

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: P331546-927

Luminaire Tested: **S122DIW-S675D1240U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331546-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIW-S675D1240U927-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5537.2 lumens  
Efficiency: N/A  
Efficacy: 90.2 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

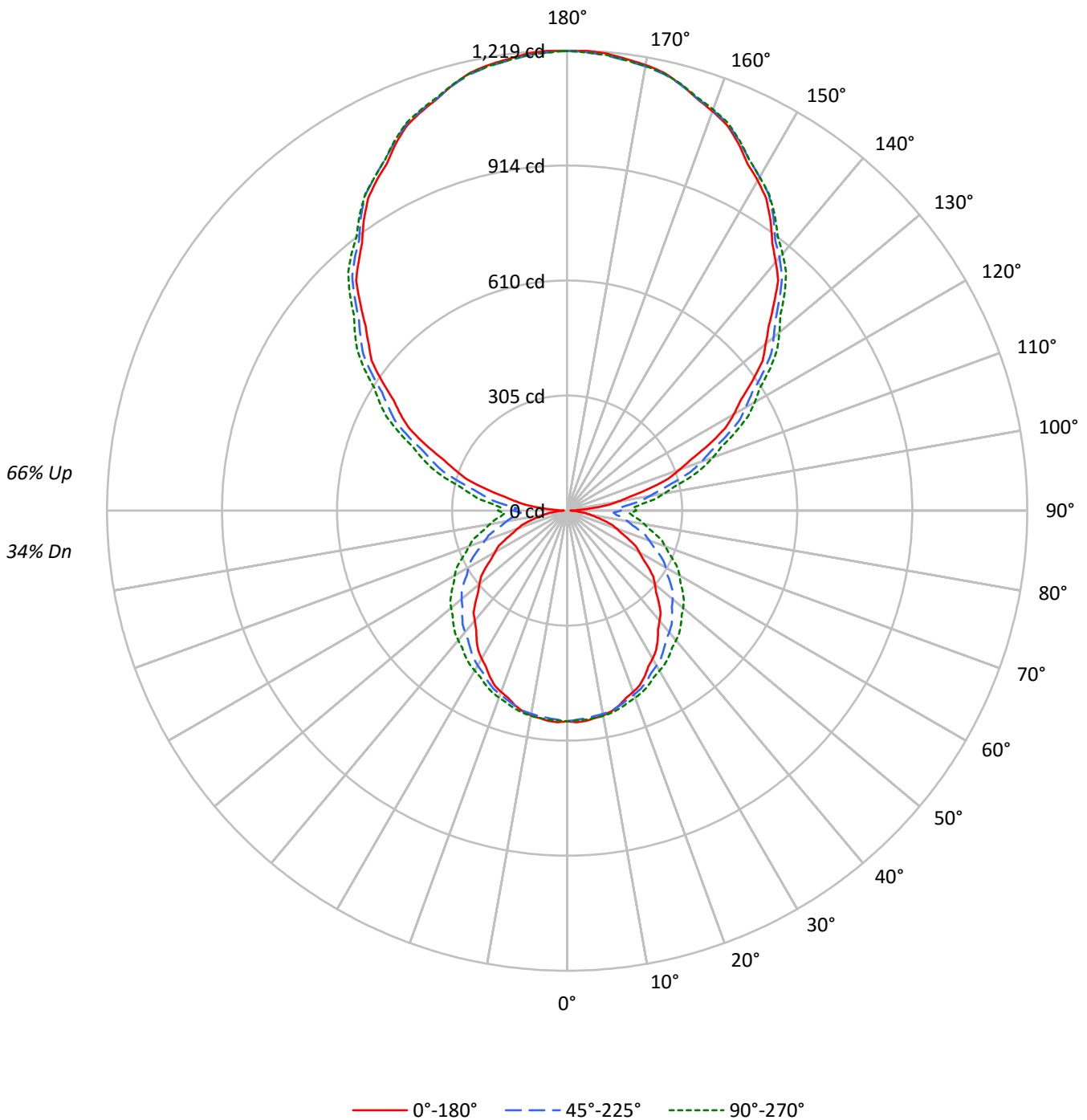
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27
3	77	67	59	54	69	61	54	49	48	44	40	37	34	31	27	24	23
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	23	21	19
5	64	52	44	38	57	47	40	35	38	33	29	29	25	22	21	18	16
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	19	16	14
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13
8	50	38	30	25	45	34	28	23	28	23	19	22	18	15	16	13	11
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10
10	43	32	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9

