

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: P332594

Luminaire Tested: **SA4XXDIP-C795D590U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332594  
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-C795D590U835-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5351.3 lumens  
Efficiency: N/A  
Efficacy: 132.8 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

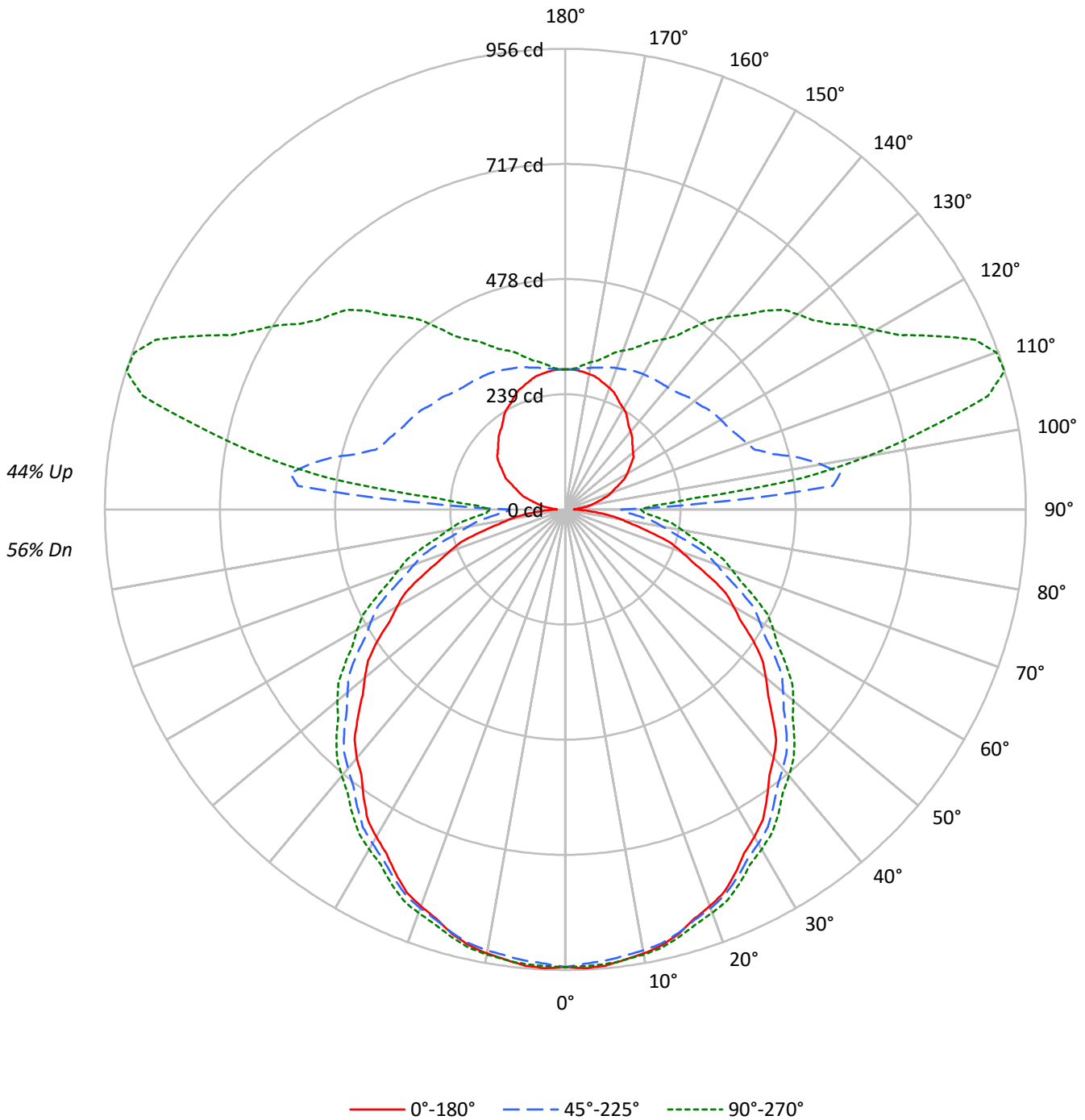
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	71	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	64	60	56	55	51	48	46	43	41	37
3	81	71	63	56	74	66	59	53	56	51	47	48	44	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	36	32	29	26
5	67	55	47	40	62	52	44	38	45	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	20	17
8	53	40	32	27	49	38	31	25	33	27	23	28	24	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	21	17	14	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.9	1.7
10°-20°	257.7	4.8
20°-30°	389.7	7.3
30°-40°	471.5	8.8
40°-50°	498.5	9.3
50°-60°	469.1	8.8
60°-70°	389.2	7.3
70°-80°	273.4	5.1
80°-90°	156.2	2.9
90°-100°	301.5	5.6
100°-110°	504.4	9.4
110°-120°	436.6	8.2
120°-130°	354.6	6.6
130°-140°	285.3	5.3
140°-150°	211.7	4.0
150°-160°	147.3	2.8
160°-170°	86.6	1.6
170°-180°	28.2	0.5
0°-30°	737.4	13.8
0°-40°	1208.8	22.6
0°-60°	2176.4	40.7
0°-90°	2995.2	56.0
90°-120°	1242.5	23.2
90°-150°	2094.1	39.1
90°-180°	2356.0	44.0
0°-180°	5351.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	18	64	116	146	157	12
95°	33	109	558	350	270	32
105°	76	129	444	902	908	82
115°	124	165	384	714	852	123
125°	168	199	362	595	671	150
135°	197	234	339	510	583	152
145°	225	257	327	415	460	141
155°	255	275	318	360	376	118
165°	278	286	305	323	328	78
175°	290	290	293	297	296	27
180°	290	290	290	290	290	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	31.6	41.5	51.5	61.2	71.0	81.0	92.0	102.4	112.9	123.5	130.3
90°	17.6	28.2	39.4	49.4	59.4	69.2	82.8	93.0	104.3	115.6	121.9
92.5°	22.7	34.1	48.0	63.5	80.3	101.5	140.7	195.1	248.4	281.1	257.6
95°	32.7	42.2	55.7	70.9	92.4	125.1	184.4	287.6	433.7	557.5	577.0
97.5°	46.3	53.0	64.7	78.2	96.7	124.9	172.7	259.6	404.7	575.6	692.7
100°	55.1	61.2	71.3	84.3	101.3	127.3	170.1	243.8	369.4	539.5	691.9
