

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: P331888-940

Luminaire Tested: **S123DIP-S340D805U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331888-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U940-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3875.5 lumens
Efficiency: N/A
Efficacy: 124.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

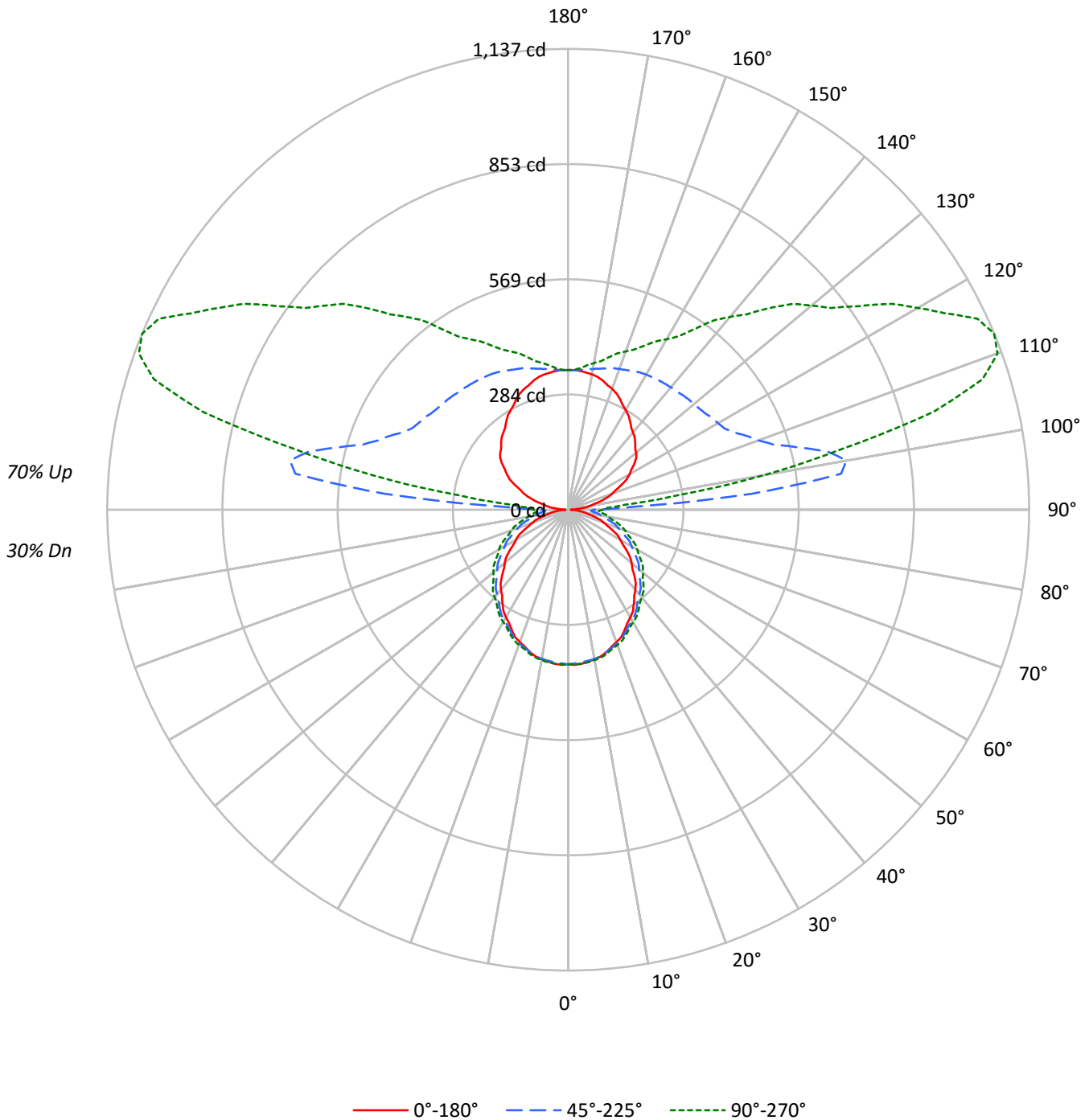
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38	30
1	93	88	84	81	83	79	76	73	62	60	58	47	45	44	33	32	31	24
2	84	77	70	65	75	69	64	59	54	51	47	41	38	36	28	27	25	20
3	77	67	60	54	68	60	54	49	48	43	39	36	33	30	25	23	21	16
4	70	59	51	45	62	53	47	41	42	37	33	32	28	26	22	20	18	14
5	64	52	44	39	57	47	40	35	37	32	29	28	25	22	20	18	16	12
6	59	47	39	33	52	42	35	30	34	28	25	25	22	19	18	16	14	10
7	54	42	34	29	48	38	31	26	30	25	22	23	19	17	16	14	12	9
8	50	38	31	25	45	34	28	23	28	23	19	21	17	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	11	10	7
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4105	4105	4105
5°	4118	4002	4004
10°	4082	3910	3890
15°	4029	3805	3766
20°	3954	3686	3630
25°	3860	3549	3485
30°	3767	3425	3339
35°	3659	3294	3223
40°	3557	3175	3098
45°	3445	3060	2998
50°	3333	2947	2888
55°	3211	2831	2789
60°	3090	2713	2689
65°	2967	2588	2567
70°	2783	2448	2443
75°	2551	2287	2318
80°	2278	2128	2175
85°	2025	2018	2090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	0.9
10°-20°	103.1	2.7
20°-30°	154.2	4.0
30°-40°	184.1	4.8
40°-50°	192.6	5.0
50°-60°	180.7	4.7
60°-70°	151.0	3.9
70°-80°	108.0	2.8
80°-90°	67.1	1.7
90°-100°	232.1	6.0
100°-110°	572.4	14.8
110°-120°	553.7	14.3
120°-130°	437.2	11.3
130°-140°	340.8	8.8
140°-150°	251.7	6.5
150°-160°	174.7	4.5
160°-170°	102.6	2.6
170°-180°	33.4	0.9
0°-30°	293.4	7.6
0°-40°	477.5	12.3
0°-60°	850.9	22.0
0°-90°	1176.9	30.4
90°-120°	1358.2	35.0
90°-150°	2387.9	61.6
90°-180°	2699.0	69.6
0°-180°	3875.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	381	381	381	381	381	
5°	382	381	378	382	381	36
15°	364	365	364	368	368	102
25°	328	332	334	339	339	151
35°	282	289	295	301	302	177
45°	231	241	251	259	263	178
55°	176	190	205	216	219	158
65°	122	138	156	168	173	120
75°	66	86	106	120	125	71
85°	20	41	63	77	81	21
90°	7	34	64	80	85	5
95°	28	98	454	174	139	29
105°	84	133	592	1022	933	89
115°	145	186	451	972	1114	144