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

	0°	45°	90°
0°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.9	1.0
10°-20°	151.6	2.7
20°-30°	229.8	4.1
30°-40°	279.8	5.1
40°-50°	301.1	5.4
50°-60°	292.4	5.3
60°-70°	255.3	4.6
70°-80°	196.5	3.5
80°-90°	136.8	2.5
90°-100°	168.0	3.0
100°-110°	305.9	5.5
110°-120°	453.3	8.2
120°-130°	562.9	10.2
130°-140°	614.6	11.1
140°-150°	594.4	10.7
150°-160°	497.0	9.0
160°-170°	329.7	6.0
170°-180°	115.2	2.1
0°-30°	434.3	7.8
0°-40°	714.1	12.9
0°-60°	1307.5	23.6
0°-90°	1896.1	34.2
90°-120°	927.2	16.7
90°-150°	2699.1	48.7
90°-180°	3641.0	65.8
0°-180°	5537.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	9	69	143	172	184	8
95°	60	108	159	188	197	66
105°	225	252	296	325	335	238
115°	414	430	464	486	493	409
125°	599	609	631	650	656	536
135°	774	786	796	811	815	598
145°	939	946	952	958	958	586
155°	1073	1076	1080	1084	1082	494
165°	1168	1167	1167	1173	1169	329
175°	1215	1212	1210	1216	1211	115
180°	1217	1217	1217	1217	1217	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	16.1	27.3	38.6	49.8	61.1	73.0	85.5	98.0	110.5	123.0	130.2
90°	9.1	22.3	35.4	48.6	61.8	76.6	93.2	109.6	126.2	142.7	149.4
92.5°	25.7	37.5	49.1	60.8	72.6	84.5	96.8	109.1	121.4	133.6	140.7
95°	59.9	70.6	81.4	92.1	102.8	113.8	125.0	136.3	147.5	158.8	165.6
97.5°	103.2	112.7	122.3	131.8	141.3	151.7	163.0	174.1	185.4	196.5	203.2
100°	136.1	144.6	153.0	161.5	170.0	179.6	190.4	201.1	211.9	222.6	229.3
102.5°	170.0	177.5	185.1	192.6	200.1	209.2	219.8	230.5	241.1	251.8	258.5
105°	224.9	230.8	236.7	242.6	248.5	256.4	266.1	275.9	285.7	295.6	302.3
107.5°	281.0	286.2	291.4	296.5	301.7	308.8	317.7	326.7	335.6	344.6	350.8
110°	316.6	321.5	326.5	331.4	336.4	343.3	352.0	360.8	369.7	378.5	384.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.0	360.4	364.7	369.2	373.5	379.9	388.0	396.2	404.4	412.6	417.8
115°	414.1	417.5	420.8	424.1	427.5	433.0	440.6	448.2	455.9	463.5	468.7
117.5°	471.3	474.4	477.4	480.6	483.7	488.4	494.6	500.7	507.0	513.2	517.9
120°	509.8	512.4	514.9	517.5	520.1	523.9	529.3	534.7	540.1	545.4	550.5
122.5°	545.2	547.6	550.2	552.6	555.1	559.0	564.6	570.1	575.5	581.0	585.3
125°	599.4	601.5	603.6	605.6	607.7	611.2	616.3	621.3	626.4	631.4	635.6
127.5°	653.1	655.5	657.9	660.3	662.7	665.8	669.7	673.5	677.3	681.1	684.8
130°	686.7	689.5	692.3	695.1	697.9	700.9	704.3	707.6	710.9	714.2	718.1
132.5°	724.5	726.7	729.0	731.3	733.5	736.1	739.1	742.1	745.1	748.1	751.3
135°	774.3	776.8	779.3	781.8	784.3	786.7	788.9	791.2	793.4	795.7	799.2
137.5°	827.5	829.5	831.6	833.5	835.6	837.3	838.6	840.0	841.4	842.8	845.9
140°	859.5	861.4	863.2	865.1	867.0	868.7	870.2	871.7	873.2	874.7	877.6
142.5°	892.4	894.3	896.1	898.0	899.9	901.3	902.1	902.9	903.8	904.7	907.1
145°	938.8	940.5	942.1	943.6	945.2	946.7	948.1	949.4	950.9	952.2	953.5
147.5°	981.0	982.9	984.8	986.7	988.6	990.1	990.9	991.9	992.8	993.7	994.3
150°	1009.7	1011.1	1012.5	1013.8	1015.2	1016.4	1017.2	1018.2	1019.1	1020.0	1020.6
152.5°	1035.2	1036.6	1037.9	1039.3	1040.7	1041.9	1043.0	1044.1	1045.2	1046.3	1047.2
