

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: P332023-927

Luminaire Tested: **S123DIP-S1000D805U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332023-927
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-S1000D805U927-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 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: 5630.3 lumens
Efficiency: N/A
Efficacy: 103.5 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: General Diffuse

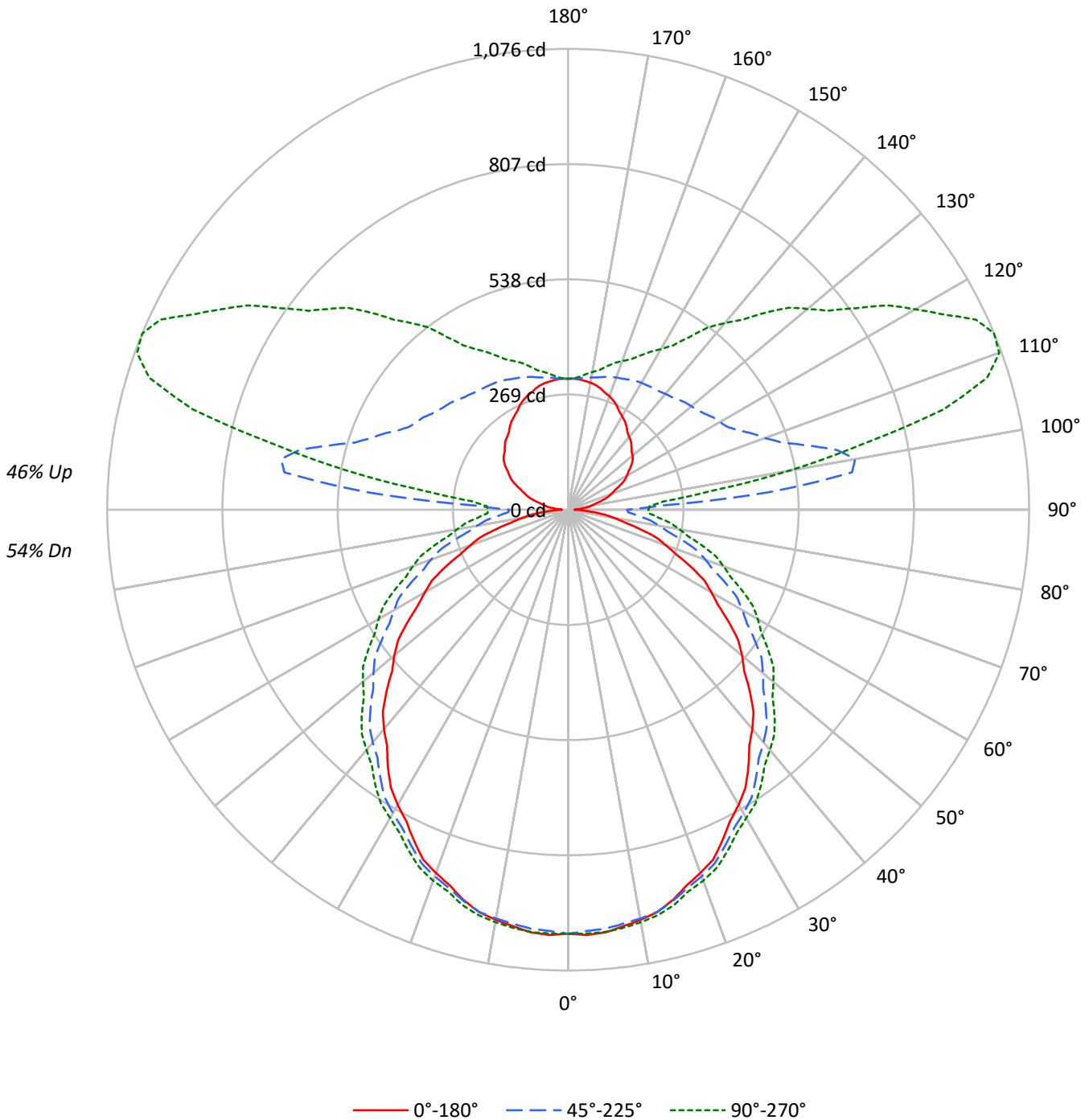
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	86	86	72	72	72	60	60	60	54
1	98	93	88	84	90	86	82	79	73	71	68	62	60	58	51	50	48	43
2	88	80	74	68	82	75	69	64	64	59	55	54	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	40	39	36	33	29
4	73	62	54	47	68	58	50	44	49	44	39	42	37	34	35	31	29	25
5	67	55	47	40	62	51	44	38	44	38	33	37	33	29	31	28	25	21
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	24	22	19
7	57	44	36	30	53	41	34	29	36	30	25	31	26	22	26	22	19	16
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	1.7
10°-20°	267.5	4.8
20°-30°	400.0	7.1
30°-40°	477.7	8.5
40°-50°	499.9	8.9
50°-60°	469.1	8.3
60°-70°	391.8	7.0
70°-80°	280.3	5.0
80°-90°	169.5	3.0
90°-100°	275.1	4.9
100°-110°	559.2	9.9
110°-120°	525.8	9.3
120°-130°	407.7	7.2
130°-140°	311.5	5.5
140°-150°	225.4	4.0
150°-160°	155.2	2.8
160°-170°	91.2	1.6
170°-180°	29.7	0.5
0°-30°	761.3	13.5
0°-40°	1239.1	22.0
0°-60°	2208.0	39.2
0°-90°	3049.6	54.2
90°-120°	1360.1	24.2
90°-150°	2304.7	40.9
90°-180°	2581.0	45.8
0°-180°	5630.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	15	74	137	174	187	11
95°	33	123	474	246	223	32
105°	80	142	579	981	909	85
115°	132	178	438	917	1050	131
125°	180	213	390	700	820	160
135°	209	249	364	562	650	161
145°	237	270	346	444	492	148
155°	268	289	335	381	397	123
165°	293	301	321	340	346	83
175°	305	306	308	312	312	29
180°	306	306	306	306	306	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	28.9	41.1	53.3	65.6	77.8	90.1	102.7	115.3	127.9	140.5	148.5
90°	15.3	28.2	41.2	54.8	67.8	81.0	95.1	109.2	123.3	137.3	144.8
92.5°	20.8	35.2	50.9	66.4	82.1	102.6	130.9	169.5	207.7	210.2	194.7
95°	33.0	44.1	60.3	80.2	105.6	140.3	204.7	308.7	422.0	474.0	412.1
97.5°	46.5	55.5	69.3	86.9	111.2	147.2	208.7	323.9	504.5	668.1	715.0
