

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: P332594-940

Luminaire Tested: **S124DIP-S795D590U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332594-940
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-S795D590U940-4F0-1E-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: 4771.8 lumens
Efficiency: N/A
Efficacy: 118.4 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

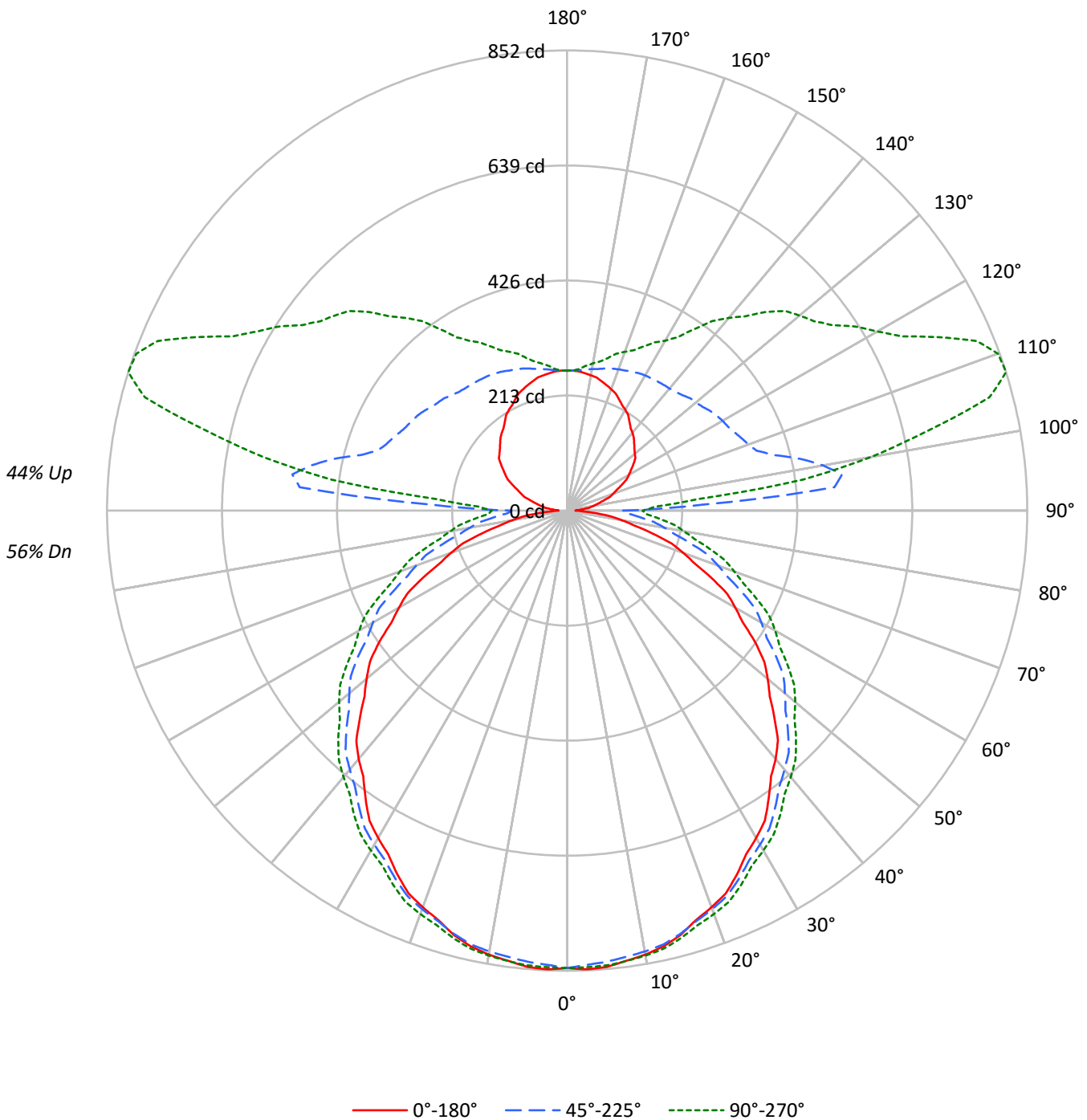
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	1.7
10°-20°	229.8	4.8
20°-30°	347.5	7.3
30°-40°	420.4	8.8
40°-50°	444.5	9.3
50°-60°	418.3	8.8
60°-70°	347.1	7.3
70°-80°	243.8	5.1
80°-90°	139.2	2.9
90°-100°	268.8	5.6
100°-110°	449.8	9.4
110°-120°	389.3	8.2
120°-130°	316.2	6.6
130°-140°	254.4	5.3
140°-150°	188.8	4.0
150°-160°	131.3	2.8
160°-170°	77.2	1.6
170°-180°	25.1	0.5
0°-30°	657.5	13.8
0°-40°	1077.9	22.6
0°-60°	1940.7	40.7
0°-90°	2670.8	56.0
90°-120°	1107.9	23.2
90°-150°	1867.3	39.1
90°-180°	2101.0	44.0
0°-180°	4771.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	53
90°	16	57	103	130	140	11
95°	29	97	497	312	241	29
105°	68	115	396	804	810	73
115°	110	147	342	636	759	110
125°	150	178	323	530	599	134
135°	175	209	302	455	520	136
145°	201	229	292	370	410	126
155°	227	245	284	321	335	105
165°	248	255	272	288	292	70
175°	258	259	261	264	264	25
180°	259	259	259	259	259	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.2	37.0	45.9	54.6	63.3	72.2	82.0	91.3	100.7	110.1	116.2
90°	15.7	25.1	35.1	44.1	53.0	61.7	73.8	82.9	93.0	103.1	108.7
92.5°	20.2	30.4	42.8	56.6	71.6	90.5	125.5	174.0	221.5	250.7	229.7
95°	29.2	37.6	49.7	63.2	82.4	111.6	164.4	256.5	386.7	497.1	514.5
97.5°	41.3	47.3	57.7	69.7	86.2	111.4	154.0	231.5	360.9	513.3	617.7
100°	49.1	54.6	63.6	75.2	90.3	113.5	151.7	217.4	329.4	481.1	617.0
102.5°	57.2	62.9	70.8	81.3	95.4	117.3	152.5	211.1	307.5	442.6	582.5
105°	68.0	73.8	80.5	90.9	104.2	125.0	157.2	207.2	286.2	396.3	521.1
107.5°	81.9	86.4	92.4	102.4	114.6	134.5	164.3	210.1	278.3	368.0	470.7
110°	90.5	94.4	100.0	109.1	121.1	140.0	169.8	212.8	276.1	357.2	445.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	98.7	102.4	107.9	116.2	128.0	146.5	175.1	215.8	275.1	349.8	428.4
