

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: P331263

Luminaire Tested: **S122DIP-S290D725U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331263  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S290D725U835-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

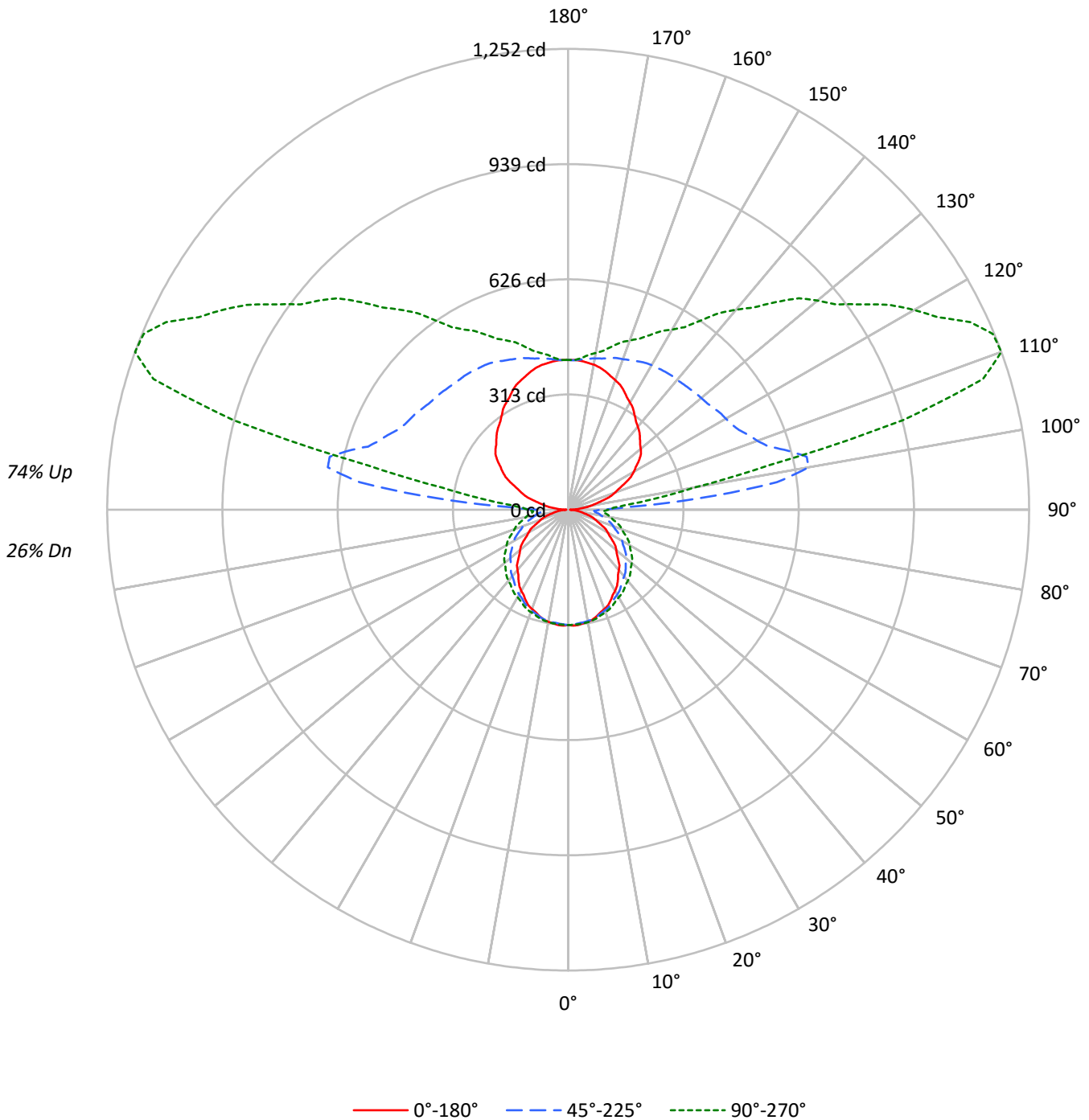
Lumens per Lamp: N/A  
Luminaire Lumens: 4028.1 lumens  
Efficiency: N/A  
Efficacy: 129.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	91	91	91	91	70	70	70	52	52	52	35	35	35	26
1	92	87	83	79	82	78	74	71	60	58	56	44	43	41	29	28	27	21
2	83	76	69	64	74	67	62	58	52	49	45	38	36	34	25	24	22	17
3	76	66	59	53	67	59	53	48	46	41	38	33	31	28	22	20	19	14
4	69	58	50	44	61	52	45	40	40	36	32	30	26	24	20	18	16	12
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	14	10
6	58	46	38	32	51	41	34	29	32	27	23	24	20	18	16	14	12	9
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	8
8	49	37	30	25	44	34	27	22	26	21	18	19	16	14	13	11	9	7
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	8	5

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

	0°	45°	90°
0°	5062	5062	5062
5°	5086	4872	4853
10°	5054	4728	4675
15°	4983	4575	4487
20°	4896	4412	4306
25°	4810	4254	4140
30°	4687	4093	3976
35°	4563	3936	3860
40°	4433	3803	3743
45°	4308	3685	3644
50°	4176	3577	3546
55°	4035	3461	3447
60°	3865	3340	3342
65°	3686	3200	3215
70°	3487	3048	3081
75°	3236	2900	2956
80°	2836	2748	2829
85°	2454	2617	2731



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.7	0.7
10°-20°	85.2	2.1
20°-30°	129.1	3.2
30°-40°	157.2	3.9
40°-50°	169.1	4.2
50°-60°	164.2	4.1
60°-70°	143.4	3.6
70°-80°	110.4	2.7
80°-90°	77.8	1.9
90°-100°	213.6	5.3
100°-110°	588.8	14.6
110°-120°	610.5	15.2
120°-130°	496.1	12.3
130°-140°	393.1	9.8
140°-150°	293.7	7.3
150°-160°	205.7	5.1
160°-170°	121.1	3.0
170°-180°	39.4	1.0
0°-30°	243.9	6.1
0°-40°	401.1	10.0
0°-60°	734.5	18.2
0°-90°	1066.0	26.5
90°-120°	1412.9	35.1
90°-150°	2595.8	64.4
90°-180°	2962.0	73.5
0°-180°	4028.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	314	313	310	313	312	30
15°	300	301	301	305	304	84
25°	273	276	280	285	287	125
35°	235	243	251	261	264	147
45°	193	205	221	234	239	149
55°	148	164	188	203	210	132
65°	101	123	150	168	174	100
75°	56	82	110	129	136	59
85°	16	45	74	92	99	18
90°	5	42	86	103	109	5
95°	31	93	359	185	164	32
105°	98	160	618	1090	941	104
