

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: P332293-927

Luminaire Tested: **S123RDIP-S560D1025U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332293-927
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: S123RDIP-S560D1025U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4632.2 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

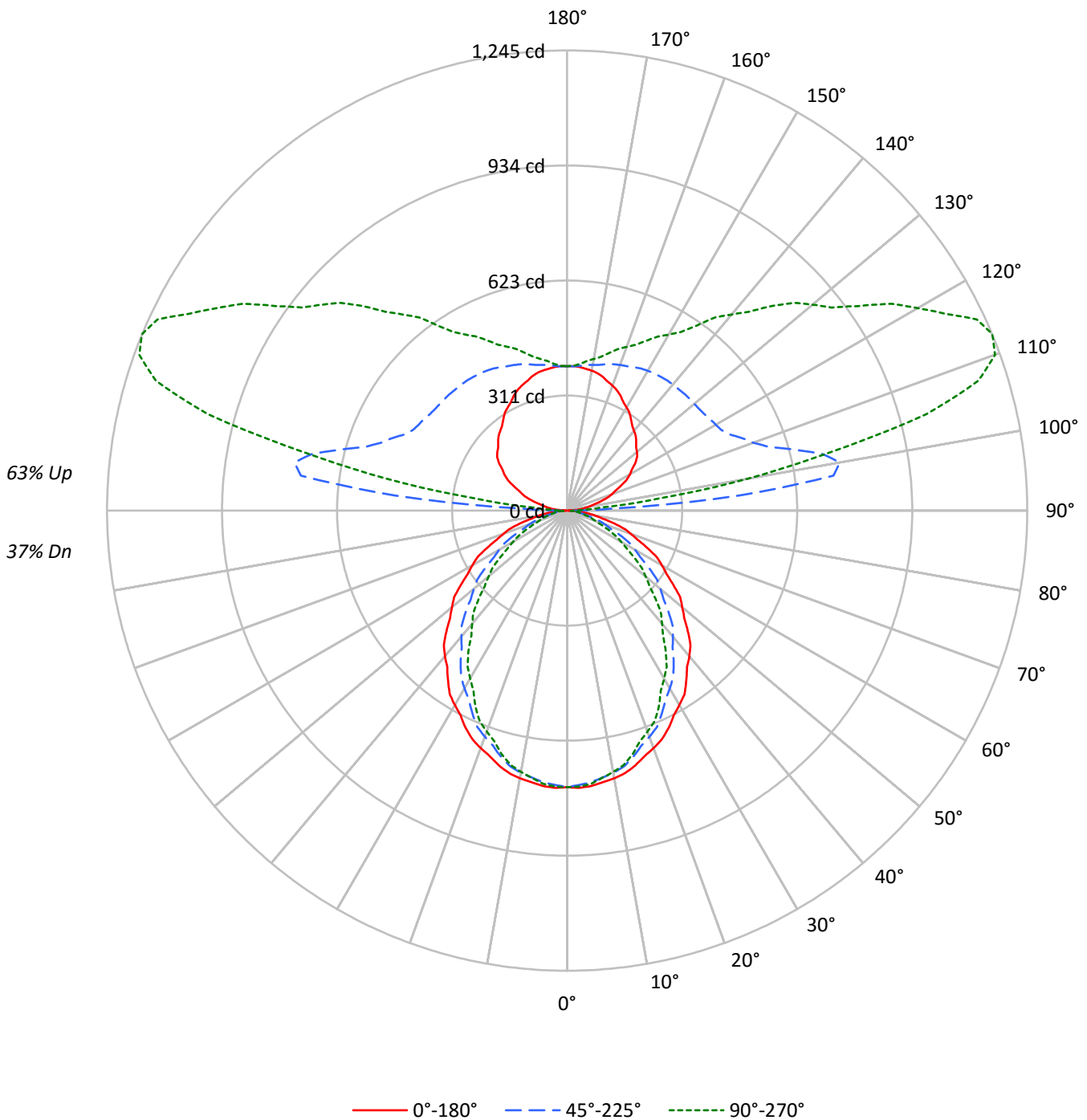
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37				
1	95	91	87	84	86	82	79	76	67	65	63	52	51	50	39	38	37	31				
2	87	80	74	69	78	72	67	63	59	55	52	46	44	42	35	33	32	27				
3	79	70	63	57	71	64	58	53	52	48	44	41	38	36	31	29	27	23				
4	72	62	55	49	65	57	50	45	46	41	38	37	33	31	28	26	24	20				
5	67	55	48	42	60	51	44	39	41	36	33	33	29	27	25	23	21	17				
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	20	18	15				
7	57	45	37	32	51	41	34	29	34	29	25	27	23	21	21	18	16	14				
8	53	41	33	28	48	37	31	26	31	26	22	25	21	18	19	17	15	12				
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11				
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8054	8054	8054
5°	8084	7973	8018
10°	8039	7873	7847
15°	7952	7689	7608
20°	7834	7458	7285
25°	7712	7201	6969
30°	7549	6901	6524
35°	7384	6603	6116
40°	7231	6250	5611
45°	7030	5903	5154
50°	6807	5508	4644
55°	6583	5056	4168
60°	6374	4573	3645
65°	6105	4050	3123
70°	5766	3402	2521
75°	5273	2674	2371
80°	4705	2374	2182
85°	3977	2100	1951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	1.5
10°-20°	195.5	4.2
20°-30°	281.5	6.1
30°-40°	317.1	6.8
40°-50°	303.3	6.5
50°-60°	248.4	5.4
60°-70°	167.6	3.6
70°-80°	84.3	1.8
80°-90°	25.3	0.5
90°-100°	217.4	4.7
100°-110°	615.6	13.3
110°-120°	605.5	13.1
120°-130°	483.0	10.4
130°-140°	380.8	8.2
140°-150°	284.2	6.1
150°-160°	198.1	4.3
160°-170°	116.4	2.5
170°-180°	37.9	0.8
0°-30°	547.2	11.8
0°-40°	864.3	18.7
0°-60°	1416.1	30.6
0°-90°	1693.3	36.6
90°-120°	1438.5	31.1
90°-150°	2586.5	55.8
90°-180°	2939.0	63.4
0°-180°	4632.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	745	738	743	742	71
15°	714	706	690	687	683	201
25°	649	633	606	594	587	298
35°	562	539	502	477	465	352
45°	462	433	388	354	339	356
55°	351	320	269	236	222	314
65°	240	206	159	130	123	237
75°	127	97	64	58	57	135
85°	32	19	17	16	16	36
90°	2	10	20	22	23	3
95°	27	87	469	137	92	29
105°	92	136	636	1112	1006	97
