

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: P332603-935

Luminaire Tested: **S124DIP-S795D810U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332603-935  
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-S795D810U935-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5282.0 lumens  
Efficiency: N/A  
Efficacy: 115.1 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

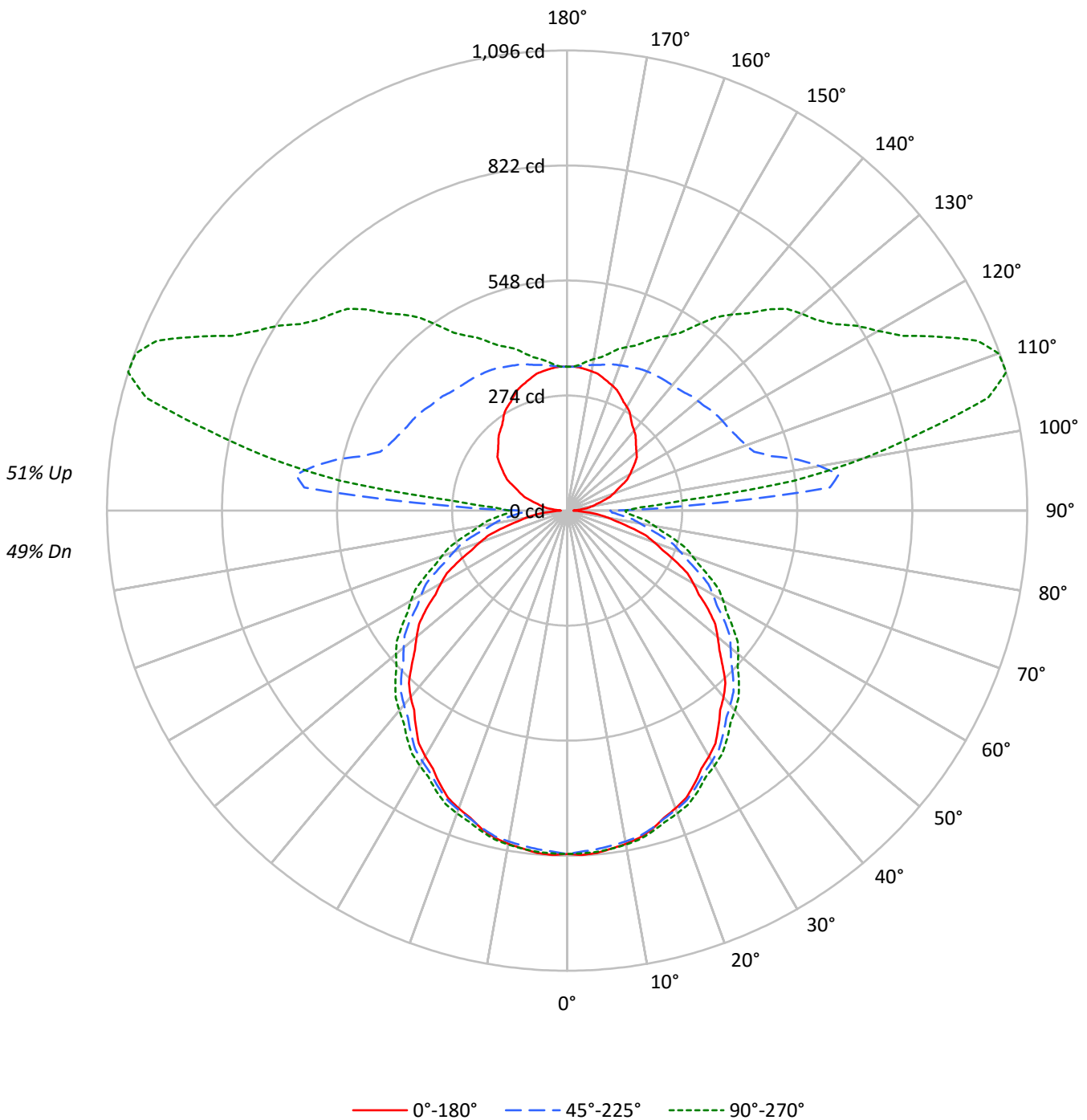
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.4	1.5
10°-20°	221.9	4.2
20°-30°	335.5	6.4
30°-40°	405.9	7.7
40°-50°	429.2	8.1
50°-60°	403.9	7.6
60°-70°	335.1	6.3
70°-80°	235.4	4.5
80°-90°	135.0	2.6
90°-100°	326.5	6.2
100°-110°	573.6	10.9
110°-120°	500.7	9.5
120°-130°	410.3	7.8
130°-140°	333.2	6.3
140°-150°	249.2	4.7
150°-160°	173.8	3.3
160°-170°	102.2	1.9
170°-180°	33.3	0.6
0°-30°	634.9	12.0
0°-40°	1040.8	19.7
0°-60°	1873.9	35.5
0°-90°	2579.3	48.8
90°-120°	1400.8	26.5
90°-150°	2393.4	45.3
90°-180°	2703.0	51.2
0°-180°	5282.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	15	57	103	130	139	11
95°	34	112	628	375	277	34
105°	87	142	502	1033	1038	93
115°	144	189	437	819	979	143
125°	197	234	418	686	774	175
135°	231	276	397	594	677	179
145°	266	303	386	487	539	167
155°	301	325	376	426	444	139
165°	328	338	360	381	387	93
175°	342	343	345	350	349	32
180°	343	343	343	343	343	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.2	35.8	44.5	53.0	61.4	70.0	79.7	88.7	97.8	107.0	112.8
90°	15.3	24.8	35.0	43.8	52.6	61.0	73.9	82.6	92.7	102.8	108.1
92.5°	21.6	32.5	46.1	61.6	78.8	100.8	143.8	204.7	264.4	299.8	269.8
95°	34.1	42.9	56.3	71.8	94.6	130.4	197.3	316.2	485.3	628.4	649.4
97.5°	50.6	56.5	68.0	81.9	101.5	132.2	185.6	285.0	453.2	651.9	788.1
100°	61.2	66.6	76.5	89.9	108.0	136.1	183.8	267.9	413.1	610.9	788.8
102.5°	72.0	77.7	86.5	98.8	115.6	142.3	186.0	260.7	385.4	561.5	744.5
105°	87.0	93.1	100.6	112.7	128.9	154.2	194.1	257.4	359.2	502.0	665.4
107.5°	105.4	110.1	116.8	128.7	143.7	168.2	204.9	262.9	350.6	466.6	600.7
110°	117.1	121.2	127.5	138.4	153.3	176.5	213.3	267.5	348.7	453.5	567.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	128.2	132.1	138.4	148.5	163.2	186.1	221.4	272.6	348.6	445.0	547.3
