

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: P332912-927

Luminaire Tested: **S124RDIP-S575D810U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332912-927
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-S575D810U927-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4154.8 lumens
Efficiency: N/A
Efficacy: 108.2 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: General Diffuse

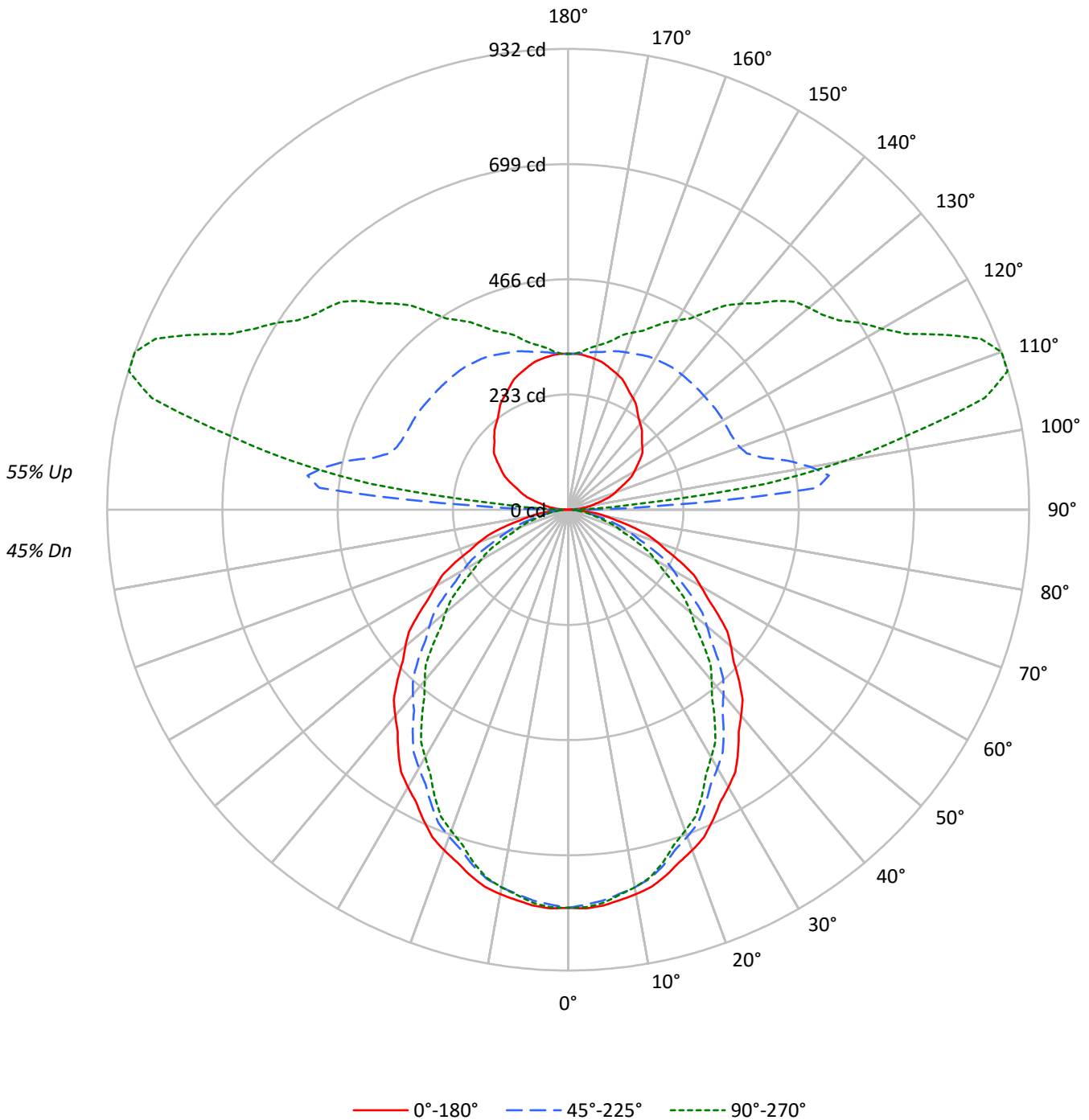
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332912-927

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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38
2	88	81	75	70	81	75	70	65	62	59	55	51	48	46	41	39	37	32
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28
4	74	63	56	50	68	58	52	47	49	44	40	40	37	34	32	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	27	24	21	18
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	21	18	16	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6500	6500	6500
5°	6514	6434	6474
10°	6473	6357	6357
15°	6399	6224	6177
20°	6296	6048	5936
25°	6167	5842	5694
30°	6039	5626	5390
35°	5899	5401	5084
40°	5730	5145	4755
45°	5574	4891	4419
50°	5397	4598	4064
55°	5206	4294	3678
60°	4996	3961	3284
65°	4804	3543	2896
70°	4525	3085	2460
75°	4173	2558	1999
80°	3640	1948	1836
85°	3084	1769	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	1.8
10°-20°	210.9	5.1
20°-30°	304.5	7.3
30°-40°	345.2	8.3
40°-50°	333.3	8.0
50°-60°	277.2	6.7
60°-70°	191.4	4.6
70°-80°	97.0	2.3
80°-90°	26.6	0.6
90°-100°	227.7	5.5
100°-110°	474.0	11.4
110°-120°	424.5	10.2
120°-130°	357.1	8.6
130°-140°	297.7	7.2
140°-150°	227.5	5.5
150°-160°	159.9	3.8
160°-170°	94.0	2.3
170°-180°	30.6	0.7
0°-30°	591.0	14.2
0°-40°	936.2	22.5
0°-60°	1546.7	37.2
0°-90°	1861.8	44.8
90°-120°	1126.2	27.1
90°-150°	2008.5	48.3
90°-180°	2293.0	55.2
0°-180°	4154.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	804	801	794	800	799	76
15°	766	760	745	743	739	216
25°	692	680	656	646	639	319
35°	599	578	548	528	516	374
45°	488	465	428	399	387	376
55°	370	344	305	274	261	331
65°	252	224	186	160	152	248
75°	134	111	82	68	64	141
85°	33	22	19	18	18	37
90°	1	5	11	12	13	3
95°	20	64	505	250	151	23
105°	72	105	406	875	872	77
115°	128	160	362	696	837	127
125°	178	211	360	592	668	158
135°	211	251	357	526	597	163
