

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: P331552-927

Luminaire Tested: **S122DIW-S675D1440U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331552-927
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-S675D1440U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6091.6 lumens
Efficiency: N/A
Efficacy: 89.5 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

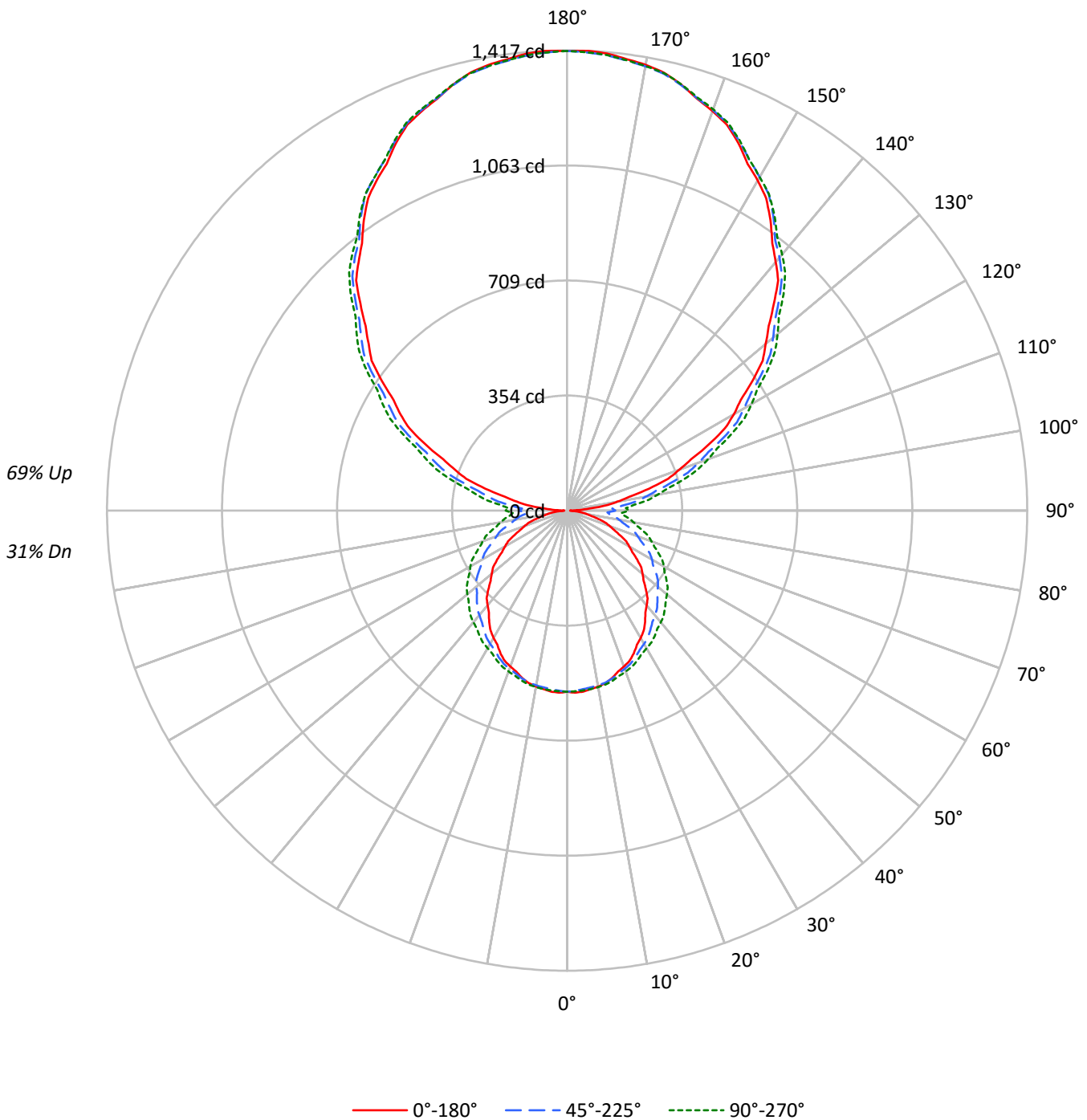
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20
3	76	67	59	53	68	60	54	48	47	43	39	36	32	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	20	17	15	12
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	14	15	12	10	8
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	14	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	8	6

