

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: P331365-940

Luminaire Tested: **S122DIP-S675D925U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331365-940  
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-S675D925U940-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5633.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

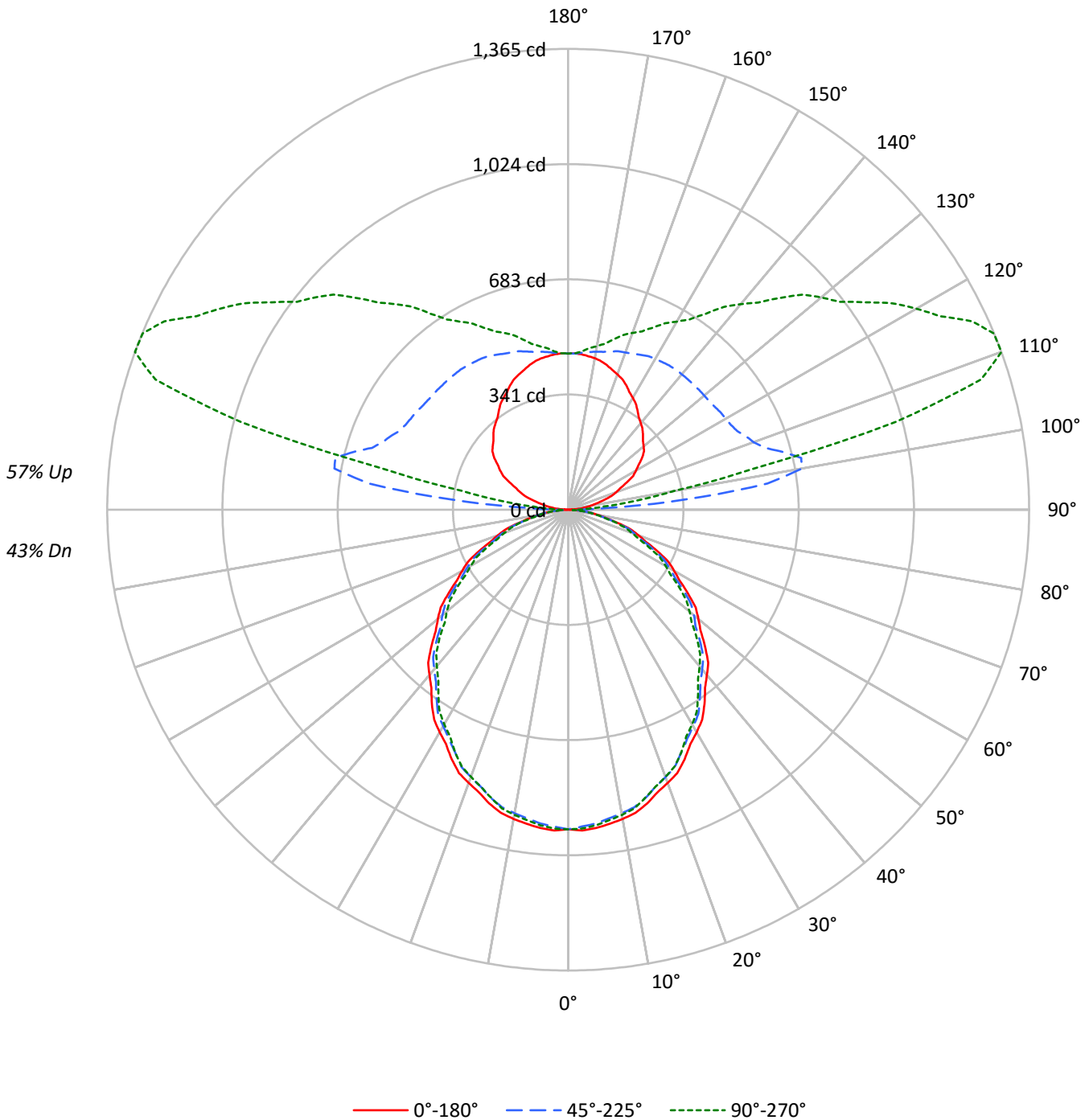
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	96	92	88	85	88	84	81	78	69	67	65	56	55	53	44	43	42	36
2	88	80	74	69	80	73	68	64	61	57	54	49	47	44	38	37	35	30
3	80	70	63	57	73	65	58	53	54	49	45	44	40	37	34	32	30	26
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22
5	67	55	47	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	29	24	21	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