115°	170	220	512	1041	1205	168
125°	235	279	481	838	972	209
135°	276	329	465	695	798	213
145°	314	361	458	571	627	197
155°	357	386	445	503	523	164
165°	389	401	426	452	459	110
175°	406	406	410	415	414	39
180°	406	406	406	406	406	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	315.3	315.0	314.8	314.5	314.3	313.9	313.3	312.8	312.2	311.6	312.0
5°	314.4	314.1	313.8	313.5	313.1	312.7	312.1	311.5	310.9	310.3	310.9
7.5°	311.5	311.3	311.1	310.9	310.7	310.4	309.9	309.5	309.0	308.5	309.3
10°	309.4	309.2	309.0	308.8	308.6	308.3	308.0	307.7	307.4	307.1	307.9
12.5°	305.7	305.8	305.8	305.9	305.9	305.8	305.6	305.4	305.1	304.9	305.7
15°	299.8	300.0	300.2	300.4	300.6	300.7	300.7	300.7	300.7	300.7	301.6
17.5°	292.2	292.6	293.0	293.5	293.9	294.3	294.6	294.9	295.2	295.6	296.5
20°	287.1	287.6	288.1	288.6	289.1	289.6	290.0	290.4	290.8	291.2	292.3
22.5°	281.7	282.2	282.8	283.4	284.0	284.6	285.1	285.7	286.3	286.8	287.9
25°	272.6	273.3	274.0	274.7	275.4	276.2	277.1	278.0	278.9	279.8	281.0
27.5°	261.7	262.8	264.0	265.1	266.3	267.4	268.4	269.5	270.6	271.7	273.2
30°	254.4	255.7	257.0	258.3	259.6	261.0	262.3	263.6	264.9	266.2	267.8
32.5°	246.4	247.9	249.3	250.8	252.3	253.8	255.4	256.9	258.5	260.0	261.9
35°	234.9	236.6	238.3	240.0	241.7	243.5	245.5	247.4	249.3	251.2	253.4
37.5°	222.3	224.3	226.3	228.3	230.2	232.5	235.0	237.4	239.9	242.4	244.9
40°	214.0	216.2	218.4	220.6	222.8	225.3	228.0	230.8	233.5	236.2	238.8
42.5°	206.0	208.2	210.4	212.6	214.9	217.5	220.7	223.8	226.9	230.0	232.9
45°	192.6	195.3	198.1	200.8	203.5	206.6	210.2	213.7	217.2	220.8	223.9
47.5°	179.4	182.4	185.4	188.3	191.3	194.9	199.0	203.1	207.3	211.4	214.7
50°	170.4	173.5	176.6	179.7	182.9	186.7	191.3	195.8	200.3	204.9	208.3
52.5°	161.6	164.9	168.2	171.5	174.8	178.8	183.6	188.4	193.2	198.0	201.5
55°	147.6	151.3	154.9	158.5	162.2	166.6	171.9	177.1	182.4	187.6	191.3
57.5°	133.8	137.9	142.0	146.1	150.2	154.9	160.3	165.6	171.0	176.4	180.3
60°	124.0	128.4	132.7	137.0	141.4	146.4	152.2	157.9	163.7	169.4	173.3
62.5°	115.3	119.8	124.3	128.8	133.3	138.4	144.2	149.9	155.7	161.5	165.5
65°	100.8	105.8	110.7	115.7	120.6	126.1	132.0	138.0	144.0	149.9	154.1
67.5°	87.6	92.8	97.9	103.1	108.3	113.9	120.0	126.1	132.2	138.3	142.5
70°	78.1	83.4	88.6	93.9	99.1	104.9	111.1	117.4	123.7	129.9	134.3
72.5°	69.4	74.8	80.2	85.6	91.1	96.9	103.3	109.6	116.0	122.3	126.6
