

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: P332904-840

Luminaire Tested: **S124RDIP-S575D590U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332904-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S575D590U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4755.8 lumens
Efficiency: N/A
Efficacy: 145.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

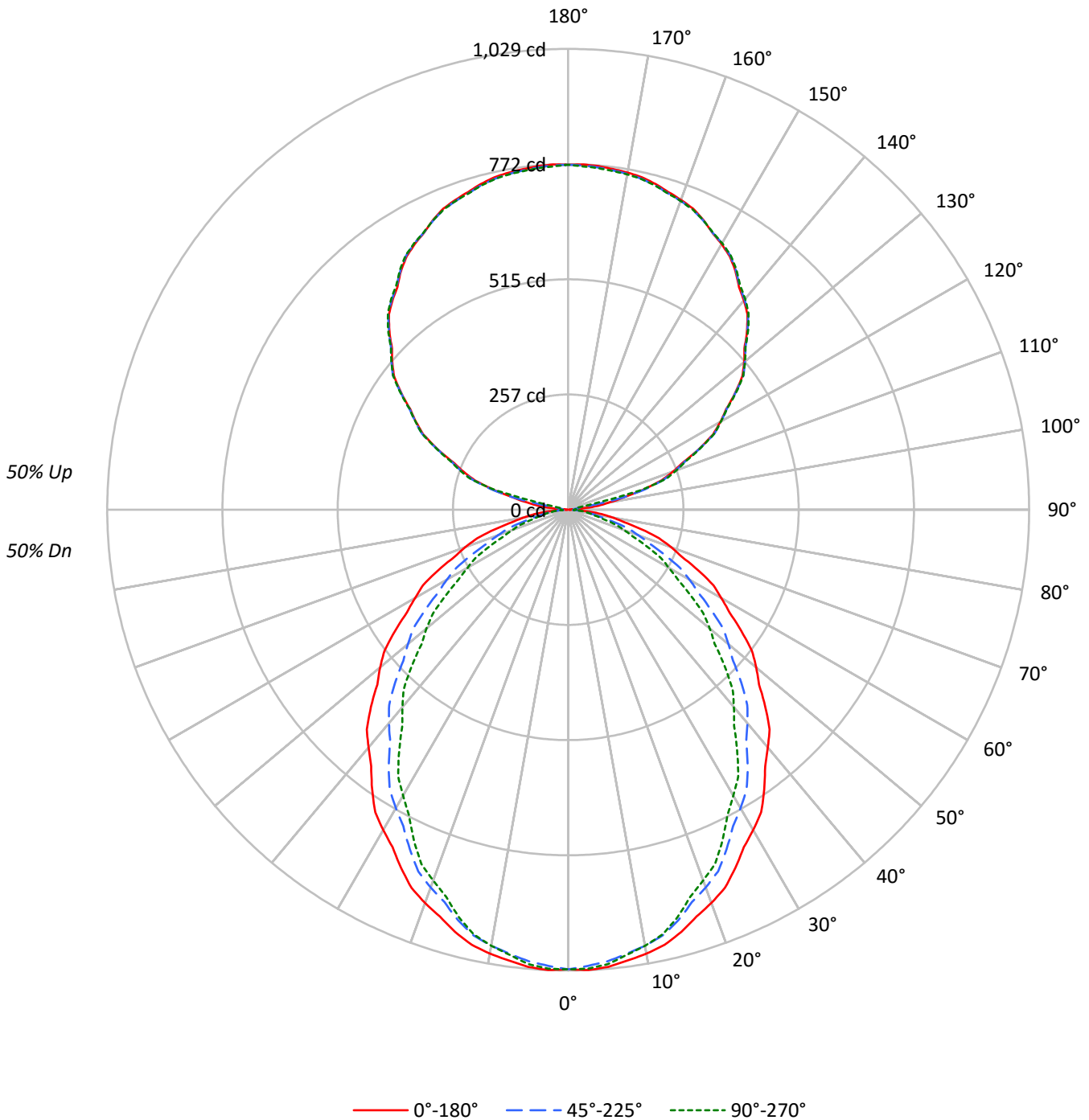
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	94	90	87	90	87	83	81	73	71	69	61	60	58	50	49	48	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	44	42	41	36
3	82	72	65	60	75	67	61	56	57	52	49	48	45	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	33	30	27
5	69	57	49	43	63	53	46	41	46	40	36	39	34	31	32	29	27	23
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	27	23	21	18
8	55	42	35	29	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	47	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8285	8285	8285
5°	8304	8203	8253
10°	8252	8104	8104
15°	8157	7934	7875
20°	8027	7710	7568
25°	7861	7448	7259
30°	7699	7171	6871
35°	7521	6885	6482
40°	7304	6559	6062
45°	7106	6235	5634
50°	6880	5863	5181
55°	6636	5475	4690
60°	6370	5050	4187
65°	6124	4518	3692
70°	5769	3932	3135
75°	5321	3260	2548
80°	4640	2483	2338
85°	3927	2251	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	2.0
10°-20°	268.8	5.7
20°-30°	388.2	8.2
30°-40°	440.0	9.3
40°-50°	424.9	8.9
50°-60°	353.4	7.4
60°-70°	244.0	5.1
70°-80°	123.7	2.6
80°-90°	34.0	0.7
90°-100°	26.3	0.6
100°-110°	168.0	3.5
110°-120°	321.3	6.8
120°-130°	407.9	8.6
130°-140°	436.4	9.2
140°-150°	408.1	8.6
150°-160°	329.1	6.9
160°-170°	212.2	4.5
170°-180°	73.2	1.5
0°-30°	753.5	15.8
0°-40°	1193.5	25.1
0°-60°	1971.8	41.5
0°-90°	2373.4	49.9
90°-120°	515.6	10.8
90°-150°	1767.9	37.2
90°-180°	2382.0	50.1
0°-180°	4755.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1025	1021	1012	1020	1018	97
15°	976	968	949	948	942	275
25°	882	867	836	823	815	406
35°	763	737	699	673	658	477
45°	622	592	546	509	494	480
55°	472	439	389	350	333	422
65°	321	286	236	204	193	317
75°	171	141	104	87	82	180
85°	42	28	24	23	23	48
90°	2	8	13	16	17	3
95°	32	13	13	16	17	41
105°	173	177	180	183	164	181
115°	324	325	325	326	326	318
125°	455	457	456	458	459	406
135°	564	564	566	567	569	435
145°	651	653	653	653	654	407
