

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: P332778-930

Luminaire Tested: **S124DIW-S795D470U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332778-930
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: S124DIW-S795D470U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

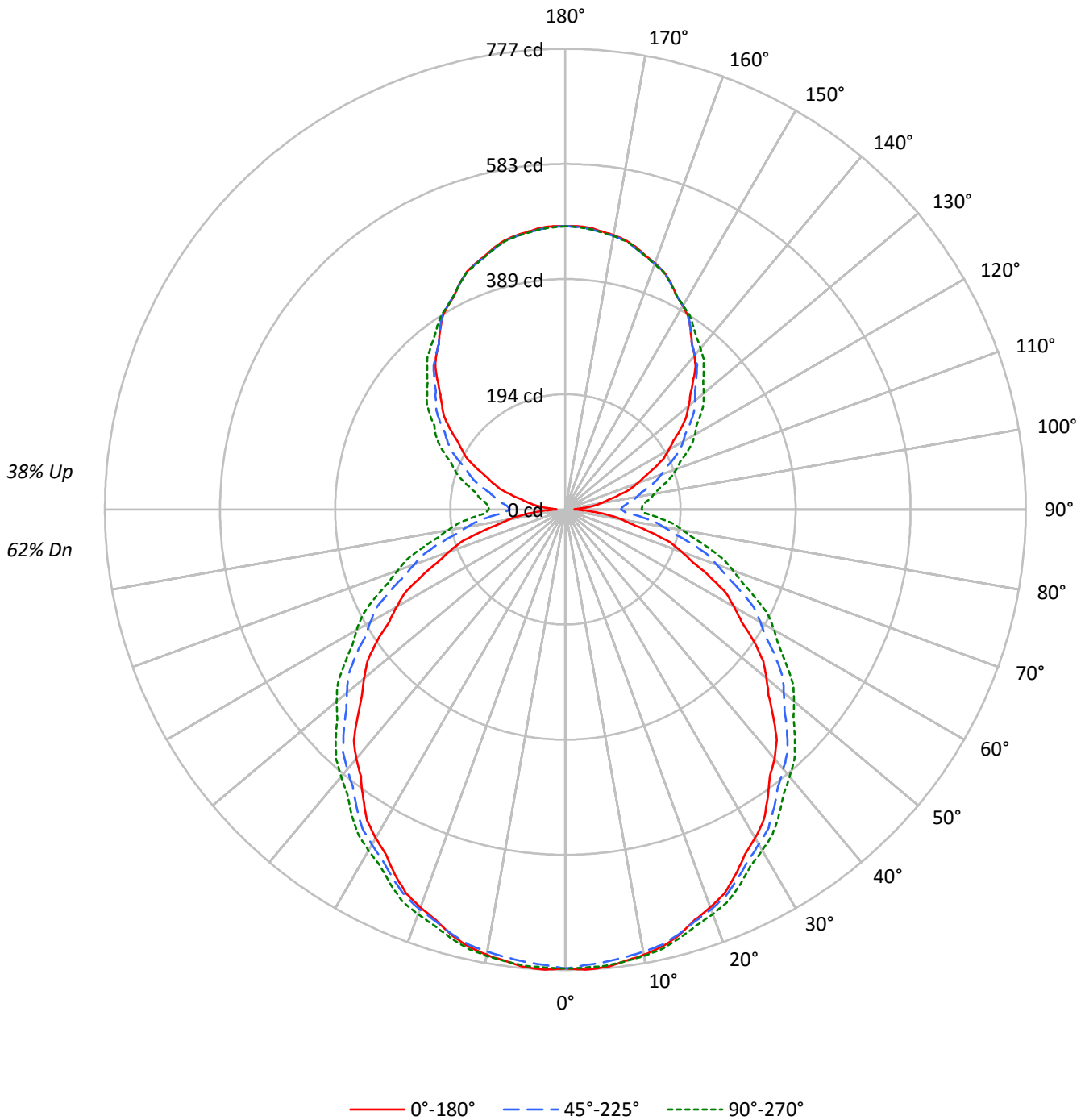
Lumens per Lamp: N/A
Luminaire Lumens: 3966.6 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): 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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	67	67	67	62	
1	99	94	90	86	92	88	84	81	77	74	71	67	64	62	57	55	54	54	54	54	49	
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	49	47	44	44	44	44	40	
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	43	40	37	37	37	37	33	
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	32	32	32	28	
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	35	31	27	27	27	27	24	
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	24	24	24	21	
7	58	45	37	31	54	42	35	29	38	31	27	33	28	24	28	24	21	21	21	21	19	
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	19	19	19	17	
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	17	17	17	15	
10	47	34	27	22	44	32	25	21	29	23	19	26	21	17	22	18	15	15	15	15	13	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	1.8
10°-20°	210.1	5.3
20°-30°	317.7	8.0
30°-40°	384.4	9.7
40°-50°	406.4	10.2
50°-60°	382.5	9.6
60°-70°	317.3	8.0
70°-80°	222.9	5.6
80°-90°	127.4	3.2
90°-100°	106.3	2.7
100°-110°	148.7	3.7
110°-120°	195.6	4.9
120°-130°	229.9	5.8
130°-140°	243.7	6.1
140°-150°	232.4	5.9
150°-160°	193.9	4.9
160°-170°	129.0	3.3
170°-180°	45.2	1.1
0°-30°	601.2	15.2
0°-40°	985.6	24.8
0°-60°	1774.4	44.7
0°-90°	2442.1	61.6
90°-120°	450.6	11.4
90°-150°	1156.5	29.2
90°-180°	1525.0	38.4
0°-180°	3966.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	15	54	94	120	129	11
95°	33	66	104	127	136	34
105°	94	113	145	167	176	100
115°	166	175	201	219	226	164
125°	238	238	258	274	279	212
135°	304	307	313	325	330	236
145°	368	369	369	374	377	231
155°	421	421	421	422	421	194
165°	458	457	457	459	457	129
175°	477	475	475	477	475	45
180°	478	478	478	478	478	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	25.9	33.9	42.0	50.1	58.0	66.4	74.9	83.5	92.1	100.7	106.3
90°	15.0	23.6	32.2	40.8	49.4	58.2	67.2	76.1	85.0	94.0	100.0
92.5°	21.1	29.0	37.0	45.0	53.0	61.3	70.1	78.8	87.6	96.3	102.1
