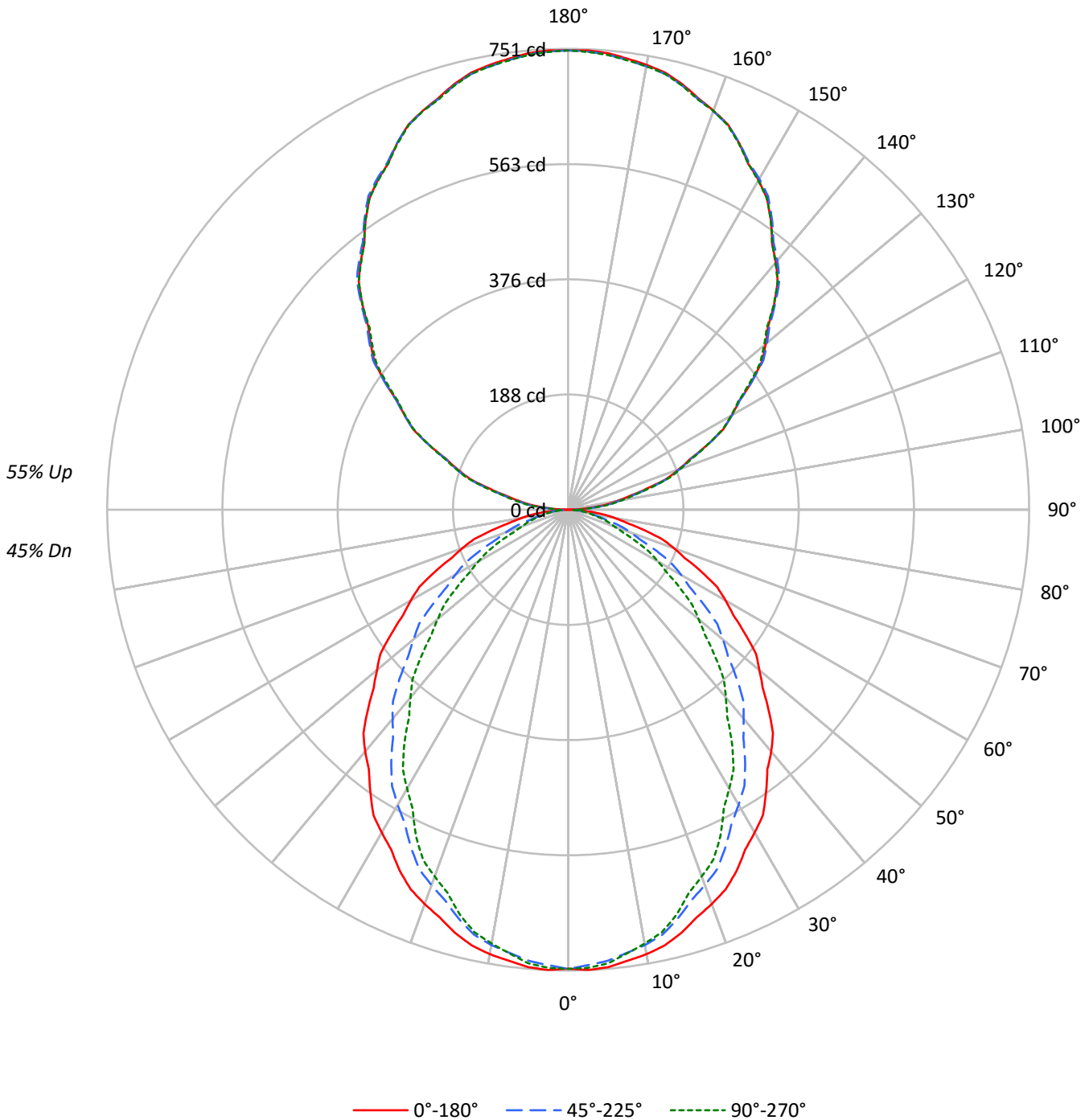
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	65	65	65	51	51	51	45				45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38				38
2	88	81	75	70	81	75	70	65	63	59	56	51	49	46	41	39	37	33				33
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	36	34	32	28				28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24				24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21				21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19				19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17				17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15				15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14				14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	16	14	12				12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8054	8054	8054
5°	8084	7973	8018
10°	8039	7873	7847
15°	7952	7689	7608
20°	7834	7458	7285
25°	7712	7201	6969
30°	7549	6901	6524
35°	7384	6603	6116
40°	7231	6250	5611
45°	7030	5903	5154
50°	6807	5508	4644
55°	6583	5056	4168
60°	6374	4573	3645
65°	6105	4050	3123
70°	5766	3402	2521
75°	5273	2674	2371
80°	4705	2374	2182
85°	3977	2100	1951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	1.9
10°-20°	195.5	5.2
20°-30°	281.5	7.5
30°-40°	317.1	8.4
40°-50°	303.3	8.1
50°-60°	248.4	6.6
60°-70°	167.6	4.4
70°-80°	84.3	2.2
80°-90°	24.5	0.7
90°-100°	48.8	1.3
100°-110°	145.9	3.9
110°-120°	248.2	6.6
120°-130°	326.5	8.7
130°-140°	367.0	9.7
140°-150°	360.7	9.6
150°-160°	303.7	8.1
160°-170°	202.2	5.4
170°-180°	70.8	1.9
0°-30°	547.2	14.5
0°-40°	864.3	22.9
0°-60°	1416.1	37.6
0°-90°	1692.5	44.9
90°-120°	442.9	11.8
90°-150°	1497.2	39.8
90°-180°	2074.0	55.1
0°-180°	3766.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	745	738	743	742	71
15°	714	706	690	687	683	201
25°	649	633	606	594	587	298
35°	562	539	502	477	465	352
45°	462	433	388	354	339	356
55°	351	320	269	236	222	314
65°	240	206	159	130	123	237
75°	127	97	64	58	57	135
85°	32	19	17	16	16	36
90°	1	7	14	16	18	4
95°	35	39	44	46	46	39
105°	132	134	139	139	140	142
115°	250	251	250	251	250	247
125°	366	367	366	364	362	326
135°	474	478	477	475	474	366
145°	576	577	579	578	576	359
155°	659	659	660	662	658	303
165°	718	716	716	719	716	202
175°	747	745	744	748	744	71
