

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: P333057-927

Luminaire Tested: **S124RDIW-S795D470U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333057-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S795D470U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4028.7 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

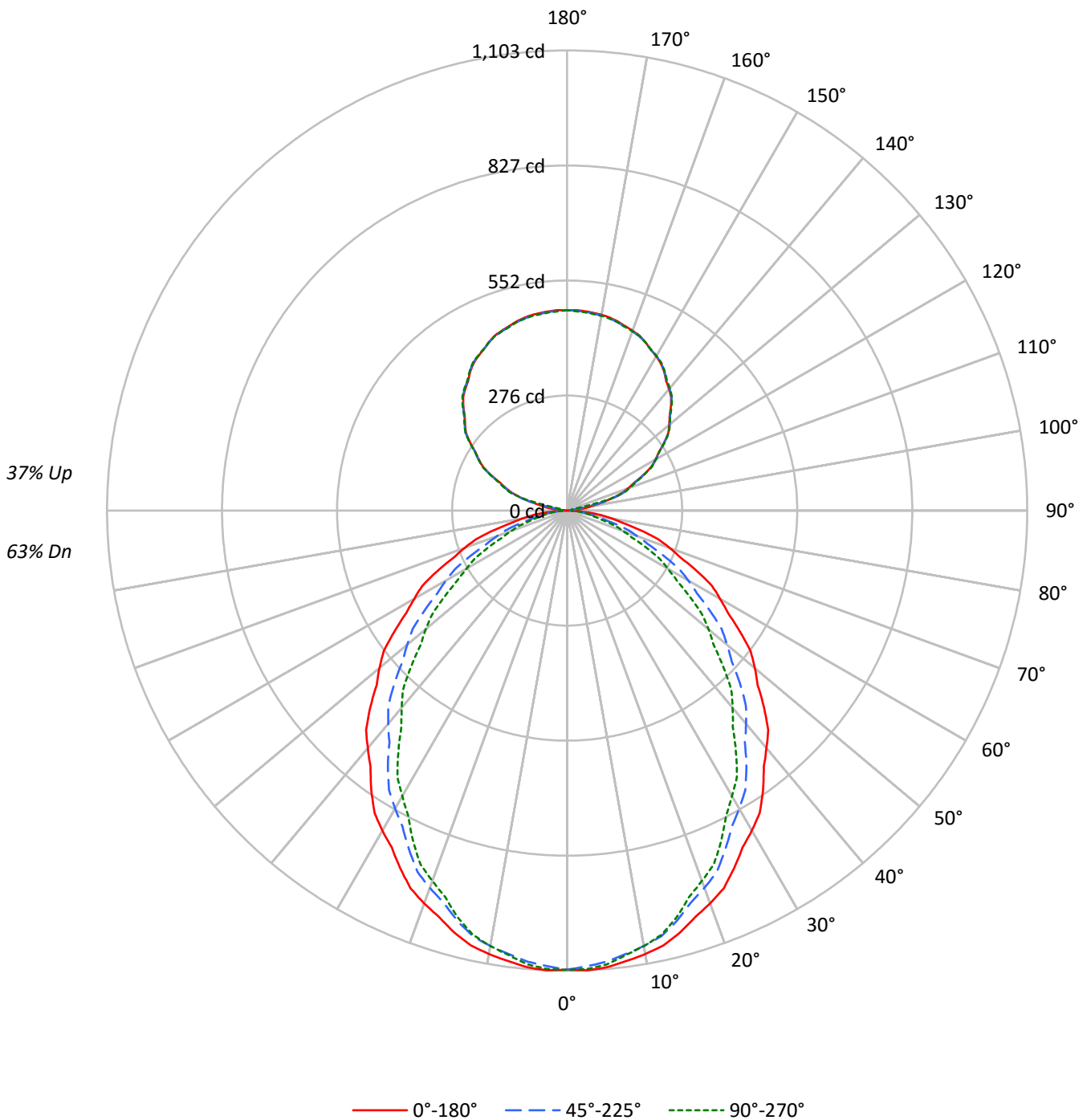
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63
1	101	97	93	90	95	91	88	85	80	78	75	70	68	67	61	60	58	54
2	92	85	79	74	86	80	75	70	71	66	63	62	59	56	54	52	50	46
3	84	75	68	62	79	71	64	59	63	57	53	55	51	48	48	45	43	39
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	40	37	34
5	71	60	51	45	67	56	49	43	50	44	40	44	40	36	39	35	32	29
6	66	54	45	40	62	51	43	38	45	39	35	40	35	32	36	32	29	26
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	33	29	26	23
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	30	26	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	28	24	21	19
10	49	37	30	25	47	36	29	24	32	26	23	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8884	8884	8884
5°	8904	8795	8849
10°	8848	8689	8689
15°	8747	8507	8444
20°	8607	8267	8115
25°	8429	7986	7783
30°	8255	7690	7368
35°	8064	7383	6951
40°	7832	7032	6500
45°	7618	6687	6042
50°	7376	6286	5556
55°	7116	5871	5029
60°	6830	5414	4490
65°	6567	4846	3960
70°	6187	4216	3361
75°	5702	3497	2732
80°	4974	2664	2506
85°	4215	2418	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	2.6
10°-20°	288.3	7.2
20°-30°	416.3	10.3
30°-40°	471.8	11.7
40°-50°	455.6	11.3
50°-60°	378.9	9.4
60°-70°	261.6	6.5
70°-80°	132.6	3.3
80°-90°	35.4	0.9
90°-100°	16.4	0.4
100°-110°	104.7	2.6
110°-120°	200.2	5.0
120°-130°	254.2	6.3
130°-140°	272.0	6.8
140°-150°	254.3	6.3
150°-160°	205.1	5.1
160°-170°	132.3	3.3
170°-180°	45.6	1.1
0°-30°	807.9	20.1
0°-40°	1279.7	31.8
0°-60°	2114.3	52.5
0°-90°	2543.9	63.1
90°-120°	321.3	8.0
90°-150°	1101.8	27.3
90°-180°	1485.0	36.9
0°-180°	4028.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1099	1095	1085	1093	1092	104
15°	1047	1038	1018	1016	1010	295
25°	946	930	896	883	874	436
35°	818	790	749	721	705	511
45°	667	635	586	546	529	514
55°	506	471	417	375	357	452
65°	344	307	254	219	207	339
75°	183	151	112	93	88	193
85°	46	29	26	24	24	51
90°	1	5	8	10	11	3
95°	20	8	8	10	10	25
105°	108	110	112	114	102	113
