

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: P332936-927

Luminaire Tested: **S124RDIP-S795D590U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332936-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S795D590U927-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4216.7 lumens
Efficiency: N/A
Efficacy: 104.6 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

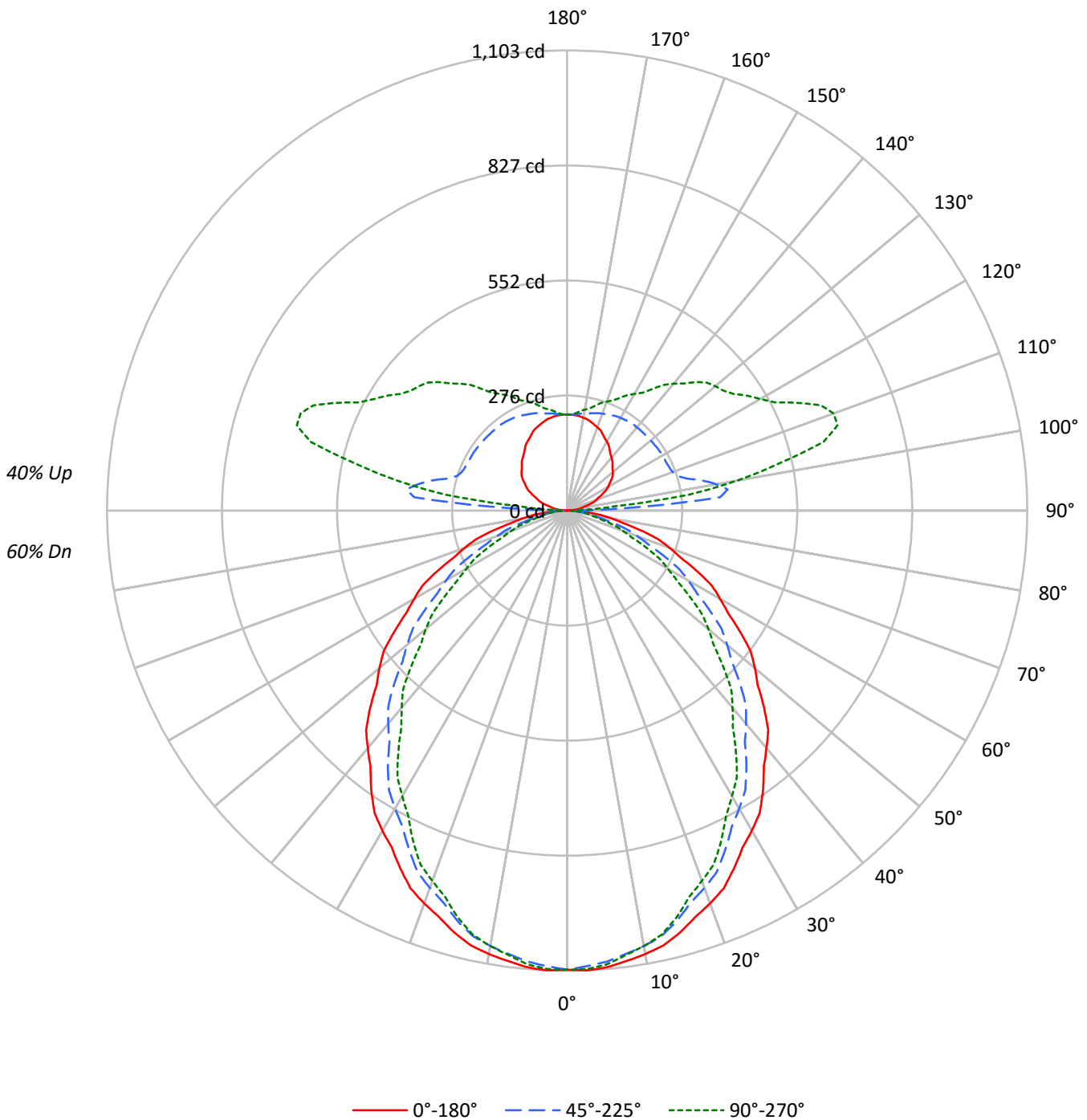
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	100	96	92	89	94	90	87	84	79	76	74	68	66	65	59	57	56	51
2	92	84	78	73	86	79	74	69	69	65	62	60	57	55	52	50	48	44
3	84	74	67	61	78	70	63	58	61	56	52	54	50	47	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	44	40	42	38	36	32
5	71	59	51	45	66	56	48	43	49	43	39	43	39	35	38	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	28	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	28	25	22
8	56	44	36	31	53	41	34	29	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	26	34	28	24	30	26	22	27	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

