

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: P332594-930

Luminaire Tested: **S124DIP-S795D590U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332594-930
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: S124DIP-S795D590U930-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4362.9 lumens
Efficiency: N/A
Efficacy: 108.3 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: General Diffuse

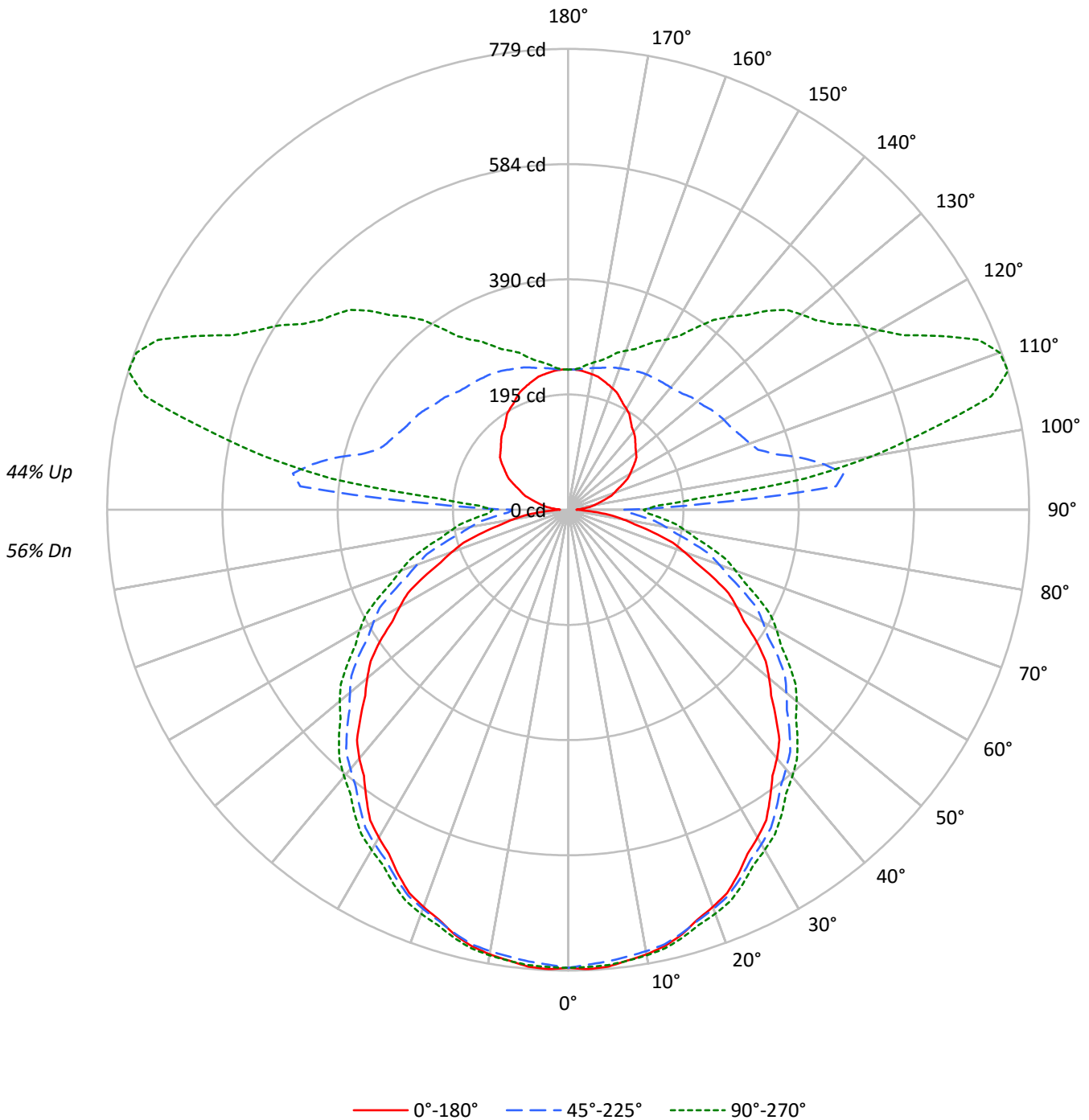
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	71	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	64	60	56	55	51	48	46	43	41	37
3	81	71	63	56	74	66	59	53	56	51	47	48	44	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	36	32	29	26
5	67	55	47	40	62	52	44	38	45	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	20	17
8	53	40	32	27	49	38	31	25	33	27	23	28	24	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	21	17	14	12

