

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: P332899-840

Luminaire Tested: **S124RDIP-S575D365U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332899-840
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: S124RDIP-S575D365U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3652.7 lumens
Efficiency: N/A
Efficacy: 132.8 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: Semi-Direct

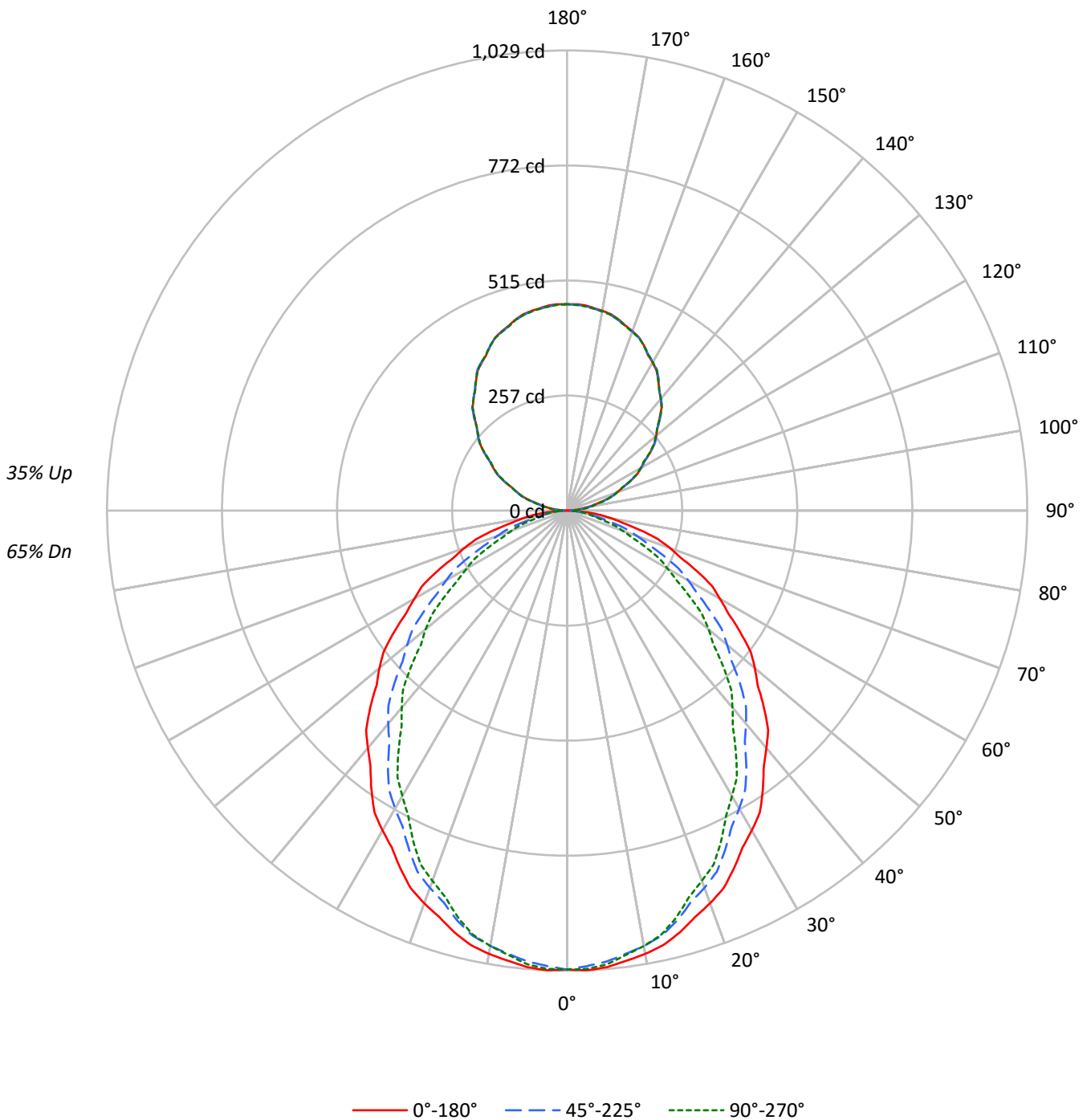
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	101	97	93	90	95	92	88	85	81	78	76	71	69	68	62	61	60	55
2	93	85	79	74	87	80	75	70	71	67	64	63	60	57	55	53	51	47
3	85	75	68	62	79	71	65	59	63	58	54	56	52	49	49	46	44	40
4	78	67	59	53	73	63	56	51	56	51	46	50	46	42	44	41	38	35
5	72	60	52	46	67	57	49	44	51	45	40	45	40	37	40	36	33	30
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29	27
7	61	49	41	35	58	46	39	34	42	36	31	37	32	29	33	29	26	24
8	57	45	37	31	54	42	35	30	38	32	28	34	29	26	31	27	24	21
9	53	41	33	28	50	39	32	27	35	29	25	32	27	23	28	24	21	19
10	50	38	30	25	47	36	29	25	32	27	23	29	25	21	26	22	20	18