115°	162	202	486	1066	1223	160
125°	225	266	454	822	965	200
135°	264	315	448	677	782	204
145°	301	345	442	556	611	189
155°	342	369	428	486	507	157
165°	374	385	410	434	442	105
175°	390	390	393	398	398	37
180°	391	391	391	391	391	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	750.7	750.2	749.8	749.3	748.9	748.1	746.8	745.4	744.2	742.9	744.1
5°	748.2	747.6	746.9	746.2	745.5	744.4	742.8	741.2	739.5	737.9	739.1
7.5°	741.3	740.6	739.8	739.1	738.4	737.0	734.9	732.8	730.6	728.6	729.2
10°	735.5	734.5	733.6	732.6	731.7	730.0	727.6	725.2	722.7	720.3	720.4
12.5°	727.2	726.2	725.1	724.1	723.0	721.0	718.0	715.1	712.1	709.2	709.1
15°	713.6	712.2	710.7	709.2	707.7	705.0	701.3	697.5	693.7	690.0	689.3
17.5°	696.5	694.8	693.1	691.3	689.6	686.3	681.5	676.8	671.9	667.2	665.7
20°	683.9	681.8	679.6	677.4	675.3	671.6	666.5	661.4	656.2	651.1	649.4
22.5°	669.8	667.3	664.9	662.3	659.9	655.9	650.5	645.0	639.6	634.1	631.9
25°	649.3	645.9	642.5	639.2	635.8	631.1	624.8	618.6	612.4	606.3	603.4
27.5°	624.4	620.7	617.0	613.2	609.5	604.2	597.3	590.4	583.5	576.6	572.7
30°	607.4	603.4	599.4	595.3	591.3	585.4	577.9	570.4	562.8	555.2	550.6
32.5°	590.4	585.9	581.3	576.7	572.1	565.9	557.9	549.9	541.9	533.9	528.9
35°	561.9	557.1	552.2	547.4	542.5	535.9	527.5	519.2	510.8	502.5	496.6
37.5°	533.1	527.7	522.3	516.8	511.4	504.3	495.4	486.5	477.5	468.6	462.0
40°	514.6	508.7	502.7	496.8	490.8	483.1	473.6	464.0	454.4	444.8	437.8
42.5°	493.7	487.7	481.9	475.9	470.0	462.1	452.2	442.3	432.4	422.5	414.8
45°	461.8	455.7	449.6	443.6	437.5	429.3	418.9	408.5	398.2	387.8	380.1
47.5°	429.8	423.2	416.5	409.9	403.2	394.7	384.3	373.9	363.5	353.2	344.8
50°	406.5	400.2	393.9	387.5	381.2	372.6	361.6	350.8	339.8	328.9	320.5
52.5°	385.7	378.8	371.9	365.0	358.2	349.4	338.5	327.7	316.9	306.1	297.4
55°	350.8	344.1	337.5	330.9	324.3	315.3	303.8	292.4	280.9	269.4	261.6
57.5°	318.5	311.2	304.0	296.8	289.6	280.3	268.8	257.3	245.7	234.2	226.9
60°	296.1	288.8	281.3	273.9	266.5	257.1	246.0	234.8	223.6	212.4	205.1
62.5°	273.8	266.4	259.0	251.5	244.2	234.8	223.6	212.5	201.2	190.0	183.2
65°	239.7	232.3	224.9	217.5	210.0	201.1	190.5	180.1	169.5	159.0	152.4
67.5°	205.6	198.1	190.6	183.1	175.6	166.8	156.7	146.6	136.6	126.4	121.5
70°	183.2	175.9	168.7	161.4	154.2	145.8	136.3	126.9	117.5	108.1	103.3
72.5°	160.9	153.8	146.6	139.4	132.2	124.4	115.8	107.2	98.6	90.1	86.2