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	1.7
10°-20°	210.1	4.8
20°-30°	317.7	7.3
30°-40°	384.4	8.8
40°-50°	406.4	9.3
50°-60°	382.5	8.8
60°-70°	317.3	7.3
70°-80°	222.9	5.1
80°-90°	127.3	2.9
90°-100°	245.8	5.6
100°-110°	411.3	9.4
110°-120°	355.9	8.2
120°-130°	289.1	6.6
130°-140°	232.6	5.3
140°-150°	172.6	4.0
150°-160°	120.1	2.8
160°-170°	70.6	1.6
170°-180°	23.0	0.5
0°-30°	601.2	13.8
0°-40°	985.6	22.6
0°-60°	1774.4	40.7
0°-90°	2442.0	56.0
90°-120°	1013.0	23.2
90°-150°	1707.3	39.1
90°-180°	1921.0	44.0
0°-180°	4362.9	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°	14	52	94	119	128	10
95°	27	89	454	286	220	26
105°	62	105	362	735	740	67
115°	101	134	313	582	694	101
125°	137	162	295	485	547	122
135°	160	191	276	416	475	124
145°	184	209	267	338	375	115
155°	208	224	260	294	306	96
165°	226	234	249	263	267	64
175°	236	237	239	242	241	22
180°	237	237	237	237	237	



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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°	25.8	33.8	42.0	49.9	57.9	66.0	75.0	83.5	92.0	100.7	106.2
90°	14.3	23.0	32.1	40.3	48.4	56.4	67.5	75.8	85.0	94.2	99.4
92.5°	18.5	27.8	39.1	51.8	65.5	82.8	114.7	159.1	202.5	229.2	210.0
95°	26.7	34.4	45.4	57.8	75.3	102.0	150.3	234.5	353.6	454.5	470.4
97.5°	37.7	43.2	52.7	63.8	78.8	101.8	140.8	211.7	330.0	469.3	564.8
100°	44.9	49.9	58.1	68.7	82.6	103.8	138.7	198.8	301.2	439.9	564.1
102.5°	52.3	57.5	64.7	74.4	87.2	107.2	139.4	193.0	281.1	404.7	532.6
105°	62.2	67.5	73.6	83.1	95.3	114.3	143.7	189.5	261.7	362.3	476.5
107.5°	74.8	79.0	84.5	93.6	104.8	122.9	150.2	192.1	254.5	336.5	430.4
110°	82.8	86.3	91.4	99.7	110.7	128.0	155.2	194.5	252.4	326.6	406.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	90.3	93.6	98.7	106.2	117.0	134.0	160.1	197.3	251.5	319.8	391.7
115°	101.0	104.1	109.2	115.5	126.1	142.6	167.4	201.5	250.9	312.8	375.7
117.5°	113.1	115.4	119.4	125.6	134.9	151.2	174.7	206.1	250.6	307.2	365.4
120°	120.6	122.1	126.0	131.7	140.1	156.2	179.5	209.3	250.7	303.7	359.1
122.5°	128.1	129.1	132.5	137.3	146.1	161.4	184.4	212.4	250.9	299.9	352.7
125°	137.0	138.6	141.2	146.1	154.7	170.2	191.7	217.9	252.0	295.0	343.2
127.5°	145.4	146.8	149.9	155.6	164.5	179.4	199.3	222.7	251.9	288.7	331.3
130°	149.6	151.2	154.7	161.5	170.2	185.2	204.0	225.3	252.0	284.9	323.7
132.5°	154.4	155.7	160.4	166.7	176.1	190.0	208.3	228.5	252.5	281.8	317.1
135°	160.4	162.2	166.8	174.7	184.5	197.3	214.0	232.0	252.5	276.1	306.2
137.5°	167.1	168.7	173.6	181.0	190.9	202.7	217.7	233.9	251.5	272.1	297.1
140°	171.9	173.2	178.1	185.8	195.3	206.5	220.7	235.8	251.8	269.6	292.1
142.5°	176.4	177.8	182.5	190.0	199.4	210.1	223.6	237.3	252.2	268.2	288.2
145°	183.7	184.8	189.3	195.6	204.2	214.4	226.5	239.0	252.6	266.9	283.0
147.5°	191.9	192.2	196.1	202.6	209.8	218.9	230.2	241.2	253.0	265.3	278.6
150°	197.1	197.4	201.0	206.4	213.1	221.8	232.1	242.3	253.0	264.2	275.8
152.5°	201.3	201.3	205.0	210.2	216.4	224.5	233.6	243.0	252.3	262.3	272.8
155°	207.9	208.4	211.2	215.8	220.9	227.9	235.8	243.7	251.1	259.5	268.3
157.5°	214.5	214.5	217.1	220.7	225.2	230.6	237.4	243.7	250.0	256.7	263.8
160°	218.6	218.6	220.5	223.7	227.4	232.5	238.1	243.7	248.8	254.4	260.5
162.5°	222.3	221.9	223.4	226.3	229.7	233.7	238.9	243.7	247.7	252.2	257.5
165°	226.5	226.5	227.4	229.8	232.1	234.9	239.0	242.8	245.6	248.8	252.6
167.5°	230.6	230.2	230.6	232.4	233.7	235.9	239.0	241.7	243.4	245.5	248.1
170°	232.5	232.1	232.5	233.9	234.9	236.3	238.6	240.9	241.8	243.2	245.1
172.5°	234.4	233.9	234.0	235.1	235.6	236.6	238.2	240.2	240.4	241.0	242.5
175°	236.3	235.8	235.8	236.3	236.8	236.8	237.7	239.0	238.6	238.6	239.5
177.5°	237.1	236.8	236.4	236.8	236.8	236.8	237.1	237.8	237.1	237.1	237.5
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8



