

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: P332612-840

Luminaire Tested: **SA4XXDIP-C795D1035U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332612-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D1035U840-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

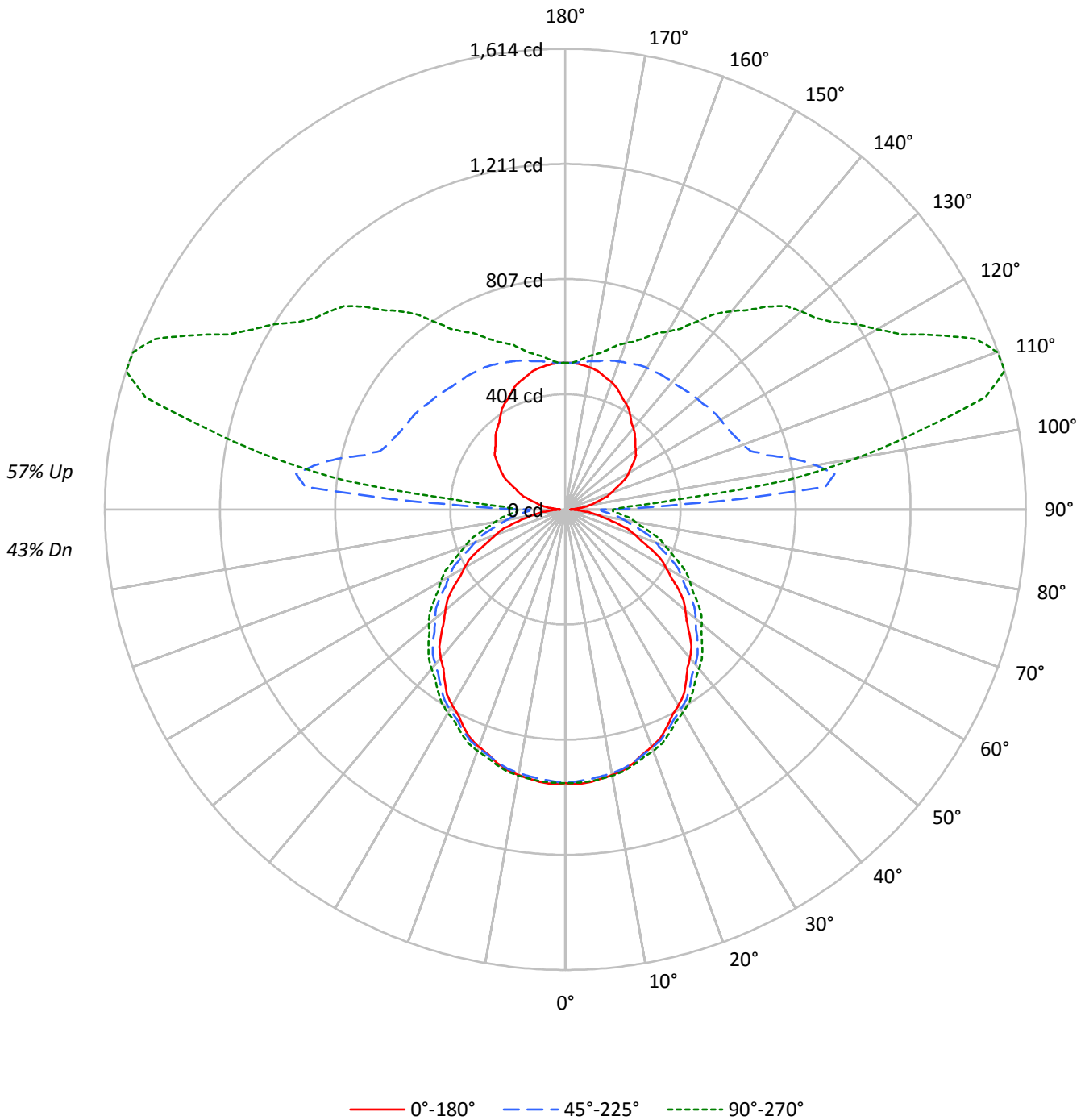
Lumens per Lamp: N/A
Luminaire Lumens: 7004.8 lumens
Efficiency: N/A
Efficacy: 134.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 52
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	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	41	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.3
10°-20°	260.3	3.7
20°-30°	393.5	5.6
30°-40°	476.1	6.8
40°-50°	503.4	7.2
50°-60°	473.7	6.8
60°-70°	393.1	5.6
70°-80°	276.1	3.9
80°-90°	158.9	2.3
90°-100°	463.3	6.6
100°-110°	840.0	12.0
110°-120°	737.0	10.5
120°-130°	607.2	8.7
130°-140°	495.8	7.1
140°-150°	372.5	5.3
150°-160°	260.2	3.7
160°-170°	153.1	2.2
170°-180°	49.8	0.7
0°-30°	744.6	10.6
0°-40°	1220.8	17.4
0°-60°	2197.9	31.4
0°-90°	3025.9	43.2
90°-120°	2040.3	29.1
90°-150°	3515.8	50.2
90°-180°	3979.0	56.8
0°-180°	7004.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	18	68	124	156	167	13
95°	47	155	915	528	378	48
105°	128	203	732	1521	1525	137
115°	214	278	640	1206	1444	213
125°	294	349	617	1014	1144	262
135°	346	412	591	882	1005	268
145°	397	454	579	728	804	249
155°	451	486	563	637	664	208
165°	491	506	539	571	580	139
175°	512	513	517	524	522	49
180°	513	513	513	513	513	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.0	42.1	52.5	62.4	72.4	82.5	94.1	104.6	115.4	126.3	133.0
90°	18.2	29.8	42.3	52.9	63.4	73.3	89.7	100.0	112.2	124.5	130.4
92.5°	27.8	41.6	59.7	80.6	103.9	134.3	195.8	284.3	370.8	421.0	374.3
95°	47.3	58.2	76.1	97.0	129.2	180.4	277.8	452.9	703.7	915.1	944.7
97.5°	72.4	79.2	94.6	113.5	141.0	184.7	262.0	408.2	657.4	952.2	1154.5
100°	88.5	94.6	108.0	126.2	151.6	191.6	260.3	383.6	598.5	892.2	1156.7
102.5°	104.5	111.6	123.3	140.1	163.8	201.8	264.7	374.1	558.2	819.3	1091.8
105°	127.6	135.4	145.2	162.1	185.0	221.1	278.3	370.8	520.8	732.3	975.1
107.5°	155.2	161.2	170.2	186.9	208.2	243.2	295.9	380.4	509.4	680.9	880.1
