

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: P331572-927

Luminaire Tested: **S122DIW-S865D970U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331572-927
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-S865D970U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5443.7 lumens
Efficiency: N/A
Efficacy: 89.0 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

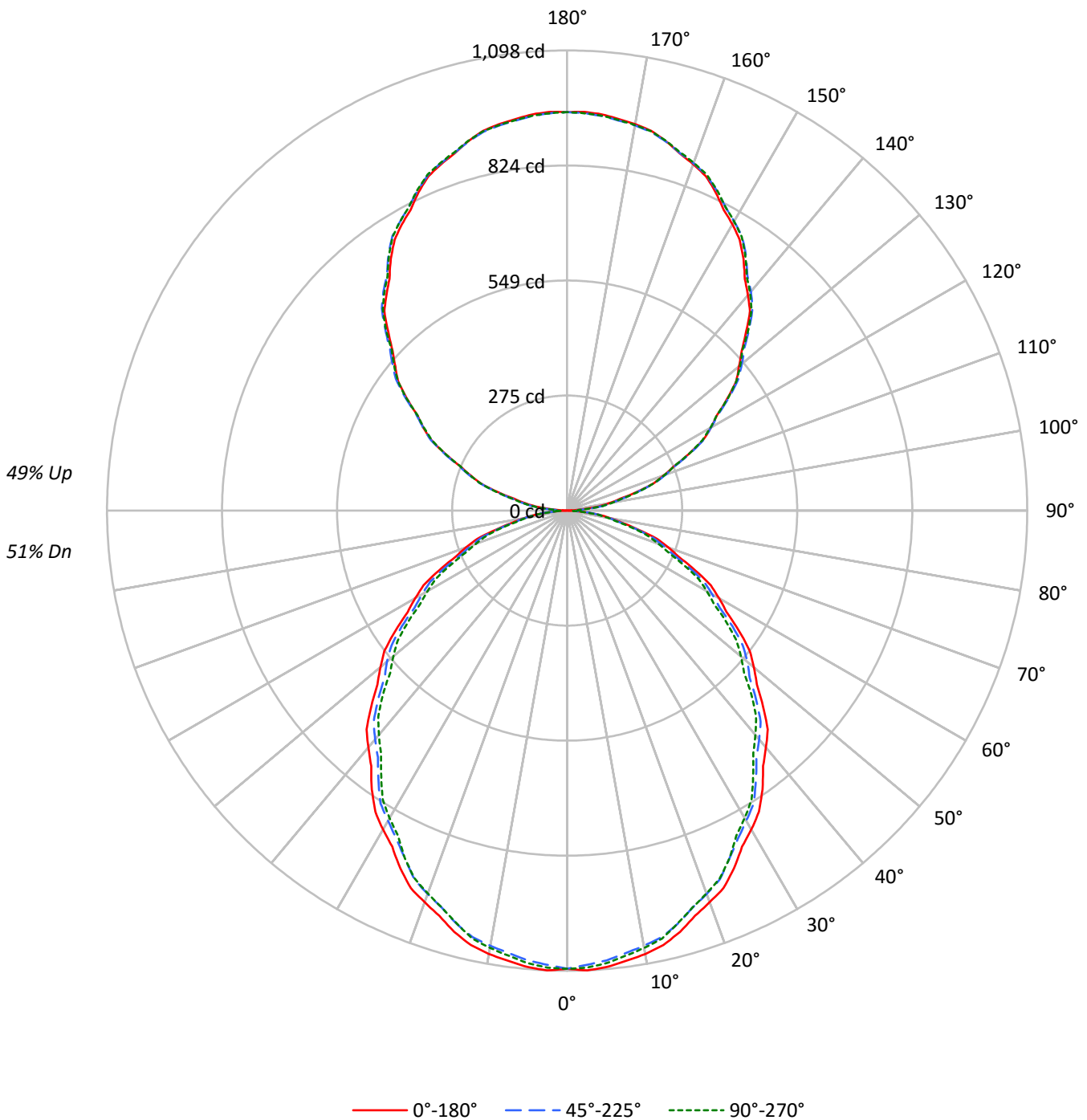
Input Watts (W): 61.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	44	42	41	36
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	16	14
10	47	35	28	23	44	33	26	22	29	23	19	24	20	17	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	1.9
10°-20°	289.3	5.3
20°-30°	425.2	7.8
30°-40°	493.9	9.1
40°-50°	493.3	9.1
50°-60°	430.2	7.9
60°-70°	318.1	5.8
70°-80°	180.2	3.3
80°-90°	52.2	1.0
90°-100°	60.2	1.1
100°-110°	187.1	3.4
110°-120°	319.9	5.9
120°-130°	420.6	7.7
130°-140°	472.1	8.7
140°-150°	462.9	8.5
150°-160°	388.3	7.1
160°-170°	257.5	4.7
170°-180°	90.0	1.7
0°-30°	817.2	15.0
0°-40°	1311.1	24.1
0°-60°	2234.6	41.0
0°-90°	2785.1	51.2
90°-120°	567.2	10.4
90°-150°	1922.8	35.3
90°-180°	2659.0	48.8
0°-180°	5443.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	11	28	27	27	4
95°	42	49	51	51	50	48
105°	172	175	176	178	178	182
115°	321	325	324	323	321	317
125°	467	474	472	470	469	417
135°	604	613	615	614	611	467
145°	733	739	744	744	741	458
155°	838	841	843	847	845	386
165°	912	912	912	917	913	257
175°	949	947	945	950	946	90
180°	951	951	951	951	951	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.3	15.4	15.4	15.4	15.5	15.8	16.2	16.6	17.0	17.4	16.8
90°	0.8	2.9	5.1	7.2	9.3	12.4	16.3	20.2	24.2	28.0	27.7
92.5°	14.3	15.8	17.4	19.0	20.6	21.8	22.7	23.7	24.6	25.5	25.6
95°	41.7	43.5	45.3	47.1	48.9	49.9	50.3	50.6	51.0	51.3	51.3
97.5°	76.2	77.8	79.4	81.0	82.5	83.7	84.3	85.0	85.6	86.3	86.3
100°	101.9	103.3	104.7	106.2	107.6	108.6	109.1	109.6	110.2	110.7	110.7
102.5°	128.9	130.0	131.1	132.3	133.4	134.4	135.0	135.7	136.3	137.0	137.2
105°	172.5	173.0	173.6	174.1	174.7	175.1	175.5	175.8	176.2	176.5	176.9
107.5°	216.5	217.3	218.0	218.8	219.6	220.0	220.0	220.0	220.0	220.0	220.1