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	0.9
10°-20°	151.6	2.5
20°-30°	229.8	3.8
30°-40°	279.8	4.6
40°-50°	301.1	4.9
50°-60°	292.4	4.8
60°-70°	255.3	4.2
70°-80°	196.5	3.2
80°-90°	137.5	2.3
90°-100°	180.5	3.0
100°-110°	344.9	5.7
110°-120°	519.9	8.5
120°-130°	650.5	10.7
130°-140°	712.9	11.7
140°-150°	690.8	11.3
150°-160°	577.9	9.5
160°-170°	383.3	6.3
170°-180°	134.0	2.2
0°-30°	434.3	7.1
0°-40°	714.1	11.7
0°-60°	1307.5	21.5
0°-90°	1896.9	31.1
90°-120°	1045.3	17.2
90°-150°	3099.5	50.9
90°-180°	4195.0	68.9
0°-180°	6091.6	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	71	148	177	189	9
95°	69	119	169	199	208	76
105°	261	289	332	362	372	276
115°	481	498	531	553	559	475
125°	697	708	730	747	754	623
135°	900	913	924	939	942	695
145°	1092	1100	1107	1113	1112	682
155°	1248	1252	1255	1261	1258	574
165°	1358	1357	1357	1364	1359	383
175°	1413	1409	1407	1414	1408	134
180°	1415	1415	1415	1415	1415	



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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	27.4	38.8	50.1	61.5	73.5	86.2	98.9	111.5	124.1	131.4
90°	9.3	22.9	36.5	50.1	63.7	79.2	96.5	113.8	131.2	148.5	155.2
92.5°	28.7	40.7	52.8	64.8	76.8	89.1	101.6	114.0	126.4	138.9	146.1
95°	68.6	79.7	90.8	101.9	113.0	124.2	135.5	146.8	158.1	169.4	176.3
97.5°	119.1	129.0	138.8	148.7	158.5	169.1	180.5	191.9	203.2	214.5	221.2
100°	157.3	166.1	174.9	183.6	192.4	202.2	213.1	223.9	234.8	245.7	252.3
102.5°	196.8	204.6	212.4	220.1	227.9	237.2	248.0	258.7	269.5	280.4	287.0
105°	260.8	266.8	272.8	278.8	284.9	292.8	302.7	312.5	322.4	332.3	339.1
107.5°	326.1	331.4	336.8	342.1	347.5	354.6	363.5	372.5	381.4	390.4	396.6
110°	367.5	372.6	377.9	383.0	388.2	395.2	404.0	412.8	421.7	430.5	436.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	413.4	418.0	422.6	427.1	431.8	438.2	446.3	454.5	462.6	470.8	475.9
115°	480.9	484.5	488.1	491.6	495.2	500.8	508.3	515.9	523.5	531.0	536.1
117.5°	547.5	550.9	554.3	557.8	561.2	565.9	571.9	577.8	583.8	589.8	594.5
120°	592.4	595.2	598.1	600.9	603.7	607.7	612.8	617.8	622.9	628.0	633.0
122.5°	633.5	636.3	639.1	642.0	644.8	648.9	654.1	659.4	664.7	669.9	674.2
125°	696.6	699.1	701.5	703.9	706.2	709.9	714.9	719.8	724.8	729.8	733.8
127.5°	759.0	761.8	764.7	767.5	770.4	773.6	777.4	781.0	784.7	788.4	791.9
130°	798.2	801.5	804.7	808.0	811.3	814.5	817.8	821.0	824.3	827.5	831.3
132.5°	842.2	844.8	847.4	850.0	852.7	855.5	858.5	861.5	864.6	867.6	870.6
135°	900.1	903.0	905.9	908.9	911.8	914.4	916.7	919.0	921.4	923.7	927.2
137.5°	961.9	964.3	966.6	969.0	971.4	973.3	974.8	976.2	977.7	979.2	982.3
140°	999.2	1001.4	1003.6	1005.8	1008.1	1010.0	1011.7	1013.4	1015.0	1016.8	1019.6
142.5°	1037.4	1039.7	1041.9	1044.0	1046.2	1047.8	1048.8	1049.8	1050.8	1051.8	1054.2
145°	1091.5	1093.4	1095.3	1097.1	1099.0	1100.7	1102.3	1103.9	1105.5	1107.1	1108.4
147.5°	1140.5	1142.7	1144.9	1147.2	1149.5	1151.1	1152.1	1153.2	1154.3	1155.3	1156.0
150°	1173.9	1175.5	1177.2	1178.8	1180.4	1181.6	1182.7	1183.8	1184.9	1185.9	1186.7
152.5°	1203.6	1205.1	1206.7	1208.3	1210.0	1211.4	1212.7	1213.9	1215.2	1216.5	1217.5
155°	1248.0	1248.8	1249.6	1250.4	1251.2	1252.0	1252.8	1253.5	1254.3	1255.1	1256.5
157.5°	1285.9	1286.5	1287.1	1287.6	1288.1	1288.6	1289.1	1289.6	1290.1	1290.5	1292.3
160°	1308.9	1309.5	1310.0	1310.5	1311.1	1311.5	1311.7	1311.9	1312.2	1312.5	1314.1
162.5°	1329.9	1330.1	1330.2	1330.2	1330.4	1330.5	1330.8	1331.1	1331.3	1331.6	1333.4
165°	1357.9	1357.6	1357.3	1357.1	1356.8	1356.7	1356.7	1356.7	1356.7	1356.7	1358.5
167.5°	1381.2	1380.5	1379.7	1378.9	1378.1	1377.7	1377.6	1377.6	1377.5	1377.4	1379.3
170°	1393.7	1392.9	1392.1	1391.3	1390.5	1390.0	1389.7	1389.5	1389.2	1388.9	1390.8
172.5°	1402.3	1401.5	1400.7	1399.9	1399.2	1398.6	1398.4	1398.0	1397.8	1397.5	1399.4
175°	1412.8	1412.0	1411.2	1410.4	1409.6	1409.0	1408.4	1407.9	1407.4	1406.8	1408.7
177.5°	1417.1	1416.5	1415.9	1415.2	1414.6	1414.0	1413.6	1413.2	1412.8	1412.3	1413.6
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2