110°	172.9	178.2	186.6	202.1	223.6	256.7	309.4	388.3	507.6	662.1	831.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	189.9	194.8	203.6	217.8	238.9	271.7	322.3	396.9	508.5	650.6	802.4
115°	214.1	219.3	228.5	240.8	262.1	294.2	342.1	410.2	511.6	640.3	772.5
117.5°	240.5	244.6	252.2	264.6	283.8	316.2	361.6	424.4	515.6	632.8	755.3
120°	257.4	260.1	267.9	279.7	297.6	329.6	374.9	434.2	518.8	628.5	745.2
122.5°	273.6	275.7	282.9	293.4	312.3	343.0	387.8	443.5	522.1	623.4	734.5
125°	293.7	297.4	303.3	314.1	333.1	364.1	406.4	458.7	528.2	616.8	718.1
127.5°	312.1	315.2	322.1	334.7	354.4	385.0	424.6	471.8	531.8	608.1	697.1
130°	321.8	325.6	333.5	348.3	367.2	398.3	436.4	479.5	534.7	603.1	684.0
132.5°	332.2	335.3	345.5	359.6	380.1	409.2	446.5	488.1	537.7	598.8	672.3
135°	346.0	349.9	360.0	377.2	398.4	425.4	460.3	498.3	541.3	591.4	653.7
137.5°	360.6	364.3	375.1	391.2	412.9	438.2	470.1	504.7	542.3	586.2	637.9
140°	371.1	374.0	384.8	401.6	422.6	446.8	477.3	509.8	544.3	582.9	629.3
142.5°	381.5	384.6	394.8	411.0	431.4	454.6	483.9	513.6	546.2	581.2	622.4
145°	397.3	400.1	409.9	423.7	442.7	464.7	491.0	518.2	547.4	578.7	612.4
147.5°	415.3	416.0	424.6	438.9	454.6	474.4	499.1	522.8	548.5	575.0	603.7
150°	426.6	427.3	435.2	447.0	461.8	480.9	503.1	525.2	548.5	572.6	597.8
152.5°	436.2	436.3	444.3	455.6	469.0	486.6	506.3	526.8	546.8	568.6	591.4
155°	450.6	451.6	457.7	467.8	478.9	494.0	511.1	528.3	544.4	562.6	581.7
157.5°	464.9	464.9	470.6	478.5	488.2	500.1	514.5	528.3	541.8	556.3	571.8
160°	473.8	473.8	477.9	484.9	493.0	504.1	516.1	528.3	539.4	551.5	564.6
162.5°	481.9	481.1	484.3	490.6	497.9	506.5	517.8	528.3	536.9	546.6	558.2
165°	491.0	491.0	493.0	498.1	503.1	509.1	518.2	526.2	532.3	539.4	547.4
167.5°	500.1	499.1	500.1	503.9	506.8	511.3	518.0	523.8	527.5	532.1	537.8
170°	504.1	503.1	504.1	507.2	509.1	512.1	517.2	522.2	524.2	527.3	531.3
172.5°	508.1	507.2	507.3	509.5	510.7	512.9	516.3	520.6	521.0	522.4	525.6
175°	512.1	511.1	511.1	512.1	513.1	513.1	515.1	518.2	517.2	517.2	519.2
177.5°	513.9	513.1	512.3	513.1	513.1	513.1	513.9	515.5	513.9	513.9	514.7
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	140.2	147.2	154.4	159.0	161.2	163.5	165.4	167.5