180°	748	748	748	748	748	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	750.7	750.2	749.8	749.3	748.9	748.1	746.8	745.4	744.2	742.9	744.1
5°	748.2	747.6	746.9	746.2	745.5	744.4	742.8	741.2	739.5	737.9	739.1
7.5°	741.3	740.6	739.8	739.1	738.4	737.0	734.9	732.8	730.6	728.6	729.2
10°	735.5	734.5	733.6	732.6	731.7	730.0	727.6	725.2	722.7	720.3	720.4
12.5°	727.2	726.2	725.1	724.1	723.0	721.0	718.0	715.1	712.1	709.2	709.1
15°	713.6	712.2	710.7	709.2	707.7	705.0	701.3	697.5	693.7	690.0	689.3
17.5°	696.5	694.8	693.1	691.3	689.6	686.3	681.5	676.8	671.9	667.2	665.7
20°	683.9	681.8	679.6	677.4	675.3	671.6	666.5	661.4	656.2	651.1	649.4
22.5°	669.8	667.3	664.9	662.3	659.9	655.9	650.5	645.0	639.6	634.1	631.9
25°	649.3	645.9	642.5	639.2	635.8	631.1	624.8	618.6	612.4	606.3	603.4
27.5°	624.4	620.7	617.0	613.2	609.5	604.2	597.3	590.4	583.5	576.6	572.7
30°	607.4	603.4	599.4	595.3	591.3	585.4	577.9	570.4	562.8	555.2	550.6
32.5°	590.4	585.9	581.3	576.7	572.1	565.9	557.9	549.9	541.9	533.9	528.9
35°	561.9	557.1	552.2	547.4	542.5	535.9	527.5	519.2	510.8	502.5	496.6
37.5°	533.1	527.7	522.3	516.8	511.4	504.3	495.4	486.5	477.5	468.6	462.0
40°	514.6	508.7	502.7	496.8	490.8	483.1	473.6	464.0	454.4	444.8	437.8
42.5°	493.7	487.7	481.9	475.9	470.0	462.1	452.2	442.3	432.4	422.5	414.8
45°	461.8	455.7	449.6	443.6	437.5	429.3	418.9	408.5	398.2	387.8	380.1
47.5°	429.8	423.2	416.5	409.9	403.2	394.7	384.3	373.9	363.5	353.2	344.8
50°	406.5	400.2	393.9	387.5	381.2	372.6	361.6	350.8	339.8	328.9	320.5
52.5°	385.7	378.8	371.9	365.0	358.2	349.4	338.5	327.7	316.9	306.1	297.4
55°	350.8	344.1	337.5	330.9	324.3	315.3	303.8	292.4	280.9	269.4	261.6
57.5°	318.5	311.2	304.0	296.8	289.6	280.3	268.8	257.3	245.7	234.2	226.9
60°	296.1	288.8	281.3	273.9	266.5	257.1	246.0	234.8	223.6	212.4	205.1
62.5°	273.8	266.4	259.0	251.5	244.2	234.8	223.6	212.5	201.2	190.0	183.2
65°	239.7	232.3	224.9	217.5	210.0	201.1	190.5	180.1	169.5	159.0	152.4
67.5°	205.6	198.1	190.6	183.1	175.6	166.8	156.7	146.6	136.6	126.4	121.5
70°	183.2	175.9	168.7	161.4	154.2	145.8	136.3	126.9	117.5	108.1	103.3
72.5°	160.9	153.8	146.6	139.4	132.2	124.4	115.8	107.2	98.6	90.1	86.2
75°	126.8	120.3	113.9	107.4	100.9	94.0	86.6	79.1	71.8	64.3	63.0
77.5°	95.8	89.9	84.1	78.2	72.3	67.0	62.3	57.5	52.7	47.9	47.2