155°	714	714	713	715	713	329
165°	753	750	750	754	749	213
175°	770	767	767	772	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°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1028.9	1028.2	1027.7	1027.1	1026.6	1025.5	1024.0	1022.5	1020.9	1019.4	1020.9
5°	1024.7	1024.0	1023.3	1022.6	1022.0	1020.6	1018.4	1016.3	1014.2	1012.2	1013.9
7.5°	1015.4	1014.7	1014.0	1013.3	1012.5	1010.8	1008.0	1005.3	1002.6	999.9	1001.0
10°	1006.6	1005.8	1004.9	1004.0	1003.2	1001.2	998.0	994.8	991.7	988.6	989.3
12.5°	995.3	994.3	993.3	992.3	991.3	989.0	985.2	981.5	977.9	974.1	974.5
15°	976.0	974.4	972.9	971.3	969.7	966.7	962.4	958.1	953.6	949.3	949.0
17.5°	952.6	950.3	948.1	945.7	943.5	939.8	934.5	929.3	924.0	918.8	917.9
20°	934.3	932.1	929.8	927.6	925.2	921.2	915.2	909.3	903.3	897.5	896.1
22.5°	914.2	911.7	909.2	906.6	904.0	899.6	893.2	886.9	880.5	874.1	872.0
25°	882.5	879.4	876.2	873.0	869.9	864.7	857.6	850.4	843.2	836.2	833.1
27.5°	849.2	845.3	841.3	837.4	833.3	827.6	819.9	812.3	804.7	797.0	793.3
30°	825.9	821.5	817.2	812.8	808.5	802.1	794.0	785.8	777.5	769.3	765.0
32.5°	801.4	796.5	791.5	786.6	781.7	775.0	766.5	758.0	749.5	741.0	736.0
35°	763.1	757.5	751.8	746.3	740.7	733.6	724.8	716.1	707.3	698.6	692.7
37.5°	722.1	716.3	710.5	704.8	698.9	691.3	681.6	671.9	662.3	652.6	645.9
40°	693.1	687.3	681.6	675.8	670.0	662.2	652.3	642.3	632.4	622.4	615.0
42.5°	665.4	659.4	653.4	647.3	641.3	633.1	622.7	612.3	602.0	591.6	584.1
45°	622.4	615.9	609.5	603.0	596.5	588.0	577.5	567.1	556.6	546.1	537.6
47.5°	577.9	571.3	564.5	557.8	551.2	542.4	531.5	520.7	509.8	498.9	490.0
50°	547.8	540.9	534.1	527.3	520.5	511.5	500.3	489.2	478.0	466.8	458.1
52.5°	516.9	510.3	503.6	497.0	490.2	481.2	469.7	458.3	446.8	435.4	426.5
55°	471.5	464.5	457.6	450.5	443.5	434.3	423.0	411.7	400.3	389.0	379.9
57.5°	426.6	419.3	412.0	404.8	397.5	388.3	377.1	365.9	354.8	343.6	334.4
60°	394.5	387.5	380.5	373.5	366.6	357.5	346.3	335.1	324.0	312.8	303.7
62.5°	365.6	358.3	351.0	343.8	336.5	327.2	315.7	304.3	292.8	281.3	273.0
65°	320.6	313.2	305.6	298.1	290.5	281.2	270.0	258.9	247.7	236.5	229.0
67.5°	274.0	266.7	259.5	252.4	245.2	236.4	226.0	215.6	205.3	194.9	188.4
70°	244.4	237.0	229.7	222.4	215.1	206.4	196.4	186.5	176.5	166.6	160.9
72.5°	213.0	206.3	199.7	193.1	186.4	178.4	169.1	159.7	150.2	140.8	135.9
