

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: P331362-930

Luminaire Tested: **S122DIP-S675D925U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331362-930  
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-S675D925U930-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5139.1 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

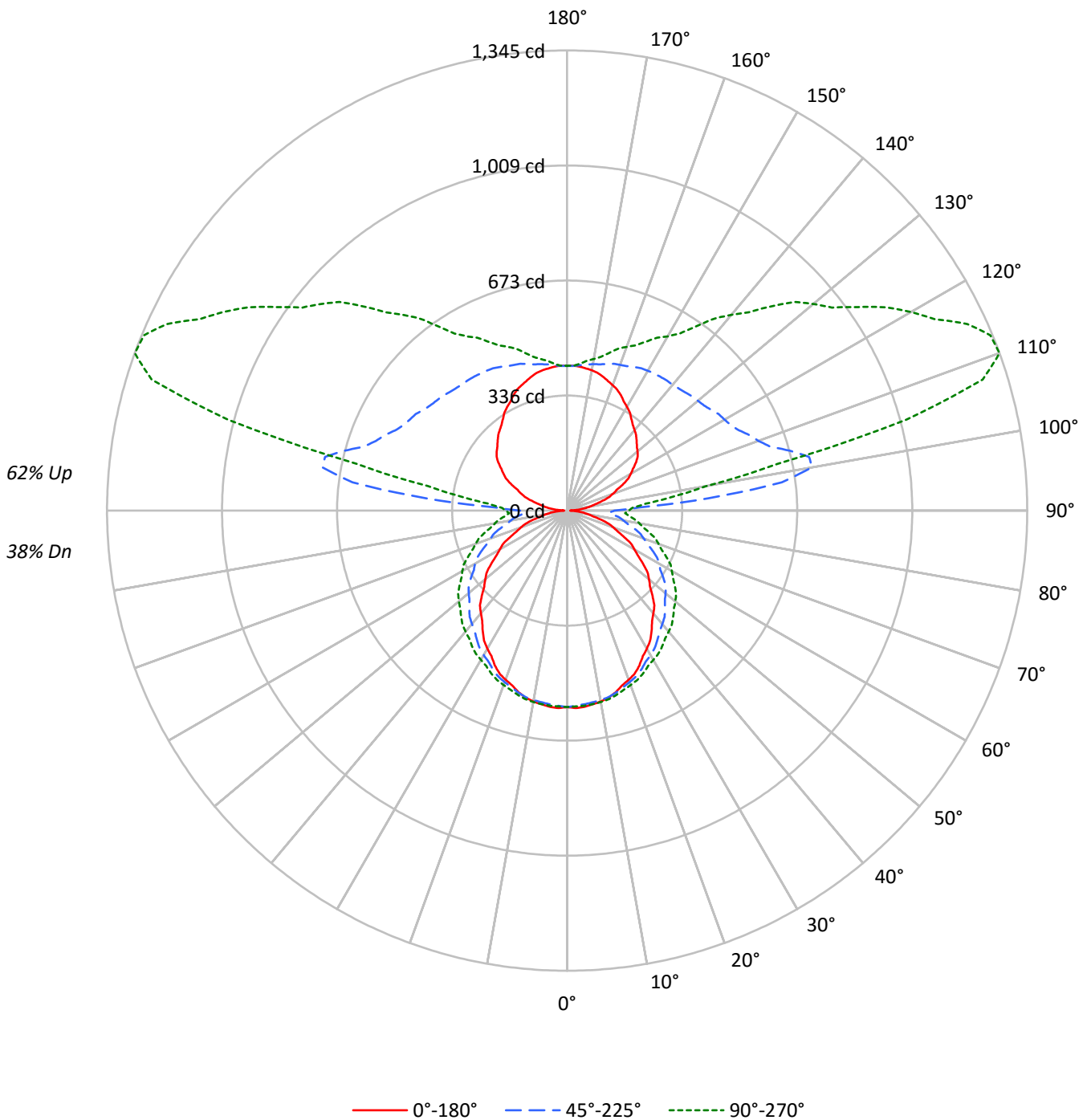
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45
1	94	89	85	81	85	81	77	74	65	63	60	51	49	48	38	37	36
2	85	77	71	65	77	70	64	60	57	53	49	44	41	39	33	31	29
3	77	67	60	54	70	61	55	49	50	45	41	39	35	32	29	26	24
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	21
5	64	53	44	38	58	48	41	35	39	33	29	31	27	23	23	20	18
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	19	16	14
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	15	12	10

