

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: P332906-935

Luminaire Tested: **S124RDIP-S575D590U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332906-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S575D590U935-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3841.2 lumens
Efficiency: N/A
Efficacy: 117.1 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

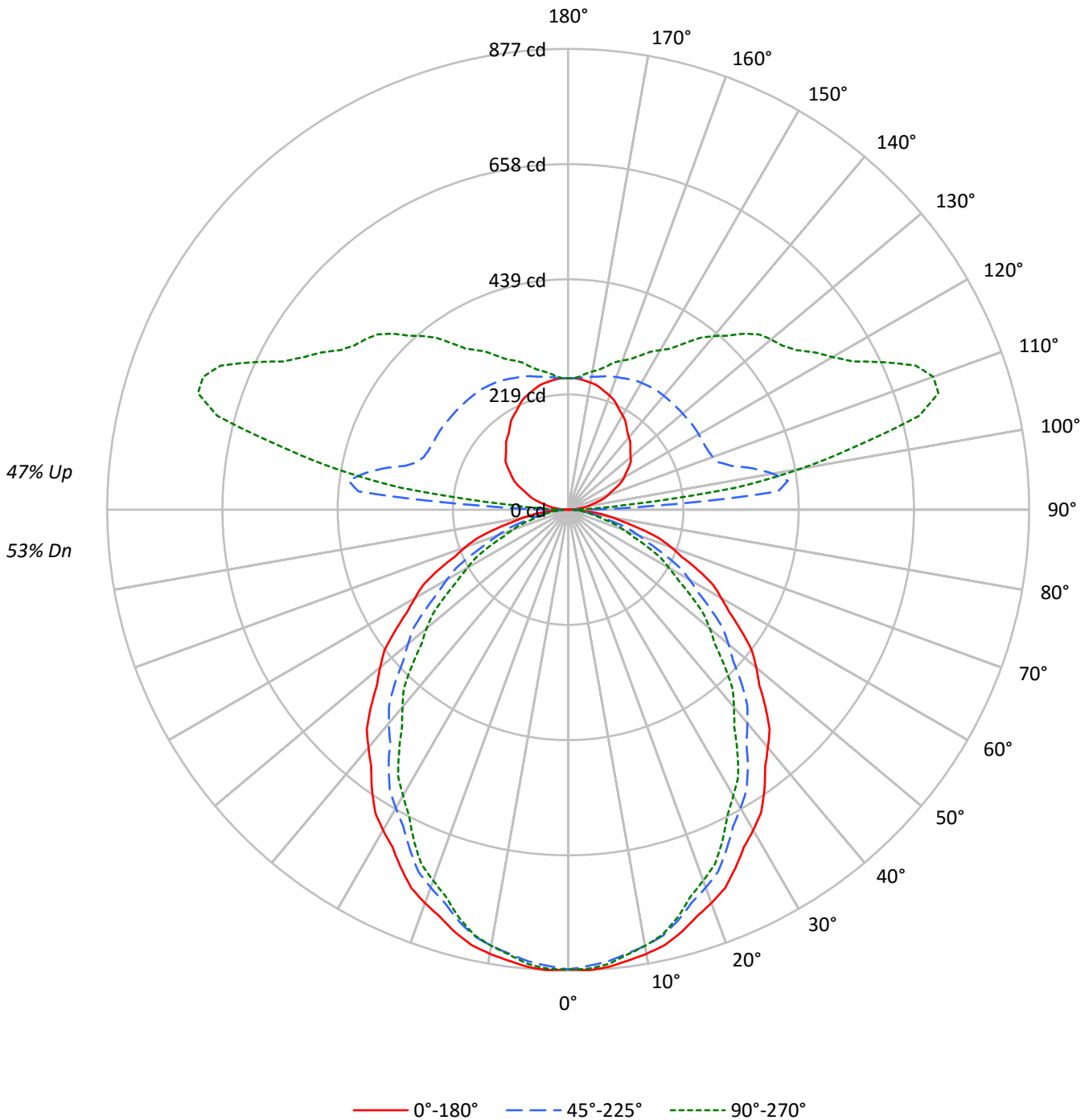
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	50	46	44	43	38
3	82	73	66	60	76	68	62	56	58	54	50	49	46	43	41	39	37	33
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	33	30	28	25
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	2.1
10°-20°	229.2	6.0
20°-30°	331.0	8.6
30°-40°	375.2	9.8
40°-50°	362.3	9.4
50°-60°	301.3	7.8
60°-70°	208.0	5.4
70°-80°	105.4	2.7
80°-90°	28.4	0.7
90°-100°	180.6	4.7
100°-110°	375.8	9.8
110°-120°	336.6	8.8
120°-130°	283.1	7.4
130°-140°	236.1	6.1
140°-150°	180.4	4.7
150°-160°	126.8	3.3
160°-170°	74.6	1.9
170°-180°	24.3	0.6
0°-30°	642.4	16.7
0°-40°	1017.6	26.5
0°-60°	1681.1	43.8
0°-90°	2023.0	52.7
90°-120°	893.0	23.2
90°-150°	1592.6	41.5
90°-180°	1818.0	47.3
0°-180°	3841.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	0	4	9	10	10	3
95°	16	51	400	198	120	18
105°	57	83	322	694	691	61
115°	101	127	287	552	664	100
125°	141	168	286	470	529	125
135°	168	199	283	417	474	129
145°	193	221	282	352	386	121
155°	220	237	274	310	324	101
165°	239	247	263	278	282	68
175°	250	250	252	255	254	24
180°	250	250	250	250	250	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.4	11.7	11.0	10.2	9.3	8.8	9.2	9.1	9.2	9.3	9.0
90°	0.5	1.5	2.9	3.4	4.0	4.0	6.9	6.9	7.8	8.9	8.4
92.5°	5.6	8.2	12.7	18.8	25.9	36.2	61.1	99.2	136.4	155.8	129.8
95°	16.2	17.7	22.6	29.0	40.7	61.4	104.1	184.7	302.0	400.3	411.6
97.5°	29.1	29.1	33.3	39.2	49.3	66.6	99.5	166.0	282.8	421.6	517.1
100°	37.4	37.4	40.7	46.7	56.0	71.7	100.7	156.2	256.4	394.9	520.6
102.5°	45.2	46.0	49.0	54.5	63.5	78.4	104.6	153.4	238.7	361.5	491.1
105°	57.4	59.0	61.4	67.3	76.1	90.4	113.9	154.7	223.5	322.2	437.6
107.5°	71.0	72.0	74.5	80.8	89.2	103.2	124.8	162.0	220.8	300.2	394.4