95°	33.4	40.5	47.6	54.7	61.8	69.6	78.1	86.6	95.1	103.5	109.0
97.5°	48.9	55.0	61.1	67.2	73.2	80.5	88.9	97.5	106.0	114.5	119.8
100°	61.2	66.6	71.9	77.3	82.6	89.4	97.7	105.9	114.1	122.5	127.8
102.5°	74.8	79.4	83.9	88.5	92.9	99.2	107.3	115.3	123.4	131.3	136.6
105°	93.9	97.8	101.7	105.7	109.7	115.4	122.8	130.3	137.7	145.1	150.3
107.5°	115.5	118.8	122.1	125.3	128.6	133.5	140.4	147.2	153.9	160.8	165.8
110°	129.6	132.5	135.3	138.2	141.0	145.8	152.5	159.1	165.8	172.4	176.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	144.3	146.7	149.1	151.6	153.9	158.3	164.6	170.9	177.2	183.4	187.7
115°	166.3	168.0	169.7	171.5	173.3	177.1	183.1	189.1	195.1	201.1	205.3
117.5°	187.8	188.9	190.0	191.2	192.2	195.6	201.2	206.8	212.5	218.2	221.8
120°	201.6	202.5	203.4	204.3	205.2	208.4	213.7	219.1	224.4	229.8	233.2
122.5°	216.7	217.0	217.2	217.4	217.7	220.4	225.6	230.7	235.9	241.1	244.6
125°	238.1	237.9	237.7	237.5	237.3	239.5	244.3	249.1	253.8	258.5	262.0
127.5°	258.0	258.1	258.2	258.2	258.3	260.1	263.7	267.3	270.8	274.3	277.7
130°	271.6	271.6	271.7	271.7	271.7	273.4	276.4	279.5	282.6	285.7	288.9
132.5°	286.0	286.0	286.0	286.0	286.0	287.1	289.6	292.0	294.4	296.8	299.9
135°	304.3	304.8	305.3	305.8	306.3	307.2	308.6	309.9	311.3	312.6	315.5
137.5°	325.1	325.2	325.2	325.2	325.3	325.7	326.5	327.3	328.1	328.9	331.4
140°	339.0	339.0	339.0	338.9	338.9	339.0	339.2	339.4	339.6	339.8	342.2
142.5°	351.1	351.1	351.3	351.4	351.6	351.6	351.3	351.1	351.0	350.8	352.9
145°	368.4	368.6	368.8	368.8	369.0	369.1	369.2	369.2	369.3	369.4	370.6
147.5°	385.9	386.1	386.3	386.5	386.7	386.8	386.7	386.6	386.6	386.5	386.6
150°	396.6	396.6	396.8	397.0	397.1	397.1	397.1	397.1	397.1	397.1	397.1
152.5°	405.9	406.0	406.2	406.3	406.5	406.7	406.7	406.8	406.8	406.9	407.1
155°	421.2	421.2	421.2	421.2	421.2	421.1	421.0	420.9	420.9	420.8	421.1
157.5°	434.1	434.0	433.9	433.7	433.6	433.5	433.5	433.5	433.4	433.4	433.7
160°	441.9	441.8	441.7	441.6	441.6	441.5	441.4	441.3	441.2	441.2	441.4
162.5°	449.0	448.7	448.5	448.3	448.1	447.9	447.8	447.8	447.7	447.6	448.1
165°	458.4	458.2	458.0	457.7	457.5	457.3	457.1	457.0	456.8	456.6	457.1
167.5°	465.8	465.5	465.1	464.8	464.4	464.2	464.2	464.3	464.3	464.3	464.8
170°	469.9	469.5	469.1	468.7	468.3	468.1	468.2	468.3	468.4	468.5	469.0
172.5°	472.9	472.5	472.2	471.9	471.5	471.3	471.3	471.4	471.4	471.4	472.0