110°	244.7	245.8	246.8	248.0	249.0	249.5	249.5	249.5	249.5	249.5	249.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.5	276.6	277.7	278.8	279.8	280.3	280.1	280.0	279.9	279.7	279.2
115°	320.9	322.0	323.1	324.2	325.2	325.6	325.2	324.9	324.5	324.2	324.0
117.5°	366.2	367.7	369.1	370.5	371.9	372.1	371.1	370.1	369.2	368.1	367.7
120°	396.4	397.8	399.3	400.7	402.1	402.1	400.7	399.3	397.8	396.4	396.4
122.5°	424.0	425.7	427.4	429.1	430.8	431.2	430.2	429.2	428.2	427.1	426.7
125°	467.0	468.6	470.2	471.8	473.4	474.0	473.4	472.9	472.3	471.8	471.3
127.5°	508.9	510.9	512.9	515.0	517.0	517.7	517.1	516.4	515.8	515.2	514.4
130°	535.2	537.5	539.8	542.2	544.5	545.4	545.1	544.7	544.4	544.0	543.7
132.5°	564.7	566.6	568.5	570.4	572.3	573.2	573.3	573.4	573.5	573.5	572.7
135°	604.2	606.2	608.1	610.1	612.0	613.1	613.5	613.9	614.3	614.6	614.4
137.5°	645.7	647.4	649.0	650.5	652.1	653.2	653.6	654.1	654.6	655.1	654.9
140°	670.7	672.4	674.0	675.6	677.2	678.4	679.4	680.2	681.1	682.0	682.0
142.5°	696.5	698.1	699.7	701.2	702.9	704.0	704.6	705.2	705.8	706.4	706.5
145°	733.3	734.6	735.9	737.1	738.4	739.5	740.6	741.6	742.8	743.8	743.9
147.5°	766.3	767.8	769.3	770.7	772.2	773.3	774.0	774.8	775.5	776.2	776.6
150°	788.7	789.8	790.8	791.9	793.0	793.9	794.6	795.4	796.1	796.8	797.3
152.5°	808.7	809.7	810.8	811.8	812.9	813.9	814.8	815.6	816.4	817.3	817.9
155°	838.4	839.0	839.6	840.1	840.6	841.1	841.7	842.2	842.7	843.3	844.1
157.5°	864.0	864.4	864.7	865.1	865.4	865.8	866.1	866.4	866.7	867.0	868.2
160°	879.4	879.7	880.1	880.4	880.8	881.1	881.3	881.5	881.6	881.8	882.9
162.5°	893.5	893.6	893.7	893.7	893.8	893.9	894.1	894.3	894.5	894.6	895.9
165°	912.3	912.1	912.0	911.7	911.6	911.5	911.5	911.5	911.5	911.5	912.8
167.5°	928.0	927.5	926.9	926.4	925.9	925.6	925.6	925.5	925.5	925.4	926.7
170°	936.4	935.8	935.3	934.8	934.2	933.9	933.7	933.5	933.3	933.2	934.4
172.5°	942.1	941.6	941.0	940.6	940.0	939.6	939.4	939.3	939.1	938.9	940.2
175°	949.2	948.6	948.2	947.6	947.1	946.6	946.3	945.9	945.5	945.2	946.4
177.5°	952.1	951.6	951.3	950.8	950.4	950.0	949.7	949.4	949.2	948.9	949.7
