

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: P333025-927

Luminaire Tested: **S124RDIW-S350D1050U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333025-927
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: S124RDIW-S350D1050U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4454.0 lumens
Efficiency: N/A
Efficacy: 117.2 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-Indirect

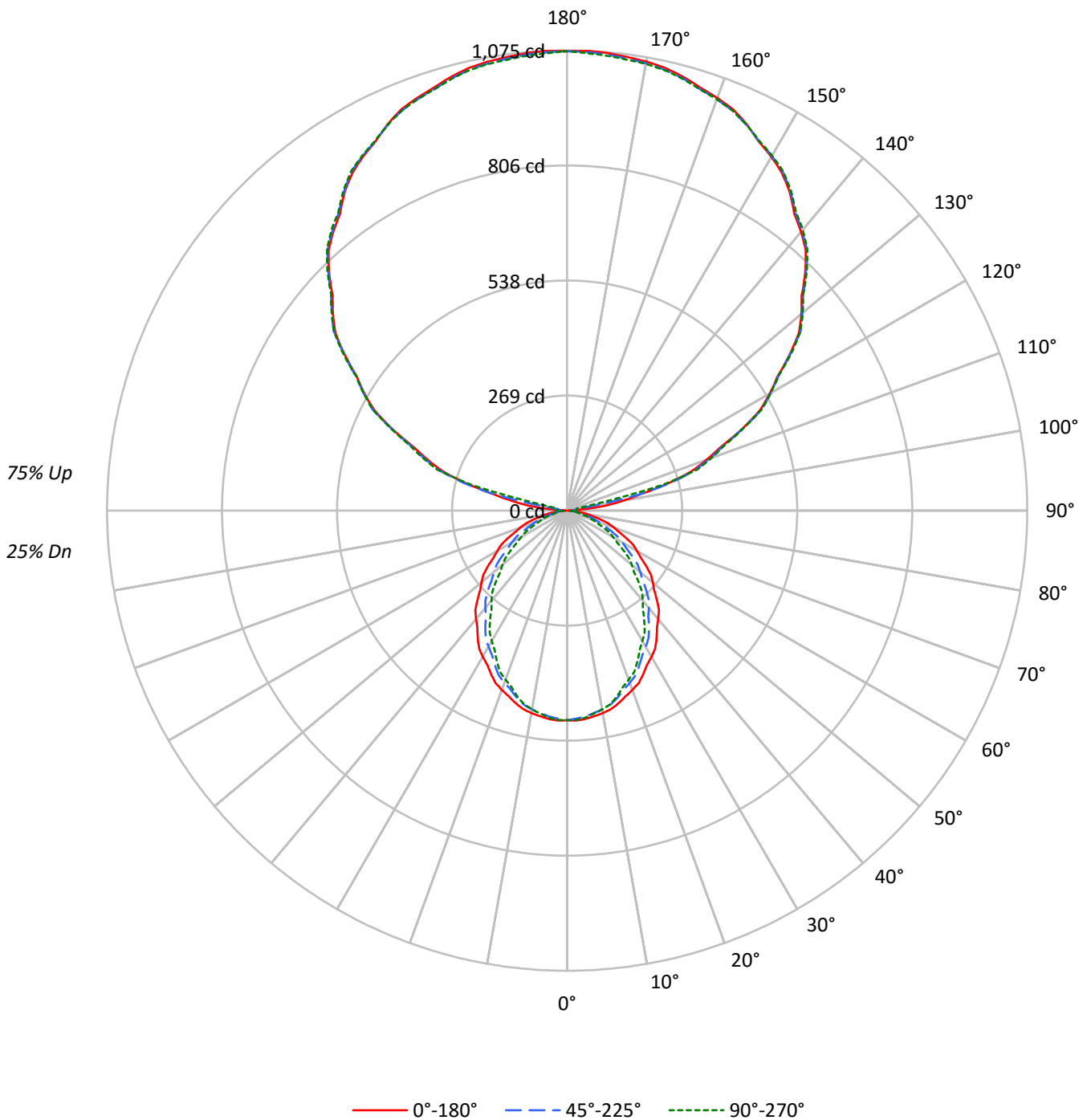
Input Watts (W): 38
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	88	85	81	82	79	76	73	61	59	57	45	44	42	30	29	29	22
2	84	77	71	67	75	69	64	60	54	50	48	39	37	36	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	53	47	62	54	47	43	42	38	34	31	28	26	21	19	18	14
5	64	53	46	40	57	48	41	36	38	33	29	28	25	22	19	17	16	12
6	59	48	40	35	53	43	36	31	34	29	25	25	22	20	17	15	14	10
7	55	43	35	30	49	39	32	27	31	26	22	23	20	17	16	14	12	9
8	51	39	32	26	45	35	29	24	28	23	20	21	18	15	14	12	11	8
9	47	35	28	23	42	32	26	21	25	21	18	19	16	14	13	11	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3953	3953	3953
5°	3962	3914	3938
10°	3937	3867	3867
15°	3892	3786	3758
20°	3830	3679	3611
25°	3751	3553	3463
30°	3674	3422	3278
35°	3588	3286	3094
40°	3485	3130	2893
45°	3391	2975	2689
50°	3282	2798	2473
55°	3167	2612	2238
60°	3039	2409	1997
65°	2923	2157	1761
70°	2752	1876	1496
75°	2539	1556	1216
80°	2213	1186	1116
85°	1880	1074	1010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.0
10°-20°	128.3	2.9
20°-30°	185.2	4.2
30°-40°	210.0	4.7
40°-50°	202.8	4.6
50°-60°	168.6	3.8
60°-70°	116.4	2.6
70°-80°	59.0	1.3
80°-90°	18.2	0.4
90°-100°	36.7	0.8
100°-110°	234.0	5.3
110°-120°	447.7	10.1
120°-130°	568.3	12.8
130°-140°	608.0	13.7
140°-150°	568.6	12.8
150°-160°	458.5	10.3
160°-170°	295.7	6.6
170°-180°	101.9	2.3
0°-30°	359.5	8.1
0°-40°	569.5	12.8
0°-60°	940.8	21.1
0°-90°	1134.5	25.5
90°-120°	718.4	16.1
90°-150°	2463.3	55.3
90°-180°	3319.0	74.5
0°-180°	4454.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	489	487	483	486	486	46
15°	466	462	453	452	450	131
25°	421	414	399	393	389	194
35°	364	352	333	321	314	227
45°	297	283	261	243	236	229
55°	225	209	186	167	159	201
65°	153	136	113	97	92	151
75°	81	67	50	42	39	86
85°	20	13	12	11	11	23
90°	2	11	18	22	24	3
95°	44	18	18	22	23	57
105°	242	246	250	256	229	253
115°	451	453	453	454	454	444
125°	634	637	636	638	639	566