75°	126.8	120.3	113.9	107.4	100.9	94.0	86.6	79.1	71.8	64.3	63.0
77.5°	95.8	89.9	84.1	78.2	72.3	67.0	62.3	57.5	52.7	47.9	47.2
80°	75.9	70.3	64.8	59.3	53.7	49.6	46.7	43.9	41.0	38.3	37.8
82.5°	57.0	52.1	47.4	42.6	37.8	34.8	33.4	32.2	30.8	29.5	29.1
85°	32.2	29.2	26.2	23.3	20.3	18.6	18.2	17.8	17.4	17.0	16.7
87.5°	12.0	11.1	10.2	9.5	8.6	8.4	8.9	9.3	9.8	10.3	10.0
90°	1.6	3.2	4.8	7.1	8.7	10.3	12.7	15.1	17.4	19.8	19.0
92.5°	9.8	14.6	21.2	27.3	34.0	45.7	66.4	100.4	133.8	121.6	91.7
95°	26.9	29.2	37.9	51.4	71.9	102.8	170.0	287.8	417.5	468.9	380.3
97.5°	45.9	46.7	53.5	65.1	85.4	118.7	183.0	315.8	532.0	726.7	777.4
100°	58.5	59.3	64.9	75.9	94.9	125.7	181.1	298.1	506.0	748.8	904.6
102.5°	71.8	73.2	78.1	88.6	105.7	134.0	183.6	282.9	468.1	707.7	910.9
105°	91.7	94.1	98.9	108.4	123.3	147.9	190.6	272.0	421.4	635.7	862.7
107.5°	112.9	115.3	119.9	129.2	143.3	166.0	203.5	271.2	391.7	572.2	778.2
110°	128.1	130.5	134.4	143.1	156.5	178.7	214.3	274.4	380.3	536.1	725.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.0	144.4	148.4	157.0	170.5	192.0	225.1	280.7	374.0	512.1	678.9
115°	162.1	165.2	170.0	177.9	191.4	212.7	242.7	291.0	371.6	486.3	623.1
117.5°	182.2	185.8	189.8	197.0	212.1	231.9	261.6	304.6	373.0	471.1	589.4
120°	196.1	198.4	202.4	210.3	225.4	245.1	273.6	314.7	375.6	464.1	571.7
122.5°	208.1	210.5	214.4	223.0	237.4	258.4	286.2	324.2	380.0	459.7	557.1
125°	225.4	227.0	231.7	240.3	255.4	276.8	304.4	339.2	386.7	453.9	538.5
127.5°	238.5	240.8	246.7	255.6	272.2	293.5	320.3	351.6	394.3	451.1	522.0
130°	246.7	249.1	256.2	265.7	282.3	303.6	329.7	359.8	399.3	449.2	513.2
132.5°	253.0	256.0	263.8	275.2	291.8	312.5	337.9	367.4	403.1	448.5	504.9
135°	264.1	267.3	276.0	287.8	304.4	325.7	350.3	377.2	408.8	447.6	494.2
137.5°	274.6	277.9	286.4	299.0	315.5	335.3	358.9	384.4	412.6	445.8	484.9
140°	281.5	285.4	293.3	306.0	321.9	341.6	364.6	388.2	415.1	445.2	479.2
142.5°	289.1	292.4	301.0	312.4	328.1	346.7	369.0	392.1	417.0	443.9	474.1
145°	301.3	303.6	310.8	322.7	336.0	354.3	374.8	396.2	418.3	442.0	467.3
147.5°	313.6	315.1	322.0	332.2	345.2	360.8	379.5	398.7	418.3	439.0	460.7
150°	321.9	322.7	328.9	339.2	350.3	364.6	382.7	399.3	418.3	436.5	456.2
152.5°	330.0	330.2	336.5	345.5	355.4	369.0	384.6	400.6	416.4	433.3	451.2
155°	342.4	342.4	347.1	355.1	363.8	374.8	388.2	400.9	414.3	427.8	443.6