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	16.2	15.5	14.9	14.5	14.3	14.2	14.0	13.9
90°	27.3	27.0	26.6	26.5	26.8	26.9	27.1	27.3
92.5°	25.7	25.7	25.8	25.8	25.9	25.9	26.0	26.0
95°	51.3	51.3	51.3	51.2	50.8	50.5	50.1	49.7
97.5°	86.3	86.3	86.3	86.3	86.3	86.3	86.2	86.2
100°	110.7	110.7	110.7	110.7	110.4	110.3	110.1	110.0
102.5°	137.4	137.4	137.6	137.6	137.4	137.2	137.0	136.9
105°	177.2	177.6	177.9	178.2	178.2	178.2	178.2	178.2
107.5°	220.3	220.5	220.5	220.2	219.4	218.6	217.8	217.0
110°	249.5	249.5	249.5	249.3	248.7	248.2	247.6	247.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.5	278.0	277.6	277.2	276.8	276.4	276.0
115°	323.8	323.6	323.4	323.1	322.6	322.0	321.5	320.9
117.5°	367.3	366.9	366.4	365.9	365.4	364.9	364.3	363.8
120°	396.4	396.4	396.4	396.1	395.5	395.1	394.5	394.0
122.5°	426.4	425.9	425.5	425.1	424.7	424.3	423.9	423.5
125°	470.7	470.2	469.7	469.3	469.1	469.0	468.7	468.6
127.5°	513.8	513.2	512.5	511.9	511.4	510.8	510.2	509.7
130°	543.3	543.0	542.6	542.0	541.3	540.6	539.9	539.2
132.5°	572.0	571.2	570.4	569.7	569.2	568.5	568.0	567.4
135°	614.3	614.1	613.9	613.5	613.0	612.4	612.0	611.4
137.5°	654.7	654.7	654.5	654.0	653.3	652.6	651.9	651.2
140°	682.0	682.0	682.0	681.7	681.0	680.2	679.5	678.8
142.5°	706.7	706.9	706.9	706.7	706.0	705.3	704.6	703.9
145°	744.2	744.3	744.5	744.3	743.5	742.8	742.1	741.4
147.5°	777.0	777.4	777.8	777.6	777.0	776.3	775.6	774.9
150°	797.8	798.4	798.9	798.9	798.4	797.8	797.3	796.8
152.5°	818.6	819.4	820.0	820.0	819.4	818.6	817.9	817.3
155°	845.1	846.0	846.8	847.0	846.5	846.0	845.4	844.9
157.5°	869.5	870.7	871.9	872.0	871.2	870.4	869.5	868.6
160°	883.9	885.0	886.1	886.3	885.6	884.9	884.2	883.4
162.5°	897.1	898.3	899.5	899.7	898.8	897.9	897.1	896.3
165°	914.0	915.2	916.5	916.6	915.8	914.9	914.0	913.1
167.5°	928.0	929.2	930.4	930.6	929.7	928.8	927.8	926.9
170°	935.6	936.9	938.2	938.3	937.2	936.1	935.0	934.0
172.5°	941.4	942.7	943.9	944.0	942.9	941.9	940.8	939.8
175°	947.7	949.0	950.1	950.3	949.2	948.2	947.1	946.0
177.5°	950.6	951.4	952.3	952.3	951.4	950.6	949.7	948.9
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8

(END OF REPORT)