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

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	1.6
10°-20°	250.5	4.4
20°-30°	368.2	6.5
30°-40°	427.7	7.6
40°-50°	427.2	7.6
50°-60°	372.6	6.6
60°-70°	275.5	4.9
70°-80°	156.0	2.8
80°-90°	46.1	0.8
90°-100°	185.0	3.3
100°-110°	627.9	11.1
110°-120°	667.1	11.8
120°-130°	549.1	9.7
130°-140°	441.0	7.8
140°-150°	333.2	5.9
150°-160°	234.2	4.2
160°-170°	137.9	2.4
170°-180°	44.9	0.8
0°-30°	707.7	12.6
0°-40°	1135.4	20.2
0°-60°	1935.1	34.4
0°-90°	2412.8	42.8
90°-120°	1480.0	26.3
90°-150°	2803.4	49.8
90°-180°	3220.0	57.2
0°-180°	5633.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	1	12	30	29	29	4
95°	31	77	349	132	102	33
105°	109	164	659	1179	1003	115
115°	191	242	552	1139	1320	190
125°	267	316	530	922	1071	237
135°	313	374	524	775	887	242
145°	358	411	522	647	708	224
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.3	13.5	13.9	13.9	13.9	14.2	14.7	15.6	16.4	16.2	15.6
90°	0.9	3.6	7.1	8.9	10.7	13.4	17.8	24.0	29.3	30.2	29.3
92.5°	10.9	15.7	22.1	25.9	32.0	40.4	60.5	88.8	114.0	115.7	97.7
95°	31.1	34.7	43.6	51.6	65.9	87.2	128.1	205.5	308.8	348.8	305.2
97.5°	50.7	55.6	65.0	77.0	93.5	117.6	169.1	277.0	448.5	595.6	624.7
100°	68.5	71.2	79.2	93.5	111.3	136.2	183.3	291.9	484.1	703.0	831.3
102.5°	84.9	86.9	94.9	109.1	127.6	152.6	196.2	292.7	470.6	706.6	908.1
105°	108.6	112.2	118.3	131.7	151.3	176.2	218.0	297.2	444.1	659.4	896.2
107.5°	134.2	137.1	143.1	155.4	174.8	199.9	240.5	309.5	430.9	608.9	818.1
110°	151.3	154.9	160.2	171.7	190.5	216.2	255.4	319.5	428.1	584.7	768.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	166.9	170.5	176.6	187.4	205.4	231.9	269.7	330.2	428.7	569.0	734.8
115°	191.4	195.8	201.2	211.8	229.6	253.6	291.9	346.2	432.5	551.8	692.4
117.5°	216.6	220.2	225.5	235.0	252.0	277.0	312.4	363.3	438.9	543.4	665.7
120°	232.3	235.9	241.2	249.1	267.0	291.9	326.6	374.7	443.2	538.4	651.5
122.5°	247.3	250.0	255.4	264.1	282.0	307.6	340.1	384.6	448.2	535.6	639.4
125°	267.0	269.7	275.0	285.7	303.4	328.4	360.4	400.5	455.7	530.4	622.1
127.5°	282.7	286.2	293.6	305.4	322.5	348.1	379.3	415.3	463.3	527.4	606.1
130°	291.9	295.4	304.3	316.8	334.7	359.5	390.7	424.5	469.0	525.9	595.4
132.5°	300.4	304.7	314.3	327.5	346.0	371.0	400.6	433.7	474.7	525.2	586.8
135°	313.3	316.8	327.5	340.8	361.3	386.2	414.7	445.9	481.4	524.1	574.9
137.5°	325.4	329.7	340.3	354.5	374.9	398.0	426.1	455.1	487.5	524.0	566.5
140°	334.7	338.2	348.8	363.1	382.7	405.8	432.5	460.1	490.4	523.3	561.6
142.5°	343.8	346.7	356.7	371.0	389.8	411.5	437.5	464.4	492.5	523.3	556.6
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	550.0
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.2
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	14.9	14.1	13.9	13.8	13.6	13.5	13.3	13.2
90°	28.4	26.7	28.4	29.3	29.3	29.3	29.3	29.3
92.5°	77.6	66.6	59.1	53.6	52.9	50.0	50.7	49.3
95°	233.2	178.9	141.5	121.9	110.4	103.3	100.6	101.5
97.5°	544.1	445.1	348.8	284.6	242.1	220.2	207.1	199.7
100°	812.5	702.1	580.2	472.6	398.7	360.4	334.7	318.6
102.5°	988.4	963.5	874.3	760.2	679.9	614.6	582.4	560.7
105°	1081.3	1181.9	1193.5	1164.0	1108.8	1053.7	1015.4	1003.0
107.5°	1014.4	1165.8	1258.4	1301.5	1308.4	1305.4	1297.7	1281.2
110°	956.7	1116.0	1229.9	1302.9	1341.1	1358.1	1366.1	1365.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	904.0	1056.9	1178.7	1262.3	1315.5	1343.8	1359.0	1363.8
115°	839.2	976.2	1092.9	1184.5	1247.7	1288.6	1311.8	1319.8
117.5°	790.4	910.8	1016.5	1102.5	1166.9	1210.1	1234.6	1241.3
120°	766.2	876.6	970.9	1052.0	1114.2	1156.0	1181.9	1190.8
122.5°	747.0	848.1	937.5	1010.7	1066.5	1107.6	1130.6	1138.1
125°	719.1	810.7	889.0	955.8	1007.5	1041.3	1063.5	1070.6
127.5°	691.5	774.5	848.3	909.9	954.9	986.6	1005.8	1011.6
130°	673.7	750.2	820.6	879.3	922.9	953.1	970.9	978.0
132.5°	656.6	727.5	792.0	847.2	890.1	920.4	936.7	943.2
135°	632.8	691.5	750.2	800.0	838.3	867.7	883.7	887.3
137.5°	613.7	662.8	709.4	752.9	787.8	813.1	827.2	832.5
140°	601.6	644.4	685.3	724.4	752.9	776.1	789.4	794.7
142.5°	591.7	627.9	663.2	696.0	723.0	744.0	755.9	757.0
145°	577.6	607.0	634.5	660.3	681.7	696.9	705.7	708.4
147.5°	566.7	589.9	611.4	630.3	647.9	660.0	666.0	667.6
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

(END OF REPORT)