157.5°	352.2	352.8	356.6	363.6	371.0	379.5	390.3	401.7	411.7	422.9	435.1
160°	359.8	359.8	363.0	369.2	374.8	382.7	392.2	401.7	410.4	419.1	429.4
162.5°	365.5	365.5	368.0	373.0	378.0	384.6	392.8	401.1	407.9	415.3	423.7
165°	374.0	373.2	374.8	378.7	381.9	387.5	393.8	399.3	404.1	409.6	415.9
167.5°	380.5	379.5	380.3	383.3	385.6	389.0	393.6	398.1	400.3	403.9	408.5
170°	384.3	382.7	383.5	385.9	387.5	389.0	393.0	396.2	397.8	400.1	404.1
172.5°	386.8	385.9	386.0	387.8	388.7	389.7	393.0	395.5	395.9	397.0	399.7
175°	389.8	389.0	388.2	389.8	389.8	390.6	392.2	393.8	393.0	393.0	394.6
177.5°	391.3	390.6	390.0	390.6	390.6	390.6	391.3	392.5	391.3	390.6	391.3
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	745.3	746.5	747.7	748.1	747.9	747.7	747.5	747.3
5°	740.3	741.6	742.8	743.2	743.0	742.7	742.4	742.1
7.5°	729.9	730.6	731.3	731.3	730.9	730.5	730.0	729.5
10°	720.6	720.7	720.8	720.6	719.9	719.2	718.6	717.9
12.5°	709.0	708.9	708.8	708.4	707.6	706.8	706.1	705.3
15°	688.6	687.9	687.3	686.4	685.5	684.6	683.7	682.7
17.5°	664.3	662.9	661.4	660.0	658.6	657.2	655.8	654.4
20°	647.6	645.9	644.1	642.5	640.8	639.2	637.5	636.0
22.5°	629.8	627.6	625.4	623.5	622.0	620.5	619.0	617.5
25°	600.6	597.7	594.9	592.7	591.3	589.8	588.3	586.8
27.5°	568.7	564.8	560.9	557.8	555.5	553.3	551.0	548.7
30°	546.1	541.5	536.9	533.5	531.4	529.3	527.0	524.9
32.5°	523.9	518.8	513.8	510.2	507.9	505.6	503.4	501.1
35°	490.8	485.1	479.3	475.2	472.7	470.3	467.9	465.4
37.5°	455.4	448.9	442.3	437.5	434.5	431.5	428.5	425.5
40°	430.8	423.7	416.8	411.7	408.6	405.5	402.4	399.3
42.5°	407.2	399.5	391.8	386.6	383.8	381.0	378.3	375.5
45°	372.4	364.7	357.0	351.6	348.3	345.1	341.8	338.6
47.5°	336.4	328.1	319.7	314.1	311.2	308.3	305.5	302.5
50°	312.2	303.8	295.5	289.7	286.6	283.5	280.4	277.3
52.5°	288.8	280.0	271.3	265.6	262.8	260.1	257.3	254.5
55°	253.8	246.0	238.1	232.9	230.2	227.5	224.8	222.1
57.5°	219.4	212.1	204.7	199.9	197.6	195.3	193.0	190.7
60°	197.8	190.5	183.2	178.5	176.2	173.9	171.6	169.3
62.5°	176.3	169.5	162.6	158.0	155.7	153.2	150.8	148.5
65°	145.8	139.2	132.5	128.5	127.1	125.6	124.1	122.6
67.5°	116.6	111.6	106.7	103.5	101.9	100.3	98.7	97.1
70°	98.5	93.9	89.1	86.0	84.5	83.1	81.6	80.1
72.5°	82.3	78.5	74.6	72.4	71.8	71.1	70.5	69.9
75°	61.6	60.3	58.9	58.1	57.8	57.6	57.3	57.0
77.5°	46.5	45.8	45.0	44.5	44.3	44.0	43.7	43.4