145°	243	279	356	444	488	153
155°	277	299	346	392	408	128
165°	302	311	331	351	356	85
175°	315	315	318	322	321	30
180°	315	315	315	315	315	



TEST NUMBER: P332912-927

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	807.1	806.6	806.2	805.7	805.3	804.5	803.3	802.1	800.8	799.6	800.8
5°	803.8	803.3	802.7	802.2	801.7	800.6	798.9	797.3	795.6	794.0	795.4
7.5°	796.5	796.0	795.4	794.9	794.2	792.9	790.8	788.6	786.5	784.3	785.2
10°	789.6	789.0	788.3	787.6	787.0	785.4	782.9	780.4	777.9	775.5	776.0
12.5°	780.8	780.0	779.2	778.4	777.6	775.8	772.9	769.9	767.1	764.1	764.5
15°	765.6	764.4	763.2	761.9	760.7	758.4	754.9	751.5	748.1	744.7	744.4
17.5°	747.3	745.4	743.7	741.9	740.1	737.2	733.1	729.0	724.8	720.7	720.0
20°	732.9	731.2	729.4	727.6	725.8	722.6	718.0	713.3	708.6	704.0	702.9
22.5°	717.2	715.2	713.2	711.1	709.2	705.7	700.7	695.7	690.7	685.7	684.0
25°	692.3	689.8	687.3	684.8	682.4	678.3	672.7	667.1	661.5	655.9	653.6
27.5°	666.1	663.1	660.0	656.9	653.7	649.2	643.2	637.2	631.2	625.2	622.3
30°	647.8	644.4	641.0	637.6	634.2	629.2	622.8	616.4	609.9	603.5	600.1
32.5°	628.7	624.8	620.9	617.0	613.2	607.9	601.3	594.6	588.0	581.3	577.3
35°	598.6	594.2	589.8	585.4	581.1	575.4	568.5	561.7	554.8	548.0	543.4
37.5°	566.4	561.9	557.4	552.9	548.3	542.2	534.6	527.0	519.5	511.9	506.7
40°	543.7	539.2	534.6	530.1	525.6	519.4	511.7	503.8	496.1	488.2	482.4
42.5°	522.0	517.3	512.5	507.8	503.0	496.6	488.5	480.3	472.2	464.1	458.2
45°	488.2	483.2	478.1	473.0	467.9	461.3	453.0	444.9	436.7	428.4	421.7
47.5°	453.4	448.1	442.8	437.6	432.4	425.5	416.9	408.4	399.9	391.3	384.4
50°	429.7	424.3	419.0	413.6	408.3	401.2	392.4	383.7	374.9	366.1	359.3
52.5°	405.5	400.3	395.1	389.8	384.5	377.5	368.4	359.5	350.5	341.5	334.5
55°	369.9	364.4	358.9	353.4	347.9	340.7	331.8	323.0	314.0	305.1	298.0
57.5°	334.6	328.9	323.2	317.5	311.8	304.6	295.8	287.0	278.3	269.5	262.3
60°	309.4	304.0	298.5	293.0	287.6	280.4	271.6	262.8	254.1	245.3	238.2
62.5°	286.8	281.1	275.4	269.7	264.0	256.7	247.6	238.7	229.7	220.7	214.1
65°	251.5	245.7	239.7	233.9	227.9	220.6	211.8	203.1	194.3	185.5	179.7
67.5°	214.9	209.2	203.6	198.0	192.3	185.4	177.3	169.1	161.1	152.9	147.8
70°	191.7	185.9	180.2	174.4	168.7	161.9	154.1	146.3	138.5	130.7	126.2
72.5°	167.1	161.8	156.6	151.5	146.2	140.0	132.6	125.2	117.8	110.4	106.6