100°	55.5	63.8	75.8	92.1	114.7	148.2	202.6	305.2	479.2	680.3	809.3
102.5°	65.0	73.1	83.8	98.9	119.2	150.2	199.9	288.6	444.4	642.9	808.9
105°	80.5	88.1	97.5	110.7	128.3	155.5	199.2	273.3	400.7	578.8	763.3
107.5°	95.8	102.5	111.0	123.2	139.1	164.3	203.4	266.2	370.3	521.5	689.3
110°	106.8	113.0	120.4	131.5	146.3	170.6	208.1	264.7	357.4	488.9	643.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.7	123.1	129.8	140.1	154.2	177.4	212.5	265.3	347.6	464.9	601.7
115°	132.4	137.7	144.3	153.4	166.8	189.3	221.4	267.8	339.6	438.1	551.0
117.5°	147.9	152.5	157.3	164.9	178.4	198.8	230.2	272.0	333.7	418.6	517.0
120°	157.9	161.0	165.2	172.6	185.6	205.7	235.8	276.0	331.5	408.8	498.6
122.5°	167.3	169.8	173.5	180.9	192.7	213.3	242.6	279.9	331.1	401.1	482.7
125°	179.7	181.0	184.7	191.5	203.3	223.5	252.1	286.3	330.4	390.0	461.3
127.5°	190.0	191.6	196.0	202.7	215.5	235.0	261.6	291.9	331.1	381.3	441.6
130°	196.5	198.1	203.4	210.6	223.4	242.4	267.6	296.0	331.7	375.5	430.2
132.5°	200.6	202.9	208.9	217.8	230.7	248.8	272.6	299.5	331.3	370.7	419.3
135°	209.0	211.3	217.9	226.9	239.6	257.5	279.4	303.1	330.5	363.5	404.3
137.5°	217.0	219.4	225.9	235.6	248.3	264.4	284.4	305.9	329.5	357.0	391.3
140°	221.6	224.7	230.8	240.7	253.2	269.0	287.6	307.0	328.8	353.0	383.3
142.5°	227.5	229.9	236.4	245.2	257.3	271.8	289.4	307.7	327.3	348.6	375.4
145°	237.0	238.7	244.0	253.0	263.3	277.5	293.6	310.3	327.6	346.2	368.0
147.5°	245.7	246.8	252.2	260.2	270.4	282.6	297.3	312.3	327.6	343.9	361.4
150°	252.1	252.7	257.6	265.7	274.3	285.5	299.8	312.8	327.6	341.9	357.4
152.5°	258.5	258.6	263.6	270.7	278.3	289.0	301.3	313.8	326.1	339.4	353.4
155°	268.2	268.2	271.9	278.1	284.9	293.6	304.1	314.0	324.6	335.1	347.5
157.5°	275.8	276.3	279.3	284.8	290.6	297.3	305.7	314.7	322.4	331.2	340.8
160°	281.8	281.8	284.3	289.2	293.6	299.8	307.2	314.7	321.5	328.3	336.3
162.5°	286.3	286.3	288.3	292.2	296.0	301.3	307.7	314.1	319.5	325.3	331.8
165°	292.9	292.3	293.6	296.7	299.1	303.5	308.4	312.8	316.5	320.8	325.7
167.5°	298.0	297.3	297.9	300.2	302.0	304.8	308.3	311.8	313.5	316.4	320.0
170°	301.0	299.8	300.4	302.2	303.5	304.8	307.8	310.3	311.6	313.4	316.5
172.5°	303.0	302.2	302.4	303.7	304.4	305.2	307.8	309.8	310.1	310.9	313.0
175°	305.3	304.8	304.1	305.3	305.3	305.9	307.2	308.4	307.8	307.8	309.0
