

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: P332594-840

Luminaire Tested: **SA4XXDIP-C795D590U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332594-840
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-C795D590U840-4F0-1E-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

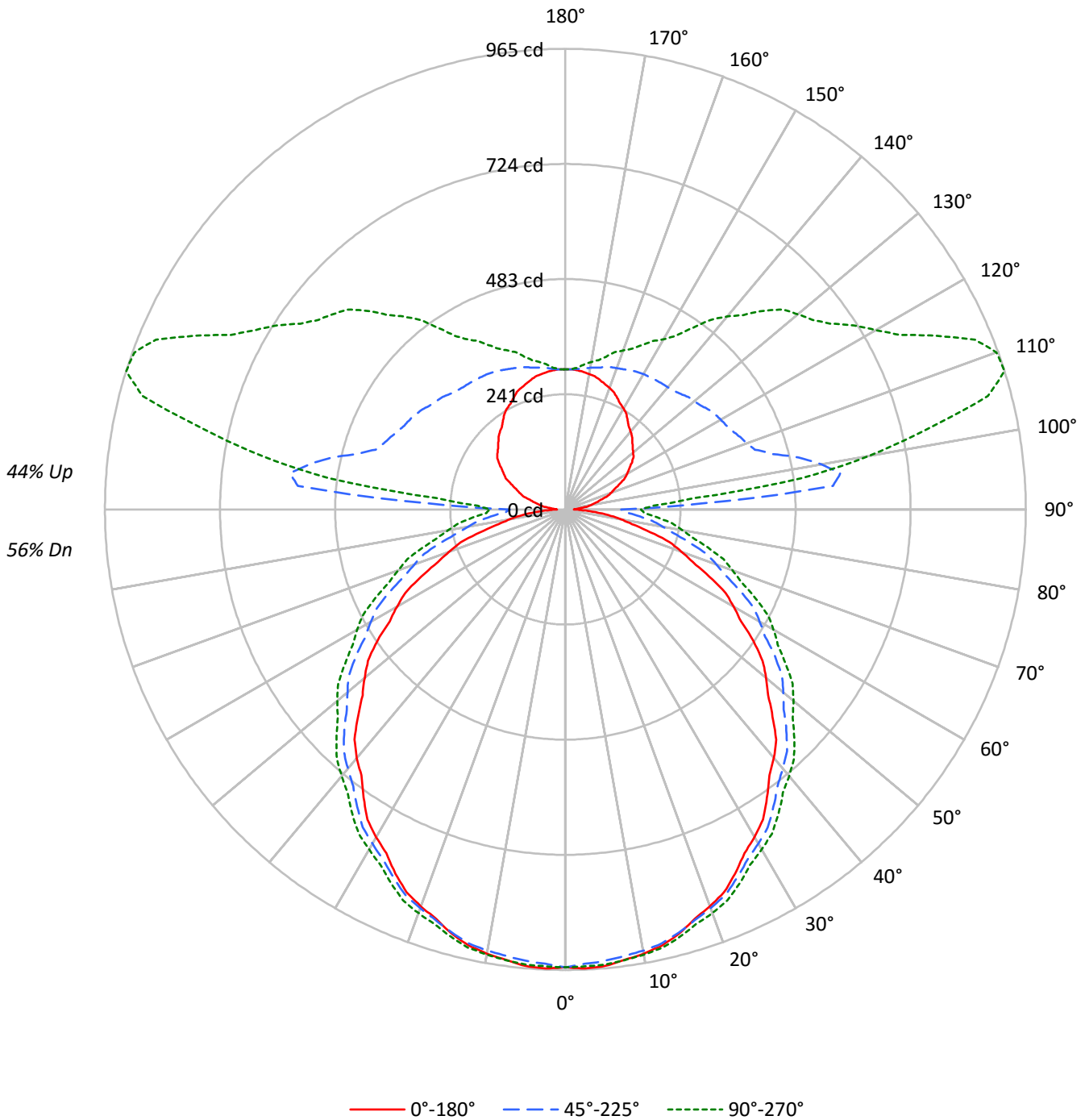
Lumens per Lamp: N/A
Luminaire Lumens: 5404.1 lumens
Efficiency: N/A
Efficacy: 134.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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									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	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°	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	1.7
10°-20°	260.3	4.8
20°-30°	393.5	7.3
30°-40°	476.1	8.8
40°-50°	503.4	9.3
50°-60°	473.7	8.8
60°-70°	393.1	7.3
70°-80°	276.1	5.1
80°-90°	157.7	2.9
90°-100°	304.5	5.6
100°-110°	509.4	9.4
110°-120°	440.9	8.2
120°-130°	358.1	6.6
130°-140°	288.1	5.3
140°-150°	213.8	4.0
150°-160°	148.7	2.8
160°-170°	87.5	1.6
170°-180°	28.5	0.5
0°-30°	744.6	13.8
0°-40°	1220.8	22.6
0°-60°	2197.9	40.7
0°-90°	3024.7	56.0
90°-120°	1254.7	23.2
90°-150°	2114.7	39.1
90°-180°	2379.0	44.0
0°-180°	5404.1	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	65	117	148	158	12
95°	33	110	563	354	273	32
105°	77	130	449	910	917	83
115°	125	166	388	721	860	124
125°	170	201	365	601	678	151
135°	199	236	342	515	589	154
145°	228	259	331	419	464	143
155°	258	278	321	364	380	119
165°	280	289	308	326	331	79
175°	293	293	296	300	298	28
180°	293	293	293	293	293	



