

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: P332606-930

Luminaire Tested: **S124DIP-S795D810U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332606-930
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: S124DIP-S795D810U930-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5139.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

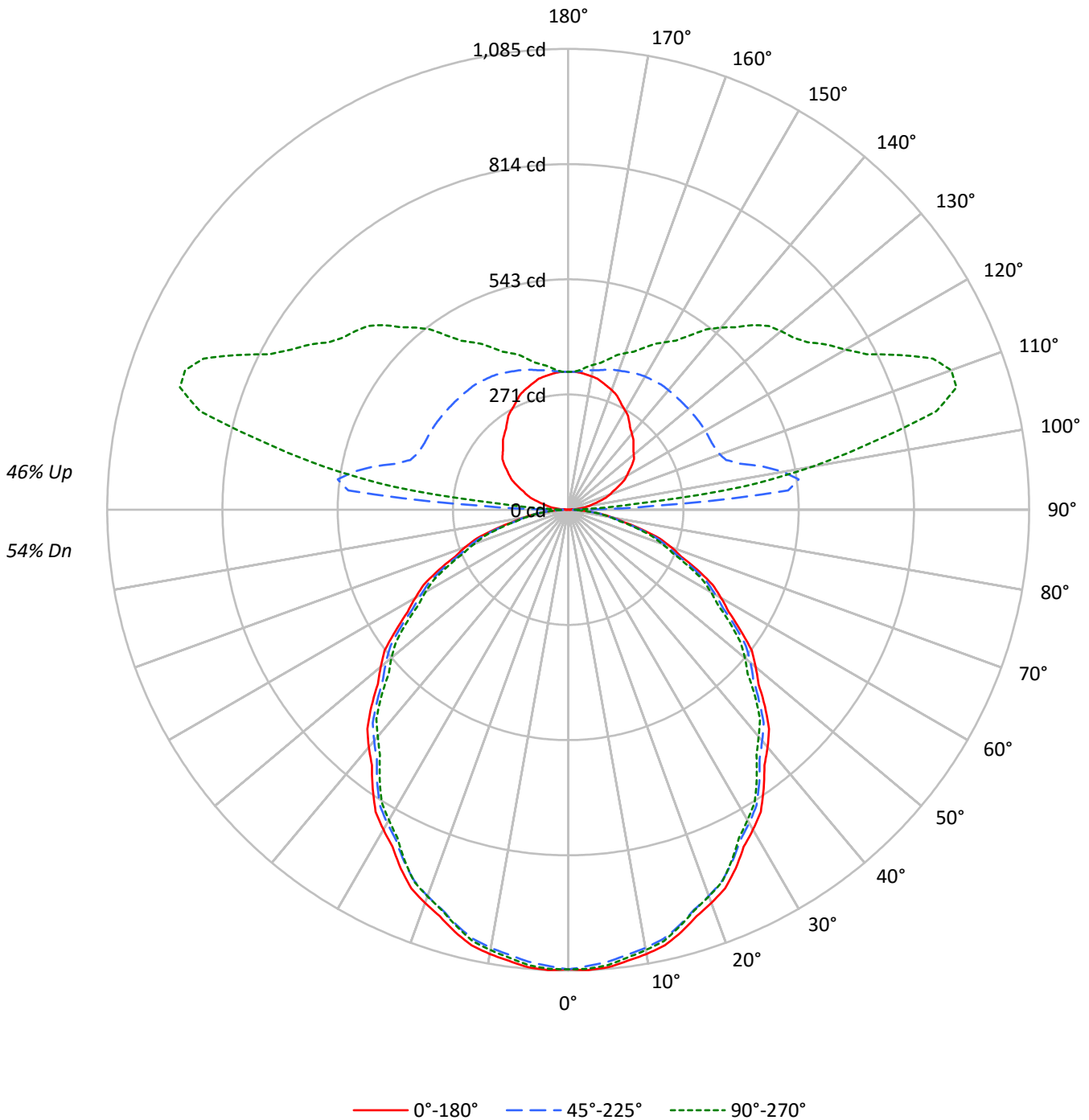
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	94	90	87	91	88	84	81	75	73	70	63	62	60	53	52	50	45
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	46	44	42	38
3	82	72	65	59	76	67	61	56	58	53	49	49	46	42	41	38	36	32
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28
5	69	57	49	43	64	53	46	41	46	40	36	39	35	32	33	30	27	24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	28	24	21	19
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	2.0
10°-20°	287.2	5.6
20°-30°	422.7	8.2
30°-40°	491.4	9.6
40°-50°	491.4	9.6
50°-60°	429.8	8.4
60°-70°	319.2	6.2
70°-80°	181.4	3.5
80°-90°	54.1	1.1
90°-100°	234.4	4.6
100°-110°	487.8	9.5
110°-120°	436.9	8.5
120°-130°	367.5	7.2
130°-140°	306.4	6.0
140°-150°	234.1	4.6
150°-160°	164.6	3.2
160°-170°	96.8	1.9
170°-180°	31.5	0.6
0°-30°	811.8	15.8
0°-40°	1303.1	25.4
0°-60°	2224.4	43.3
0°-90°	2779.1	54.1
90°-120°	1159.1	22.6
90°-150°	2067.1	40.2
90°-180°	2360.0	45.9
0°-180°	5139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	1	5	12	13	13	4
95°	21	66	520	257	156	24
105°	75	108	418	900	897	80
115°	131	165	373	716	861	130
125°	183	217	371	610	687	163
135°	217	259	368	541	615	168
145°	250	287	366	456	502	157
155°	285	308	356	403	420	131
165°	310	320	341	361	367	88
175°	324	324	327	332	330	31
180°	324	324	324	324	324	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.2	18.3	18.5	18.5	18.4	18.3	18.9	18.8	18.8	18.9	18.8
90°	0.7	1.9	3.8	4.5	5.1	5.1	8.9	8.9	10.2	11.5	10.8
92.5°	7.3	10.6	16.6	24.4	33.7	46.9	79.3	128.7	177.0	202.2	168.4
95°	21.0	22.9	29.4	37.6	52.9	79.7	135.2	239.7	392.1	519.6	534.3
97.5°	37.7	37.7	43.2	50.9	64.0	86.4	129.1	215.5	367.0	547.2	671.2
100°	48.4	48.4	52.9	60.6	72.6	93.1	130.7	202.8	332.8	512.6	675.7
102.5°	58.6	59.7	63.6	70.8	82.3	101.7	135.7	199.2	309.8	469.2	637.5