80°	75.9	70.3	64.8	59.3	53.7	49.6	46.7	43.9	41.0	38.3	37.8
82.5°	57.0	52.1	47.4	42.6	37.8	34.8	33.4	32.2	30.8	29.5	29.1
85°	32.2	29.2	26.2	23.3	20.3	18.6	18.2	17.8	17.4	17.0	16.7
87.5°	11.8	10.9	9.9	9.0	8.1	7.8	8.1	8.5	8.8	9.1	9.1
90°	0.6	1.9	3.2	4.5	5.8	7.3	9.0	10.7	12.4	14.1	14.7
92.5°	14.3	15.1	16.0	16.9	17.7	18.7	19.6	20.7	21.6	22.6	23.0
95°	34.7	35.6	36.5	37.5	38.3	39.3	40.4	41.4	42.5	43.5	44.0
97.5°	61.6	62.3	63.0	63.7	64.3	65.0	65.8	66.5	67.3	68.1	68.7
100°	79.9	80.7	81.5	82.3	83.1	83.8	84.4	85.2	85.8	86.4	86.8
102.5°	101.2	101.6	102.1	102.5	103.0	103.7	104.6	105.4	106.2	107.1	107.5
105°	132.3	132.5	132.8	133.1	133.3	134.0	135.2	136.4	137.6	138.8	138.8
107.5°	168.5	168.7	168.8	169.0	169.1	169.4	169.9	170.4	170.9	171.3	171.7
110°	191.1	191.4	191.6	191.9	192.1	192.4	192.7	192.9	193.2	193.5	194.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	214.6	214.8	214.9	215.1	215.2	215.3	215.4	215.5	215.5	215.6	216.2
115°	249.9	250.3	250.6	251.0	251.4	251.5	251.3	251.0	250.7	250.5	250.6
117.5°	285.4	285.7	285.9	286.2	286.5	286.5	286.1	285.7	285.4	285.0	285.0
120°	307.5	308.3	309.1	309.9	310.7	310.7	310.1	309.4	308.8	308.1	308.0
122.5°	330.6	331.1	331.7	332.3	332.9	333.0	332.6	332.3	332.0	331.6	331.3
125°	365.8	366.1	366.5	366.9	367.3	367.3	367.1	366.9	366.5	366.3	365.8
127.5°	398.2	399.0	399.9	400.7	401.6	401.8	401.6	401.2	400.9	400.7	399.9
130°	419.9	420.9	421.9	422.9	424.0	424.4	424.0	423.6	423.2	422.8	422.2
132.5°	441.5	442.5	443.5	444.6	445.7	446.0	445.8	445.4	445.1	444.9	444.3
135°	474.5	475.3	476.1	476.9	477.6	478.0	477.8	477.7	477.6	477.4	476.9
137.5°	505.1	505.7	506.4	507.1	507.7	508.2	508.5	508.9	509.2	509.5	509.0
140°	526.2	526.9	527.6	528.2	528.9	529.3	529.4	529.5	529.7	529.8	529.7
142.5°	545.6	546.2	546.8	547.5	548.1	548.6	548.8	549.1	549.3	549.5	549.4
145°	575.7	575.9	576.2	576.4	576.7	577.0	577.4	577.8	578.2	578.6	578.5
147.5°	602.0	602.5	602.9	603.4	603.9	604.3	604.7	605.0	605.4	605.8	605.8
150°	620.4	620.6	620.8	621.2	621.4	621.6	621.9	622.2	622.4	622.7	622.7
152.5°	635.4	635.7	636.1	636.5	636.8	637.1	637.2	637.4	637.5	637.7	637.9
155°	659.2	659.2	659.2	659.2	659.2	659.2	659.3	659.5	659.6	659.7	660.3
157.5°	679.4	679.2	679.1	678.9	678.7	678.7	678.8	678.9	679.1	679.1	679.7