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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°	138.6	145.8	153.0	157.9	160.2	162.6	164.9	167.3
90°	161.8	168.5	175.2	179.7	182.1	184.6	187.0	189.4
92.5°	153.2	160.3	167.5	172.2	174.4	176.6	178.8	181.0
95°	183.1	189.9	196.8	201.0	202.6	204.2	205.9	207.5
97.5°	227.8	234.5	241.1	245.5	247.6	249.6	251.7	253.7
100°	259.0	265.6	272.3	276.5	278.1	279.9	281.6	283.3
102.5°	293.7	300.5	307.2	311.4	313.1	314.8	316.6	318.2
105°	345.9	352.8	359.6	363.9	365.9	367.9	369.9	371.9
107.5°	402.9	409.2	415.4	418.9	419.6	420.4	421.1	421.9
110°	442.0	447.7	453.4	456.9	458.1	459.3	460.5	461.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	481.1	486.2	491.3	494.6	495.9	497.3	498.7	500.1
115°	541.2	546.4	551.5	554.7	555.9	557.0	558.2	559.4
117.5°	599.2	603.9	608.6	611.4	612.4	613.5	614.5	615.5
120°	638.0	643.1	648.1	651.2	652.4	653.6	654.7	655.9
122.5°	678.4	682.7	687.0	689.7	690.7	691.8	692.9	694.0
125°	737.8	741.9	745.9	748.6	750.0	751.4	752.7	754.1
127.5°	795.4	798.9	802.4	804.5	805.3	806.0	806.7	807.5
130°	835.0	838.8	842.6	844.7	845.1	845.5	845.8	846.2
132.5°	873.5	876.5	879.6	881.4	881.9	882.6	883.1	883.8
135°	930.7	934.2	937.7	939.8	940.5	941.1	941.7	942.4
137.5°	985.4	988.5	991.6	993.2	993.4	993.6	993.7	993.9
140°	1022.5	1025.4	1028.3	1029.7	1029.7	1029.8	1029.8	1029.8
142.5°	1056.8	1059.3	1061.8	1063.0	1062.9	1062.7	1062.6	1062.5
145°	1109.8	1111.1	1112.5	1113.0	1112.9	1112.7	1112.5	1112.4
147.5°	1156.8	1157.5	1158.2	1158.3	1157.8	1157.1	1156.6	1156.0
150°	1187.5	1188.3	1189.1	1189.1	1188.3	1187.5	1186.7	1185.9
152.5°	1218.5	1219.5	1220.5	1220.5	1219.5	1218.5	1217.5	1216.5
155°	1257.8	1259.2	1260.4	1260.8	1260.0	1259.2	1258.4	1257.6
157.5°	1294.1	1295.9	1297.8	1298.0	1296.7	1295.5	1294.2	1292.9
160°	1315.7	1317.2	1318.8	1319.1	1318.0	1317.0	1316.0	1314.9
162.5°	1335.2	1337.0	1338.8	1339.1	1337.8	1336.6	1335.3	1334.0
165°	1360.4	1362.2	1364.1	1364.4	1363.0	1361.8	1360.4	1359.1
167.5°	1381.2	1383.1	1384.9	1385.1	1383.8	1382.4	1381.0	1379.6
170°	1392.7	1394.5	1396.4	1396.5	1394.9	1393.3	1391.7	1390.1
172.5°	1401.2	1403.1	1404.9	1405.1	1403.5	1401.9	1400.3	1398.8
175°	1410.6	1412.4	1414.3	1414.4	1412.8	1411.2	1409.6	1408.0
177.5°	1414.9	1416.2	1417.5	1417.5	1416.2	1414.9	1413.6	1412.3
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2

(END OF REPORT)