75°	170.6	164.1	157.6	151.2	144.7	137.3	129.2	120.9	112.7	104.5	100.5
77.5°	127.4	122.0	116.5	111.0	105.5	99.5	92.8	86.2	79.6	72.9	70.6
80°	99.8	94.7	89.7	84.6	79.6	74.4	69.2	63.9	58.7	53.4	52.9
82.5°	75.9	71.3	66.7	62.0	57.4	53.5	50.5	47.5	44.5	41.5	41.1
85°	42.4	39.0	35.4	31.9	28.5	26.5	26.0	25.4	24.8	24.3	24.0
87.5°	14.8	13.9	13.1	12.3	11.4	11.1	11.1	11.2	11.3	11.3	11.3
90°	1.7	3.1	4.5	6.0	7.4	8.6	9.6	10.6	11.6	12.6	13.4
92.5°	7.3	7.4	7.4	7.5	7.6	8.1	9.2	10.2	11.2	12.2	13.0
95°	31.7	27.4	23.0	18.6	14.2	12.1	12.3	12.4	12.5	12.6	13.4
97.5°	67.3	70.0	72.7	75.4	78.2	72.3	58.1	43.8	29.5	15.2	15.2
100°	94.4	96.7	99.1	101.4	103.7	96.0	78.4	60.7	43.0	25.3	23.1
102.5°	124.9	126.5	128.3	130.0	131.7	131.4	129.1	126.7	124.4	122.1	98.7
105°	173.4	174.2	174.9	175.7	176.4	177.1	177.8	178.4	179.0	179.8	180.9
107.5°	218.4	218.8	219.2	219.5	219.9	220.6	221.5	222.4	223.2	224.1	224.7
110°	248.8	249.2	249.6	250.0	250.3	251.0	251.8	252.5	253.3	254.1	254.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	278.3	279.0	279.7	280.4	281.1	281.7	282.0	282.4	282.8	283.1	283.1
115°	323.8	324.2	324.5	324.9	325.3	325.4	325.3	325.2	325.0	324.9	325.2
117.5°	364.7	365.2	365.7	366.2	366.7	367.1	367.4	367.7	367.9	368.2	368.2
120°	392.3	392.8	393.3	393.8	394.4	394.6	394.5	394.3	394.2	394.0	394.3
122.5°	418.1	418.4	418.7	419.0	419.3	419.6	419.8	419.9	420.1	420.3	420.4
125°	455.0	455.6	456.2	456.7	457.2	457.3	457.0	456.8	456.5	456.3	456.7
127.5°	490.1	490.2	490.4	490.5	490.6	491.0	491.6	492.1	492.7	493.3	493.2
130°	512.7	512.8	512.9	513.1	513.2	513.4	513.8	514.2	514.6	515.0	515.1
132.5°	533.4	533.6	533.9	534.1	534.3	534.7	535.2	535.6	536.1	536.6	536.7
135°	564.5	564.4	564.3	564.1	564.0	564.2	564.7	565.2	565.7	566.2	566.5
137.5°	592.1	592.1	592.2	592.2	592.3	592.6	593.1	593.7	594.3	594.8	595.1
140°	610.1	610.3	610.6	610.8	611.1	611.3	611.6	611.9	612.1	612.4	612.7
142.5°	626.2	626.6	627.1	627.5	628.0	628.3	628.4	628.6	628.7	628.9	629.2
145°	651.0	651.4	651.7	652.1	652.5	652.7	652.7	652.7	652.7	652.7	652.8
147.5°	670.7	671.4	672.1	672.8	673.5	673.8	673.7	673.6	673.4	673.3	673.4
150°	684.9	685.4	686.0	686.5	687.0	687.2	687.0	686.9	686.8	686.6	686.6
152.5°	696.9	697.3	697.7	698.1	698.5	698.6	698.4	698.2	697.9	697.7	697.9
155°	713.8	713.9	714.0	714.1	714.3	714.1	713.8	713.4	713.0	712.6	713.1