175°	477.0	476.5	476.1	475.7	475.3	475.1	475.0	474.9	474.8	474.7	475.3
177.5°	478.3	477.9	477.6	477.3	477.0	476.8	476.8	476.8	476.8	476.8	477.3
180°	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	112.0	117.7	123.4	127.1	128.8	130.6	132.3	134.0
90°	106.2	112.2	118.3	122.2	123.9	125.6	127.3	129.1
92.5°	107.8	113.5	119.3	122.9	124.6	126.2	127.8	129.5
95°	114.4	119.8	125.3	128.9	130.6	132.4	134.1	135.8
97.5°	125.1	130.5	135.8	139.3	141.0	142.7	144.3	146.0
100°	133.1	138.5	143.9	147.2	148.6	149.9	151.3	152.6
102.5°	141.9	147.2	152.5	155.9	157.5	159.1	160.6	162.2
105°	155.3	160.4	165.4	168.8	170.6	172.4	174.2	176.0
107.5°	170.7	175.7	180.7	183.8	185.2	186.5	187.9	189.3
110°	181.0	185.2	189.6	192.6	194.4	196.2	198.0	199.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	191.9	196.2	200.5	203.3	205.0	206.5	208.1	209.7
115°	209.5	213.6	217.8	220.5	221.7	223.0	224.2	225.5
117.5°	225.6	229.3	233.0	235.6	237.0	238.4	239.7	241.1
120°	236.6	240.1	243.5	246.1	247.8	249.5	251.2	252.9
122.5°	248.2	251.8	255.4	257.7	258.8	259.8	261.0	262.0
125°	265.5	269.0	272.5	274.8	275.7	276.7	277.7	278.8
127.5°	281.0	284.3	287.6	289.8	291.0	292.2	293.3	294.6
130°	292.3	295.6	298.9	300.9	301.8	302.6	303.5	304.3
132.5°	303.1	306.2	309.4	311.4	312.5	313.6	314.5	315.6
135°	318.5	321.4	324.2	326.2	327.1	328.0	328.9	329.8
137.5°	334.0	336.6	339.2	341.0	342.1	343.1	344.1	345.1
140°	344.6	347.1	349.4	351.1	352.0	352.9	353.8	354.7
142.5°	355.1	357.3	359.5	361.0	361.8	362.6	363.4	364.2
145°	371.6	372.7	373.7	374.5	375.0	375.6	376.1	376.7
147.5°	386.7	386.8	386.9	387.2	387.7	388.2	388.8	389.3
150°	397.1	397.1	397.1	397.1	397.1	397.0	396.9	396.8
152.5°	407.3	407.5	407.7	407.6	407.5	407.2	407.1	406.8
155°	421.4	421.8	422.1	422.1	421.8	421.4	421.1	420.8
157.5°	433.9	434.1	434.4	434.4	434.1	433.8	433.6	433.3
160°	441.6	441.9	442.1	442.1	441.6	441.2	440.8	440.3
162.5°	448.5	449.0	449.4	449.4	449.0	448.6	448.2	447.8
165°	457.6	458.1	458.6	458.7	458.4	458.0	457.7	457.4
167.5°	465.3	465.8	466.3	466.3	465.8	465.3	464.7	464.2
170°	469.4	469.9	470.4	470.3	469.8	469.2	468.6	468.1
172.5°	472.5	473.1	473.6	473.6	473.0	472.5	471.9	471.3
175°	475.9	476.5	477.0	477.0	476.5	475.9	475.3	474.7
177.5°	477.8	478.2	478.7	478.6	478.1	477.6	477.0	476.5
180°	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7

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