125°	200	236	414	747	876	177
135°	234	278	400	609	704	181
145°	266	304	390	493	544	167
155°	302	326	377	429	447	139
165°	330	339	361	383	390	93
175°	344	344	346	351	351	33
180°	344	344	344	344	344	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	383.1	382.9	382.6	382.5	382.2	381.8	381.2	380.6	380.0	379.4	380.0
5°	381.8	381.7	381.5	381.3	381.1	380.8	380.1	379.6	379.1	378.5	379.2
7.5°	378.1	378.2	378.2	378.2	378.3	378.0	377.5	376.9	376.4	375.9	376.7
10°	374.8	375.0	375.1	375.3	375.5	375.4	374.9	374.4	374.0	373.5	374.4
12.5°	370.8	371.0	371.3	371.6	371.8	371.8	371.5	371.1	370.9	370.5	371.4
15°	363.6	363.8	364.1	364.4	364.6	364.8	364.6	364.5	364.4	364.4	365.3
17.5°	354.5	355.0	355.5	356.1	356.6	356.9	356.9	356.8	356.8	356.8	357.6
20°	347.8	348.3	348.8	349.5	350.0	350.4	350.5	350.7	350.9	351.1	352.0
22.5°	340.8	341.3	341.9	342.4	343.0	343.4	343.7	343.9	344.2	344.5	345.5
25°	328.2	329.1	330.1	331.0	331.9	332.5	332.8	333.1	333.3	333.7	334.8
27.5°	315.6	316.6	317.7	318.8	319.9	320.7	321.2	321.8	322.4	323.0	324.0
30°	306.7	307.8	309.1	310.2	311.5	312.4	313.2	313.9	314.6	315.4	316.5
32.5°	296.7	298.0	299.3	300.7	302.0	303.2	304.2	305.1	306.1	307.0	308.3
35°	282.5	284.0	285.5	287.0	288.5	289.8	291.0	292.2	293.4	294.6	296.0
37.5°	267.6	269.2	270.9	272.6	274.2	275.8	277.2	278.7	280.3	281.7	283.3
40°	257.6	259.3	260.9	262.6	264.2	266.0	267.9	269.7	271.5	273.4	275.0
42.5°	246.6	248.7	250.7	252.7	254.8	256.7	258.7	260.6	262.5	264.4	266.2
45°	231.0	233.3	235.4	237.6	239.9	242.1	244.4	246.7	249.1	251.4	253.2
47.5°	214.6	217.1	219.6	222.2	224.7	227.3	229.9	232.6	235.1	237.8	239.8
50°	204.0	206.6	209.2	211.8	214.4	217.0	219.9	222.8	225.7	228.5	230.7
52.5°	192.7	195.5	198.1	200.9	203.7	206.6	209.7	212.9	216.1	219.2	221.4
55°	176.2	179.2	182.3	185.3	188.3	191.5	194.8	198.2	201.5	204.8	207.3
57.5°	160.1	163.2	166.4	169.6	172.7	176.2	179.8	183.4	187.1	190.7	193.2
60°	148.7	152.0	155.4	158.7	162.0	165.6	169.4	173.2	176.9	180.7	183.3
62.5°	138.1	141.5	144.9	148.3	151.7	155.4	159.4	163.5	167.5	171.5	174.0
65°	121.7	125.4	128.9	132.5	136.2	140.0	144.0	148.1	152.1	156.2	159.0
67.5°	105.1	109.0	112.8	116.5	120.4	124.4	128.5	132.7	136.8	141.0	143.9
70°	93.5	97.5	101.4	105.4	109.3	113.6	118.0	122.4	126.9	131.3	134.3
72.5°	82.8	86.9	90.8	94.8	98.7	103.0	107.5	112.2	116.7	121.4	124.4