115°	144.2	148.0	154.5	163.2	177.8	200.1	233.6	280.4	349.6	436.9	526.2
117.5°	161.8	164.8	170.0	178.6	191.7	214.0	245.7	289.0	351.1	430.8	513.4
120°	172.9	174.9	180.2	188.2	200.3	222.3	253.8	294.7	352.5	427.1	505.8
122.5°	183.7	185.1	189.9	196.9	209.6	230.7	261.9	300.3	354.0	422.8	497.9
125°	196.9	199.4	203.2	210.4	223.0	244.3	273.6	309.7	357.1	417.5	485.9
127.5°	209.2	211.2	215.9	224.1	237.2	258.0	285.4	317.7	358.6	410.5	470.7
130°	215.5	218.0	223.2	233.1	245.6	266.7	292.8	322.4	360.0	406.3	461.2
132.5°	222.5	224.5	231.3	240.6	254.3	273.9	299.4	327.7	361.4	402.8	452.6
135°	231.4	234.1	240.8	252.3	266.4	284.6	308.2	333.9	363.0	396.7	439.0
137.5°	241.3	243.6	250.8	261.5	276.0	292.9	314.4	337.7	362.8	392.4	427.5
140°	248.2	250.0	257.3	268.5	282.4	298.6	319.0	340.7	363.9	389.6	421.2
142.5°	255.0	257.0	263.8	274.7	288.3	303.8	323.3	343.2	364.8	388.1	416.2
145°	265.5	267.3	273.9	283.1	295.7	310.4	327.9	346.0	365.6	386.4	409.2
147.5°	277.5	277.9	283.7	293.2	303.6	316.8	333.3	349.1	366.3	384.0	403.1
150°	285.0	285.5	290.7	298.5	308.4	321.2	336.0	350.8	366.3	382.4	399.2
152.5°	291.3	291.4	296.7	304.2	313.2	324.9	338.1	351.8	365.2	379.7	394.9
155°	300.9	301.6	305.7	312.4	319.8	329.8	341.3	352.8	363.5	375.7	388.5
157.5°	310.5	310.5	314.3	319.5	326.0	333.9	343.6	352.8	361.8	371.5	381.9
160°	316.4	316.4	319.1	323.8	329.2	336.7	344.7	352.8	360.2	368.2	377.0
162.5°	321.8	321.2	323.4	327.6	332.4	338.2	345.8	352.8	358.6	365.1	372.7
165°	327.9	327.9	329.2	332.6	336.0	340.0	346.0	351.5	355.5	360.2	365.6
167.5°	333.9	333.3	333.9	336.5	338.4	341.5	345.9	349.8	352.2	355.3	359.1
170°	336.7	336.0	336.7	338.6	340.0	342.0	345.3	348.7	350.1	352.1	354.8
172.5°	339.3	338.6	338.8	340.3	341.0	342.5	344.8	347.7	347.9	348.9	351.0
175°	342.0	341.3	341.3	342.0	342.7	342.7	344.1	346.0	345.3	345.3	346.7
177.5°	343.2	342.7	342.2	342.7	342.7	342.7	343.2	344.3	343.2	343.2	343.7
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	118.8	124.8	130.9	134.7	136.6	138.6	140.3	142.1
90°	114.6	121.1	127.8	131.5	133.8	136.1	137.1	138.7