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	2.6
10°-20°	268.8	7.4
20°-30°	388.2	10.6
30°-40°	440.0	12.0
40°-50°	424.9	11.6
50°-60°	353.4	9.7
60°-70°	244.0	6.7
70°-80°	123.7	3.4
80°-90°	33.1	0.9
90°-100°	30.4	0.8
100°-110°	90.2	2.5
110°-120°	153.0	4.2
120°-130°	201.8	5.5
130°-140°	226.6	6.2
140°-150°	222.7	6.1
150°-160°	187.3	5.1
160°-170°	124.6	3.4
170°-180°	43.6	1.2
0°-30°	753.5	20.6
0°-40°	1193.5	32.7
0°-60°	1971.8	54.0
0°-90°	2372.6	65.0
90°-120°	273.6	7.5
90°-150°	924.6	25.3
90°-180°	1280.0	35.0
0°-180°	3652.7	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°	1	5	8	10	11	3
95°	21	25	27	28	28	24
105°	83	84	85	86	87	88
115°	156	156	155	154	154	153
125°	227	227	226	226	225	202
135°	292	294	294	294	293	226
145°	355	356	357	356	356	222
155°	407	407	406	408	406	187
165°	443	442	441	443	442	125
175°	461	459	459	461	459	44
180°	461	461	461	461	461	



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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°	14.6	13.7	12.8	11.8	10.9	10.4	10.4	10.4	10.4	10.4	10.3
90°	1.1	1.9	2.8	3.7	4.5	5.4	6.0	6.6	7.2	7.9	8.3
92.5°	7.7	8.7	9.6	10.6	11.6	12.3	12.8	13.2	13.7	14.1	14.4
95°	21.4	22.1	22.8	23.5	24.2	24.9	25.4	26.1	26.6	27.2	27.4
97.5°	37.4	38.0	38.6	39.1	39.7	40.3	40.9	41.6	42.2	42.9	43.2
100°	50.0	50.3	50.6	50.9	51.2	51.7	52.4	53.2	53.9	54.6	54.7
102.5°	63.1	63.2	63.3	63.5	63.6	64.0	64.6	65.3	65.9	66.6	66.9
105°	83.1	83.2	83.3	83.4	83.4	83.6	84.0	84.3	84.6	84.9	85.1
107.5°	104.2	104.3	104.4	104.5	104.6	104.6	104.7	104.7	104.8	104.8	105.0
110°	118.5	118.7	118.8	119.0	119.1	119.2	119.1	119.0	118.9	118.9	118.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	133.3	133.3	133.4	133.4	133.4	133.4	133.2	133.1	133.0	132.8	132.8
115°	155.6	155.6	155.6	155.6	155.6	155.5	155.3	155.2	155.0	154.9	154.8
117.5°	176.5	176.6	176.7	176.7	176.8	176.8	176.7	176.6	176.4	176.3	176.1
120°	190.6	190.9	191.2	191.5	191.9	191.9	191.7	191.4	191.2	191.0	190.6
122.5°	205.1	205.2	205.4	205.5	205.6	205.6	205.5	205.4	205.3	205.2	204.9
125°	226.6	226.6	226.6	226.6	226.6	226.5	226.5	226.4	226.3	226.2	226.1
127.5°	246.1	246.3	246.6	246.8	247.0	247.1	247.0	246.8	246.7	246.6	246.4
130°	259.8	260.0	260.2	260.5	260.7	260.8	260.8	260.8	260.8	260.8	260.7
132.5°	273.8	274.0	274.1	274.3	274.5	274.5	274.5	274.4	274.4	274.3	274.1
135°	292.3	292.8	293.2	293.7	294.2	294.4	294.4	294.4	294.4	294.4	294.3
137.5°	312.4	312.7	312.9	313.1	313.3	313.5	313.6	313.7	313.9	314.0	313.8
140°	325.8	326.0	326.1	326.3	326.5	326.5	326.5	326.5	326.5	326.5	326.5
142.5°	338.1	338.2	338.4	338.5	338.7	338.8	338.7	338.6	338.6	338.5	338.5
145°	355.1	355.4	355.7	356.0	356.4	356.6	356.6	356.7	356.8	356.9	356.8
147.5°	371.9	372.3	372.6	373.0	373.4	373.5	373.5	373.4	373.4	373.3	373.2
150°	382.2	382.5	382.8	383.1	383.4	383.6	383.6	383.6	383.6	383.6	383.6
152.5°	391.9	392.1	392.2	392.4	392.6	392.7	392.8	392.9	392.9	393.0	393.2
155°	406.8	406.8	406.8	406.8	406.8	406.8	406.7	406.6	406.6	406.5	406.8
157.5°	419.4	419.2	419.1	419.0	418.8	418.7	418.7	418.7	418.7	418.7	418.9
160°	426.8	426.7	426.7	426.6	426.5	426.4	426.4	426.3	426.2	426.1	426.4
162.5°	433.6	433.4	433.2	433.0	432.8	432.7	432.6	432.5	432.4	432.3	432.8
165°	442.8	442.6	442.4	442.1	441.9	441.7	441.5	441.4	441.2	441.1	441.5
167.5°	449.9	449.6	449.3	448.9	448.6	448.4	448.5	448.5	448.5	448.5	449.0
170°	453.9	453.5	453.1	452.7	452.3	452.2	452.2	452.3	452.4	452.5	452.9
172.5°	456.8	456.5	456.1	455.8	455.4	455.2	455.2	455.3	455.3	455.3	455.9
175°	460.7	460.3	459.9	459.5	459.1	458.9	458.8	458.7	458.7	458.6	459.1
177.5°	462.0	461.7	461.3	461.0	460.7	460.6	460.6	460.6	460.6	460.6	461.0
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4