115°	110.5	113.9	119.4	126.4	137.9	156.0	183.1	220.3	274.4	342.1	410.9
117.5°	123.7	126.3	130.5	137.3	147.5	165.4	191.1	225.4	274.1	336.0	399.7
120°	131.9	133.6	137.8	144.0	153.3	170.9	196.4	228.9	274.2	332.2	392.8
122.5°	140.1	141.2	144.9	150.2	159.8	176.6	201.7	232.3	274.4	328.0	385.8
125°	149.8	151.6	154.4	159.8	169.2	186.1	209.6	238.4	275.6	322.6	375.4
127.5°	159.1	160.5	163.9	170.1	179.9	196.3	218.0	243.5	275.5	315.8	362.3
130°	163.6	165.4	169.2	176.6	186.1	202.5	223.1	246.4	275.6	311.6	354.0
132.5°	168.9	170.3	175.4	182.4	192.6	207.9	227.8	249.9	276.2	308.2	346.8
135°	175.4	177.4	182.4	191.1	201.8	215.8	234.1	253.8	276.2	302.0	334.9
137.5°	182.8	184.5	189.8	198.0	208.8	221.7	238.1	255.8	275.1	297.6	324.9
140°	188.1	189.4	194.7	203.2	213.7	225.9	241.4	257.9	275.4	294.9	319.5
142.5°	193.0	194.5	199.7	207.9	218.1	229.8	244.5	259.5	275.8	293.4	315.2
145°	200.9	202.2	207.1	213.9	223.4	234.5	247.7	261.4	276.3	291.9	309.5
147.5°	209.9	210.2	214.5	221.6	229.4	239.4	251.8	263.8	276.7	290.2	304.7
150°	215.6	215.9	219.8	225.7	233.1	242.6	253.9	265.0	276.7	288.9	301.7
152.5°	220.2	220.2	224.3	229.9	236.7	245.5	255.5	265.8	275.9	286.9	298.4
155°	227.4	227.9	231.0	236.0	241.7	249.2	257.9	266.5	274.6	283.8	293.5
157.5°	234.6	234.6	237.5	241.4	246.3	252.3	259.7	266.5	273.4	280.7	288.6
160°	239.1	239.1	241.1	244.7	248.7	254.3	260.5	266.5	272.2	278.2	284.9
162.5°	243.2	242.7	244.3	247.5	251.2	255.6	261.3	266.5	270.9	275.8	281.6
165°	247.7	247.7	248.7	251.3	253.9	256.9	261.4	265.6	268.6	272.2	276.3
167.5°	252.3	251.8	252.3	254.2	255.7	258.0	261.4	264.3	266.2	268.5	271.3
170°	254.3	253.9	254.3	255.8	256.9	258.4	260.9	263.5	264.5	266.0	268.0
172.5°	256.4	255.8	255.9	257.1	257.7	258.8	260.6	262.7	262.9	263.6	265.2
175°	258.4	257.9	257.9	258.4	259.0	259.0	259.9	261.4	260.9	260.9	262.0
177.5°	259.3	259.0	258.5	259.0	259.0	259.0	259.3	260.1	259.3	259.3	259.8
180°	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	122.3	128.6	134.8	138.8	140.7	142.7	144.5	146.3