160°	692.1	691.8	691.6	691.3	691.0	690.9	690.9	690.9	690.9	690.9	691.6
162.5°	703.4	703.0	702.6	702.3	701.9	701.8	701.9	702.0	702.1	702.2	702.8
165°	718.0	717.6	717.2	716.8	716.4	716.1	716.1	716.1	716.1	716.1	716.9
167.5°	729.6	729.0	728.6	728.0	727.5	727.3	727.4	727.5	727.6	727.7	728.5
170°	736.2	735.6	735.1	734.6	734.0	733.8	733.8	733.8	733.8	733.8	734.7
172.5°	741.3	740.8	740.3	739.7	739.3	738.9	738.9	738.9	738.9	738.9	739.8
175°	746.7	746.2	745.7	745.2	744.7	744.4	744.4	744.4	744.4	744.4	745.2
177.5°	749.0	748.5	748.1	747.7	747.3	747.1	747.1	747.1	747.1	747.1	747.7
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	745.3	746.5	747.7	748.1	747.9	747.7	747.5	747.3
5°	740.3	741.6	742.8	743.2	743.0	742.7	742.4	742.1
7.5°	729.9	730.6	731.3	731.3	730.9	730.5	730.0	729.5
10°	720.6	720.7	720.8	720.6	719.9	719.2	718.6	717.9
12.5°	709.0	708.9	708.8	708.4	707.6	706.8	706.1	705.3
15°	688.6	687.9	687.3	686.4	685.5	684.6	683.7	682.7
17.5°	664.3	662.9	661.4	660.0	658.6	657.2	655.8	654.4
20°	647.6	645.9	644.1	642.5	640.8	639.2	637.5	636.0
22.5°	629.8	627.6	625.4	623.5	622.0	620.5	619.0	617.5
25°	600.6	597.7	594.9	592.7	591.3	589.8	588.3	586.8
27.5°	568.7	564.8	560.9	557.8	555.5	553.3	551.0	548.7
30°	546.1	541.5	536.9	533.5	531.4	529.3	527.0	524.9
32.5°	523.9	518.8	513.8	510.2	507.9	505.6	503.4	501.1
35°	490.8	485.1	479.3	475.2	472.7	470.3	467.9	465.4
37.5°	455.4	448.9	442.3	437.5	434.5	431.5	428.5	425.5
40°	430.8	423.7	416.8	411.7	408.6	405.5	402.4	399.3
42.5°	407.2	399.5	391.8	386.6	383.8	381.0	378.3	375.5
45°	372.4	364.7	357.0	351.6	348.3	345.1	341.8	338.6
47.5°	336.4	328.1	319.7	314.1	311.2	308.3	305.5	302.5
50°	312.2	303.8	295.5	289.7	286.6	283.5	280.4	277.3
52.5°	288.8	280.0	271.3	265.6	262.8	260.1	257.3	254.5
55°	253.8	246.0	238.1	232.9	230.2	227.5	224.8	222.1
57.5°	219.4	212.1	204.7	199.9	197.6	195.3	193.0	190.7
60°	197.8	190.5	183.2	178.5	176.2	173.9	171.6	169.3
62.5°	176.3	169.5	162.6	158.0	155.7	153.2	150.8	148.5
65°	145.8	139.2	132.5	128.5	127.1	125.6	124.1	122.6
67.5°	116.6	111.6	106.7	103.5	101.9	100.3	98.7	97.1
70°	98.5	93.9	89.1	86.0	84.5	83.1	81.6	80.1
72.5°	82.3	78.5	74.6	72.4	71.8	71.1	70.5	69.9
75°	61.6	60.3	58.9	58.1	57.8	57.6	57.3	57.0
77.5°	46.5	45.8	45.0	44.5	44.3	44.0	43.7	43.4