75°	133.8	128.7	123.7	118.6	113.5	107.7	101.3	94.8	88.4	82.0	78.8
77.5°	100.0	95.7	91.4	87.1	82.8	78.0	72.8	67.7	62.4	57.2	55.4
80°	78.3	74.3	70.3	66.4	62.4	58.4	54.3	50.1	46.0	41.9	41.5
82.5°	59.6	55.9	52.3	48.6	45.0	42.0	39.6	37.2	34.9	32.6	32.2
85°	33.3	30.6	27.8	25.0	22.3	20.8	20.4	20.0	19.5	19.1	18.9
87.5°	11.5	10.9	10.3	9.6	8.8	8.3	9.0	8.9	9.0	9.1	8.9
90°	0.6	1.8	3.7	4.4	5.0	5.0	8.6	8.6	9.9	11.2	10.5
92.5°	7.1	10.3	16.1	23.7	32.7	45.6	77.1	125.1	172.0	196.5	163.7
95°	20.4	22.3	28.5	36.5	51.4	77.4	131.3	232.9	381.0	504.9	519.1
97.5°	36.7	36.7	42.0	49.4	62.2	84.0	125.5	209.4	356.6	531.7	652.1
100°	47.1	47.1	51.4	58.9	70.6	90.5	127.0	197.0	323.4	498.0	656.6
102.5°	57.0	58.0	61.8	68.8	80.0	98.9	131.9	193.5	301.0	455.9	619.4
105°	72.5	74.3	77.4	84.8	96.0	114.0	143.7	195.1	281.9	406.3	551.9
107.5°	89.6	90.8	93.9	101.8	112.5	130.2	157.5	204.3	278.4	378.6	497.4
110°	101.0	102.2	105.3	112.7	123.9	140.6	167.9	211.2	279.3	369.2	470.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.9	113.1	116.7	123.7	134.8	151.5	177.8	218.6	282.3	364.7	454.8
115°	127.6	129.4	133.8	140.0	151.8	168.5	193.3	230.4	288.0	362.3	440.4
117.5°	143.9	145.7	149.6	156.4	167.4	184.7	208.3	242.4	294.1	361.7	434.0
120°	154.9	156.1	160.4	167.2	177.8	195.1	218.6	250.9	298.6	361.7	430.5
122.5°	164.8	166.0	170.3	176.7	188.1	205.0	228.5	258.8	303.0	361.2	426.5
125°	177.8	180.2	183.9	190.8	202.6	219.9	242.2	270.7	309.7	360.5	419.9
127.5°	189.3	191.3	195.7	203.5	215.8	233.3	254.8	281.0	315.1	359.2	411.1
130°	195.7	198.2	203.2	212.5	224.3	242.2	263.2	287.4	319.0	358.6	405.8
132.5°	202.2	204.1	210.6	219.4	232.2	249.1	270.2	293.8	322.5	358.1	400.8
135°	211.2	213.7	219.9	230.4	243.4	259.5	280.0	302.3	327.6	357.4	393.3
137.5°	220.3	222.6	229.4	239.5	252.9	268.3	287.4	308.2	330.7	357.3	386.9
140°	226.7	228.5	235.4	245.9	258.9	273.8	292.4	312.2	333.3	356.8	383.4
142.5°	233.6	235.5	241.9	251.8	264.4	278.8	296.8	315.1	335.3	356.8	380.5
145°	243.4	245.3	251.5	260.2	272.0	285.6	301.7	318.4	336.4	355.5	375.3
147.5°	254.4	255.1	260.5	269.4	279.2	291.5	306.7	321.2	337.0	353.3	370.8
150°	261.4	262.1	267.0	274.4	283.7	295.5	309.1	322.7	337.0	351.8	367.3
152.5°	267.8	268.0	272.9	279.9	288.2	299.0	311.1	323.7	336.0	349.4	363.4
155°	276.9	277.5	281.2	287.4	294.2	303.5	314.0	324.6	334.5	345.6	357.4