110°	80.1	81.0	83.5	89.4	98.2	111.5	133.1	167.5	221.5	292.7	372.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	88.7	89.7	92.6	98.1	106.9	120.1	140.9	173.4	223.9	289.2	360.6
115°	101.2	102.6	106.1	111.0	120.4	133.6	153.3	182.7	228.4	287.3	349.2
117.5°	114.2	115.5	118.6	124.0	132.7	146.5	165.1	192.3	233.2	286.8	344.1
120°	122.8	123.8	127.2	132.6	140.9	154.7	173.4	198.9	236.8	286.8	341.4
122.5°	130.6	131.6	135.1	140.1	149.2	162.6	181.2	205.2	240.3	286.5	338.2
125°	140.9	142.9	145.9	151.3	160.6	174.4	192.0	214.6	245.6	285.9	333.0
127.5°	150.1	151.7	155.2	161.4	171.1	184.9	202.1	222.8	249.8	284.7	326.1
130°	155.2	157.1	161.1	168.5	177.8	192.0	208.7	227.9	253.0	284.4	321.7
132.5°	160.3	161.9	167.0	174.0	184.1	197.5	214.2	233.0	255.7	284.0	317.8
135°	167.5	169.4	174.4	182.7	193.0	205.8	222.0	239.7	259.8	283.4	311.9
137.5°	174.7	176.5	181.9	189.9	200.6	212.8	227.9	244.4	262.3	283.3	306.8
140°	179.8	181.2	186.7	195.0	205.3	217.1	231.9	247.5	264.2	282.9	304.0
142.5°	185.3	186.8	191.7	199.7	209.7	221.0	235.4	249.9	265.8	282.9	301.7
145°	193.0	194.5	199.4	206.3	215.6	226.4	239.2	252.4	266.7	281.9	297.6
147.5°	201.7	202.2	206.6	213.6	221.4	231.2	243.1	254.7	267.2	280.2	294.0
150°	207.2	207.8	211.7	217.6	225.0	234.3	245.1	255.9	267.2	279.0	291.3
152.5°	212.4	212.5	216.4	221.9	228.5	237.0	246.7	256.7	266.4	277.0	288.1
155°	219.6	220.1	223.0	227.9	233.3	240.6	249.0	257.4	265.2	274.1	283.4
157.5°	226.5	226.5	229.3	233.1	237.8	243.6	250.7	257.4	264.0	271.0	278.6
160°	230.8	230.8	232.8	236.3	240.1	245.6	251.5	257.4	262.8	268.6	275.1
162.5°	234.8	234.4	235.9	239.0	242.5	246.8	252.3	257.4	261.6	266.3	271.9
165°	239.2	239.2	240.1	242.6	245.1	248.1	252.4	256.4	259.3	262.8	266.7
167.5°	243.6	243.1	243.6	245.5	246.8	249.1	252.4	255.2	257.0	259.2	262.0
170°	245.6	245.1	245.6	247.0	248.1	249.5	251.9	254.4	255.4	256.8	258.8
172.5°	247.5	247.0	247.1	248.2	248.8	249.9	251.6	253.7	253.8	254.5	256.1
175°	249.5	249.0	249.0	249.5	250.0	250.0	251.0	252.4	251.9	251.9	253.0
177.5°	250.4	250.0	249.6	250.0	250.0	250.0	250.4	251.2	250.4	250.4	250.8
180°	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	9.0	9.0	9.0	9.0	9.2	9.4	9.5	9.6
