

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: P331338-930

Luminaire Tested: **SA2XXDIP-C675D330U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331338-930
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: SA2XXDIP-C675D330U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3245.9 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

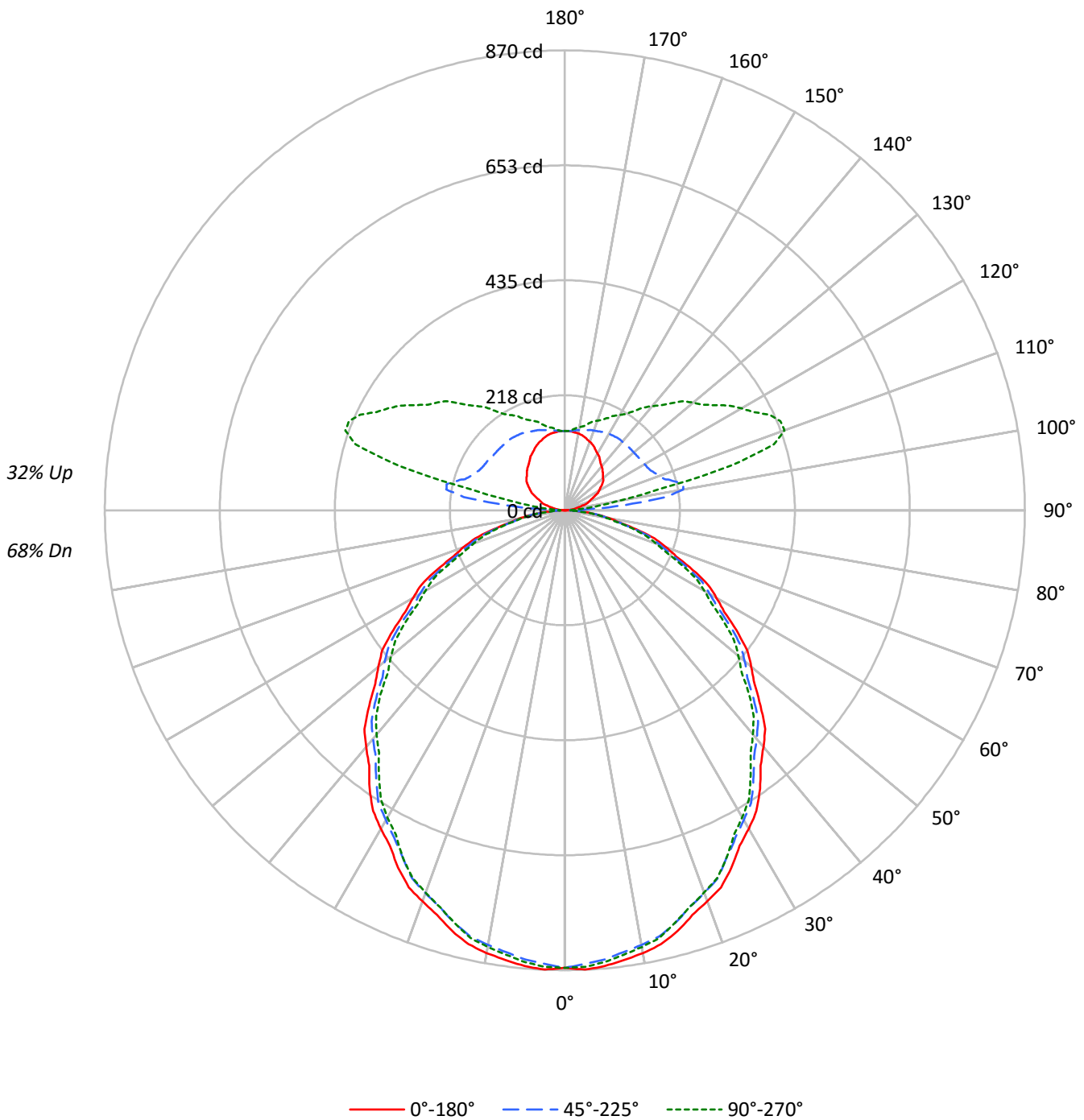
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	73	73	73	68
1	102	97	93	90	96	92	88	85	82	79	77	73	71	69	64	63	61	57
2	93	85	79	73	87	80	75	70	72	67	64	64	60	57	56	54	52	48
3	85	75	67	61	79	71	64	59	63	58	54	56	52	49	50	47	44	41
4	77	66	58	52	73	63	56	50	56	50	46	50	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	32	29	27
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	26	23	28	24	21	19
10	49	37	29	25	47	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	2.5
10°-20°	229.0	7.1
20°-30°	336.6	10.4
30°-40°	391.0	12.0
40°-50°	390.6	12.0
50°-60°	340.6	10.5
60°-70°	251.9	7.8
70°-80°	142.7	4.4
80°-90°	39.7	1.2
90°-100°	59.9	1.8
100°-110°	203.2	6.3
110°-120°	215.9	6.7
120°-130°	177.7	5.5
130°-140°	142.7	4.4
140°-150°	107.9	3.3
150°-160°	75.8	2.3
160°-170°	44.6	1.4
170°-180°	14.5	0.4
0°-30°	647.0	19.9
0°-40°	1038.1	32.0
0°-60°	1769.3	54.5
0°-90°	2203.6	67.9
90°-120°	479.1	14.8
90°-150°	907.4	28.0
90°-180°	1042.0	32.1
0°-180°	3245.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	0	4	10	9	10	2
95°	10	25	113	43	33	11
105°	35	53	213	382	325	37
115°	62	78	179	369	427	61
125°	86	102	172	299	347	77
135°	101	121	170	251	287	78
145°	116	133	169	210	229	73
155°	132	142	164	185	193	61
165°	144	148	157	166	169	40
175°	150	150	151	153	152	14
180°	150	150	150	150	150	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	11.9	11.8	11.7	11.5	11.3	11.3	11.5	11.5	11.3	10.8
90°	0.3	1.1	2.3	2.9	3.4	4.3	5.8	7.7	9.5	9.8	9.5
92.5°	3.5	5.1	7.2	8.4	10.4	13.0	19.6	28.8	36.9	37.4	31.6
95°	10.1	11.3	14.1	16.7	21.3	28.2	41.5	66.5	100.0	112.9	98.8
97.5°	16.4	17.9	21.0	24.9	30.2	38.1	54.7	89.7	145.2	192.7	202.2
100°	22.2	23.1	25.6	30.2	36.0	44.1	59.4	94.5	156.7	227.6	269.0
