

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: P331335-930

Luminaire Tested: **SA2XXDIP-C675D330U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331335-930
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-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

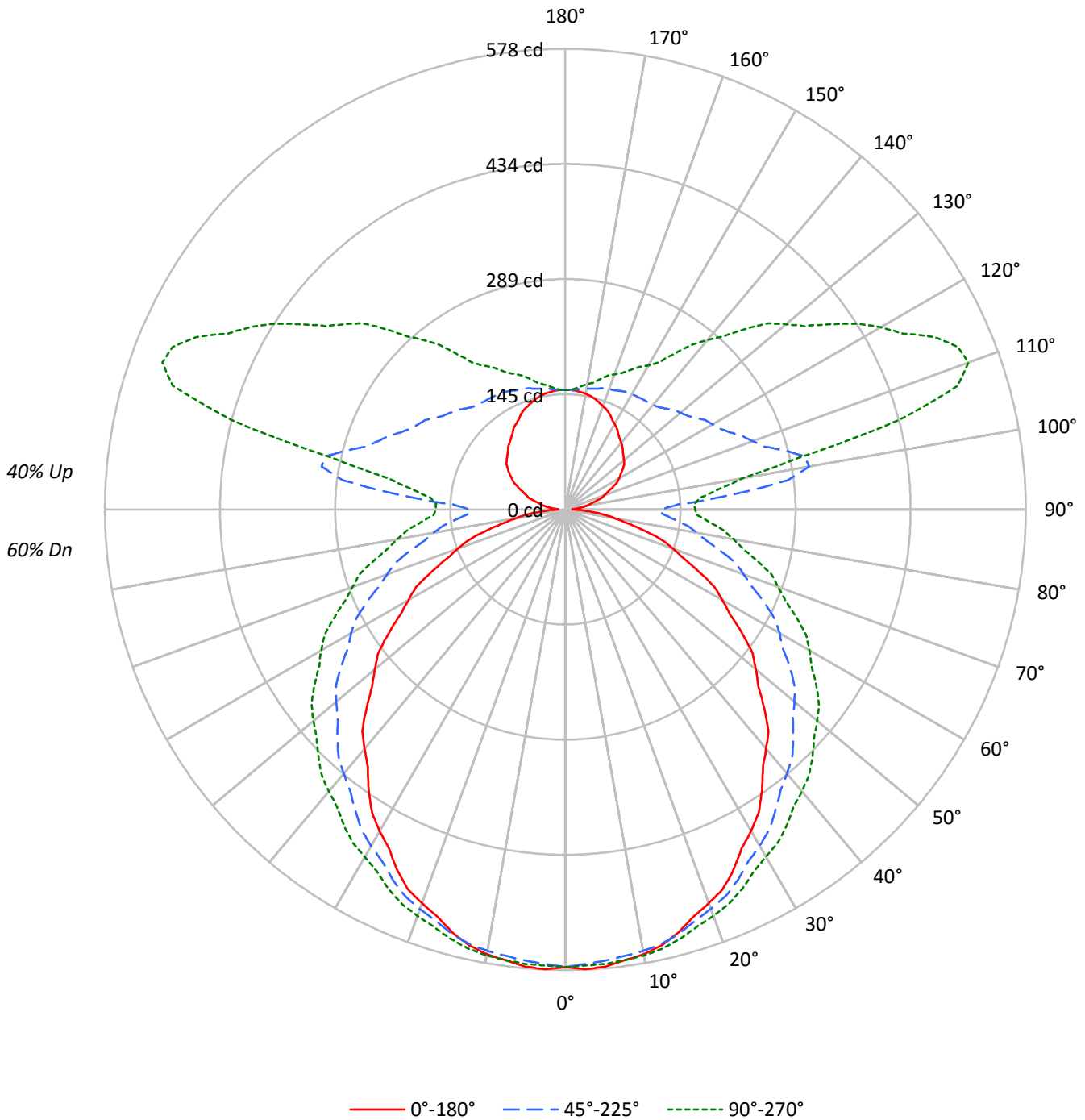
Lumens per Lamp: N/A
Luminaire Lumens: 3234.7 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	98	93	88	84	91	87	83	79	75	72	69	65	62	60	55	53	52	47
2	89	80	73	67	82	75	69	64	65	60	56	56	52	49	47	45	42	38
3	81	70	62	55	75	65	58	52	57	51	46	49	44	41	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	37	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	39	33	29	33	29	26	23
6	62	49	40	34	57	46	38	32	40	34	29	35	30	26	30	26	22	20
7	57	44	36	30	53	41	34	28	36	30	25	32	26	23	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	18	15
9	49	37	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	8.9
40°-50°	309.9	9.6
50°-60°	300.9	9.3
60°-70°	262.7	8.1
70°-80°	202.3	6.3
80°-90°	137.1	4.2
90°-100°	153.4	4.7
100°-110°	271.5	8.4
110°-120°	261.0	8.1
120°-130°	202.9	6.3
130°-140°	153.3	4.7
140°-150°	109.7	3.4
150°-160°	75.8	2.3
160°-170°	44.6	1.4
170°-180°	14.5	0.4
0°-30°	446.9	13.8
0°-40°	734.9	22.7
0°-60°	1345.7	41.6
0°-90°	1947.8	60.2
90°-120°	686.0	21.2
90°-150°	1151.9	35.6
90°-180°	1287.0	39.8
0°-180°	3234.7	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	61	120	151	163	6
95°	17	71	209	169	170	16
105°	39	82	285	481	435	42
115°	65	92	228	443	511	64
125°	88	105	200	349	405	78
135°	102	122	179	277	320	79
145°	116	133	169	215	238	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°	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	38.8	50.0	61.1	72.7	84.8	97.1	109.3	121.2	128.7
90°	8.6	20.2	32.1	43.4	54.7	66.9	80.1	94.0	107.5	119.7	126.8
92.5°	11.2	22.7	34.8	46.1	58.0	71.3	89.3	109.8	129.4	141.3	142.8
95°	16.7	26.6	38.2	49.4	62.8	79.6	103.9	140.1	184.6	208.6	201.5
97.5°	22.3	31.6	42.3	54.0	67.0	84.1	111.4	156.9	223.1	281.4	297.6
100°	28.0	35.7	45.2	56.6	69.2	85.9	111.5	157.0	229.6	310.8	359.1
102.5°	32.6	39.5	48.3	59.3	71.5	87.7	111.9	153.2	220.9	307.3	379.2
105°	39.3	45.8	53.2	62.9	74.6	90.2	113.3	148.5	205.7	285.0	368.1
107.5°	47.5	52.7	58.9	67.2	77.7	92.6	115.0	146.5	195.0	261.9	335.7
110°	52.3	57.2	62.6	70.0	79.7	94.5	116.3	146.0	190.3	250.1	315.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	57.4	61.6	66.7	73.3	82.3	96.7	117.5	145.7	186.3	240.3	299.9
115°	65.2	68.7	72.5	78.0	85.8	98.7	119.4	145.4	181.6	228.5	279.6