80°	37.4	37.0	36.6	36.3	36.0	35.7	35.5	35.2
82.5°	28.7	28.3	27.9	27.6	27.6	27.6	27.5	27.4
85°	16.5	16.2	15.9	15.8	15.8	15.8	15.8	15.8
87.5°	10.1	10.1	10.1	10.4	10.1	10.1	10.2	9.9
90°	19.8	20.6	21.4	22.9	22.1	22.9	23.7	22.9
92.5°	66.5	52.8	46.7	42.5	41.1	38.7	39.5	38.1
95°	284.6	193.0	151.1	122.6	107.6	100.4	94.9	91.7
97.5°	709.6	568.4	466.4	371.8	313.5	277.9	256.5	249.7
100°	932.3	868.2	775.7	663.5	583.6	525.9	495.0	495.8
102.5°	1006.3	1004.2	950.3	879.2	817.0	771.3	745.5	727.3
105°	1027.9	1107.1	1122.0	1101.5	1065.1	1035.1	1009.8	1005.8
107.5°	965.7	1094.1	1163.3	1191.5	1192.2	1182.0	1173.5	1166.2
110°	906.2	1051.7	1151.3	1206.7	1228.8	1235.2	1233.6	1232.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	847.3	996.0	1107.6	1178.8	1219.3	1238.9	1244.9	1245.2
115°	769.4	907.0	1023.2	1109.4	1168.7	1203.5	1219.3	1223.3
117.5°	713.0	831.7	936.0	1023.5	1085.4	1125.2	1148.0	1153.3
120°	683.2	790.0	884.9	964.7	1027.1	1071.4	1090.4	1095.2
122.5°	659.8	756.5	844.4	918.5	974.1	1013.9	1034.7	1040.8
125°	628.7	714.9	790.8	854.0	904.6	939.4	959.2	964.7
127.5°	601.4	678.3	746.8	804.3	849.4	879.2	897.0	902.1
130°	584.4	655.5	719.5	773.3	815.2	843.8	860.3	866.6
132.5°	568.5	634.0	693.6	744.9	784.3	812.7	827.4	831.9
135°	547.2	603.3	654.7	699.8	738.6	762.2	776.5	782.0
137.5°	527.8	573.8	618.1	657.1	689.7	713.8	725.7	729.4
140°	516.3	556.7	594.6	628.7	658.7	680.8	693.5	692.7
142.5°	505.6	540.3	573.1	602.7	628.4	647.9	659.3	658.5
145°	492.7	518.7	544.0	567.0	586.7	603.3	609.7	611.2
147.5°	482.0	502.7	523.2	539.5	554.4	565.7	571.7	572.4
150°	474.4	492.7	509.2	524.3	536.1	544.8	549.5	549.5
152.5°	467.5	483.2	497.9	510.3	519.7	527.8	530.6	530.6
155°	457.0	469.7	481.6	491.1	498.2	504.5	506.0	506.8
157.5°	446.0	456.5	465.7	473.2	479.3	484.1	485.4	485.2
160°	439.7	448.4	456.2	461.8	467.3	472.1	472.1	471.3
162.5°	432.1	439.5	446.8	451.7	455.3	459.4	459.4	458.6
165°	422.2	427.0	432.5	436.5	439.7	442.8	442.0	442.0
167.5°	413.7	417.3	420.5	423.3	424.8	427.0	426.2	426.2
170°	408.1	410.4	413.5	415.1	415.9	417.5	416.7	416.7
172.5°	403.0	404.7	407.3	408.2	408.4	410.0	408.5	407.9
175°	396.2	397.0	398.5	398.5	398.5	399.3	398.5	397.8
177.5°	391.9	392.5	393.2	393.2	392.5	393.2	391.9	391.9
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6

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