105°	74.6	76.5	79.7	87.3	98.8	117.3	147.9	200.8	290.1	418.2	568.0
107.5°	92.2	93.4	96.6	104.8	115.8	134.0	162.1	210.3	286.5	389.6	511.9
110°	104.0	105.2	108.4	116.0	127.5	144.7	172.8	217.4	287.5	379.9	483.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.1	116.4	120.1	127.3	138.7	156.0	183.0	225.0	290.6	375.4	468.1
115°	131.3	133.2	137.7	144.1	156.2	173.4	198.9	237.2	296.4	372.9	453.2
117.5°	148.1	149.9	153.9	160.9	172.3	190.1	214.3	249.5	302.7	372.3	446.6
120°	159.4	160.6	165.1	172.1	183.0	200.8	225.0	258.2	307.3	372.3	443.0
122.5°	169.6	170.9	175.3	181.8	193.6	211.0	235.2	266.4	311.9	371.8	439.0
125°	183.0	185.5	189.3	196.3	208.5	226.3	249.2	278.6	318.8	371.0	432.2
127.5°	194.9	196.9	201.5	209.5	222.1	240.1	262.3	289.2	324.2	369.7	423.1
130°	201.5	204.0	209.1	218.7	230.8	249.2	270.9	295.8	328.3	369.1	417.6
132.5°	208.1	210.1	216.8	225.8	239.0	256.4	278.1	302.4	331.9	368.6	412.5
135°	217.4	220.0	226.3	237.2	250.5	267.1	288.1	311.1	337.2	367.9	404.8
137.5°	226.7	229.1	236.1	246.5	260.3	276.1	295.8	317.2	340.4	367.7	398.2
140°	233.3	235.2	242.2	253.1	266.4	281.8	300.9	321.3	343.0	367.2	394.6
142.5°	240.4	242.4	248.9	259.2	272.1	286.9	305.5	324.3	345.0	367.2	391.6
145°	250.5	252.4	258.9	267.7	279.9	293.9	310.5	327.7	346.2	365.9	386.3
147.5°	261.9	262.5	268.2	277.3	287.4	300.0	315.6	330.6	346.8	363.6	381.6
150°	269.0	269.7	274.8	282.4	292.0	304.1	318.1	332.2	346.8	362.1	378.1
152.5°	275.7	275.8	280.9	288.0	296.6	307.7	320.2	333.1	345.8	359.5	374.0
155°	284.9	285.6	289.4	295.8	302.8	312.3	323.2	334.0	344.2	355.7	367.9
157.5°	294.0	294.0	297.6	302.6	308.7	316.2	325.4	334.0	342.6	351.8	361.6
160°	299.6	299.6	302.1	306.6	311.8	318.8	326.4	334.0	341.0	348.7	357.0
162.5°	304.8	304.2	306.2	310.2	314.8	320.2	327.4	334.0	339.6	345.7	352.9
165°	310.5	310.5	311.8	315.0	318.1	322.0	327.7	332.8	336.6	341.0	346.2
167.5°	316.2	315.6	316.2	318.6	320.4	323.3	327.6	331.3	333.5	336.5	340.1
170°	318.8	318.1	318.8	320.7	322.0	323.8	327.0	330.2	331.5	333.4	336.0
172.5°	321.3	320.7	320.8	322.2	322.9	324.3	326.5	329.2	329.5	330.4	332.4
175°	323.8	323.2	323.2	323.8	324.5	324.5	325.8	327.7	327.0	327.0	328.3
177.5°	325.0	324.5	324.0	324.5	324.5	324.5	325.0	326.0	325.0	325.0	325.5