155°	1073.4	1074.1	1074.8	1075.5	1076.2	1076.8	1077.5	1078.2	1078.9	1079.6	1080.7
157.5°	1106.0	1106.5	1107.0	1107.5	1107.9	1108.3	1108.7	1109.1	1109.5	1110.0	1111.5
160°	1125.8	1126.2	1126.7	1127.2	1127.6	1128.0	1128.1	1128.4	1128.6	1128.9	1130.2
162.5°	1143.8	1144.0	1144.1	1144.1	1144.2	1144.4	1144.6	1144.9	1145.1	1145.3	1146.8
165°	1167.9	1167.7	1167.4	1167.2	1167.0	1166.9	1166.9	1166.9	1166.9	1166.9	1168.5
167.5°	1188.0	1187.3	1186.7	1186.0	1185.3	1184.9	1184.9	1184.9	1184.8	1184.7	1186.4
170°	1198.7	1198.0	1197.4	1196.7	1196.0	1195.6	1195.3	1195.1	1194.8	1194.6	1196.2
172.5°	1206.1	1205.5	1204.8	1204.0	1203.4	1202.9	1202.7	1202.5	1202.2	1202.0	1203.6
175°	1215.1	1214.5	1213.8	1213.1	1212.4	1211.9	1211.4	1210.9	1210.5	1210.0	1211.6
177.5°	1218.9	1218.3	1217.7	1217.2	1216.6	1216.2	1215.8	1215.4	1215.1	1214.7	1215.8
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	137.4	144.7	151.9	156.8	159.1	161.4	163.8	166.1
90°	156.1	162.9	169.6	174.2	176.6	179.0	181.3	183.7
92.5°	147.9	155.0	162.2	166.8	169.0	171.2	173.4	175.6
95°	172.4	179.2	186.1	190.3	192.0	193.7	195.4	197.1
97.5°	209.8	216.5	223.2	227.5	229.6	231.7	233.8	235.8
100°	235.9	242.6	249.2	253.4	255.2	256.9	258.6	260.4
102.5°	265.1	271.9	278.5	282.7	284.5	286.2	288.0	289.8
105°	309.0	315.8	322.5	326.9	328.8	330.8	332.8	334.8
107.5°	357.0	363.2	369.5	373.0	374.0	374.9	375.8	376.8
110°	390.0	395.8	401.5	405.0	406.3	407.6	408.9	410.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	423.0	428.2	433.4	436.7	438.2	439.7	441.2	442.6
115°	473.8	479.0	484.2	487.4	488.7	490.0	491.2	492.6
117.5°	522.7	527.5	532.3	535.2	536.4	537.5	538.7	539.8
120°	555.5	560.5	565.5	568.7	570.1	571.3	572.6	573.9
122.5°	589.7	594.1	598.3	601.1	602.3	603.5	604.7	605.9
125°	639.8	644.0	648.2	650.9	652.3	653.7	655.1	656.5
127.5°	688.4	692.1	695.7	697.9	698.8	699.6	700.4	701.3
130°	721.9	725.8	729.7	731.8	732.4	732.8	733.4	734.0
132.5°	754.5	757.6	760.8	762.7	763.4	764.1	764.9	765.6
135°	802.8	806.4	809.9	812.1	812.8	813.6	814.3	815.1
137.5°	849.1	852.2	855.3	857.0	857.3	857.6	857.9	858.3
140°	880.4	883.4	886.2	887.7	887.9	888.0	888.3	888.4
142.5°	909.6	912.1	914.6	915.8	915.8	915.8	915.9	915.9
145°	954.8	956.1	957.4	958.1	958.1	958.1	958.0	958.0
147.5°	995.0	995.6	996.2	996.4	995.9	995.5	995.1	994.7
150°	1021.4	1022.1	1022.7	1022.7	1022.1	1021.4	1020.6	1020.0
152.5°	1048.1	1048.8	1049.7	1049.7	1048.8	1048.1	1047.2	1046.3
155°	1081.9	1083.0	1084.1	1084.3	1083.7	1083.0	1082.3	1081.6
157.5°	1113.1	1114.6	1116.2	1116.4	1115.3	1114.2	1113.1	1112.0
160°	1131.6	1133.0	1134.3	1134.6	1133.7	1132.7	1131.9	1130.9
162.5°	1148.4	1149.9	1151.5	1151.8	1150.6	1149.5	1148.4	1147.4
165°	1170.1	1171.6	1173.3	1173.5	1172.4	1171.2	1170.1	1168.9
167.5°	1188.0	1189.5	1191.1	1191.4	1190.2	1189.0	1187.8	1186.6
170°	1197.8	1199.4	1201.0	1201.1	1199.8	1198.4	1197.0	1195.6
172.5°	1205.2	1206.8	1208.4	1208.5	1207.1	1205.8	1204.4	1203.0
175°	1213.2	1214.8	1216.4	1216.6	1215.1	1213.8	1212.4	1211.0
177.5°	1217.0	1218.1	1219.1	1219.1	1218.1	1217.0	1215.8	1214.7
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2

(END OF REPORT)