

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: P331333-930

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

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331333-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
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-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

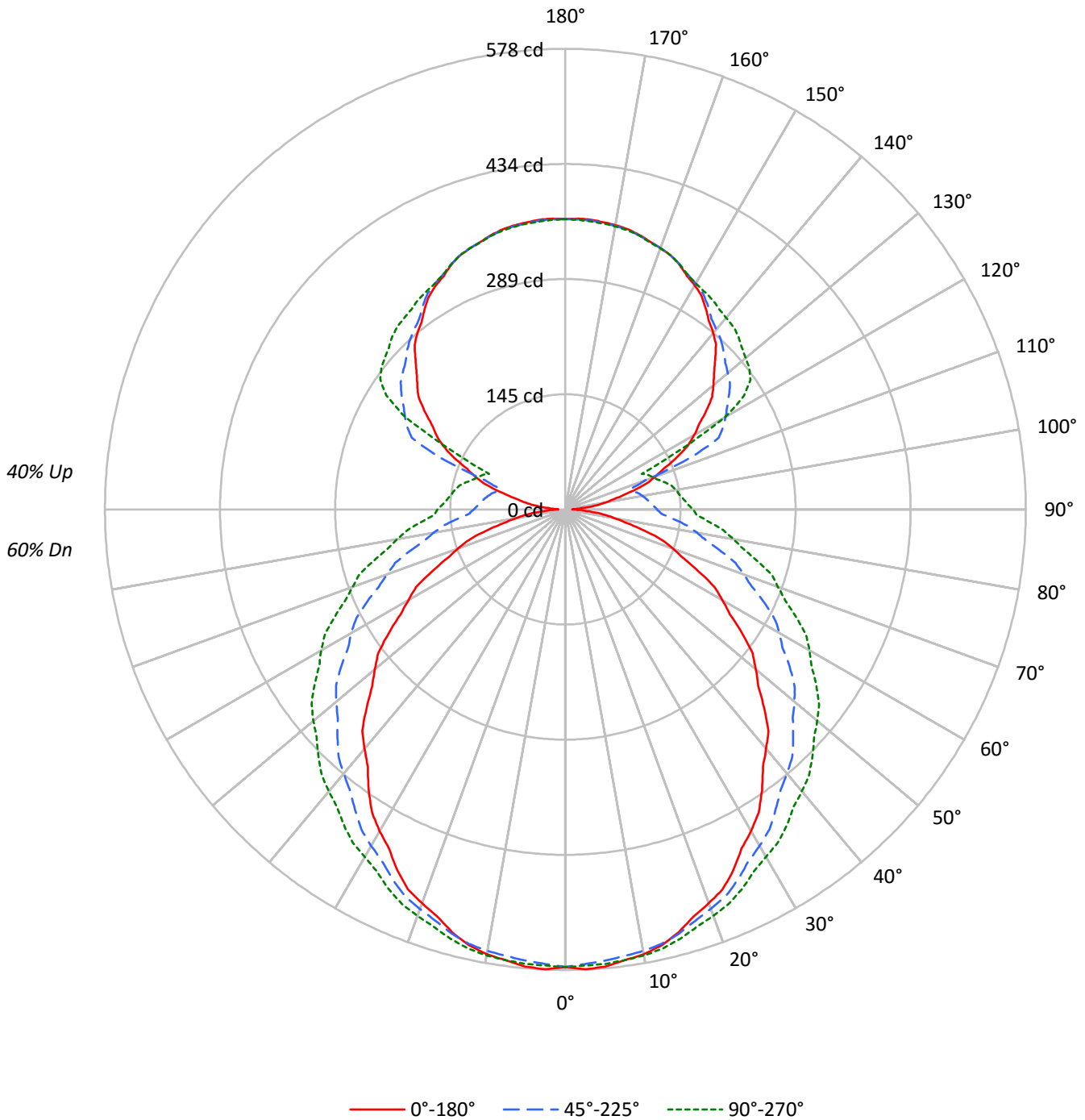
Lumens per Lamp: N/A
Luminaire Lumens: 3259.4 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	98	93	88	84	91	87	83	79	75	72	69	65	62	60	55	53	51	47
2	89	80	73	67	82	75	69	63	65	60	56	56	52	49	47	44	42	38
3	80	70	62	55	75	65	58	52	57	51	46	49	44	40	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	36	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	38	33	29	33	29	25	22
6	62	49	40	34	57	46	38	32	40	34	29	35	29	26	30	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.7
10°-20°	156.0	4.8
20°-30°	236.5	7.3
30°-40°	288.0	8.8
40°-50°	309.9	9.5
50°-60°	300.9	9.2
60°-70°	262.7	8.1
70°-80°	202.3	6.2
80°-90°	136.6	4.2
90°-100°	105.7	3.2
100°-110°	112.9	3.5
110°-120°	164.2	5.0
120°-130°	221.8	6.8
130°-140°	219.7	6.7
140°-150°	196.2	6.0
150°-160°	156.3	4.8
160°-170°	100.7	3.1
170°-180°	34.7	1.1
0°-30°	446.9	13.7
0°-40°	734.9	22.5
0°-60°	1345.7	41.3
0°-90°	1947.4	59.7
90°-120°	382.8	11.7
90°-150°	1020.5	31.3
90°-180°	1312.0	40.3
0°-180°	3259.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	60	115	148	160	6
95°	24	55	106	138	149	26
105°	84	113	88	118	130	90
115°	155	170	212	120	106	152
125°	216	221	251	274	284	193
135°	266	271	281	300	307	206
145°	308	308	312	318	322	193
155°	339	337	340	341	339	156
165°	357	356	356	358	356	101
175°	365	363	364	365	363	35
180°	364	364	364	364	364	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.4	27.6	38.6	49.8	61.0	72.5	84.5	96.4	108.3	120.3	127.8
90°	8.6	20.0	31.3	42.7	54.1	65.9	78.2	90.5	102.8	115.1	122.9
92.5°	13.0	22.9	32.9	42.8	52.7	63.5	75.1	86.7	98.3	110.0	117.4
95°	23.8	30.6	37.3	44.1	50.8	60.0	71.5	83.0	94.5	106.0	113.3
97.5°	39.9	42.2	44.4	46.7	49.0	55.9	67.5	79.1	90.7	102.3	109.4
100°	52.5	51.3	50.1	48.9	47.8	52.8	64.2	75.6	86.9	98.2	105.6
102.5°	65.7	70.3	74.8	79.4	84.0	87.1	88.8	90.6	92.3	94.0	101.3