115°	202	203	202	203	203	199
125°	284	285	284	285	286	253
135°	352	352	353	354	354	271
145°	406	407	407	407	408	253
155°	445	445	444	445	444	205
165°	469	468	468	470	467	133
175°	480	478	478	481	477	46
180°	480	480	480	480	480	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1103.2	1102.6	1101.9	1101.4	1100.7	1099.6	1098.0	1096.4	1094.7	1093.1	1094.7
5°	1098.8	1098.0	1097.3	1096.5	1095.7	1094.3	1092.0	1089.8	1087.5	1085.3	1087.2
7.5°	1088.9	1088.1	1087.3	1086.5	1085.7	1083.9	1080.9	1078.0	1075.1	1072.1	1073.3
10°	1079.4	1078.5	1077.5	1076.6	1075.6	1073.5	1070.2	1066.8	1063.4	1060.0	1060.7
12.5°	1067.2	1066.2	1065.1	1064.0	1063.0	1060.4	1056.5	1052.4	1048.5	1044.5	1045.0
15°	1046.6	1044.9	1043.1	1041.5	1039.8	1036.6	1031.9	1027.2	1022.5	1017.9	1017.5
17.5°	1021.4	1019.0	1016.5	1014.2	1011.7	1007.7	1002.0	996.4	990.8	985.2	984.1
20°	1001.9	999.4	997.0	994.6	992.1	987.8	981.4	975.0	968.6	962.3	960.8
22.5°	980.3	977.6	974.9	972.1	969.4	964.6	957.7	950.9	944.1	937.3	935.1
25°	946.3	942.9	939.5	936.1	932.8	927.2	919.6	911.9	904.2	896.5	893.3
27.5°	910.5	906.3	902.1	897.9	893.6	887.4	879.2	871.0	862.8	854.6	850.6
30°	885.6	880.9	876.2	871.6	866.9	860.2	851.4	842.6	833.7	824.9	820.2
32.5°	859.3	854.1	848.7	843.4	838.2	831.0	821.9	812.8	803.7	794.6	789.2
35°	818.2	812.2	806.2	800.2	794.2	786.6	777.2	767.8	758.4	749.1	742.8
37.5°	774.2	768.0	761.8	755.7	749.5	741.2	730.9	720.5	710.1	699.7	692.6
40°	743.2	737.0	730.9	724.7	718.5	710.0	699.3	688.7	678.0	667.3	659.5
42.5°	713.5	707.0	700.6	694.1	687.6	678.8	667.7	656.6	645.5	634.3	626.3
45°	667.3	660.4	653.5	646.6	639.6	630.6	619.3	608.1	596.8	585.7	576.5
47.5°	619.6	612.5	605.4	598.2	591.0	581.6	570.0	558.3	546.6	534.9	525.4
50°	587.3	580.0	572.7	565.4	558.1	548.4	536.5	524.5	512.5	500.5	491.2
52.5°	554.3	547.2	540.0	532.8	525.7	515.9	503.7	491.4	479.1	466.8	457.3
55°	505.6	498.0	490.6	483.1	475.6	465.8	453.6	441.4	429.3	417.1	407.3
57.5°	457.4	449.6	441.8	434.0	426.2	416.3	404.3	392.4	380.4	368.4	358.5
60°	423.0	415.5	408.1	400.5	393.0	383.3	371.3	359.3	347.4	335.3	325.6
62.5°	392.0	384.2	376.4	368.6	360.8	350.8	338.5	326.2	313.9	301.7	292.6
65°	343.8	335.7	327.6	319.6	311.6	301.6	289.5	277.6	265.6	253.7	245.6
67.5°	293.7	286.1	278.3	270.6	262.8	253.5	242.3	231.2	220.1	209.0	202.0
70°	262.1	254.2	246.3	238.4	230.6	221.3	210.6	199.9	189.3	178.6	172.5