135°	787	786	789	791	792	606
145°	907	909	909	910	912	567
155°	994	995	993	996	994	458
165°	1049	1045	1045	1051	1044	296
175°	1073	1069	1069	1075	1067	102
180°	1073	1073	1073	1073	1073	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	490.9	490.6	490.4	490.1	489.8	489.3	488.6	487.9	487.1	486.4	487.1
5°	488.9	488.6	488.3	488.0	487.6	487.0	485.9	485.0	483.9	483.0	483.8
7.5°	484.5	484.2	483.9	483.5	483.2	482.3	481.0	479.7	478.4	477.1	477.6
10°	480.3	479.9	479.5	479.1	478.6	477.7	476.2	474.7	473.2	471.7	472.1
12.5°	474.9	474.4	474.0	473.5	473.0	471.9	470.1	468.3	466.6	464.8	465.0
15°	465.7	464.9	464.2	463.4	462.7	461.3	459.2	457.1	455.0	453.0	452.8
17.5°	454.6	453.4	452.3	451.3	450.2	448.4	445.9	443.4	440.9	438.4	437.9
20°	445.8	444.7	443.7	442.6	441.5	439.6	436.7	433.9	431.0	428.2	427.5
22.5°	436.3	435.0	433.8	432.6	431.3	429.2	426.2	423.2	420.2	417.1	416.1
25°	421.1	419.6	418.1	416.6	415.1	412.6	409.2	405.8	402.3	398.9	397.5
27.5°	405.2	403.3	401.4	399.6	397.7	394.9	391.3	387.6	384.0	380.3	378.5
30°	394.1	392.0	389.9	387.9	385.8	382.8	378.8	374.9	371.0	367.1	365.0
32.5°	382.4	380.0	377.7	375.3	373.0	369.8	365.8	361.7	357.7	353.6	351.2
35°	364.1	361.4	358.8	356.1	353.4	350.0	345.9	341.7	337.5	333.4	330.5
37.5°	344.5	341.7	339.1	336.3	333.5	329.9	325.2	320.6	316.0	311.4	308.2
40°	330.7	328.0	325.2	322.5	319.7	316.0	311.2	306.5	301.7	297.0	293.5
42.5°	317.5	314.7	311.7	308.9	306.0	302.1	297.1	292.2	287.2	282.3	278.7
45°	297.0	293.9	290.8	287.7	284.6	280.6	275.6	270.6	265.6	260.6	256.5
47.5°	275.8	272.6	269.4	266.2	263.0	258.8	253.7	248.4	243.2	238.1	233.8
50°	261.3	258.1	254.8	251.6	248.3	244.1	238.8	233.4	228.1	222.8	218.6
52.5°	246.7	243.4	240.3	237.1	233.9	229.6	224.1	218.6	213.2	207.7	203.5
55°	225.0	221.7	218.3	215.0	211.7	207.2	201.8	196.5	191.0	185.6	181.3
57.5°	203.5	200.0	196.6	193.1	189.6	185.3	179.9	174.6	169.3	163.9	159.5
60°	188.2	184.9	181.6	178.2	174.9	170.6	165.2	159.9	154.6	149.2	144.9
62.5°	174.4	171.0	167.5	164.1	160.6	156.1	150.7	145.2	139.7	134.3	130.2
65°	153.0	149.4	145.8	142.3	138.6	134.2	128.9	123.5	118.2	112.9	109.3
67.5°	130.7	127.3	123.8	120.4	117.0	112.8	107.8	102.9	97.9	93.0	89.9
70°	116.6	113.1	109.6	106.2	102.6	98.5	93.7	89.0	84.2	79.5	76.8
72.5°	101.6	98.5	95.3	92.1	89.0	85.2	80.6	76.1	71.7	67.2	64.9