105°	84.3	91.4	98.6	105.7	112.8	113.2	106.8	100.4	94.0	87.6	94.7
107.5°	106.4	112.1	117.8	123.6	129.3	127.1	117.2	107.2	97.3	87.2	92.9
110°	120.1	125.1	130.0	134.9	139.8	138.4	130.5	122.6	114.8	106.9	107.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	133.6	137.8	142.0	146.2	150.4	154.7	159.1	163.5	168.0	172.4	157.0
115°	154.9	157.9	160.9	164.0	167.1	173.4	183.2	193.0	202.8	212.5	191.0
117.5°	173.1	175.5	178.0	180.4	182.9	188.5	197.1	205.9	214.6	223.2	222.2
120°	187.0	188.7	190.3	191.8	193.5	198.5	207.0	215.4	223.9	232.4	238.2
122.5°	198.9	200.1	201.3	202.5	203.7	208.4	216.5	224.6	232.7	240.8	246.2
125°	216.0	216.7	217.5	218.3	219.0	222.9	229.9	237.0	244.0	251.0	256.5
127.5°	232.3	232.9	233.6	234.2	234.9	238.1	243.6	249.2	254.9	260.5	265.6
130°	242.6	243.4	244.1	244.8	245.6	248.3	252.7	257.3	261.9	266.4	271.4
132.5°	253.2	253.7	254.4	254.9	255.6	257.7	261.4	265.0	268.6	272.3	277.1
135°	266.0	266.9	267.9	268.8	269.8	271.4	273.8	276.2	278.6	281.0	285.4
137.5°	279.9	280.5	281.1	281.8	282.3	283.4	284.8	286.2	287.6	289.0	293.0
140°	288.9	289.3	289.5	289.8	290.1	290.7	291.8	292.8	293.8	294.8	298.3
142.5°	296.5	296.8	297.0	297.3	297.5	298.0	298.8	299.6	300.4	301.3	304.1
145°	307.6	307.6	307.5	307.4	307.4	307.9	308.8	309.9	310.9	311.9	313.4
147.5°	318.0	317.8	317.6	317.3	317.2	317.5	318.5	319.5	320.5	321.5	321.9
150°	324.7	324.3	323.9	323.5	323.1	323.4	324.3	325.3	326.2	327.2	327.5
152.5°	330.4	330.0	329.5	329.1	328.6	328.8	329.7	330.6	331.5	332.4	332.7
155°	338.8	338.2	337.7	337.1	336.6	336.7	337.5	338.1	338.8	339.5	339.9
157.5°	345.2	344.8	344.3	343.9	343.4	343.5	344.0	344.5	345.0	345.4	345.8
160°	349.0	348.7	348.3	348.0	347.6	347.6	348.0	348.3	348.7	349.0	349.4
162.5°	352.4	352.0	351.7	351.3	351.0	351.0	351.2	351.6	351.9	352.2	352.6
165°	356.9	356.6	356.2	355.9	355.6	355.5	355.6	355.8	356.0	356.1	356.5
167.5°	360.3	360.0	359.6	359.2	358.9	358.8	359.0	359.1	359.3	359.5	359.9
170°	362.2	361.8	361.5	361.2	360.8	360.7	360.8	360.9	361.0	361.2	361.6
172.5°	363.5	363.1	362.7	362.4	362.1	361.9	362.1	362.2	362.3	362.4	362.8
175°	365.1	364.7	364.3	363.9	363.5	363.3	363.5	363.5	363.7	363.8	364.2
177.5°	365.3	365.0	364.7	364.4	364.0	363.9	363.9	364.0	364.0	364.1	364.4