177.5°	306.4	305.9	305.5	305.9	305.9	305.9	306.4	307.4	306.4	305.9	306.4
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	156.8	165.0	173.3	178.8	181.1	183.6	186.1	188.4
90°	153.6	162.4	171.1	177.7	179.4	182.4	185.4	187.3
92.5°	183.0	180.1	183.3	185.1	186.2	186.6	189.4	190.5
95°	344.6	280.1	254.8	237.3	228.0	224.8	222.8	222.8
97.5°	669.1	565.6	492.8	423.5	380.2	354.7	340.4	337.5
100°	837.9	794.7	729.2	645.9	585.7	543.0	521.2	524.2
102.5°	890.3	895.5	860.0	808.8	762.6	729.1	711.3	699.5
105°	899.4	968.0	986.6	974.9	948.6	927.2	909.5	908.6
107.5°	842.5	949.5	1010.2	1036.5	1039.1	1033.2	1028.7	1025.1
110°	791.2	911.4	995.7	1043.1	1062.4	1069.2	1069.9	1070.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	739.6	862.1	955.5	1015.3	1049.2	1066.7	1073.5	1075.9
115°	671.3	784.8	881.5	952.9	1001.3	1030.5	1044.7	1049.8
117.5°	619.4	718.1	805.6	877.9	928.2	961.2	981.0	987.1
120°	591.4	680.6	760.3	826.5	877.1	913.5	930.0	935.4
122.5°	568.4	649.4	723.6	785.2	830.4	863.2	881.2	887.6
125°	536.9	609.5	674.0	726.9	768.2	797.1	814.3	820.3
127.5°	508.6	573.5	631.9	680.2	717.2	742.0	757.6	763.3
130°	490.5	550.8	605.5	650.6	684.9	708.6	723.1	729.4
132.5°	473.4	529.1	580.1	623.3	655.8	679.7	692.8	697.9
135°	450.1	498.4	543.0	581.1	612.6	632.4	644.8	650.3
137.5°	428.6	468.5	507.0	540.1	566.8	586.8	597.5	601.5
140°	415.9	451.1	484.4	513.5	538.2	556.7	567.8	568.4
142.5°	403.3	433.6	462.6	488.0	509.2	525.8	535.9	536.5
145°	389.7	412.0	433.8	453.2	469.6	483.5	489.5	491.7
147.5°	378.7	395.5	412.1	425.6	438.2	447.8	453.4	454.7
150°	371.6	385.9	398.9	410.8	420.6	427.9	432.1	432.6
152.5°	366.1	378.4	389.9	399.7	407.2	413.6	415.9	416.0
155°	358.0	367.9	377.2	384.6	390.1	395.1	396.4	397.0
157.5°	349.3	357.6	364.8	370.6	375.4	379.1	380.2	380.0
160°	344.4	351.2	357.4	361.7	366.1	369.7	369.7	369.2
162.5°	338.4	344.2	349.9	353.8	356.6	359.8	359.8	359.3
165°	330.7	334.5	338.8	341.9	344.4	346.8	346.2	346.2
167.5°	324.0	326.9	329.4	331.6	332.7	334.5	333.8	333.8
170°	319.6	321.5	323.9	325.2	325.7	327.0	326.4	326.4
172.5°	315.6	317.0	318.9	319.7	319.8	321.1	320.0	319.5
175°	310.3	310.9	312.1	312.1	312.1	312.8	312.1	311.6
177.5°	307.0	307.4	307.9	307.9	307.4	307.9	307.0	307.0
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9

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