157.5°	727.9	727.8	727.7	727.7	727.6	727.3	726.9	726.5	726.0	725.6	726.3
160°	736.2	735.8	735.4	735.1	734.7	734.4	734.3	734.2	734.0	733.9	734.7
162.5°	743.6	743.1	742.6	742.1	741.6	741.3	741.1	741.0	740.9	740.8	741.5
165°	752.9	752.2	751.6	750.9	750.3	750.0	750.0	750.0	750.0	750.0	751.0
167.5°	760.2	759.6	758.9	758.3	757.6	757.2	757.2	757.1	757.0	756.9	758.1
170°	764.5	763.7	762.9	762.1	761.3	761.0	761.1	761.2	761.4	761.5	762.5
172.5°	767.2	766.4	765.7	764.9	764.2	763.8	764.0	764.1	764.2	764.3	765.4
175°	770.2	769.4	768.6	767.9	767.1	766.8	766.9	767.1	767.2	767.3	768.4
177.5°	771.5	770.8	770.1	769.4	768.7	768.4	768.6	768.8	769.0	769.2	770.1
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1022.5	1024.0	1025.5	1026.2	1026.1	1025.9	1025.8	1025.7
5°	1015.6	1017.4	1019.2	1019.9	1019.5	1019.2	1018.8	1018.4
7.5°	1002.1	1003.2	1004.4	1004.6	1004.1	1003.5	1003.0	1002.4
10°	990.0	990.7	991.4	991.4	990.7	990.0	989.3	988.6
12.5°	974.9	975.3	975.8	975.5	974.5	973.6	972.6	971.6
15°	948.6	948.3	947.9	947.2	945.8	944.6	943.4	942.2
17.5°	916.9	915.8	914.8	913.4	911.6	909.8	907.9	906.1
20°	894.6	893.2	891.8	890.0	887.8	885.4	883.2	880.9
22.5°	870.0	867.9	865.8	863.8	861.9	860.1	858.3	856.4
25°	830.2	827.2	824.3	821.9	820.1	818.4	816.7	814.9
27.5°	789.6	786.0	782.3	779.2	776.7	774.2	771.7	769.2
30°	760.6	756.2	751.8	748.3	745.5	742.7	739.9	737.1
32.5°	730.9	725.9	720.7	716.9	714.3	711.7	708.9	706.3
35°	686.7	680.8	674.9	670.3	667.2	664.0	660.9	657.7
37.5°	639.2	632.7	626.0	621.2	617.9	614.8	611.7	608.5
40°	607.7	600.4	593.0	587.8	584.6	581.5	578.3	575.2
42.5°	576.6	569.2	561.7	556.3	553.0	549.8	546.4	543.2
45°	529.1	520.5	511.9	506.0	502.9	499.8	496.7	493.5
47.5°	481.1	472.2	463.3	457.2	453.7	450.3	446.9	443.3
50°	449.3	440.6	431.8	425.9	422.5	419.2	415.9	412.5
52.5°	417.6	408.7	399.9	393.7	390.2	386.8	383.3	379.9
55°	370.8	361.7	352.6	346.5	343.2	339.8	336.5	333.2
57.5°	325.1	315.9	306.7	300.8	298.3	295.8	293.3	290.7
60°	294.6	285.5	276.4	270.5	267.7	264.9	262.2	259.3
62.5°	264.6	256.2	247.8	242.5	240.2	238.0	235.8	233.6
65°	221.6	214.0	206.5	201.7	199.7	197.5	195.4	193.3
67.5°	182.0	175.5	169.1	164.7	162.4	160.1	157.7	155.4
70°	155.1	149.4	143.5	139.8	138.0	136.3	134.5	132.8
72.5°	131.0	126.0	121.1	117.9	116.2	114.6	113.0	111.4
75°	96.4	92.5	88.5	85.9	84.8	83.8	82.8	81.7