72.5°	228.4	221.3	214.1	207.0	199.9	191.3	181.3	171.1	161.1	151.0	145.7
75°	182.8	175.9	169.0	162.1	155.1	147.3	138.5	129.7	120.9	112.1	107.7
77.5°	136.7	130.8	124.9	119.1	113.1	106.6	99.6	92.4	85.3	78.2	75.7
80°	107.0	101.6	96.2	90.7	85.3	79.8	74.1	68.5	62.9	57.3	56.7
82.5°	81.4	76.4	71.5	66.5	61.5	57.4	54.2	50.9	47.7	44.5	44.0
85°	45.5	41.7	38.0	34.3	30.5	28.4	27.8	27.3	26.7	26.1	25.7
87.5°	15.7	14.7	13.7	12.7	11.6	11.1	11.1	11.1	11.0	11.0	10.9
90°	1.1	2.0	2.9	3.7	4.6	5.3	6.0	6.7	7.3	7.9	8.4
92.5°	4.5	4.6	4.6	4.7	4.8	5.1	5.7	6.3	7.0	7.6	8.1
95°	19.7	17.0	14.3	11.6	8.9	7.6	7.7	7.8	7.8	7.9	8.4
97.5°	41.9	43.6	45.3	47.0	48.7	45.1	36.2	27.3	18.4	9.5	9.5
100°	58.9	60.3	61.8	63.2	64.6	59.8	48.8	37.8	26.8	15.8	14.4
102.5°	77.9	78.9	79.9	81.0	82.1	81.8	80.4	79.0	77.6	76.1	61.5
105°	108.1	108.5	109.0	109.5	110.0	110.4	110.8	111.2	111.6	112.0	112.7
107.5°	136.2	136.4	136.7	136.9	137.1	137.5	138.0	138.6	139.1	139.7	140.0
110°	155.1	155.3	155.6	155.8	156.1	156.4	156.9	157.4	157.9	158.4	158.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.5	173.9	174.4	174.8	175.2	175.5	175.8	175.9	176.2	176.4	176.4
115°	201.8	202.0	202.2	202.5	202.7	202.8	202.7	202.6	202.6	202.5	202.6
117.5°	227.3	227.6	227.9	228.2	228.5	228.8	228.9	229.1	229.3	229.5	229.4
120°	244.5	244.8	245.1	245.4	245.7	245.9	245.8	245.7	245.7	245.6	245.7
122.5°	260.5	260.8	260.9	261.2	261.3	261.5	261.6	261.7	261.8	262.0	262.1
125°	283.6	283.9	284.2	284.6	284.9	284.9	284.8	284.6	284.5	284.3	284.6
127.5°	305.5	305.5	305.6	305.7	305.8	306.0	306.3	306.7	307.1	307.4	307.4
130°	319.5	319.6	319.7	319.8	319.9	320.0	320.3	320.5	320.8	321.0	321.1
132.5°	332.5	332.6	332.7	332.9	333.0	333.3	333.6	333.8	334.1	334.5	334.5
135°	351.8	351.7	351.6	351.6	351.5	351.6	352.0	352.3	352.6	352.9	353.1
137.5°	369.0	369.0	369.1	369.1	369.2	369.3	369.6	370.0	370.3	370.7	370.9
140°	380.2	380.3	380.5	380.6	380.8	381.0	381.1	381.4	381.5	381.7	381.9
142.5°	390.2	390.5	390.9	391.1	391.4	391.6	391.7	391.8	391.9	392.0	392.1
145°	405.7	405.9	406.2	406.4	406.6	406.8	406.8	406.8	406.8	406.8	406.9
147.5°	418.0	418.4	418.8	419.3	419.8	419.9	419.9	419.8	419.7	419.6	419.7
150°	426.9	427.2	427.5	427.9	428.2	428.3	428.2	428.1	428.0	427.9	427.9
152.5°	434.4	434.6	434.8	435.1	435.4	435.4	435.3	435.1	435.0	434.8	435.0