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	135.4	143.1	150.7	155.6	158.1	160.5	162.8	165.2
90°	130.5	138.2	145.9	150.9	153.3	155.6	157.9	160.3
92.5°	124.8	132.2	139.6	144.5	146.8	149.0	151.3	153.6
95°	120.7	127.9	135.3	140.0	142.2	144.3	146.5	148.6
97.5°	116.5	123.5	130.6	135.3	137.5	139.8	142.0	144.3
100°	112.9	120.2	127.5	132.2	134.4	136.6	138.7	140.8
102.5°	108.6	115.9	123.3	128.0	130.2	132.4	134.6	136.8
105°	101.9	109.0	116.1	120.8	123.1	125.4	127.6	129.9
107.5°	98.4	104.0	109.5	113.4	115.7	118.0	120.3	122.5
110°	107.0	107.0	107.1	108.3	110.6	112.8	115.1	117.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	141.5	126.1	110.6	104.0	106.2	108.5	110.7	112.9
115°	169.4	147.9	126.3	114.4	112.3	110.1	107.9	105.7
117.5°	221.1	220.0	218.9	212.4	200.4	188.4	176.4	164.5
120°	244.1	250.0	255.8	255.8	250.0	244.1	238.2	232.4
122.5°	251.7	257.1	262.6	265.5	265.6	265.9	266.0	266.3
125°	261.9	267.3	272.6	276.3	278.1	280.0	281.8	283.6
127.5°	270.8	276.0	281.2	284.6	286.3	288.0	289.6	291.2
130°	276.5	281.6	286.7	289.9	291.4	292.8	294.2	295.6
132.5°	281.9	286.8	291.6	294.8	296.2	297.6	299.1	300.4
135°	289.8	294.3	298.8	301.7	303.1	304.4	305.8	307.2
137.5°	297.0	300.9	304.9	307.4	308.5	309.6	310.6	311.7
140°	301.7	305.2	308.8	310.9	311.7	312.5	313.3	314.1
142.5°	307.0	309.8	312.7	314.4	315.1	315.8	316.4	317.1
145°	314.9	316.4	318.0	319.0	319.6	320.2	320.9	321.6
147.5°	322.4	322.8	323.3	323.6	323.8	324.0	324.2	324.4
150°	327.8	328.2	328.6	328.6	328.3	328.0	327.7	327.4
152.5°	333.1	333.5	333.8	333.8	333.4	333.0	332.6	332.2
155°	340.2	340.6	341.0	340.9	340.4	340.0	339.5	339.0
157.5°	346.3	346.7	347.0	347.0	346.5	346.1	345.6	345.2
160°	349.8	350.1	350.4	350.4	350.0	349.6	349.2	348.8
162.5°	352.9	353.4	353.8	353.8	353.2	352.7	352.2	351.7
165°	356.9	357.3	357.8	357.8	357.3	356.9	356.5	356.1
167.5°	360.3	360.7	361.1	361.0	360.5	360.0	359.5	358.9
170°	362.0	362.4	362.8	362.7	362.2	361.7	361.2	360.6
172.5°	363.2	363.6	364.0	364.0	363.5	363.0	362.4	361.9
175°	364.6	365.0	365.4	365.3	364.8	364.2	363.5	363.0
177.5°	364.8	365.1	365.4	365.3	364.9	364.5	364.1	363.7
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3

(END OF REPORT)