75°	66.1	70.4	74.7	79.1	83.5	87.9	92.6	97.1	101.7	106.4	109.4
77.5°	51.5	55.8	60.2	64.6	68.9	73.5	78.1	82.8	87.4	92.1	95.3
80°	41.1	45.7	50.2	54.8	59.2	63.9	68.7	73.5	78.3	83.1	86.2
82.5°	32.2	36.7	41.4	45.9	50.6	55.3	60.2	65.0	69.9	74.8	77.9
85°	20.3	25.0	29.6	34.2	38.8	43.6	48.5	53.3	58.2	63.1	66.3
87.5°	11.3	16.2	21.0	26.1	30.9	35.9	41.0	46.2	51.3	56.4	59.4
90°	6.8	12.8	18.6	25.2	31.2	37.2	44.0	50.7	57.6	64.4	66.8
92.5°	13.7	21.9	31.9	41.5	51.4	66.1	88.9	123.6	157.7	151.5	128.2
95°	28.3	34.0	45.2	60.7	82.4	113.7	177.5	285.9	404.7	454.5	379.3
97.5°	44.5	48.4	57.7	71.2	92.4	125.6	186.5	307.9	502.8	678.9	726.3
100°	55.3	58.9	66.8	79.5	99.2	130.0	183.1	290.5	478.0	696.3	836.3
102.5°	66.7	70.6	77.6	89.4	107.2	135.5	183.5	275.3	442.7	658.1	839.9
105°	84.2	88.5	94.9	105.5	120.9	145.6	187.3	263.1	398.8	591.7	794.3
107.5°	102.4	106.4	112.3	122.4	136.7	159.6	196.4	259.8	369.9	532.7	716.8
110°	115.5	119.2	124.3	133.7	147.2	169.3	204.5	261.1	358.2	499.3	668.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	127.7	131.2	136.0	145.1	158.3	179.7	212.4	265.0	350.8	476.1	625.5
115°	145.0	148.9	154.2	162.3	175.2	196.3	226.0	271.9	346.3	450.8	573.6
117.5°	162.6	166.5	170.7	177.8	191.7	211.1	240.4	281.4	344.9	434.4	541.0
120°	174.6	177.1	181.0	188.5	202.2	221.4	249.5	288.8	345.5	426.7	523.6
122.5°	185.1	187.5	191.2	198.9	211.9	232.0	259.5	295.8	347.9	421.2	509.1
125°	199.9	201.3	205.5	213.2	226.4	246.6	273.7	307.0	351.5	413.5	490.0
127.5°	211.5	213.5	218.6	226.3	240.9	260.7	286.5	316.3	356.1	408.5	472.9
130°	218.7	220.8	226.9	235.2	249.8	269.5	294.4	322.6	359.4	405.1	463.3
132.5°	224.0	226.7	233.4	243.4	258.1	277.1	301.0	328.4	361.4	402.9	454.3
135°	233.7	236.4	244.0	254.3	268.9	288.1	310.8	335.5	364.4	399.6	442.4
137.5°	242.8	245.7	253.1	264.2	278.7	296.3	317.6	340.8	366.2	396.0	431.9
140°	248.6	252.1	259.0	270.2	284.2	301.8	322.3	343.4	367.4	394.1	425.5
142.5°	255.3	258.2	265.6	275.5	289.4	305.8	325.5	345.9	367.9	391.7	419.5
145°	266.0	268.0	274.2	284.5	296.3	312.4	330.5	349.3	368.8	389.7	412.8
147.5°	276.5	277.8	283.9	292.9	304.3	318.1	334.7	351.5	368.8	387.1	406.4
150°	283.7	284.5	290.0	299.1	308.8	321.4	337.4	352.0	368.8	384.9	402.3
152.5°	291.0	291.1	296.7	304.7	313.3	325.3	339.1	353.2	367.1	382.0	397.8
155°	301.8	301.8	306.0	313.0	320.7	330.5	342.3	353.5	365.3	377.2	391.1
