

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: P331686-935

Luminaire Tested: **SA2XXRDIP-C675D530U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331686-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D530U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

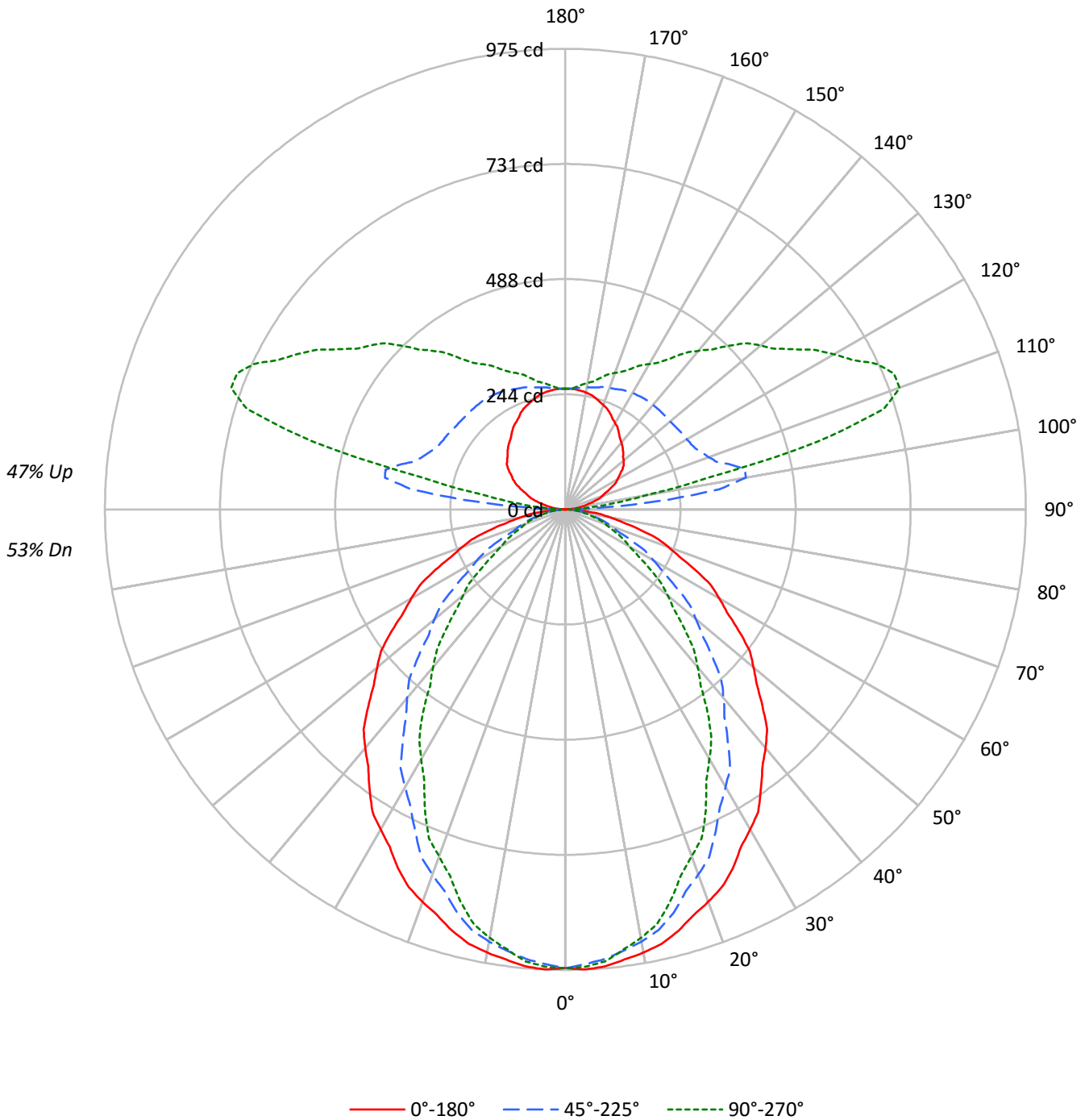
Lumens per Lamp: N/A
Luminaire Lumens: 3776.7 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53				
1	99	95	91	88	92	88	85	82	75	73	71	64	62	60	53	52	51	46				
2	91	83	77	72	84	78	72	68	67	63	59	56	54	51	47	45	43	39				
3	83	74	67	61	77	69	62	57	59	54	51	50	47	44	42	40	38	34				
4	76	66	58	52	70	61	54	49	53	48	44	45	41	38	38	35	33	29				
5	70	59	51	45	65	55	48	43	48	42	38	41	37	33	34	31	29	26				
6	65	53	45	39	60	50	42	37	43	38	33	37	33	30	31	28	26	23				
7	60	48	40	35	56	45	38	33	39	34	30	34	30	26	29	26	23	21				
8	56	44	36	31	52	41	34	29	36	30	26	31	27	24	27	23	21	19				
9	52	40	33	28	48	38	31	26	33	28	24	29	24	21	25	21	19	17				
10	49	37	30	25	45	35	28	24	31	25	22	27	22	19	23	20	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	2.4
10°-20°	249.6	6.6
20°-30°	350.5	9.3
30°-40°	382.2	10.1
40°-50°	351.5	9.3
50°-60°	276.0	7.3
60°-70°	180.0	4.8
70°-80°	92.8	2.5
80°-90°	26.4	0.7
90°-100°	102.1	2.7
100°-110°	346.4	9.2
110°-120°	368.0	9.7
120°-130°	303.0	8.0
130°-140°	243.3	6.4
140°-150°	183.9	4.9
150°-160°	129.2	3.4
160°-170°	76.1	2.0
170°-180°	24.8	0.7
0°-30°	691.1	18.3
0°-40°	1073.3	28.4
0°-60°	1700.8	45.0
0°-90°	1999.9	53.0
90°-120°	816.6	21.6
90°-150°	1546.7	41.0
90°-180°	1777.0	47.1
0°-180°	3776.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	0	7	17	16	16	3
95°	17	42	192	73	56	18
105°	60	90	364	650	553	64
115°	106	133	304	628	728	105
125°	147	174	293	509	591	131
135°	173	206	289	428	490	133
145°	197	227	288	357	391	124
155°	224	242	279	316	328	103
165°	244	252	268	284	288	69
175°	255	255	257	260	260	24
180°	255	255	255	255	255	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.4	10.4	9.6	8.5	7.4	7.1	7.6	8.3	8.9	9.0	8.7
90°	0.5	2.0	4.0	4.9	5.9	7.4	9.8	13.3	16.2	16.7	16.2
92.5°	6.0	8.6	12.1	14.4	17.7	22.3	33.4	49.0	62.9	63.8	53.9
95°	17.2	19.1	24.0	28.5	36.3	48.1	70.7	113.4	170.4	192.5	168.4
97.5°	28.0	30.7	35.8	42.5	51.6	64.9	93.3	152.8	247.5	328.6	344.7