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	2.5
10°-20°	288.3	6.8
20°-30°	416.3	9.9
30°-40°	471.8	11.2
40°-50°	455.6	10.8
50°-60°	378.9	9.0
60°-70°	261.6	6.2
70°-80°	132.6	3.1
80°-90°	35.3	0.8
90°-100°	166.1	3.9
100°-110°	345.8	8.2
110°-120°	309.7	7.3
120°-130°	260.5	6.2
130°-140°	217.2	5.2
140°-150°	166.0	3.9
150°-160°	116.6	2.8
160°-170°	68.6	1.6
170°-180°	22.3	0.5
0°-30°	807.9	19.2
0°-40°	1279.7	30.3
0°-60°	2114.3	50.1
0°-90°	2543.8	60.3
90°-120°	821.6	19.5
90°-150°	1465.3	34.8
90°-180°	1673.0	39.7
0°-180°	4216.7	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°	0	4	8	9	10	3
95°	15	47	368	182	110	17
105°	53	77	296	638	636	56
115°	93	117	264	508	610	92
125°	130	154	263	432	487	115
135°	154	183	261	384	436	119
145°	178	203	259	324	356	111
155°	202	218	252	286	298	93
165°	220	227	242	256	260	62
175°	230	230	232	235	234	22
180°	230	230	230	230	230	



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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°	15.6	14.6	13.6	12.5	11.4	10.8	11.2	11.0	11.0	11.1	10.9
90°	0.5	1.3	2.7	3.2	3.6	3.6	6.3	6.3	7.2	8.2	7.7
92.5°	5.1	7.5	11.7	17.3	23.8	33.3	56.2	91.3	125.5	143.3	119.4
95°	14.9	16.2	20.8	26.7	37.5	56.5	95.8	169.9	277.9	368.3	378.7
97.5°	26.8	26.8	30.7	36.0	45.4	61.3	91.6	152.7	260.2	387.9	475.8
100°	34.4	34.4	37.5	42.9	51.5	66.0	92.6	143.7	235.9	363.3	479.0
102.5°	41.6	42.3	45.1	50.1	58.4	72.1	96.3	141.2	219.6	332.6	451.9
105°	52.8	54.3	56.5	61.9	70.0	83.2	104.8	142.4	205.7	296.4	402.7
107.5°	65.4	66.2	68.5	74.3	82.1	95.0	114.9	149.0	203.1	276.2	362.9
110°	73.7	74.5	76.8	82.2	90.4	102.6	122.5	154.1	203.8	269.3	343.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	81.6	82.5	85.2	90.2	98.3	110.5	129.7	159.5	206.0	266.1	331.8
115°	93.1	94.4	97.6	102.1	110.7	122.9	141.0	168.1	210.2	264.4	321.3
117.5°	105.0	106.3	109.1	114.1	122.1	134.8	151.9	176.9	214.5	263.9	316.6
120°	113.0	113.9	117.0	122.0	129.7	142.4	159.5	183.0	217.9	263.9	314.1
122.5°	120.2	121.1	124.3	128.9	137.3	149.6	166.8	188.8	221.1	263.6	311.2
125°	129.7	131.5	134.2	139.2	147.7	160.4	176.7	197.5	225.9	263.0	306.4
127.5°	138.1	139.6	142.8	148.5	157.4	170.2	185.9	205.0	229.8	262.0	300.0
130°	142.8	144.6	148.2	155.0	163.6	176.7	192.0	209.7	232.7	261.7	296.0
132.5°	147.5	148.9	153.7	160.1	169.4	181.7	197.1	214.4	235.3	261.3	292.4
135°	154.1	155.9	160.4	168.1	177.6	189.3	204.2	220.5	239.1	260.7	286.9
137.5°	160.7	162.4	167.4	174.7	184.6	195.7	209.7	224.9	241.3	260.6	282.3
140°	165.4	166.8	171.7	179.4	188.9	199.7	213.3	227.8	243.1	260.3	279.7
142.5°	170.5	171.8	176.4	183.7	192.9	203.4	216.6	229.9	244.5	260.3	277.6
145°	177.6	179.0	183.5	189.8	198.4	208.3	220.1	232.3	245.4	259.4	273.9
147.5°	185.6	186.1	190.0	196.5	203.7	212.7	223.7	234.3	245.8	257.8	270.5
150°	190.7	191.2	194.8	200.2	207.0	215.6	225.5	235.4	245.8	256.7	268.0
152.5°	195.4	195.5	199.1	204.1	210.2	218.1	227.0	236.1	245.1	254.8	265.1
155°	202.0	202.5	205.2	209.7	214.7	221.4	229.1	236.8	244.0	252.2	260.7
157.5°	208.4	208.4	211.0	214.4	218.8	224.1	230.7	236.8	242.9	249.4	256.4
160°	212.4	212.4	214.2	217.4	220.9	225.9	231.4	236.8	241.8	247.2	253.1
162.5°	216.0	215.6	217.1	219.9	223.2	227.0	232.1	236.8	240.7	245.0	250.2
165°	220.1	220.1	220.9	223.2	225.5	228.2	232.3	235.9	238.6	241.8	245.4
167.5°	224.1	223.7	224.1	225.9	227.1	229.2	232.2	234.8	236.5	238.5	241.1
170°	225.9	225.5	225.9	227.3	228.2	229.6	231.8	234.1	235.0	236.3	238.1
172.5°	227.8	227.3	227.4	228.4	228.9	229.9	231.5	233.4	233.5	234.2	235.6
175°	229.6	229.1	229.1	229.6	230.0	230.0	230.9	232.3	231.8	231.8	232.7
177.5°	230.4	230.0	229.7	230.0	230.0	230.0	230.4	231.1	230.4	230.4	230.8
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0