75°	81.4	78.3	75.2	72.1	69.0	65.5	61.6	57.7	53.8	49.9	47.9
77.5°	60.8	58.2	55.6	53.0	50.4	47.5	44.3	41.1	37.9	34.8	33.7
80°	47.6	45.2	42.8	40.4	37.9	35.5	33.0	30.5	28.0	25.5	25.3
82.5°	36.2	34.0	31.8	29.5	27.3	25.5	24.1	22.7	21.2	19.8	19.6
85°	20.3	18.6	17.0	15.2	13.5	12.6	12.4	12.1	11.9	11.6	11.5
87.5°	7.4	7.2	7.1	7.0	6.8	6.9	7.1	7.3	7.5	7.8	7.8
90°	2.4	4.4	6.3	8.3	10.2	12.0	13.4	14.8	16.2	17.7	18.7
92.5°	10.1	10.2	10.3	10.5	10.5	11.3	12.8	14.2	15.6	17.0	18.1
95°	44.1	38.1	32.0	26.0	19.9	17.0	17.1	17.3	17.5	17.7	18.7
97.5°	93.7	97.5	101.3	105.1	108.8	100.8	80.9	61.0	41.1	21.2	21.3
100°	131.7	134.8	138.1	141.2	144.5	133.8	109.2	84.5	60.0	35.3	32.3
102.5°	174.0	176.3	178.7	181.1	183.4	183.0	179.8	176.6	173.3	170.2	137.4
105°	241.6	242.6	243.8	244.8	245.9	246.8	247.7	248.7	249.5	250.4	252.0
107.5°	304.4	304.9	305.4	305.9	306.5	307.4	308.6	309.8	311.0	312.2	313.0
110°	346.7	347.3	347.8	348.3	348.9	349.7	350.8	351.8	352.9	353.9	354.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	387.9	388.8	389.8	390.7	391.7	392.4	392.9	393.4	393.9	394.4	394.3
115°	451.1	451.6	452.2	452.7	453.2	453.4	453.2	453.0	452.9	452.7	453.0
117.5°	508.0	508.7	509.5	510.2	510.9	511.4	511.8	512.2	512.6	513.0	512.9
120°	546.6	547.3	548.0	548.7	549.5	549.7	549.5	549.4	549.1	549.0	549.4
122.5°	582.6	583.0	583.4	583.8	584.2	584.6	584.9	585.1	585.3	585.6	585.8
125°	634.1	634.8	635.5	636.2	636.9	637.1	636.8	636.4	636.0	635.6	636.2
127.5°	682.9	683.0	683.3	683.4	683.6	684.0	684.9	685.7	686.5	687.4	687.3
130°	714.3	714.5	714.7	714.9	715.0	715.4	716.0	716.4	717.0	717.6	717.7
132.5°	743.2	743.5	743.9	744.2	744.5	745.0	745.7	746.4	747.0	747.7	747.9
135°	786.6	786.4	786.2	786.0	785.8	786.2	786.9	787.6	788.3	789.0	789.3
137.5°	824.9	825.0	825.1	825.1	825.2	825.6	826.4	827.2	828.0	828.8	829.2
140°	850.0	850.3	850.7	851.0	851.4	851.8	852.2	852.5	852.9	853.2	853.7
142.5°	872.4	873.1	873.7	874.4	875.0	875.4	875.7	875.8	876.1	876.3	876.7
145°	907.0	907.5	908.0	908.6	909.1	909.3	909.3	909.3	909.3	909.3	909.6
147.5°	934.4	935.4	936.4	937.4	938.4	938.8	938.7	938.5	938.3	938.1	938.3
150°	954.3	955.1	955.8	956.5	957.2	957.4	957.3	957.1	956.9	956.7	956.7
152.5°	971.0	971.6	972.2	972.7	973.3	973.4	973.1	972.8	972.5	972.2	972.4
155°	994.4	994.7	994.8	995.0	995.1	995.0	994.4	994.0	993.4	992.8	993.6
157.5°	1014.2	1014.1	1014.0	1013.8	1013.8	1013.4	1012.8	1012.2	1011.6	1011.0	1011.9