100°	37.8	39.3	43.7	51.6	61.4	75.2	101.2	161.1	267.1	387.9	458.6
102.5°	46.8	48.0	52.3	60.2	70.4	84.1	108.2	161.4	259.7	389.9	501.0
105°	59.9	61.9	65.3	72.7	83.4	97.2	120.3	164.0	245.0	363.9	494.5
107.5°	74.0	75.6	79.0	85.8	96.4	110.3	132.7	170.7	237.7	336.0	451.3
110°	83.4	85.4	88.4	94.8	105.0	119.3	140.9	176.2	236.2	322.6	424.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	92.1	94.1	97.4	103.4	113.3	127.9	148.8	182.2	236.6	313.9	405.4
115°	105.6	108.1	111.0	116.8	126.7	139.9	161.1	191.0	238.7	304.4	382.0
117.5°	119.5	121.5	124.4	129.7	139.1	152.8	172.4	200.4	242.2	299.8	367.3
120°	128.1	130.1	133.0	137.5	147.3	161.1	180.2	206.7	244.5	297.0	359.5
122.5°	136.4	138.0	140.9	145.8	155.6	169.7	187.7	212.2	247.3	295.5	352.8
125°	147.3	148.8	151.7	157.6	167.5	181.2	198.9	220.9	251.4	292.7	343.2
127.5°	155.9	157.9	162.0	168.5	178.0	192.1	209.3	229.1	255.6	291.0	334.4
130°	161.1	163.0	167.9	174.8	184.6	198.4	215.6	234.2	258.7	290.2	328.5
132.5°	165.7	168.2	173.4	180.7	190.9	204.7	221.0	239.4	261.9	289.8	323.7
135°	172.8	174.8	180.7	188.0	199.3	213.1	228.9	246.0	265.6	289.2	317.2
137.5°	179.5	181.8	187.8	195.6	206.8	219.6	235.1	251.1	269.0	289.1	312.5
140°	184.6	186.6	192.5	200.4	211.1	223.9	238.7	253.8	270.5	288.7	309.9
142.5°	189.8	191.3	196.8	204.7	215.1	227.0	241.4	256.2	271.7	288.7	307.1
145°	197.4	199.3	204.2	211.6	221.4	232.2	245.5	259.2	273.0	287.7	303.4
147.5°	205.6	207.1	211.8	218.6	226.8	236.3	248.8	261.0	273.4	285.9	299.7
150°	211.1	212.6	216.5	222.9	230.3	239.1	250.4	261.7	273.0	284.8	296.6
152.5°	216.6	217.3	221.3	226.9	233.8	241.9	252.0	262.1	272.2	282.8	293.9
155°	224.4	224.9	227.8	233.2	238.7	246.0	254.3	262.7	271.0	279.4	288.7
157.5°	230.8	231.4	233.8	238.4	242.8	248.9	256.0	262.7	268.8	275.9	283.9
160°	235.2	235.7	237.6	241.6	245.5	250.9	256.8	262.7	267.6	273.5	280.3
162.5°	239.5	239.2	241.2	244.4	247.9	252.1	257.2	262.3	266.4	271.6	277.2
165°	244.5	244.0	245.0	248.0	250.4	253.4	257.8	261.2	264.2	267.6	272.0
167.5°	248.7	248.1	248.9	250.8	252.6	254.4	257.7	260.5	261.9	264.2	266.9
170°	251.4	250.4	250.9	252.4	253.4	254.9	257.3	259.8	260.7	262.2	264.2
172.5°	253.0	252.4	252.1	253.6	254.2	255.2	256.9	258.6	259.2	259.8	261.4
175°	254.9	254.3	253.8	254.9	254.9	255.3	256.3	257.3	256.8	257.3	257.8