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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°	31.9	41.9	52.0	61.8	71.7	81.8	92.9	103.4	114.0	124.7	131.6
90°	17.8	28.5	39.8	49.9	60.0	69.9	83.6	93.9	105.3	116.7	123.1
92.5°	22.9	34.4	48.5	64.1	81.1	102.5	142.1	197.0	250.9	283.9	260.1
95°	33.0	42.6	56.2	71.6	93.3	126.3	186.2	290.4	438.0	563.0	582.7
97.5°	46.8	53.5	65.3	79.0	97.7	126.1	174.4	262.2	408.7	581.3	699.5
100°	55.6	61.8	72.0	85.1	102.3	128.6	171.8	246.2	373.0	544.8	698.7
102.5°	64.8	71.2	80.2	92.1	108.1	132.8	172.7	239.0	348.2	501.3	659.6
105°	77.1	83.6	91.2	102.9	118.1	141.6	178.0	234.7	324.2	448.8	590.2
107.5°	92.7	97.9	104.6	115.9	129.8	152.3	186.0	237.9	315.2	416.8	533.1
110°	102.5	106.9	113.2	123.5	137.1	158.5	192.3	241.0	312.7	404.6	503.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.8	115.9	122.2	131.6	144.9	165.9	198.3	244.4	311.5	396.2	485.1
115°	125.1	129.0	135.2	143.1	156.2	176.6	207.3	249.5	310.7	387.5	465.3
117.5°	140.1	143.0	147.8	155.5	167.0	187.3	216.4	255.3	310.4	380.5	452.6
120°	149.4	151.3	156.0	163.1	173.6	193.5	222.4	259.2	310.5	376.2	444.8
122.5°	158.6	159.9	164.1	170.1	181.0	200.0	228.4	263.1	310.7	371.4	436.9
125°	169.7	171.7	174.9	181.0	191.7	210.8	237.4	269.9	312.1	365.4	425.2
127.5°	180.2	181.8	185.6	192.7	203.8	222.3	246.9	275.8	312.0	357.6	410.3
130°	185.3	187.3	191.7	200.1	210.8	229.3	252.7	279.0	312.1	352.8	400.9
132.5°	191.3	192.9	198.6	206.5	218.1	235.4	258.0	283.1	312.8	349.0	392.7
135°	198.6	200.9	206.6	216.4	228.5	244.4	265.1	287.4	312.8	342.0	379.3
137.5°	207.0	208.9	215.0	224.2	236.5	251.1	269.6	289.7	311.5	337.0	368.0
140°	213.0	214.5	220.6	230.1	242.0	255.8	273.4	292.1	311.8	334.0	361.8
142.5°	218.5	220.3	226.1	235.4	247.0	260.2	276.9	293.9	312.4	332.2	357.0
145°	227.5	228.9	234.5	242.3	253.0	265.6	280.5	296.1	312.9	330.6	350.5
147.5°	237.7	238.0	242.9	251.0	259.8	271.1	285.2	298.7	313.4	328.6	345.1
150°	244.2	244.5	248.9	255.6	264.0	274.8	287.5	300.1	313.4	327.2	341.6
152.5°	249.3	249.3	254.0	260.3	268.0	278.0	289.3	301.0	312.5	324.9	337.9
155°	257.5	258.1	261.6	267.3	273.7	282.3	292.1	301.8	311.0	321.4	332.3
157.5°	265.7	265.7	268.9	273.4	278.9	285.7	294.1	301.8	309.6	317.9	326.8
160°	270.7	270.7	273.1	277.1	281.7	288.0	295.0	301.8	308.2	315.1	322.7
162.5°	275.4	274.9	276.7	280.3	284.5	289.4	295.9	301.8	306.8	312.4	318.9
165°	280.5	280.5	281.7	284.6	287.5	290.9	296.1	300.7	304.2	308.2	312.9
167.5°	285.7	285.2	285.7	287.9	289.5	292.2	296.0	299.3	301.4	304.1	307.3
170°	288.0	287.5	288.0	289.7	290.9	292.7	295.5	298.4	299.5	301.2	303.6
172.5°	290.3	289.7	289.8	291.1	291.9	293.1	295.1	297.5	297.7	298.5	300.3
175°	292.7	292.1	292.1	292.7	293.3	293.3	294.4	296.1	295.5	295.5	296.7
177.5°	293.7	293.3	292.8	293.3	293.3	293.3	293.7	294.6	293.7	293.7	294.2
180°	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3