80°	37.4	37.0	36.6	36.3	36.0	35.7	35.5	35.2
82.5°	28.7	28.3	27.9	27.6	27.6	27.6	27.5	27.4
85°	16.5	16.2	15.9	15.8	15.8	15.8	15.8	15.8
87.5°	9.1	9.1	9.1	9.1	9.0	9.0	9.0	8.9
90°	15.1	15.7	16.2	16.6	16.9	17.1	17.3	17.7
92.5°	23.4	23.8	24.2	24.4	24.2	24.1	23.9	23.8
95°	44.5	45.1	45.6	45.9	45.9	45.9	45.9	45.9
97.5°	69.3	69.9	70.5	70.7	70.7	70.7	70.6	70.6
100°	87.2	87.6	88.0	88.3	88.6	88.9	89.1	89.4
102.5°	107.9	108.3	108.7	108.8	108.8	108.8	108.7	108.7
105°	138.8	138.8	138.8	138.9	139.2	139.4	139.7	140.0
107.5°	172.1	172.6	173.0	173.2	173.0	172.9	172.7	172.5
110°	194.5	195.0	195.5	195.7	195.4	195.1	194.9	194.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	216.8	217.5	218.1	218.3	218.3	218.2	218.2	218.2
115°	250.7	250.9	251.0	251.0	250.9	250.7	250.6	250.5
117.5°	285.0	284.9	284.9	284.8	284.4	284.0	283.7	283.3
120°	307.8	307.7	307.6	307.4	307.1	306.9	306.6	306.3
122.5°	331.0	330.6	330.3	329.9	329.5	329.2	328.8	328.4
125°	365.3	364.7	364.2	363.7	363.2	362.7	362.1	361.6
127.5°	399.2	398.5	397.8	397.0	396.5	395.9	395.3	394.7
130°	421.8	421.2	420.6	419.9	419.1	418.1	417.2	416.3
132.5°	443.6	443.0	442.4	441.7	441.0	440.3	439.6	438.9
135°	476.4	475.9	475.4	475.0	474.7	474.4	474.2	473.9
137.5°	508.4	507.9	507.4	506.8	506.4	505.8	505.3	504.9
140°	529.5	529.4	529.3	528.7	527.8	526.9	526.0	525.1
142.5°	549.3	549.1	549.0	548.6	547.9	547.2	546.4	545.7
145°	578.3	578.2	578.1	577.7	577.2	576.7	576.2	575.7
147.5°	605.8	605.8	605.8	605.4	604.6	603.8	603.0	602.2
150°	622.7	622.7	622.7	622.3	621.5	620.8	620.0	619.2
152.5°	638.2	638.3	638.6	638.3	637.6	637.0	636.3	635.6
155°	660.8	661.3	661.8	661.6	660.7	659.8	658.9	658.0
157.5°	680.2	680.8	681.4	681.2	680.5	679.8	679.1	678.3
160°	692.2	692.8	693.5	693.6	693.1	692.5	692.0	691.5
162.5°	703.5	704.2	704.8	704.7	703.9	703.1	702.2	701.3
165°	717.7	718.5	719.3	719.2	718.4	717.4	716.5	715.6
167.5°	729.3	730.2	730.9	730.9	730.2	729.3	728.5	727.7
170°	735.6	736.6	737.4	737.4	736.6	735.6	734.7	733.8
172.5°	740.6	741.4	742.2	742.2	741.2	740.4	739.4	738.6
175°	746.0	746.7	747.5	747.5	746.6	745.6	744.7	743.8
177.5°	748.4	749.0	749.6	749.6	748.8	748.1	747.3	746.6
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5

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