102.5°	27.5	28.1	30.7	35.3	41.3	49.4	63.5	94.7	152.3	228.7	293.9
105°	35.1	36.3	38.3	42.6	49.0	57.1	70.6	96.2	143.7	213.4	290.1
107.5°	43.5	44.4	46.3	50.3	56.6	64.7	77.9	100.2	139.5	197.1	264.8
110°	49.0	50.1	51.9	55.6	61.6	70.0	82.7	103.4	138.6	189.2	248.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.1	55.2	57.2	60.7	66.4	75.1	87.3	106.9	138.8	184.2	237.8
115°	62.0	63.3	65.1	68.6	74.4	82.1	94.5	112.0	140.0	178.6	224.1
117.5°	70.1	71.3	73.0	76.1	81.6	89.7	101.1	117.6	142.1	175.9	215.5
120°	75.2	76.3	78.1	80.6	86.4	94.5	105.7	121.3	143.5	174.3	210.8
122.5°	80.1	81.0	82.7	85.5	91.2	99.5	110.1	124.5	145.0	173.3	206.9
125°	86.4	87.3	89.0	92.5	98.2	106.3	116.7	129.6	147.5	171.7	201.4
127.5°	91.5	92.6	95.1	98.9	104.4	112.7	122.8	134.4	149.9	170.7	196.2
130°	94.5	95.6	98.5	102.6	108.4	116.3	126.5	137.4	151.8	170.2	192.7
132.5°	97.3	98.7	101.7	106.0	112.0	120.1	129.7	140.4	153.7	170.0	190.0
135°	101.4	102.6	106.0	110.3	117.0	125.0	134.3	144.3	155.9	169.7	186.1
137.5°	105.3	106.7	110.1	114.8	121.3	128.8	137.9	147.3	157.8	169.6	183.4
140°	108.4	109.5	112.9	117.6	123.8	131.3	140.0	149.0	158.7	169.4	181.7
142.5°	111.3	112.3	115.4	120.1	126.2	133.2	141.6	150.3	159.4	169.4	180.2
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	178.1
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	175.9
150°	123.8	124.7	127.0	130.8	135.1	140.3	146.9	153.5	160.1	167.1	174.0
152.5°	127.1	127.5	129.8	133.1	137.2	141.9	147.8	153.8	159.7	165.9	172.4
155°	131.7	131.9	133.6	136.8	140.0	144.3	149.2	154.1	159.0	163.9	169.4
157.5°	135.4	135.7	137.1	139.9	142.4	146.0	150.2	154.1	157.7	161.8	166.6
160°	137.9	138.3	139.4	141.7	144.1	147.2	150.7	154.1	157.0	160.5	164.4
162.5°	140.6	140.3	141.5	143.3	145.4	147.9	150.9	153.8	156.3	159.3	162.7
165°	143.5	143.2	143.7	145.4	146.9	148.6	151.2	153.3	155.0	157.0	159.6
167.5°	145.9	145.5	146.0	147.2	148.2	149.3	151.2	152.9	153.7	155.0	156.6
170°	147.5	146.9	147.2	148.1	148.6	149.5	150.9	152.4	153.0	153.8	155.0
172.5°	148.4	148.1	147.9	148.8	149.1	149.8	150.7	151.7	152.1	152.5	153.4
175°	149.5	149.2	149.0	149.5	149.5	149.8	150.3	150.9	150.7	150.9	151.2