157.5°	310.5	311.0	314.4	320.6	327.1	334.7	344.1	354.2	362.9	372.8	383.6
160°	317.2	317.2	320.0	325.6	330.5	337.4	345.8	354.2	361.9	369.5	378.5
162.5°	322.3	322.3	324.5	329.0	333.2	339.1	346.3	353.6	359.6	366.1	373.5
165°	329.8	329.0	330.5	333.9	336.7	341.6	347.1	352.0	356.2	361.1	366.7
167.5°	335.5	334.7	335.4	338.0	339.9	343.0	347.1	351.0	352.9	356.1	360.2
170°	338.9	337.4	338.1	340.2	341.6	343.0	346.5	349.3	350.7	352.8	356.2
172.5°	341.1	340.2	340.4	341.9	342.7	343.6	346.5	348.7	349.0	350.0	352.3
175°	343.7	343.0	342.3	343.7	343.7	344.4	345.8	347.1	346.5	346.5	347.9
177.5°	344.9	344.4	343.8	344.4	344.4	344.4	344.9	346.1	344.9	344.4	344.9
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	380.6	381.2	381.8	382.0	382.0	381.9	381.8	381.7
5°	380.0	380.8	381.5	381.8	381.7	381.6	381.5	381.4
7.5°	377.7	378.6	379.5	380.0	379.9	379.7	379.6	379.5
10°	375.4	376.3	377.2	377.6	377.4	377.2	377.0	376.8
12.5°	372.2	373.1	373.9	374.3	374.1	373.9	373.7	373.5
15°	366.2	367.1	368.1	368.5	368.4	368.3	368.2	368.1
17.5°	358.4	359.3	360.1	360.4	360.3	360.2	360.1	359.9
20°	352.8	353.6	354.5	354.9	355.0	355.1	355.2	355.3
22.5°	346.5	347.6	348.7	349.2	349.1	349.0	349.0	348.9
25°	336.0	337.2	338.4	339.0	339.0	339.0	339.0	339.0
27.5°	325.0	326.1	327.2	327.7	327.8	327.9	327.9	328.0
30°	317.5	318.7	319.8	320.3	320.3	320.3	320.3	320.3
32.5°	309.4	310.6	311.7	312.5	312.7	312.9	313.2	313.3
35°	297.4	298.7	300.1	301.0	301.4	301.8	302.1	302.5
37.5°	284.8	286.4	288.0	288.9	289.2	289.5	289.8	290.1
40°	276.5	278.1	279.6	280.6	281.0	281.4	281.8	282.1
42.5°	267.9	269.6	271.3	272.4	273.0	273.4	273.9	274.5
45°	254.9	256.6	258.4	259.7	260.4	261.1	261.9	262.6
47.5°	241.7	243.8	245.8	247.0	247.5	248.2	248.7	249.3
50°	232.7	234.9	237.0	238.4	239.1	239.7	240.3	241.0
52.5°	223.6	225.8	228.0	229.5	230.3	231.1	231.8	232.6
55°	209.8	212.3	214.8	216.4	217.1	217.9	218.6	219.4
57.5°	195.7	198.2	200.7	202.4	203.3	204.2	205.1	205.9
60°	185.9	188.5	191.1	192.9	193.9	194.9	195.9	197.0
62.5°	176.6	179.1	181.7	183.5	184.5	185.4	186.4	187.3
65°	161.8	164.5	167.3	169.2	170.0	171.0	171.9	172.8
67.5°	147.0	150.0	153.0	155.0	155.7	156.5	157.3	158.0
70°	137.2	140.2	143.1	145.1	146.0	146.9	147.8	148.7
72.5°	127.3	130.4	133.4	135.5	136.3	137.2	138.2	139.1
75°	112.4	115.5	118.6	120.6	121.7	122.9	123.9	125.1
77.5°	98.5	101.7	105.0	106.9	107.8	108.7	109.5	110.4