75°	55.9	61.5	67.2	72.8	78.5	84.5	91.0	97.5	103.9	110.4	114.7
77.5°	42.8	48.7	54.6	60.5	66.5	72.7	79.3	85.8	92.4	98.9	103.3
80°	34.1	40.2	46.4	52.5	58.7	65.1	71.6	78.2	84.7	91.3	95.5
82.5°	26.8	32.9	39.0	45.0	51.1	57.5	64.1	70.8	77.4	84.0	88.3
85°	16.4	22.6	28.9	35.1	41.4	47.7	54.2	60.7	67.1	73.6	77.8
87.5°	9.1	15.5	22.2	28.5	34.8	41.6	48.8	56.4	63.8	70.4	74.3
90°	5.3	13.5	22.5	29.9	37.3	45.8	56.2	68.1	79.3	86.5	89.8
92.5°	13.7	23.4	34.5	43.4	54.1	67.3	91.2	122.3	150.7	158.3	146.5
95°	31.0	38.9	51.4	63.2	80.5	104.6	146.6	220.7	317.4	358.7	324.2
97.5°	47.7	56.2	68.7	83.5	102.1	128.4	179.4	280.0	436.5	571.4	600.8
100°	63.4	69.5	80.2	96.5	115.8	142.4	189.5	290.5	465.0	663.0	779.3
102.5°	77.4	82.5	93.0	108.9	128.6	154.9	198.7	288.9	450.8	663.6	844.2
105°	97.6	103.7	112.1	126.7	146.9	172.8	214.8	289.7	423.9	618.3	829.8
107.5°	120.1	124.9	132.6	145.7	165.1	190.8	231.5	297.2	408.8	570.2	757.3
110°	134.7	139.9	146.6	158.7	177.2	203.3	242.7	303.9	404.2	546.7	711.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.5	153.3	160.3	171.5	189.0	215.5	253.4	311.2	402.5	530.4	679.2
115°	169.9	174.9	180.7	191.2	207.9	231.9	270.0	322.3	402.6	511.9	638.4
117.5°	191.6	195.5	200.9	209.9	225.6	250.0	285.3	334.2	404.9	500.8	611.2
120°	205.4	208.9	214.0	221.5	237.5	261.6	296.1	342.4	406.6	494.3	596.4
122.5°	218.5	221.2	226.0	233.9	249.7	274.1	306.5	349.4	409.0	489.6	583.5
125°	235.4	237.8	242.5	251.8	267.5	291.0	322.3	360.8	412.4	481.3	564.6
127.5°	249.2	252.2	258.7	268.9	283.8	307.6	337.5	371.7	416.5	475.4	547.0
130°	257.3	260.3	268.0	278.9	294.4	317.3	346.8	378.6	419.8	472.0	535.4
132.5°	264.8	268.5	276.8	288.3	304.4	327.1	354.8	385.5	423.1	469.2	525.6
135°	275.6	278.7	288.1	299.8	317.8	340.2	366.2	394.6	426.9	465.4	512.1
137.5°	286.2	290.0	299.3	311.8	329.6	350.2	375.3	401.2	430.1	462.6	501.9
140°	294.4	297.4	306.7	319.1	336.2	356.6	380.2	404.6	431.4	460.5	495.8
142.5°	302.5	304.9	313.6	326.0	342.4	361.5	384.3	408.0	432.7	459.8	490.3
145°	314.2	317.4	325.2	336.9	352.5	369.7	390.9	412.7	434.6	458.1	483.7
147.5°	327.4	329.7	337.2	348.0	361.0	376.3	396.2	415.4	435.3	455.3	477.2
150°	336.1	338.5	344.7	354.9	366.6	380.7	398.7	416.6	434.6	453.4	472.1
152.5°	344.9	346.0	352.2	361.1	372.2	385.1	401.2	417.3	433.4	450.3	467.8
155°	357.2	358.0	362.7	371.3	379.9	391.6	404.9	418.2	431.5	444.8	459.6