90°	115.3	121.9	128.5	132.4	134.6	136.8	137.9	139.6
92.5°	201.2	182.4	172.9	166.6	162.3	161.2	161.1	162.8
95°	470.8	397.7	335.2	289.6	266.6	252.8	245.5	240.8
97.5°	644.6	620.8	576.6	527.2	492.4	463.6	450.1	441.4
100°	697.0	712.8	693.6	659.5	616.7	587.2	573.4	570.8
102.5°	689.9	745.9	758.7	746.6	721.0	700.3	685.8	684.2
105°	642.8	736.1	791.8	816.1	818.8	816.5	811.0	809.6
107.5°	579.1	678.0	754.0	802.8	829.5	842.6	849.2	852.0
110°	540.4	633.2	711.9	771.1	808.9	831.9	842.8	849.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	510.6	593.2	667.5	726.7	769.3	796.8	811.4	820.5
115°	479.1	546.4	610.5	662.4	704.0	736.0	753.8	759.3
117.5°	460.3	516.5	567.7	612.1	648.1	675.4	693.6	698.4
120°	450.5	501.9	546.9	585.9	616.6	640.7	655.6	662.9
122.5°	441.8	491.7	532.9	567.4	593.4	614.1	626.8	633.9
125°	428.3	476.0	515.1	545.7	567.4	583.4	594.3	598.6
127.5°	412.0	457.6	496.4	525.6	547.4	562.0	571.6	576.0
130°	400.0	444.1	482.4	511.9	534.0	548.0	557.4	561.8
132.5°	388.2	429.5	466.9	496.3	518.0	533.6	542.6	547.0
135°	370.3	406.8	441.2	469.0	490.5	506.0	515.4	519.8
137.5°	354.7	385.8	415.0	440.1	460.1	475.2	483.0	487.7
140°	345.6	372.3	397.9	421.2	440.1	452.3	460.5	465.6
142.5°	337.8	361.2	383.3	403.4	420.1	431.3	438.5	442.3
145°	327.1	345.6	362.1	377.5	391.0	400.5	406.4	409.8
147.5°	318.3	332.2	344.6	356.1	366.2	374.3	378.8	380.4
150°	313.9	325.6	335.7	344.9	353.0	359.6	362.7	363.2
152.5°	309.3	319.4	328.8	336.4	343.2	348.7	350.4	351.0
155°	302.6	310.8	318.4	324.5	329.7	333.7	335.2	335.2
157.5°	295.4	302.3	308.6	313.5	317.4	320.5	321.4	321.4
160°	291.0	296.6	302.1	306.2	309.2	312.4	312.8	312.8
162.5°	286.5	291.2	295.6	299.3	301.6	304.6	305.1	304.7
165°	280.3	283.3	286.9	289.4	291.5	293.5	293.0	292.5
167.5°	274.3	276.6	279.5	281.0	282.0	283.3	283.2	282.9
170°	270.6	272.2	274.2	275.7	276.7	277.2	276.7	276.7
172.5°	267.3	268.5	269.7	270.8	271.4	272.0	271.4	270.6
175°	263.0	263.5	264.5	264.5	264.5	265.6	264.5	263.5
177.5°	260.1	260.6	260.6	260.9	260.6	260.9	260.1	259.3
180°	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0

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