102.5°	64.2	70.5	79.4	91.2	107.0	131.5	171.0	236.7	344.8	496.4	653.2
105°	76.3	82.8	90.3	101.9	116.9	140.2	176.3	232.4	321.0	444.4	584.4
107.5°	91.8	96.9	103.6	114.8	128.5	150.8	184.2	235.6	312.1	412.7	527.9
110°	101.5	105.9	112.1	122.3	135.8	157.0	190.4	238.6	309.6	400.6	499.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	110.7	114.8	121.0	130.3	143.5	164.3	196.4	242.0	308.5	392.3	480.4
115°	123.9	127.7	133.9	141.7	154.7	174.9	205.3	247.1	307.7	383.7	460.8
117.5°	138.7	141.6	146.4	154.0	165.4	185.5	214.3	252.8	307.4	376.8	448.2
120°	147.9	149.8	154.5	161.5	171.9	191.6	220.2	256.7	307.5	372.5	440.5
122.5°	157.1	158.3	162.5	168.4	179.2	198.0	226.2	260.5	307.7	367.8	432.6
125°	168.0	170.0	173.2	179.2	189.8	208.7	235.1	267.3	309.1	361.8	421.0
127.5°	178.4	180.0	183.8	190.8	201.8	220.1	244.5	273.1	309.0	354.1	406.3
130°	183.5	185.5	189.8	198.1	208.7	227.1	250.2	276.3	309.1	349.4	397.0
132.5°	189.4	191.0	196.7	204.5	216.0	233.1	255.5	280.3	309.7	345.6	388.9
135°	196.7	198.9	204.6	214.3	226.3	242.0	262.5	284.6	309.7	338.7	375.6
137.5°	205.0	206.9	212.9	222.0	234.2	248.6	267.0	286.9	308.5	333.7	364.4
140°	210.9	212.4	218.4	227.9	239.6	253.3	270.7	289.2	308.8	330.7	358.3
142.5°	216.4	218.1	223.9	233.1	244.6	257.7	274.2	291.0	309.3	329.0	353.5
145°	225.3	226.7	232.2	239.9	250.5	263.0	277.8	293.2	309.8	327.4	347.1
147.5°	235.4	235.7	240.5	248.5	257.3	268.5	282.4	295.8	310.3	325.4	341.7
150°	241.8	242.1	246.5	253.1	261.4	272.1	284.7	297.2	310.3	324.0	338.3
152.5°	246.9	246.9	251.5	257.8	265.4	275.3	286.5	298.1	309.4	321.7	334.6
155°	255.0	255.6	259.0	264.7	271.0	279.5	289.2	298.9	308.0	318.3	329.1
157.5°	263.1	263.1	266.3	270.7	276.2	282.9	291.2	298.9	306.6	314.8	323.6
160°	268.1	268.1	270.4	274.4	278.9	285.2	292.1	298.9	305.2	312.0	319.5
162.5°	272.7	272.2	274.0	277.6	281.7	286.6	293.0	298.9	303.8	309.3	315.8
165°	277.8	277.8	278.9	281.8	284.7	288.1	293.2	297.8	301.2	305.2	309.8
167.5°	282.9	282.4	282.9	285.1	286.7	289.3	293.1	296.4	298.5	301.1	304.3
170°	285.2	284.7	285.2	286.9	288.1	289.8	292.6	295.5	296.6	298.3	300.6
172.5°	287.5	286.9	287.0	288.3	289.0	290.2	292.2	294.6	294.8	295.6	297.4
175°	289.8	289.2	289.2	289.8	290.4	290.4	291.5	293.2	292.6	292.6	293.8