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

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	1.1
10°-20°	156.0	3.0
20°-30°	236.5	4.6
30°-40°	288.0	5.6
40°-50°	309.9	6.0
50°-60°	300.9	5.9
60°-70°	262.7	5.1
70°-80°	202.3	3.9
80°-90°	139.6	2.7
90°-100°	262.7	5.1
100°-110°	642.4	12.5
110°-120°	655.0	12.7
120°-130°	527.3	10.3
130°-140°	413.7	8.1
140°-150°	306.5	6.0
150°-160°	214.1	4.2
160°-170°	126.0	2.5
170°-180°	41.0	0.8
0°-30°	446.9	8.7
0°-40°	734.9	14.3
0°-60°	1345.7	26.2
0°-90°	1950.3	37.9
90°-120°	1560.1	30.4
90°-150°	2807.6	54.6
90°-180°	3189.0	62.1
0°-180°	5139.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	68	138	168	180	7
95°	35	116	415	247	230	35
105°	104	179	674	1177	1027	110
115°	178	235	554	1115	1291	176
125°	246	292	513	893	1037	218
135°	287	343	488	735	845	222
145°	327	376	477	597	657	205
155°	372	402	463	524	544	171
165°	405	417	443	470	478	114
175°	422	423	426	432	430	40
180°	423	423	423	423	423	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.5	28.0	39.6	51.0	62.4	74.3	86.9	99.9	112.8	124.7	132.1
90°	9.1	22.3	36.3	48.7	61.0	74.7	90.7	108.2	124.9	137.5	144.1
92.5°	17.6	32.0	47.8	61.4	76.9	95.2	125.0	162.3	196.8	209.6	200.5
95°	35.1	47.1	63.9	79.9	101.7	131.1	179.6	261.5	367.0	414.7	381.8
97.5°	52.2	64.3	80.7	99.5	122.2	153.5	211.2	320.5	488.0	633.1	666.6
100°	68.5	77.8	92.0	111.8	134.9	166.3	219.8	329.4	515.5	726.0	850.0
102.5°	82.8	90.8	104.4	123.7	146.8	177.8	227.7	326.0	498.8	724.6	915.6
105°	103.5	112.0	123.1	140.6	164.0	194.2	242.1	324.1	468.0	674.5	897.4
107.5°	126.7	133.6	143.4	158.9	181.0	210.7	257.0	329.3	449.6	621.5	818.9
110°	141.6	148.6	157.2	171.5	192.2	222.3	267.1	334.8	443.1	595.3	769.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	156.0	162.3	171.0	184.0	203.6	233.7	276.8	340.7	439.5	576.3	733.8
115°	178.3	184.3	191.3	203.1	221.4	248.6	291.9	349.8	437.1	554.4	688.5
117.5°	200.6	205.1	211.3	221.3	238.2	265.5	305.7	359.9	436.8	540.0	657.2
120°	214.8	218.8	224.5	232.5	249.6	276.4	315.5	366.9	436.9	531.4	639.9
122.5°	228.5	231.5	236.6	244.9	261.5	288.5	325.2	372.9	438.0	524.8	624.7
125°	245.8	248.2	253.1	262.9	279.2	304.8	340.1	382.6	439.0	513.2	602.1
127.5°	260.1	263.2	269.8	280.4	295.8	321.6	354.8	392.4	441.2	504.5	581.0
130°	268.6	271.7	279.6	290.8	306.9	331.5	363.9	398.7	443.3	499.2	567.1
132.5°	276.4	280.1	288.7	300.5	317.3	341.4	371.6	404.9	445.3	494.6	555.1
135°	287.2	290.5	300.3	312.5	331.2	354.9	382.8	413.1	447.5	488.4	538.7
137.5°	298.3	302.1	311.9	324.9	343.4	364.9	391.5	418.8	449.2	483.4	525.7
140°	306.8	309.8	319.4	332.2	350.0	371.2	396.0	421.6	449.6	480.1	518.0
142.5°	315.3	317.6	326.6	339.4	356.4	376.3	400.1	424.8	450.5	478.7	511.6
145°	327.1	330.4	338.5	350.7	367.0	384.9	406.8	429.7	452.4	476.8	503.9
147.5°	340.8	343.2	351.0	362.2	375.8	391.8	412.4	432.4	453.1	473.9	496.8
150°	349.9	352.3	358.8	369.4	381.6	396.2	415.0	433.7	452.4	472.0	491.5
152.5°	359.0	360.1	366.6	375.9	387.5	400.8	417.6	434.3	451.1	468.7	486.9