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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°	111.9	117.6	123.3	126.9	128.7	130.4	132.1	133.8
90°	105.4	111.5	117.5	121.1	123.1	125.1	126.1	127.7
92.5°	183.9	166.7	158.1	152.3	148.4	147.4	147.3	148.9
95°	430.5	363.6	306.5	264.8	243.8	231.1	224.5	220.1
97.5°	589.4	567.6	527.2	482.0	450.2	423.9	411.6	403.6
100°	637.2	651.8	634.1	603.0	563.9	536.9	524.2	521.9
102.5°	630.8	682.0	693.7	682.7	659.3	640.3	627.0	625.6
105°	587.7	673.0	723.9	746.2	748.6	746.5	741.5	740.2
107.5°	529.5	619.9	689.4	734.0	758.4	770.4	776.4	779.0
110°	494.1	578.9	650.9	705.0	739.6	760.6	770.5	776.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	466.8	542.3	610.3	664.4	703.4	728.6	741.8	750.2
115°	438.1	499.5	558.2	605.6	643.7	672.9	689.2	694.2
117.5°	420.9	472.2	519.0	559.6	592.6	617.5	634.1	638.5
120°	411.9	458.9	500.0	535.7	563.8	585.8	599.4	606.1
122.5°	403.9	449.6	487.2	518.8	542.6	561.5	573.1	579.6
125°	391.6	435.2	471.0	499.0	518.8	533.4	543.4	547.3
127.5°	376.7	418.4	453.9	480.5	500.5	513.8	522.6	526.7
130°	365.7	406.0	441.1	468.1	488.3	501.1	509.6	513.6
132.5°	354.9	392.7	426.9	453.8	473.6	487.9	496.1	500.1
135°	338.6	371.9	403.4	428.8	448.5	462.7	471.2	475.2
137.5°	324.3	352.7	379.4	402.4	420.7	434.5	441.6	445.9
140°	316.0	340.4	363.8	385.1	402.4	413.5	421.0	425.7
142.5°	308.8	330.3	350.4	368.8	384.1	394.4	401.0	404.4
145°	299.1	316.0	331.1	345.1	357.5	366.2	371.6	374.7
147.5°	291.0	303.7	315.0	325.6	334.8	342.2	346.3	347.8
150°	287.0	297.7	307.0	315.4	322.8	328.8	331.6	332.1
152.5°	282.8	292.0	300.6	307.5	313.8	318.8	320.4	320.9
155°	276.7	284.1	291.1	296.7	301.4	305.1	306.5	306.5
157.5°	270.1	276.4	282.2	286.7	290.2	293.0	293.8	293.8
160°	266.0	271.2	276.2	280.0	282.7	285.6	286.0	286.0
162.5°	262.0	266.3	270.3	273.7	275.7	278.5	279.0	278.6
165°	256.2	259.0	262.3	264.6	266.5	268.3	267.9	267.4
167.5°	250.8	252.9	255.5	256.9	257.9	259.0	258.9	258.6
170°	247.4	248.8	250.7	252.1	253.0	253.5	253.0	253.0
172.5°	244.4	245.5	246.6	247.6	248.2	248.7	248.2	247.4
175°	240.4	240.9	241.8	241.8	241.8	242.8	241.8	240.9
177.5°	237.8	238.2	238.2	238.6	238.2	238.6	237.8	237.1
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8

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