177.5°	290.8	290.4	289.9	290.4	290.4	290.4	290.8	291.7	290.8	290.8	291.3
180°	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	137.2	144.2	151.2	155.6	157.8	160.0	162.0	164.1
90°	129.3	136.7	144.1	148.5	151.0	153.4	154.7	156.6
92.5°	225.6	204.5	193.9	186.8	182.0	180.8	180.7	182.6
95°	528.0	446.0	375.9	324.8	299.0	283.5	275.3	270.0
97.5°	722.9	696.2	646.6	591.2	552.2	519.9	504.8	495.0
100°	781.6	799.4	777.8	739.6	691.6	658.5	643.0	640.1
102.5°	773.7	836.5	850.8	837.3	808.6	785.3	769.1	767.3
105°	720.9	825.5	887.9	915.2	918.2	915.6	909.5	907.9
107.5°	649.4	760.3	845.6	900.3	930.2	944.9	952.3	955.5
110°	606.0	710.1	798.3	864.7	907.1	932.9	945.1	952.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	572.6	665.2	748.6	814.9	862.7	893.6	909.9	920.1
115°	537.3	612.7	684.6	742.8	789.5	825.4	845.3	851.5
117.5°	516.2	579.2	636.6	686.4	726.8	757.4	777.8	783.2
120°	505.2	562.9	613.3	657.1	691.5	718.5	735.2	743.4
122.5°	495.4	551.4	597.6	636.3	665.5	688.7	702.9	710.9
125°	480.3	533.8	577.7	612.0	636.3	654.2	666.5	671.3
127.5°	462.0	513.2	556.7	589.4	613.9	630.2	641.0	646.0
130°	448.6	498.0	541.0	574.1	598.9	614.6	625.1	630.0
132.5°	435.3	481.7	523.6	556.6	580.9	598.4	608.5	613.4
135°	415.3	456.2	494.8	525.9	550.1	567.5	578.0	582.9
137.5°	397.8	432.6	465.4	493.5	516.0	532.9	541.6	546.9
140°	387.6	417.5	446.2	472.3	493.5	507.2	516.4	522.1
142.5°	378.8	405.1	429.8	452.4	471.1	483.7	491.8	496.0
145°	366.8	387.6	406.1	423.3	438.5	449.1	455.8	459.6
147.5°	356.9	372.5	386.4	399.4	410.7	419.7	424.8	426.6
150°	352.0	365.1	376.5	386.8	395.9	403.3	406.7	407.3
152.5°	346.9	358.2	368.7	377.2	384.9	391.0	393.0	393.6
155°	339.4	348.5	357.1	363.9	369.7	374.2	375.9	375.9
157.5°	331.3	339.0	346.1	351.6	356.0	359.4	360.4	360.4
160°	326.3	332.6	338.8	343.4	346.8	350.3	350.8	350.8
162.5°	321.3	326.6	331.5	335.7	338.2	341.6	342.2	341.7
165°	314.3	317.7	321.7	324.6	326.9	329.1	328.6	328.0
167.5°	307.6	310.2	313.4	315.1	316.3	317.7	317.6	317.2
170°	303.5	305.2	307.5	309.2	310.3	310.9	310.3	310.3
172.5°	299.8	301.1	302.5	303.7	304.4	305.0	304.4	303.5
175°	294.9	295.5	296.6	296.6	296.6	297.8	296.6	295.5
177.5°	291.7	292.2	292.2	292.6	292.2	292.6	291.7	290.8
180°	290.4	290.4	290.4	290.4	290.4	290.4	290.4	290.4

(END OF REPORT)