160°	1025.7	1025.2	1024.7	1024.1	1023.6	1023.3	1023.1	1022.9	1022.7	1022.5	1023.6
162.5°	1036.0	1035.4	1034.7	1034.0	1033.3	1032.8	1032.7	1032.5	1032.4	1032.1	1033.2
165°	1049.0	1048.1	1047.3	1046.3	1045.4	1045.0	1045.0	1045.0	1045.0	1045.0	1046.5
167.5°	1059.3	1058.4	1057.5	1056.5	1055.6	1055.1	1054.9	1054.9	1054.8	1054.6	1056.2
170°	1065.1	1064.0	1063.0	1061.8	1060.8	1060.3	1060.5	1060.7	1060.9	1061.0	1062.5
172.5°	1068.9	1067.9	1066.8	1065.7	1064.6	1064.2	1064.4	1064.5	1064.8	1064.9	1066.4
175°	1073.1	1072.1	1071.0	1069.9	1068.8	1068.4	1068.6	1068.7	1068.9	1069.1	1070.7
177.5°	1075.0	1074.0	1073.0	1072.1	1071.0	1070.7	1071.0	1071.3	1071.5	1071.8	1072.9
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	487.9	488.6	489.3	489.6	489.6	489.6	489.5	489.4
5°	484.7	485.4	486.3	486.6	486.5	486.3	486.1	485.9
7.5°	478.2	478.7	479.3	479.3	479.1	478.9	478.6	478.3
10°	472.4	472.7	473.0	473.0	472.7	472.4	472.1	471.7
12.5°	465.2	465.4	465.6	465.5	465.0	464.5	464.1	463.6
15°	452.7	452.5	452.3	451.9	451.3	450.8	450.2	449.6
17.5°	437.4	437.0	436.6	435.9	435.0	434.1	433.2	432.4
20°	426.9	426.2	425.6	424.7	423.6	422.5	421.4	420.3
22.5°	415.1	414.1	413.1	412.2	411.3	410.4	409.6	408.6
25°	396.1	394.7	393.3	392.2	391.3	390.5	389.7	388.8
27.5°	376.8	375.0	373.3	371.9	370.6	369.4	368.2	367.0
30°	362.9	360.8	358.8	357.0	355.7	354.4	353.1	351.7
32.5°	348.8	346.3	344.0	342.1	340.8	339.5	338.3	337.0
35°	327.6	324.9	322.0	319.9	318.4	316.9	315.4	313.9
37.5°	305.1	301.9	298.7	296.4	294.9	293.3	291.8	290.3
40°	289.9	286.5	283.0	280.5	279.0	277.5	276.0	274.5
42.5°	275.1	271.6	268.0	265.5	263.9	262.3	260.7	259.2
45°	252.5	248.3	244.2	241.5	240.0	238.4	236.9	235.5
47.5°	229.6	225.3	221.1	218.2	216.5	214.8	213.2	211.6
50°	214.4	210.2	206.0	203.2	201.6	200.0	198.4	196.9
52.5°	199.2	195.0	190.8	187.8	186.2	184.6	182.9	181.3
55°	177.0	172.6	168.3	165.3	163.7	162.2	160.6	159.0
57.5°	155.1	150.8	146.3	143.5	142.4	141.2	139.9	138.7
60°	140.5	136.3	131.9	129.0	127.7	126.4	125.1	123.7
62.5°	126.3	122.2	118.3	115.7	114.6	113.6	112.5	111.5
65°	105.7	102.1	98.5	96.3	95.2	94.3	93.2	92.2
67.5°	86.8	83.7	80.6	78.6	77.5	76.4	75.3	74.1
70°	74.0	71.2	68.5	66.7	65.8	65.0	64.2	63.4
72.5°	62.5	60.1	57.8	56.2	55.5	54.7	53.9	53.2
75°	46.0	44.1	42.2	41.0	40.5	40.0	39.5	39.0
77.5°	32.6	31.4	30.3	29.7	29.5	29.4	29.2	29.1