117.5°	72.6	75.1	78.2	82.5	89.4	102.0	121.2	145.3	177.5	219.0	264.1
120°	77.7	79.6	82.0	85.4	91.9	104.0	122.6	145.6	175.2	213.4	255.2
122.5°	82.5	83.7	85.8	88.9	94.9	106.9	124.3	145.7	173.3	208.5	247.1
125°	88.1	88.9	90.7	94.2	99.9	110.9	127.2	146.1	169.9	200.0	234.6
127.5°	93.2	94.1	96.4	100.0	105.3	115.9	130.8	147.2	167.5	193.0	223.1
130°	96.1	97.1	99.8	103.6	109.3	119.1	133.1	148.0	166.2	188.6	215.5
132.5°	98.9	100.1	103.1	107.1	112.9	122.4	135.0	148.7	164.9	184.3	208.6
135°	102.2	103.4	106.8	111.1	117.8	126.8	137.9	149.8	163.1	178.8	199.1
137.5°	106.2	107.5	110.9	115.5	122.1	129.9	139.8	150.0	161.3	173.9	191.1
140°	109.2	110.1	113.4	117.8	123.9	131.5	140.6	149.9	160.0	171.0	186.4
142.5°	112.1	112.9	115.9	120.3	126.3	133.2	141.7	150.5	159.6	169.7	182.9
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	179.1
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	176.0
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°	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°	136.2	143.6	151.2	156.2	158.6	160.9	163.3	165.7
90°	133.9	140.7	148.7	153.8	156.0	158.2	160.5	162.7
92.5°	143.5	147.2	152.0	155.0	156.9	158.2	160.7	162.4
95°	185.2	174.7	169.7	168.0	166.4	166.3	167.6	170.2
97.5°	278.3	253.2	228.9	212.5	201.0	196.1	194.0	193.8
100°	360.0	331.0	298.4	268.0	246.1	235.8	229.4	226.3
102.5°	411.9	410.5	388.3	355.8	331.8	312.7	304.4	299.3
105°	434.6	473.5	483.8	478.5	462.7	446.9	436.5	434.6
107.5°	405.5	460.7	496.9	515.0	519.3	520.3	519.9	516.6
110°	382.3	439.8	482.6	510.1	524.6	532.1	536.7	538.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	360.5	416.0	461.3	492.4	511.6	522.8	529.7	533.3
115°	332.7	382.6	425.9	459.3	481.8	497.1	506.6	511.3
117.5°	309.9	354.3	394.0	425.6	448.3	464.1	473.9	478.0
120°	297.5	338.4	374.1	403.9	426.2	441.7	452.1	457.0
122.5°	287.0	324.7	358.7	385.8	405.6	420.6	429.8	434.0
125°	271.0	305.7	336.1	361.0	379.4	392.0	400.8	404.8
127.5°	255.3	286.7	315.3	338.3	354.5	366.4	374.2	377.7
130°	245.2	274.4	301.7	323.7	339.2	350.5	357.8	361.5
132.5°	235.5	262.7	287.9	308.6	324.0	335.3	342.0	345.6
135°	221.8	244.7	267.5	286.3	300.2	311.2	317.9	320.5
137.5°	209.8	229.1	247.6	264.0	276.5	285.9	291.8	294.7
140°	202.4	219.1	235.3	250.1	260.3	269.0	274.3	277.2
142.5°	196.6	210.7	224.5	236.8	246.5	254.2	259.0	260.3
145°	189.1	199.8	209.9	219.2	227.1	232.8	236.7	238.5
147.5°	183.8	191.4	198.5	204.9	211.1	215.4	217.8	218.7
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)