155°	371.9	372.7	377.6	386.5	395.4	407.6	421.5	435.3	449.1	463.0	478.4
157.5°	382.6	383.4	387.3	395.1	402.3	412.5	424.3	435.3	445.4	457.1	470.5
160°	389.8	390.6	393.8	400.3	406.8	415.8	425.6	435.3	443.4	453.2	464.6
162.5°	396.9	396.4	399.7	404.9	410.7	417.8	426.2	434.6	441.5	450.0	459.4
165°	405.2	404.4	406.0	410.9	415.0	419.9	427.2	432.9	437.7	443.4	450.8
167.5°	412.1	411.1	412.5	415.6	418.6	421.7	427.1	431.8	434.0	437.7	442.3
170°	416.6	415.0	415.8	418.2	419.9	422.3	426.4	430.5	432.1	434.5	437.7
172.5°	419.2	418.2	417.8	420.2	421.2	423.0	425.7	428.5	429.5	430.6	433.3
175°	422.3	421.5	420.7	422.3	422.3	423.1	424.8	426.4	425.6	426.4	427.2
177.5°	423.8	422.5	421.8	423.1	423.1	423.1	423.8	425.1	423.8	423.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	139.5	146.7	154.6	159.7	162.1	164.4	166.8	169.2
90°	150.7	156.5	165.5	171.1	173.3	175.5	177.7	180.0
92.5°	189.3	186.5	186.9	186.6	188.2	187.8	190.6	191.6
95°	322.9	280.4	253.2	239.9	231.5	227.3	227.1	230.1
97.5°	599.7	516.1	434.9	380.7	344.0	326.1	316.4	311.8
100°	839.8	745.8	641.2	547.1	481.6	448.7	427.1	414.5
102.5°	995.6	979.6	904.7	804.8	733.4	675.7	648.3	630.5
105°	1073.2	1171.6	1188.6	1166.0	1117.6	1069.2	1036.2	1026.9
107.5°	1004.6	1149.3	1240.2	1283.7	1292.1	1291.4	1286.4	1273.3
110°	947.3	1098.9	1208.9	1279.6	1316.7	1334.2	1343.5	1344.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	894.5	1040.2	1157.4	1237.9	1288.6	1316.5	1332.4	1338.8
115°	828.3	959.2	1071.4	1158.9	1218.8	1258.3	1281.4	1290.8
117.5°	776.8	892.3	994.4	1076.7	1137.5	1178.9	1203.1	1211.2
120°	750.1	856.1	947.5	1025.2	1084.2	1124.5	1150.1	1160.3
122.5°	728.2	825.7	912.4	982.7	1035.5	1074.8	1097.6	1106.1
125°	695.8	784.6	861.1	925.5	974.4	1007.0	1029.0	1037.1
127.5°	663.7	744.1	816.3	875.7	918.5	949.1	968.2	975.1
130°	643.2	717.5	786.3	842.9	884.3	913.5	931.2	939.2
132.5°	623.2	692.3	755.7	809.0	849.7	878.8	895.3	902.6
135°	595.5	653.1	710.6	758.9	795.3	823.7	839.8	844.6
137.5°	572.3	620.6	666.6	708.7	741.8	766.1	780.3	786.4
140°	557.7	599.7	640.0	677.9	705.0	727.3	740.6	746.6
142.5°	546.0	581.6	616.2	647.8	673.4	693.7	705.5	707.4
145°	530.3	558.2	584.6	609.2	629.7	644.4	653.5	656.9
147.5°	518.4	539.7	559.6	577.2	593.7	605.2	611.1	613.1
150°	511.0	528.9	546.0	560.6	572.8	582.6	587.5	588.3
152.5°	503.9	520.4	534.9	547.6	557.2	565.7	569.2	569.4
155°	493.9	507.0	519.1	528.1	537.0	542.7	546.0	544.4
157.5°	482.3	493.3	503.5	510.5	516.8	521.5	523.0	523.0
160°	475.2	484.1	493.1	498.8	504.5	508.6	509.4	509.4
162.5°	468.1	475.6	483.3	487.7	493.4	496.2	497.0	496.4
165°	457.3	463.0	468.7	472.0	475.2	478.4	478.4	477.6
167.5°	447.0	451.4	455.3	458.3	459.7	461.5	461.4	460.4
170°	441.8	444.3	447.5	449.1	450.0	452.4	451.6	450.0
172.5°	435.9	437.7	440.3	441.3	442.1	443.3	442.5	441.5
175°	429.7	430.5	431.3	432.1	432.1	432.9	432.1	430.5
177.5°	425.1	425.1	425.7	425.7	425.7	425.7	425.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1

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