157.5°	367.6	368.3	372.1	379.6	386.5	396.3	407.6	418.2	427.9	439.2	452.0
160°	374.4	375.2	378.3	384.6	390.9	399.4	408.8	418.2	426.0	435.4	446.4
162.5°	381.3	380.8	384.0	389.0	394.6	401.3	409.5	417.6	424.2	432.3	441.3
165°	389.3	388.5	390.1	394.8	398.7	403.4	410.4	415.9	420.6	426.0	433.1
167.5°	395.9	394.9	396.3	399.3	402.1	405.1	410.2	414.8	417.0	420.6	424.9
170°	400.2	398.7	399.4	401.8	403.4	405.7	409.6	413.5	415.1	417.4	420.6
172.5°	402.7	401.8	401.3	403.7	404.6	406.3	409.0	411.6	412.6	413.7	416.2
175°	405.7	404.9	404.1	405.7	405.7	406.5	408.0	409.6	408.8	409.6	410.4
177.5°	407.1	405.9	405.2	406.5	406.5	406.5	407.1	408.4	407.1	406.5	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	312.4	312.8	313.2	313.4	313.2	313.0	312.9	312.7
5°	311.5	312.1	312.7	312.9	312.8	312.7	312.6	312.5
7.5°	310.0	310.7	311.5	311.8	311.7	311.6	311.5	311.4
10°	308.7	309.5	310.3	310.7	310.6	310.5	310.4	310.3
12.5°	306.5	307.3	308.1	308.5	308.4	308.3	308.2	308.1
15°	302.5	303.5	304.4	304.8	304.7	304.6	304.5	304.4
17.5°	297.5	298.4	299.3	299.8	299.8	299.8	299.8	299.8
20°	293.4	294.5	295.6	296.2	296.2	296.2	296.2	296.2
22.5°	289.1	290.2	291.3	291.9	292.1	292.2	292.4	292.6
25°	282.3	283.5	284.7	285.4	285.7	286.0	286.3	286.6
27.5°	274.7	276.3	277.8	278.7	278.9	279.1	279.3	279.6
30°	269.4	271.1	272.7	273.6	273.9	274.2	274.5	274.8
32.5°	263.7	265.6	267.5	268.7	269.2	269.8	270.3	270.8
35°	255.7	257.9	260.1	261.6	262.3	263.0	263.7	264.4
37.5°	247.3	249.8	252.3	253.9	254.6	255.4	256.1	256.8
40°	241.5	244.1	246.7	248.5	249.4	250.3	251.2	252.1
42.5°	235.8	238.6	241.5	243.4	244.3	245.2	246.1	247.0
45°	227.0	230.2	233.3	235.4	236.4	237.4	238.4	239.4
47.5°	218.0	221.2	224.5	226.7	227.8	228.9	230.0	231.1
50°	211.7	215.2	218.6	220.9	222.0	223.1	224.2	225.3
52.5°	205.0	208.5	212.0	214.4	215.6	216.8	218.0	219.1
55°	194.9	198.5	202.2	204.6	205.9	207.3	208.6	209.9
57.5°	184.2	188.1	192.0	194.6	196.0	197.3	198.6	200.0
60°	177.1	181.0	184.8	187.4	188.8	190.2	191.7	193.1
62.5°	169.6	173.7	177.8	180.5	181.8	183.1	184.5	185.8
65°	158.2	162.3	166.5	169.2	170.5	171.8	173.1	174.4
67.5°	146.6	150.8	155.0	157.8	159.1	160.5	161.9	163.3
70°	138.6	142.9	147.3	150.1	151.3	152.5	153.7	154.9
72.5°	130.8	135.1	139.3	142.2	143.6	145.1	146.6	148.0
75°	119.1	123.4	127.8	130.6	131.9	133.2	134.5	135.8
77.5°	107.6	111.9	116.2	119.1	120.5	121.9	123.3	124.7