92.5°	230.0	203.0	188.4	178.7	172.3	170.3	169.6	171.3
95°	589.5	490.7	406.0	344.3	313.1	294.1	283.9	276.9
97.5°	821.7	788.2	727.8	661.0	614.4	575.7	557.2	544.9
100°	892.5	911.5	884.0	837.6	780.5	740.8	722.0	718.1
102.5°	884.8	956.8	971.7	954.5	920.2	892.0	872.3	869.5
105°	824.7	946.2	1018.0	1048.9	1051.9	1048.1	1040.3	1037.9
107.5°	742.3	871.3	970.2	1033.5	1068.2	1084.9	1093.2	1096.4
110°	692.4	813.6	915.8	993.1	1042.5	1072.4	1086.2	1093.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	654.4	762.0	858.8	935.9	991.8	1027.6	1046.2	1057.7
115°	614.8	702.1	785.3	852.9	907.6	949.3	972.3	979.1
117.5°	592.1	665.0	731.1	788.8	835.9	871.4	894.8	900.6
120°	580.6	647.3	705.2	755.9	795.9	827.2	846.3	855.3
122.5°	570.5	635.0	688.1	732.7	766.6	793.4	809.7	818.6
125°	554.5	616.2	666.6	706.1	734.3	755.0	769.0	774.3
127.5°	535.1	594.1	644.1	681.7	710.2	728.9	741.1	746.5
130°	520.6	577.5	627.0	665.0	693.9	712.0	723.9	729.2
132.5°	506.1	559.6	607.8	645.8	674.1	694.3	705.8	711.0
135°	484.7	531.7	576.0	611.9	640.1	660.1	672.1	677.3
137.5°	465.7	505.8	543.3	575.8	601.9	621.6	631.5	637.3
140°	454.9	489.1	522.0	552.2	576.8	592.5	603.0	609.4
142.5°	445.1	475.4	503.7	529.8	551.5	566.1	575.2	579.9
145°	432.0	456.1	477.5	497.4	515.1	527.3	534.9	539.0
147.5°	421.1	439.5	455.7	471.0	484.1	494.5	500.2	502.1
150°	415.3	430.8	444.4	456.4	467.3	476.0	480.0	480.7
152.5°	409.5	422.8	435.1	445.1	454.3	461.4	463.8	464.5
155°	400.5	411.4	421.5	429.6	436.3	441.6	443.7	443.7
157.5°	391.0	400.0	408.5	415.0	420.1	424.1	425.3	425.3
160°	385.1	392.5	399.9	405.3	409.3	413.4	414.1	414.1
162.5°	379.2	385.5	391.3	396.1	399.1	403.1	403.8	403.3
165°	370.9	375.0	379.7	383.1	385.7	388.5	387.8	387.1
167.5°	363.0	366.1	369.9	371.9	373.2	375.0	374.9	374.3
170°	358.2	360.2	362.9	364.9	366.3	366.9	366.3	366.3
172.5°	353.9	355.3	357.0	358.4	359.2	359.9	359.2	358.2
175°	348.1	348.7	350.1	350.1	350.1	351.5	350.1	348.7
177.5°	344.3	344.8	344.8	345.3	344.8	345.3	344.3	343.2
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7

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