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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°	10.3	10.2	10.2	10.3	10.4	10.6	10.8	10.9
90°	8.8	9.3	9.8	10.1	10.2	10.4	10.5	10.7
92.5°	14.7	14.9	15.2	15.5	15.6	15.7	15.8	15.9
95°	27.6	27.9	28.1	28.2	28.2	28.2	28.2	28.2
97.5°	43.4	43.7	44.0	44.1	44.1	44.1	44.1	44.1
100°	54.9	55.0	55.2	55.3	55.3	55.3	55.3	55.3
102.5°	67.1	67.3	67.5	67.7	67.7	67.8	67.8	67.9
105°	85.4	85.6	85.8	86.1	86.3	86.6	86.8	87.1
107.5°	105.3	105.5	105.7	105.8	105.8	105.8	105.8	105.7
110°	118.6	118.4	118.2	118.3	118.5	118.8	119.0	119.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	132.8	132.7	132.7	132.7	132.8	132.8	132.8	132.9
115°	154.7	154.6	154.5	154.5	154.4	154.3	154.2	154.2
117.5°	175.8	175.5	175.3	175.1	174.9	174.7	174.6	174.4
120°	190.2	189.8	189.3	189.2	189.3	189.6	189.7	189.9
122.5°	204.7	204.4	204.1	203.8	203.6	203.3	203.0	202.7
125°	225.9	225.8	225.6	225.4	225.3	225.1	225.0	224.8
127.5°	246.3	246.1	245.9	245.8	245.7	245.6	245.4	245.3
130°	260.5	260.3	260.2	259.9	259.6	259.3	259.0	258.7
132.5°	274.0	273.8	273.7	273.5	273.4	273.3	273.2	273.0
135°	294.1	294.0	293.8	293.6	293.4	293.1	292.9	292.7
137.5°	313.6	313.4	313.2	313.1	313.1	313.2	313.2	313.3
140°	326.4	326.3	326.2	326.1	326.1	326.0	325.9	325.8
142.5°	338.5	338.5	338.4	338.4	338.4	338.4	338.4	338.4
145°	356.7	356.6	356.6	356.4	356.2	355.9	355.7	355.5
147.5°	373.2	373.1	373.0	373.0	372.9	372.8	372.7	372.7
150°	383.6	383.6	383.6	383.5	383.5	383.4	383.3	383.2
152.5°	393.4	393.6	393.8	393.7	393.5	393.3	393.1	392.9
155°	407.1	407.4	407.7	407.7	407.4	407.1	406.8	406.5
157.5°	419.1	419.4	419.6	419.6	419.3	419.1	418.8	418.5
160°	426.6	426.8	427.1	427.0	426.6	426.2	425.8	425.4
162.5°	433.2	433.6	434.0	434.0	433.7	433.3	432.9	432.5
165°	442.0	442.5	442.9	443.0	442.7	442.4	442.1	441.8
167.5°	449.5	449.9	450.4	450.4	449.9	449.4	448.9	448.4
170°	453.4	453.9	454.4	454.3	453.8	453.2	452.7	452.1
172.5°	456.5	457.0	457.5	457.5	457.0	456.4	455.9	455.2
175°	459.7	460.2	460.8	460.8	460.2	459.7	459.1	458.6
177.5°	461.4	461.9	462.3	462.3	461.8	461.3	460.8	460.3
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4

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