80°	99.8	104.0	108.3	111.1	112.5	113.9	115.3	116.7
82.5°	92.5	96.8	101.0	103.8	105.1	106.5	107.8	109.1
85°	82.1	86.3	90.6	93.4	94.8	96.2	97.6	99.0
87.5°	78.3	82.1	86.5	89.4	90.7	92.0	93.3	94.6
90°	93.1	95.5	101.1	104.5	105.7	107.0	108.2	109.4
92.5°	132.8	127.0	124.4	122.2	122.8	121.5	123.3	123.3
95°	264.7	220.9	191.9	177.2	168.3	163.2	162.1	164.1
97.5°	533.7	450.5	369.7	315.7	279.6	261.5	251.3	245.9
100°	766.6	673.4	570.0	477.9	414.1	381.6	360.0	347.1
102.5°	918.4	900.1	825.4	727.6	658.2	601.9	574.8	556.8
105°	995.9	1087.8	1101.5	1078.0	1030.6	983.3	950.8	940.9
107.5°	933.1	1069.5	1154.2	1194.3	1201.5	1200.0	1194.4	1180.9
110°	880.0	1023.1	1126.4	1192.7	1227.4	1243.4	1251.5	1251.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	831.1	968.7	1078.8	1154.5	1202.3	1228.3	1242.7	1248.0
115°	770.5	893.9	999.3	1081.9	1138.5	1175.6	1197.0	1205.1
117.5°	723.8	832.5	928.3	1005.9	1063.5	1102.5	1125.0	1131.9
120°	700.0	799.8	885.5	958.6	1014.4	1052.3	1076.1	1085.0
122.5°	680.8	772.4	853.6	919.7	969.7	1006.8	1027.9	1035.4
125°	652.5	735.8	807.3	867.7	914.0	944.6	965.0	972.2
127.5°	624.6	699.9	767.3	823.1	863.5	892.3	910.0	915.9
130°	606.6	676.2	740.4	793.6	832.7	860.1	876.6	883.6
132.5°	589.2	653.8	712.9	762.9	801.4	828.8	844.0	850.4
135°	565.0	618.7	672.5	717.7	752.1	778.7	793.6	797.5
137.5°	545.1	590.1	633.0	672.4	703.7	726.6	739.6	745.0
140°	532.6	571.7	609.3	644.8	670.4	691.3	703.7	709.0
142.5°	522.4	555.6	587.9	617.5	641.8	660.8	671.8	673.3
145°	508.5	534.9	559.8	583.0	602.3	616.1	624.4	627.2
147.5°	497.9	518.4	537.4	554.1	569.8	580.7	586.2	587.9
150°	490.9	508.1	524.5	538.6	550.3	559.7	564.4	565.2
152.5°	484.0	500.0	513.9	526.1	535.3	543.4	546.9	547.0
155°	474.5	487.0	498.7	507.3	515.9	521.4	524.5	523.0
157.5°	463.4	473.9	483.7	490.4	496.5	501.1	502.5	502.5
160°	456.5	465.1	473.7	479.2	484.7	488.6	489.3	489.3
162.5°	449.6	457.0	464.3	468.6	474.0	476.7	477.5	476.8
165°	439.3	444.8	450.3	453.4	456.5	459.6	459.6	458.9
167.5°	429.5	433.7	437.4	440.3	441.7	443.4	443.2	442.3
170°	424.5	426.8	429.9	431.5	432.3	434.6	433.8	432.3
172.5°	418.8	420.6	423.1	424.0	424.8	425.9	425.1	424.2
175°	412.7	413.5	414.3	415.1	415.1	415.9	415.1	413.5
177.5°	408.4	408.4	409.0	409.0	409.0	409.0	408.4	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5

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