77.5°	68.3	65.9	63.5	62.2	61.9	61.6	61.3	61.0
80°	52.4	51.9	51.3	51.0	50.8	50.6	50.5	50.3
82.5°	40.7	40.3	40.0	39.7	39.5	39.3	39.2	39.0
85°	23.6	23.3	22.9	22.8	22.8	22.8	22.8	22.8
87.5°	11.4	11.4	11.4	11.5	11.7	11.9	12.0	12.2
90°	14.2	14.9	15.8	16.3	16.6	16.8	17.1	17.3
92.5°	13.7	14.5	15.2	15.7	15.8	15.8	15.9	15.9
95°	14.2	14.9	15.8	16.2	16.4	16.5	16.6	16.7
97.5°	15.3	15.5	15.6	15.7	15.8	15.9	16.0	16.2
100°	21.0	18.8	16.7	15.7	15.8	15.9	16.0	16.2
102.5°	75.1	51.7	28.2	16.5	16.6	16.6	16.6	16.6
105°	182.1	183.2	184.3	182.6	178.0	173.4	168.7	164.2
107.5°	225.2	225.8	226.3	226.8	227.3	227.8	228.3	228.8
110°	254.6	254.8	255.1	255.4	255.8	256.1	256.5	256.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.0	283.0	282.9	283.1	283.6	284.1	284.6	285.0
115°	325.4	325.7	325.9	326.1	326.1	326.1	326.1	326.1
117.5°	368.1	368.1	368.0	368.0	367.9	367.9	367.8	367.8
120°	394.6	394.8	395.1	395.1	394.8	394.6	394.3	394.0
122.5°	420.6	420.7	420.9	420.8	420.6	420.3	420.1	419.8
125°	457.0	457.4	457.8	458.1	458.2	458.3	458.4	458.6
127.5°	493.2	493.1	493.0	492.9	492.8	492.7	492.6	492.5
130°	515.2	515.3	515.5	515.5	515.5	515.5	515.5	515.5
132.5°	536.9	537.0	537.1	537.1	537.0	536.9	536.8	536.7
135°	566.7	567.0	567.2	567.5	567.7	568.0	568.4	568.6
137.5°	595.4	595.7	595.9	596.0	596.0	595.9	595.8	595.7
140°	613.1	613.5	613.9	614.1	614.3	614.4	614.5	614.6
142.5°	629.4	629.8	630.1	630.3	630.3	630.3	630.3	630.4
145°	652.9	653.1	653.2	653.4	653.6	653.9	654.2	654.4
147.5°	673.5	673.6	673.7	673.8	674.0	674.1	674.2	674.3
150°	686.6	686.6	686.6	686.7	686.8	687.0	687.1	687.2
152.5°	698.1	698.3	698.5	698.6	698.5	698.4	698.3	698.3
155°	713.6	714.1	714.6	714.7	714.3	713.9	713.6	713.2
157.5°	726.9	727.6	728.2	728.2	727.6	726.9	726.3	725.6
160°	735.4	736.2	737.0	737.0	736.2	735.4	734.7	733.9
162.5°	742.4	743.1	743.9	743.9	743.0	742.0	741.2	740.3
165°	752.0	753.1	754.2	754.1	752.9	751.7	750.6	749.4
167.5°	759.2	760.3	761.4	761.3	760.1	758.8	757.5	756.3
170°	763.6	764.6	765.7	765.5	764.3	763.0	761.6	760.4
172.5°	766.4	767.4	768.4	768.2	766.9	765.5	764.1	762.7
175°	769.6	770.7	771.9	771.7	770.2	768.6	767.1	765.6
177.5°	770.9	771.7	772.5	772.3	771.1	769.9	768.6	767.4
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2

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