157.5°	285.7	285.7	289.1	294.0	299.9	307.2	316.2	324.6	332.9	341.8	351.3
160°	291.1	291.1	293.6	297.9	302.9	309.7	317.1	324.6	331.4	338.8	346.9
162.5°	296.1	295.6	297.5	301.4	305.9	311.2	318.1	324.6	329.9	335.9	342.9
165°	301.7	301.7	302.9	306.0	309.1	312.8	318.4	323.4	327.1	331.4	336.4
167.5°	307.2	306.7	307.2	309.6	311.3	314.2	318.3	321.9	324.1	326.9	330.4
170°	309.7	309.1	309.7	311.6	312.8	314.7	317.7	320.8	322.1	323.9	326.5
172.5°	312.2	311.6	311.7	313.1	313.8	315.1	317.3	319.9	320.1	321.0	323.0
175°	314.7	314.0	314.0	314.7	315.3	315.3	316.6	318.4	317.7	317.7	319.0
177.5°	315.8	315.3	314.8	315.3	315.3	315.3	315.8	316.8	315.8	315.8	316.2
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	802.1	803.3	804.5	805.0	804.9	804.8	804.7	804.6
5°	796.7	798.1	799.5	800.0	799.7	799.5	799.2	798.9
7.5°	786.1	787.0	787.9	788.1	787.7	787.2	786.8	786.3
10°	776.6	777.1	777.7	777.7	777.1	776.6	776.0	775.5
12.5°	764.8	765.1	765.5	765.2	764.5	763.7	763.0	762.2
15°	744.1	743.9	743.5	743.0	742.0	741.0	740.1	739.1
17.5°	719.2	718.4	717.6	716.5	715.1	713.7	712.2	710.7
20°	701.8	700.7	699.6	698.2	696.4	694.6	692.8	691.0
22.5°	682.5	680.8	679.1	677.6	676.1	674.7	673.3	671.8
25°	651.3	648.9	646.6	644.8	643.3	642.0	640.6	639.2
27.5°	619.4	616.6	613.7	611.2	609.3	607.3	605.4	603.4
30°	596.7	593.2	589.8	587.0	584.8	582.6	580.4	578.2
32.5°	573.4	569.4	565.4	562.4	560.3	558.3	556.1	554.1
35°	538.7	534.0	529.4	525.9	523.4	520.9	518.4	515.9
37.5°	501.5	496.3	491.1	487.3	484.7	482.3	479.8	477.4
40°	476.7	471.0	465.2	461.1	458.6	456.1	453.7	451.2
42.5°	452.3	446.5	440.6	436.4	433.8	431.3	428.6	426.1
45°	415.0	408.3	401.6	397.0	394.5	392.1	389.6	387.1
47.5°	377.4	370.4	363.5	358.6	355.9	353.2	350.5	347.8
50°	352.4	345.6	338.7	334.1	331.4	328.8	326.2	323.6
52.5°	327.6	320.6	313.7	308.9	306.1	303.4	300.7	298.0
55°	290.9	283.8	276.6	271.8	269.2	266.6	264.0	261.3
57.5°	255.0	247.8	240.6	236.0	234.0	232.0	230.0	228.1
60°	231.1	223.9	216.8	212.2	210.0	207.8	205.7	203.4
62.5°	207.6	201.0	194.4	190.2	188.5	186.7	185.0	183.2
65°	173.8	167.9	162.0	158.2	156.6	155.0	153.3	151.6
67.5°	142.8	137.7	132.6	129.2	127.4	125.6	123.7	121.9
70°	121.7	117.2	112.6	109.6	108.3	106.9	105.5	104.2
72.5°	102.7	98.9	95.0	92.4	91.2	89.9	88.6	87.4
75°	75.7	72.6	69.4	67.4	66.5	65.8	65.0	64.1