90°	138.4	146.2	154.2	158.6	161.6	164.4	165.3	167.2
92.5°	312.7	270.3	246.7	230.9	220.9	217.3	215.8	217.7
95°	853.4	703.6	574.9	481.4	434.1	405.1	389.1	378.1
97.5°	1203.1	1151.2	1058.8	957.8	887.5	828.8	800.6	781.7
100°	1310.4	1337.0	1294.0	1223.5	1137.4	1077.6	1049.0	1042.7
102.5°	1300.0	1406.3	1426.8	1399.9	1347.9	1305.3	1275.3	1270.6
105°	1211.9	1392.3	1498.1	1543.4	1547.3	1541.2	1528.9	1524.8
107.5°	1090.5	1282.0	1428.4	1522.2	1573.7	1598.3	1610.1	1614.5
110°	1016.8	1196.8	1348.5	1463.0	1536.5	1580.7	1600.8	1611.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	961.4	1121.0	1264.4	1378.9	1462.0	1515.1	1542.5	1559.0
115°	903.8	1033.1	1156.3	1256.5	1337.9	1400.0	1433.9	1443.7
117.5°	871.8	979.4	1077.1	1162.6	1232.4	1285.2	1319.8	1327.9
120°	855.9	954.3	1039.8	1114.7	1174.1	1220.3	1248.5	1261.4
122.5°	841.8	937.2	1015.3	1081.3	1131.6	1171.2	1195.1	1207.9
125°	819.5	910.7	984.8	1043.2	1085.0	1115.7	1136.2	1143.8
127.5°	792.3	879.6	953.2	1008.8	1051.0	1078.5	1096.3	1104.0
130°	771.9	855.9	928.8	985.0	1027.8	1054.4	1072.0	1079.4
132.5°	751.2	830.1	901.1	957.4	999.4	1029.2	1045.9	1053.4
135°	721.0	790.3	855.7	908.7	950.5	980.1	997.6	1005.1
137.5°	694.2	753.2	808.5	856.4	895.2	924.3	938.8	947.3
140°	678.7	729.2	777.7	822.2	858.7	882.1	897.4	906.7
142.5°	665.0	709.4	751.1	789.6	821.9	843.4	857.0	863.6
145°	646.1	681.8	713.5	742.9	769.0	787.1	798.2	804.2
147.5°	630.5	657.9	682.3	704.9	724.3	739.7	748.2	750.7
150°	622.1	645.2	665.4	683.6	699.6	712.8	718.8	719.8
152.5°	613.2	633.1	651.7	666.6	680.3	690.9	694.6	695.6
155°	599.9	616.0	631.1	643.2	653.3	661.4	664.4	664.4
157.5°	585.5	599.1	611.8	621.5	629.0	635.1	636.9	636.9
160°	576.6	587.7	598.8	606.9	613.0	619.0	620.1	620.1
162.5°	567.7	577.2	585.9	593.2	597.6	603.7	604.7	603.9
165°	555.5	561.6	568.6	573.6	577.6	581.7	580.7	579.7
167.5°	543.6	548.3	553.9	556.9	559.0	561.6	561.4	560.6
170°	536.3	539.4	543.4	546.4	548.5	549.5	548.5	548.5
172.5°	529.9	532.1	534.5	536.7	538.0	539.0	538.0	536.3
175°	521.2	522.2	524.2	524.2	524.2	526.2	524.2	522.2
177.5°	515.5	516.3	516.3	517.2	516.3	517.2	515.5	513.9
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1

(END OF REPORT)