90°	8.9	9.3	9.8	9.8	10.3	10.8	10.3	10.3
92.5°	96.4	72.6	57.8	48.0	42.1	39.5	37.8	37.8
95°	363.9	287.8	222.0	174.4	150.3	135.1	126.2	119.9
97.5°	537.7	509.5	461.4	410.1	374.9	345.3	330.5	320.3
100°	592.4	602.2	578.1	541.7	499.0	469.1	454.3	450.4
102.5°	589.6	638.3	645.3	630.2	603.9	582.2	566.7	563.5
105°	550.1	635.1	683.7	703.9	704.8	700.9	694.0	691.0
107.5°	494.0	584.4	653.0	696.7	721.0	732.2	737.1	738.4
110°	460.2	545.2	616.4	670.5	705.3	725.9	734.8	739.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	435.5	510.6	577.9	631.9	671.5	696.5	708.9	716.0
115°	410.6	471.1	528.5	575.7	614.4	643.9	659.6	663.6
117.5°	398.4	448.4	493.6	533.6	566.7	591.4	607.3	610.4
120°	393.0	438.6	477.9	512.7	540.8	562.4	575.1	580.6
122.5°	388.2	432.3	468.0	498.6	522.3	540.8	551.6	557.0
125°	380.1	422.4	456.2	483.3	502.9	517.2	526.5	529.4
127.5°	370.3	410.7	444.5	470.1	489.9	502.6	510.4	513.3
130°	362.5	401.3	434.6	460.7	480.9	493.1	501.0	503.9
132.5°	354.2	390.6	423.3	449.3	469.1	482.9	490.3	493.4
135°	342.9	374.8	404.7	429.3	448.9	462.7	470.5	473.5
137.5°	332.5	359.6	384.8	407.0	425.3	438.9	445.4	448.9
140°	326.6	349.7	371.8	392.4	409.7	420.4	427.3	431.3
142.5°	321.2	341.5	360.4	378.3	393.5	403.6	409.7	412.3
145°	313.3	330.0	344.8	358.5	370.8	379.2	384.1	386.5
147.5°	306.9	320.2	332.0	342.9	351.9	359.0	362.7	363.7
150°	303.1	314.4	324.2	333.0	340.9	347.2	350.2	350.7
152.5°	298.7	308.4	317.5	324.8	331.4	336.7	338.4	338.9
155°	292.2	300.1	307.5	313.3	318.3	322.2	323.6	323.6
157.5°	285.2	291.9	298.0	302.7	306.5	309.4	310.3	310.3
160°	280.9	286.4	291.7	295.7	298.6	301.6	302.0	302.0
162.5°	276.6	281.2	285.4	289.0	291.2	294.1	294.6	294.2
165°	270.6	273.5	277.0	279.5	281.5	283.4	282.9	282.4
167.5°	264.8	267.1	269.8	271.3	272.3	273.5	273.5	273.1
170°	261.3	262.8	264.8	266.2	267.2	267.7	267.2	267.2
172.5°	258.1	259.2	260.5	261.5	262.1	262.6	262.1	261.3
175°	253.9	254.4	255.4	255.4	255.4	256.4	255.4	254.4
177.5°	251.2	251.6	251.6	251.9	251.6	251.9	251.2	250.4
180°	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0

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