155°	444.8	444.9	445.0	445.0	445.1	445.0	444.8	444.6	444.3	444.1	444.4
157.5°	453.7	453.6	453.5	453.5	453.4	453.3	453.0	452.7	452.5	452.3	452.7
160°	458.8	458.6	458.4	458.1	457.9	457.7	457.6	457.6	457.5	457.4	457.9
162.5°	463.4	463.1	462.8	462.5	462.2	462.0	461.9	461.8	461.8	461.7	462.2
165°	469.2	468.8	468.4	468.0	467.6	467.5	467.5	467.5	467.5	467.5	468.1
167.5°	473.8	473.4	473.0	472.6	472.1	471.9	471.9	471.8	471.8	471.7	472.5
170°	476.4	475.9	475.5	475.0	474.5	474.3	474.4	474.4	474.5	474.6	475.2
172.5°	478.2	477.7	477.2	476.7	476.3	476.0	476.1	476.2	476.3	476.3	477.0
175°	480.0	479.5	479.0	478.6	478.1	477.9	478.0	478.1	478.2	478.2	479.0
177.5°	480.9	480.5	480.0	479.5	479.1	479.0	479.0	479.2	479.3	479.4	479.9
180°	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1096.4	1098.0	1099.6	1100.4	1100.3	1100.1	1099.9	1099.8
5°	1089.0	1090.9	1092.8	1093.5	1093.1	1092.8	1092.4	1092.0
7.5°	1074.5	1075.8	1077.0	1077.2	1076.7	1076.0	1075.5	1074.8
10°	1061.5	1062.2	1063.0	1063.0	1062.2	1061.5	1060.7	1060.0
12.5°	1045.4	1045.8	1046.3	1046.0	1045.0	1043.9	1042.8	1041.8
15°	1017.2	1016.8	1016.4	1015.6	1014.2	1012.9	1011.6	1010.3
17.5°	983.1	982.1	981.0	979.5	977.5	975.5	973.5	971.5
20°	959.3	957.7	956.2	954.3	951.9	949.4	947.0	944.6
22.5°	932.9	930.6	928.4	926.2	924.2	922.3	920.3	918.3
25°	890.2	887.0	883.8	881.3	879.4	877.6	875.7	873.8
27.5°	846.7	842.8	838.8	835.5	832.8	830.1	827.4	824.7
30°	815.6	810.9	806.2	802.3	799.4	796.4	793.4	790.4
32.5°	783.7	778.3	772.9	768.7	765.9	763.0	760.2	757.3
35°	736.3	730.0	723.7	718.7	715.4	712.0	708.6	705.3
37.5°	685.5	678.3	671.2	666.0	662.7	659.3	655.9	652.5
40°	651.6	643.7	635.9	630.3	626.9	623.5	620.2	616.8
42.5°	618.3	610.3	602.3	596.5	592.9	589.5	586.0	582.4
45°	567.3	558.1	548.9	542.6	539.2	535.9	532.5	529.2
47.5°	515.9	506.4	496.9	490.2	486.6	482.8	479.1	475.4
50°	481.8	472.5	463.0	456.6	453.0	449.5	445.9	442.4
52.5°	447.8	438.3	428.7	422.2	418.4	414.7	411.1	407.3
55°	397.6	387.9	378.2	371.5	368.0	364.4	360.8	357.3
57.5°	348.6	338.7	328.8	322.6	319.9	317.2	314.5	311.8
60°	315.9	306.2	296.4	290.0	287.1	284.1	281.1	278.1
62.5°	283.7	274.7	265.7	260.0	257.6	255.2	252.8	250.4
65°	237.5	229.5	221.4	216.3	214.0	211.8	209.5	207.3
67.5°	195.1	188.2	181.3	176.6	174.1	171.6	169.1	166.7
70°	166.3	160.1	153.9	149.9	148.1	146.2	144.3	142.4