80°	25.0	24.7	24.5	24.3	24.2	24.2	24.1	24.0
82.5°	19.4	19.3	19.1	18.9	18.9	18.8	18.7	18.6
85°	11.3	11.1	10.9	10.9	10.9	10.9	10.9	10.9
87.5°	8.0	8.2	8.3	8.5	8.6	8.7	8.9	9.0
90°	19.8	20.8	21.9	22.7	23.0	23.4	23.7	24.1
92.5°	19.2	20.2	21.3	21.9	21.9	22.0	22.1	22.2
95°	19.8	20.8	21.9	22.6	22.7	22.9	23.1	23.3
97.5°	21.4	21.5	21.6	21.8	21.9	22.1	22.3	22.5
100°	29.2	26.2	23.2	21.8	21.9	22.1	22.3	22.5
102.5°	104.7	72.0	39.3	23.0	23.0	23.1	23.1	23.1
105°	253.7	255.2	256.8	254.4	248.0	241.6	235.2	228.8
107.5°	313.8	314.6	315.4	316.1	316.8	317.4	318.1	318.8
110°	354.7	355.1	355.4	355.8	356.4	356.9	357.4	358.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	394.3	394.2	394.1	394.4	395.1	395.8	396.5	397.1
115°	453.4	453.8	454.1	454.3	454.3	454.3	454.3	454.3
117.5°	512.9	512.9	512.8	512.7	512.6	512.5	512.5	512.4
120°	549.7	550.1	550.4	550.4	550.1	549.7	549.4	549.0
122.5°	586.1	586.2	586.5	586.4	586.1	585.7	585.3	584.9
125°	636.8	637.3	637.8	638.2	638.3	638.5	638.7	638.9
127.5°	687.1	687.1	686.9	686.8	686.7	686.5	686.3	686.3
130°	717.9	718.1	718.3	718.4	718.4	718.4	718.4	718.4
132.5°	748.1	748.3	748.5	748.5	748.3	748.1	748.1	747.9
135°	789.7	790.0	790.4	790.8	791.2	791.5	791.9	792.2
137.5°	829.6	830.0	830.4	830.5	830.4	830.3	830.2	830.0
140°	854.3	854.8	855.3	855.7	855.9	856.0	856.2	856.4
142.5°	877.1	877.5	877.9	878.1	878.1	878.1	878.2	878.2
145°	909.7	909.9	910.1	910.4	910.7	911.1	911.4	911.8
147.5°	938.4	938.5	938.7	938.8	939.1	939.2	939.4	939.5
150°	956.7	956.7	956.7	956.8	957.0	957.2	957.4	957.5
152.5°	972.7	973.0	973.3	973.4	973.3	973.1	973.0	973.0
155°	994.3	995.0	995.7	995.8	995.2	994.7	994.2	993.6
157.5°	1012.8	1013.8	1014.7	1014.7	1013.8	1012.8	1011.9	1011.0
160°	1024.7	1025.7	1026.8	1026.8	1025.7	1024.7	1023.6	1022.5
162.5°	1034.3	1035.4	1036.4	1036.4	1035.1	1034.0	1032.8	1031.5
165°	1047.9	1049.3	1050.8	1050.6	1049.0	1047.4	1045.8	1044.2
167.5°	1057.8	1059.4	1060.9	1060.8	1059.1	1057.2	1055.5	1053.7
170°	1063.9	1065.3	1066.8	1066.6	1064.8	1063.0	1061.2	1059.5
172.5°	1067.8	1069.2	1070.6	1070.4	1068.4	1066.5	1064.6	1062.6
175°	1072.3	1073.9	1075.5	1075.2	1073.1	1071.0	1068.8	1066.7
177.5°	1074.1	1075.2	1076.4	1076.1	1074.4	1072.7	1071.0	1069.3
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1

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