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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°	10.8	10.7	10.6	10.6	10.9	11.1	11.2	11.3
90°	8.2	8.6	9.0	9.0	9.5	9.9	9.5	9.5
92.5°	88.7	66.8	53.2	44.1	38.7	36.4	34.8	34.8
95°	334.9	264.8	204.2	160.4	138.3	124.3	116.1	110.3
97.5°	494.7	468.7	424.5	377.3	344.9	317.7	304.1	294.7
100°	545.0	554.1	531.9	498.4	459.1	431.6	418.0	414.4
102.5°	542.5	587.3	593.7	579.8	555.6	535.7	521.4	518.5
105°	506.1	584.3	629.1	647.6	648.5	644.8	638.5	635.8
107.5°	454.6	537.7	600.8	641.0	663.4	673.7	678.2	679.4
110°	423.4	501.6	567.1	616.9	649.0	667.9	676.0	680.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.7	469.8	531.7	581.4	617.8	640.8	652.2	658.8
115°	377.8	433.4	486.2	529.7	565.3	592.5	606.9	610.5
117.5°	366.5	412.6	454.2	490.9	521.4	544.2	558.8	561.7
120°	361.6	403.5	439.7	471.7	497.6	517.5	529.2	534.2
122.5°	357.2	397.8	430.6	458.8	480.5	497.6	507.5	512.5
125°	349.7	388.6	419.8	444.7	462.7	475.9	484.4	487.1
127.5°	340.7	377.9	409.0	432.5	450.8	462.4	469.6	472.3
130°	333.5	369.2	399.9	423.9	442.4	453.7	461.0	463.7
132.5°	325.9	359.4	389.4	413.4	431.6	444.3	451.1	453.9
135°	315.4	344.8	372.3	395.0	413.0	425.7	432.9	435.6
137.5°	305.9	330.8	354.0	374.5	391.3	403.9	409.8	413.0
140°	300.5	321.8	342.1	361.1	376.9	386.8	393.2	396.8
142.5°	295.5	314.2	331.6	348.1	362.0	371.3	376.9	379.4
145°	288.3	303.6	317.3	329.9	341.2	348.9	353.4	355.6
147.5°	282.4	294.6	305.5	315.4	323.8	330.3	333.7	334.6
150°	278.8	289.2	298.3	306.4	313.6	319.5	322.2	322.7
152.5°	274.8	283.8	292.1	298.8	304.9	309.7	311.3	311.8
155°	268.9	276.1	282.9	288.3	292.9	296.4	297.8	297.8
157.5°	262.4	268.5	274.2	278.5	282.0	284.7	285.5	285.5
160°	258.5	263.5	268.4	272.0	274.7	277.5	277.9	277.9
162.5°	254.5	258.7	262.6	265.9	267.9	270.6	271.1	270.7
165°	249.0	251.7	254.8	257.1	259.0	260.7	260.3	259.8
167.5°	243.7	245.7	248.3	249.6	250.6	251.7	251.6	251.3
170°	240.4	241.8	243.6	244.9	245.8	246.3	245.8	245.8
172.5°	237.5	238.5	239.6	240.6	241.1	241.6	241.1	240.4
175°	233.6	234.1	235.0	235.0	235.0	235.9	235.0	234.1
177.5°	231.1	231.5	231.5	231.8	231.5	231.8	231.1	230.4
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0

(END OF REPORT)