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	18.9	19.1	19.2	19.2	19.3	19.5	19.3	19.3
90°	11.5	12.1	12.7	12.7	13.4	14.0	13.4	13.4
92.5°	125.2	94.2	75.0	62.2	54.7	51.3	49.1	49.1
95°	472.4	373.6	288.1	226.3	195.1	175.3	163.9	155.6
97.5°	697.9	661.2	598.8	532.3	486.6	448.2	429.0	415.8
100°	768.8	781.5	750.3	703.2	647.7	608.8	589.7	584.6
102.5°	765.2	828.5	837.6	817.9	783.9	755.7	735.6	731.5
105°	714.0	824.3	887.4	913.5	914.8	909.7	900.8	897.0
107.5°	641.2	758.6	847.5	904.3	935.9	950.4	956.8	958.4
110°	597.4	707.6	800.1	870.2	915.4	942.2	953.7	959.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	565.2	662.8	750.1	820.2	871.6	904.0	920.1	929.4
115°	533.0	611.4	685.9	747.1	797.5	835.8	856.1	861.3
117.5°	517.1	582.0	640.7	692.6	735.6	767.7	788.3	792.3
120°	510.0	569.3	620.3	665.5	701.9	729.9	746.5	753.5
122.5°	503.9	561.1	607.6	647.2	677.9	701.9	715.9	722.9
125°	493.4	548.3	592.2	627.3	652.8	671.3	683.4	687.2
127.5°	480.7	533.0	576.9	610.3	635.9	652.3	662.5	666.3
130°	470.5	520.8	564.2	597.9	624.1	640.1	650.3	654.1
132.5°	459.7	507.0	549.4	583.2	608.8	626.8	636.5	640.3
135°	445.0	486.4	525.3	557.2	582.7	600.5	610.7	614.6
137.5°	431.6	466.7	499.5	528.2	552.0	569.6	578.0	582.7
140°	424.0	453.9	482.6	509.4	531.7	545.7	554.6	559.7
142.5°	416.8	443.2	467.8	491.0	510.8	523.7	531.7	535.2
145°	406.8	428.4	447.5	465.4	481.4	492.1	498.6	501.7
147.5°	398.4	415.6	431.0	445.0	456.7	466.0	470.8	472.0
150°	393.3	408.0	420.8	432.2	442.5	450.7	454.5	455.2
152.5°	387.8	400.3	412.1	421.5	430.2	436.9	439.2	439.9
155°	379.3	389.6	399.1	406.8	413.1	418.2	420.1	420.1
157.5°	370.2	378.8	386.9	393.0	397.8	401.6	402.8	402.8
160°	364.7	371.7	378.7	383.8	387.6	391.4	392.1	392.1
162.5°	359.1	365.0	370.6	375.1	377.9	381.7	382.4	381.9
165°	351.2	355.1	359.5	362.7	365.3	367.9	367.2	366.6
167.5°	343.7	346.7	350.3	352.1	353.4	355.1	355.0	354.4
170°	339.2	341.0	343.6	345.5	346.8	347.4	346.8	346.8
172.5°	335.1	336.5	338.0	339.4	340.1	340.8	340.1	339.2
175°	329.6	330.2	331.5	331.5	331.5	332.8	331.5	330.2
177.5°	326.0	326.5	326.5	327.0	326.5	327.0	326.0	325.0
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5

(END OF REPORT)