177.5°	255.7	254.9	254.5	255.3	255.3	255.3	255.7	256.5	255.7	255.3	255.7
180°	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	8.4	8.1	8.2	8.2	8.2	8.2	8.2	8.2
90°	15.7	14.7	15.7	16.2	16.2	16.2	16.2	16.2
92.5°	42.8	36.8	32.6	29.5	29.2	27.6	28.0	27.2
95°	128.6	98.7	78.1	67.2	60.9	57.0	55.4	56.0
97.5°	300.2	245.6	192.5	157.0	133.5	121.5	114.3	110.2
100°	448.3	387.4	320.1	260.7	220.0	198.9	184.6	175.8
102.5°	545.4	531.6	482.4	419.4	375.1	339.1	321.3	309.4
105°	596.6	652.0	658.5	642.2	611.8	581.3	560.3	553.4
107.5°	559.6	643.3	694.3	718.1	721.9	720.2	716.0	706.9
110°	527.9	615.7	678.6	718.8	739.9	749.3	753.7	753.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	498.8	583.2	650.3	696.5	725.8	741.4	749.8	752.4
115°	463.0	538.6	603.0	653.6	688.4	711.0	723.8	728.1
117.5°	436.1	502.5	560.9	608.3	643.9	667.7	681.1	684.8
120°	422.8	483.6	535.7	580.4	614.8	637.8	652.0	656.9
122.5°	412.2	468.0	517.2	557.6	588.4	611.1	623.8	627.9
125°	396.7	447.3	490.5	527.4	555.9	574.5	586.8	590.7
127.5°	381.5	427.3	468.0	502.0	526.8	544.3	554.9	558.1
130°	371.7	414.0	452.7	485.1	509.2	525.9	535.7	539.6
132.5°	362.3	401.4	437.0	467.4	491.1	507.8	516.9	520.4
135°	349.1	381.5	414.0	441.4	462.5	478.7	487.6	489.6
137.5°	338.6	365.8	391.4	415.4	434.6	448.6	456.3	459.3
140°	331.9	355.5	378.1	399.7	415.4	428.2	435.5	438.5
142.5°	326.4	346.5	365.9	384.0	398.9	410.5	417.1	417.7
145°	318.7	334.8	350.1	364.4	376.1	384.4	389.3	390.8
147.5°	312.7	325.5	337.3	347.8	357.5	364.1	367.5	368.3
150°	308.3	319.2	329.5	338.3	345.7	351.5	354.5	355.0
152.5°	304.0	314.1	322.8	330.5	336.2	341.4	343.5	343.6
155°	298.1	305.9	313.2	318.7	324.1	327.5	329.5	328.5
157.5°	291.1	297.6	303.8	308.1	311.9	314.8	315.6	315.6
160°	286.7	292.1	297.6	301.0	304.4	306.9	307.4	307.4
162.5°	282.4	287.1	291.7	294.3	297.7	299.5	299.9	299.5
165°	276.0	279.4	282.8	284.8	286.7	288.7	288.7	288.3
167.5°	269.8	272.4	274.7	276.6	277.4	278.5	278.4	277.8
170°	266.7	268.1	270.1	271.0	271.6	273.0	272.5	271.6
172.5°	263.1	264.2	265.7	266.3	266.8	267.5	267.0	266.4
175°	259.2	259.8	260.3	260.7	260.7	261.2	260.7	259.8
177.5°	256.5	256.5	256.9	256.9	256.9	256.9	256.5	255.7
180°	255.3	255.3	255.3	255.3	255.3	255.3	255.3	255.3

(END OF REPORT)