77.5°	53.6	51.7	49.8	48.8	48.6	48.3	48.1	47.8
80°	41.1	40.7	40.2	40.0	39.8	39.7	39.6	39.5
82.5°	31.9	31.6	31.4	31.1	31.0	30.8	30.7	30.6
85°	18.5	18.3	18.0	17.9	17.9	17.9	17.9	17.9
87.5°	9.0	9.0	9.0	9.0	9.2	9.4	9.4	9.5
90°	11.2	11.8	12.4	12.4	13.0	13.6	13.0	13.0
92.5°	121.7	91.6	72.9	60.4	53.2	49.8	47.7	47.7
95°	459.0	363.0	280.0	219.9	189.6	170.3	159.2	151.1
97.5°	678.1	642.5	581.9	517.2	472.8	435.5	416.8	404.0
100°	747.0	759.4	729.0	683.3	629.3	591.5	573.0	568.0
102.5°	743.5	805.0	813.8	794.7	761.7	734.3	714.7	710.7
105°	693.8	800.9	862.2	887.6	888.9	883.9	875.3	871.6
107.5°	623.1	737.1	823.5	878.7	909.3	923.4	929.6	931.2
110°	580.4	687.5	777.4	845.5	889.5	915.5	926.7	932.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	549.2	644.0	728.8	796.9	846.8	878.4	894.0	903.0
115°	517.8	594.1	666.5	726.0	774.9	812.1	831.9	836.9
117.5°	502.5	565.5	622.5	673.0	714.7	745.9	766.0	769.8
120°	495.5	553.2	602.7	646.7	682.0	709.2	725.3	732.1
122.5°	489.6	545.2	590.3	628.8	658.7	682.0	695.6	702.4
125°	479.4	532.7	575.4	609.5	634.3	652.3	664.0	667.7
127.5°	467.1	517.9	560.5	592.9	617.8	633.8	643.7	647.5
130°	457.2	506.0	548.2	581.0	606.4	621.9	631.8	635.6
132.5°	446.7	492.7	533.9	566.6	591.5	609.0	618.5	622.2
135°	432.4	472.6	510.4	541.4	566.2	583.5	593.4	597.1
137.5°	419.4	453.4	485.3	513.3	536.4	553.5	561.7	566.2
140°	411.9	441.0	468.9	495.0	516.6	530.2	538.9	543.8
142.5°	405.0	430.6	454.6	477.1	496.3	508.9	516.6	520.1
145°	395.2	416.3	434.8	452.2	467.7	478.2	484.4	487.5
147.5°	387.1	403.9	418.7	432.4	443.8	452.8	457.5	458.6
150°	382.1	396.4	408.8	419.9	429.9	437.9	441.6	442.3
152.5°	376.8	389.0	400.4	409.6	418.0	424.5	426.7	427.4
155°	368.5	378.5	387.8	395.2	401.4	406.3	408.2	408.2
157.5°	359.7	368.0	375.9	381.8	386.5	390.2	391.3	391.3
160°	354.3	361.2	368.0	372.9	376.6	380.3	381.0	381.0
162.5°	348.9	354.7	360.0	364.5	367.2	370.9	371.5	371.1
165°	341.3	345.0	349.4	352.4	354.9	357.4	356.8	356.2
167.5°	334.0	336.8	340.3	342.1	343.4	345.0	344.9	344.4
170°	329.5	331.4	333.9	335.7	337.0	337.5	337.0	337.0
172.5°	325.6	326.9	328.4	329.8	330.5	331.1	330.5	329.5
175°	320.3	320.8	322.1	322.1	322.1	323.4	322.1	320.8
177.5°	316.8	317.3	317.3	317.7	317.3	317.7	316.8	315.8
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3

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