72.5°	140.5	135.1	129.8	126.4	124.7	122.9	121.2	119.5
75°	103.5	99.2	94.8	92.1	91.0	89.9	88.7	87.6
77.5°	73.2	70.7	68.1	66.7	66.4	66.1	65.8	65.4
80°	56.2	55.6	55.1	54.7	54.5	54.3	54.1	53.9
82.5°	43.6	43.3	42.9	42.5	42.4	42.1	42.0	41.8
85°	25.3	25.0	24.6	24.4	24.4	24.4	24.4	24.4
87.5°	10.9	10.9	10.8	10.9	11.0	11.2	11.4	11.6
90°	8.9	9.3	9.8	10.1	10.3	10.5	10.6	10.8
92.5°	8.6	9.0	9.5	9.7	9.8	9.8	9.9	9.9
95°	8.9	9.3	9.8	10.1	10.1	10.2	10.3	10.4
97.5°	9.6	9.6	9.7	9.7	9.8	9.9	10.0	10.1
100°	13.1	11.7	10.4	9.7	9.8	9.9	10.0	10.1
102.5°	46.8	32.2	17.6	10.3	10.3	10.3	10.3	10.4
105°	113.4	114.2	114.9	113.8	110.9	108.1	105.2	102.3
107.5°	140.4	140.7	141.1	141.4	141.7	142.0	142.3	142.6
110°	158.7	158.8	159.0	159.1	159.4	159.6	159.9	160.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	176.3	176.3	176.3	176.4	176.7	177.1	177.4	177.6
115°	202.8	203.0	203.1	203.2	203.2	203.2	203.2	203.2
117.5°	229.4	229.4	229.3	229.3	229.3	229.3	229.3	229.2
120°	245.9	246.1	246.2	246.2	246.1	245.9	245.7	245.6
122.5°	262.1	262.2	262.3	262.3	262.1	262.0	261.8	261.7
125°	284.8	285.0	285.3	285.4	285.5	285.6	285.7	285.7
127.5°	307.4	307.3	307.3	307.2	307.1	307.0	307.0	307.0
130°	321.2	321.2	321.3	321.3	321.3	321.3	321.3	321.3
132.5°	334.6	334.7	334.8	334.8	334.7	334.7	334.6	334.5
135°	353.2	353.4	353.6	353.7	353.9	354.0	354.2	354.3
137.5°	371.1	371.2	371.5	371.5	371.5	371.4	371.4	371.3
140°	382.1	382.4	382.6	382.8	382.9	382.9	383.0	383.1
142.5°	392.3	392.5	392.7	392.8	392.8	392.8	392.8	392.8
145°	406.9	407.0	407.1	407.2	407.3	407.5	407.7	407.8
147.5°	419.8	419.8	419.9	419.9	420.0	420.1	420.2	420.3
150°	427.9	427.9	427.9	428.0	428.1	428.2	428.3	428.3
152.5°	435.1	435.2	435.4	435.4	435.4	435.3	435.2	435.2
155°	444.7	445.0	445.4	445.4	445.2	445.0	444.7	444.5
157.5°	453.0	453.4	453.8	453.8	453.4	453.0	452.7	452.3
160°	458.4	458.8	459.3	459.3	458.8	458.4	457.9	457.4
162.5°	462.6	463.1	463.6	463.6	463.0	462.5	461.9	461.4
165°	468.7	469.4	470.0	469.9	469.2	468.5	467.8	467.1
167.5°	473.2	473.9	474.6	474.5	473.7	472.9	472.1	471.3
170°	475.9	476.5	477.2	477.1	476.3	475.5	474.7	473.9
172.5°	477.6	478.2	478.9	478.8	477.9	477.1	476.2	475.3
175°	479.7	480.4	481.1	480.9	480.0	479.0	478.1	477.1
177.5°	480.5	480.9	481.5	481.3	480.6	479.8	479.0	478.3
180°	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0

(END OF REPORT)