177.5°	150.0	149.5	149.4	149.8	149.8	149.8	150.0	150.5	150.0	149.8	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	10.3	9.7	9.4	9.1	9.0	8.9	8.7	8.6
90°	9.2	8.6	9.2	9.5	9.5	9.5	9.5	9.5
92.5°	25.1	21.5	19.2	17.4	17.1	16.2	16.4	16.0
95°	75.5	57.9	45.8	39.5	35.7	33.4	32.5	32.9
97.5°	176.1	144.1	112.9	92.1	78.4	71.3	67.1	64.7
100°	263.0	227.3	187.8	153.0	129.1	116.7	108.4	103.1
102.5°	319.9	311.9	283.0	246.1	220.0	198.9	188.5	181.5
105°	350.0	382.5	386.3	376.8	358.9	341.0	328.6	324.7
107.5°	328.3	377.4	407.3	421.3	423.5	422.6	420.0	414.7
110°	309.7	361.3	398.1	421.8	434.1	439.6	442.2	441.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.6	342.1	381.5	408.6	425.8	435.0	439.9	441.4
115°	271.7	316.0	353.8	383.4	403.9	417.1	424.6	427.2
117.5°	255.8	294.8	329.1	356.9	377.7	391.8	399.6	401.8
120°	248.0	283.7	314.3	340.5	360.7	374.2	382.5	385.5
122.5°	241.8	274.5	303.5	327.1	345.2	358.6	366.0	368.4
125°	232.8	262.4	287.8	309.4	326.1	337.0	344.2	346.6
127.5°	223.8	250.7	274.6	294.5	309.1	319.4	325.5	327.4
130°	218.1	242.9	265.6	284.6	298.7	308.5	314.3	316.6
132.5°	212.5	235.5	256.4	274.3	288.1	297.9	303.2	305.3
135°	204.8	223.8	242.9	258.9	271.3	280.9	286.1	287.2
137.5°	198.7	214.6	229.7	243.7	255.0	263.2	267.7	269.5
140°	194.7	208.6	221.8	234.5	243.7	251.2	255.5	257.2
142.5°	191.5	203.3	214.7	225.3	234.0	240.8	244.7	245.0
145°	186.9	196.5	205.4	213.8	220.6	225.6	228.4	229.3
147.5°	183.4	190.9	197.9	204.0	209.7	213.6	215.6	216.1
150°	180.9	187.3	193.3	198.4	202.8	206.3	208.0	208.3
152.5°	178.4	184.3	189.4	193.9	197.3	200.2	201.5	201.6
155°	174.9	179.4	183.8	186.9	190.1	192.2	193.3	192.7
157.5°	170.8	174.6	178.2	180.8	183.0	184.7	185.2	185.2
160°	168.2	171.4	174.6	176.6	178.6	180.0	180.3	180.3
162.5°	165.7	168.4	171.1	172.7	174.7	175.7	175.9	175.7
165°	161.9	163.9	165.9	167.1	168.2	169.4	169.4	169.1
167.5°	158.2	159.8	161.2	162.2	162.7	163.4	163.3	163.0
170°	156.5	157.3	158.4	159.0	159.3	160.1	159.9	159.3
172.5°	154.3	155.0	155.9	156.2	156.5	156.9	156.6	156.3
175°	152.1	152.4	152.7	153.0	153.0	153.3	153.0	152.4
177.5°	150.5	150.5	150.7	150.7	150.7	150.7	150.5	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8

(END OF REPORT)