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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°	138.6	145.6	152.7	157.1	159.4	161.6	163.6	165.7
90°	130.6	138.0	145.5	150.0	152.5	154.9	156.2	158.1
92.5°	227.8	206.5	195.8	188.6	183.8	182.6	182.5	184.4
95°	533.2	450.4	379.6	328.0	301.9	286.3	278.0	272.7
97.5°	730.0	703.1	653.0	597.0	557.6	525.0	509.8	499.9
100°	789.3	807.3	785.5	746.9	698.4	665.0	649.3	646.4
102.5°	781.3	844.8	859.2	845.6	816.6	793.0	776.7	774.9
105°	728.0	833.6	896.7	924.2	927.3	924.6	918.5	916.9
107.5°	655.8	767.8	853.9	909.2	939.4	954.2	961.7	964.9
110°	612.0	717.1	806.2	873.2	916.0	942.1	954.4	961.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	578.2	671.8	756.0	822.9	871.2	902.4	918.9	929.2
115°	542.6	618.7	691.4	750.1	797.3	833.5	853.6	859.9
117.5°	521.3	584.9	642.9	693.2	734.0	764.9	785.5	790.9
120°	510.2	568.5	619.4	663.6	698.3	725.6	742.5	750.7
122.5°	500.3	556.8	603.5	642.6	672.1	695.5	709.8	717.9
125°	485.0	539.1	583.4	618.0	642.6	660.7	673.1	677.9
127.5°	466.6	518.3	562.2	595.2	620.0	636.4	647.3	652.4
130°	453.0	502.9	546.3	579.8	604.8	620.7	631.3	636.2
132.5°	439.6	486.5	528.8	562.1	586.6	604.3	614.5	619.5
135°	419.4	460.7	499.7	531.1	555.5	573.1	583.7	588.7
137.5°	401.7	436.9	470.0	498.4	521.1	538.2	546.9	552.3
140°	391.4	421.6	450.6	477.0	498.4	512.2	521.5	527.3
142.5°	382.5	409.1	434.0	456.9	475.7	488.5	496.7	500.9
145°	370.4	391.4	410.1	427.5	442.8	453.5	460.3	464.1
147.5°	360.4	376.2	390.2	403.3	414.8	423.8	429.0	430.8
150°	355.5	368.7	380.2	390.6	399.8	407.3	410.7	411.3
152.5°	350.3	361.7	372.3	380.9	388.7	394.9	396.9	397.5
155°	342.7	351.9	360.6	367.5	373.3	377.9	379.6	379.6
157.5°	334.6	342.3	349.5	355.1	359.5	362.9	364.0	364.0
160°	329.5	335.9	342.1	346.8	350.2	353.8	354.3	354.3
162.5°	324.5	329.8	334.8	339.0	341.5	345.0	345.6	345.1
165°	317.4	320.8	324.9	327.8	330.1	332.3	331.8	331.2
167.5°	310.6	313.3	316.5	318.2	319.4	320.8	320.7	320.3
170°	306.5	308.2	310.5	312.3	313.4	314.0	313.4	313.4
172.5°	302.8	304.1	305.5	306.7	307.4	308.0	307.4	306.5
175°	297.8	298.4	299.5	299.5	299.5	300.7	299.5	298.4
177.5°	294.6	295.1	295.1	295.5	295.1	295.5	294.6	293.7
180°	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3

(END OF REPORT)