80°	89.3	92.6	95.7	97.6	98.6	99.5	100.5	101.4
82.5°	81.1	84.2	87.4	89.3	90.3	91.2	92.1	93.1
85°	69.5	72.6	75.7	77.8	78.6	79.6	80.5	81.4
87.5°	62.7	66.0	69.3	71.6	72.3	73.4	74.5	75.3
90°	70.6	74.5	78.3	81.8	81.9	83.6	85.2	85.4
92.5°	109.1	100.0	97.6	96.0	95.6	94.3	95.9	95.5
95°	297.8	219.8	185.7	162.6	150.3	144.9	140.9	139.0
97.5°	669.3	547.5	460.3	378.8	328.2	297.8	279.9	274.8
100°	863.4	809.7	730.8	633.6	564.1	514.1	487.9	489.5
102.5°	926.6	927.4	882.4	821.4	767.6	728.2	706.4	691.3
105°	942.6	1014.9	1030.7	1014.3	983.1	957.4	935.9	933.4
107.5°	884.6	1000.2	1063.8	1090.3	1091.6	1083.5	1076.8	1071.2
110°	830.4	961.0	1051.2	1101.6	1121.9	1128.2	1127.6	1126.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	776.3	909.7	1010.5	1074.8	1111.3	1129.4	1135.5	1136.6
115°	704.8	828.3	933.0	1010.5	1063.5	1094.9	1109.6	1113.8
117.5°	652.1	758.9	853.2	931.7	987.0	1022.9	1043.7	1049.1
120°	624.0	720.3	806.1	877.9	933.6	973.3	990.7	995.5
122.5°	601.6	688.8	768.4	835.2	884.8	920.5	939.6	945.5
125°	571.4	649.3	718.2	775.3	820.6	851.9	870.0	875.5
127.5°	544.7	614.3	676.5	728.5	768.8	795.7	812.1	817.2
130°	527.9	592.4	650.6	699.1	736.6	762.3	777.5	783.6
132.5°	512.1	571.5	625.7	672.1	707.4	733.2	746.7	751.3
135°	490.7	541.9	588.9	629.6	664.3	685.6	698.7	704.0
137.5°	471.2	513.3	553.8	589.2	618.3	640.0	651.0	654.7
140°	459.7	496.6	531.5	562.4	589.3	609.3	620.9	620.7
142.5°	448.5	480.4	510.6	537.5	560.5	578.3	588.8	588.5
145°	435.8	459.6	482.6	503.4	521.2	536.2	542.2	543.9
147.5°	425.4	443.9	462.1	476.8	490.4	500.6	506.2	507.1
150°	418.3	434.4	449.0	462.4	473.0	480.8	485.2	485.4
152.5°	412.1	426.0	438.9	450.0	458.3	465.4	467.9	468.0
155°	403.0	414.1	424.5	432.9	439.2	444.8	446.2	446.8
157.5°	393.2	402.5	410.6	417.1	422.6	426.8	427.9	427.8
160°	387.6	395.3	402.3	407.2	412.1	416.2	416.2	415.5
162.5°	380.9	387.4	393.9	398.2	401.4	405.0	405.0	404.4
165°	372.3	376.5	381.4	384.9	387.6	390.4	389.7	389.7
167.5°	364.7	367.9	370.8	373.3	374.5	376.5	375.8	375.8
170°	359.7	361.9	364.6	366.0	366.7	368.1	367.4	367.4
172.5°	355.3	356.8	359.0	359.9	360.0	361.4	360.2	359.6
175°	349.3	350.0	351.3	351.3	351.3	352.0	351.3	350.7
177.5°	345.5	346.1	346.6	346.6	346.1	346.6	345.5	345.5
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4

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