

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: P331335-927

Luminaire Tested: **SA2XXDIP-C675D330U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331335-927
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-C675D330U927-4F0-1E-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: 3143.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

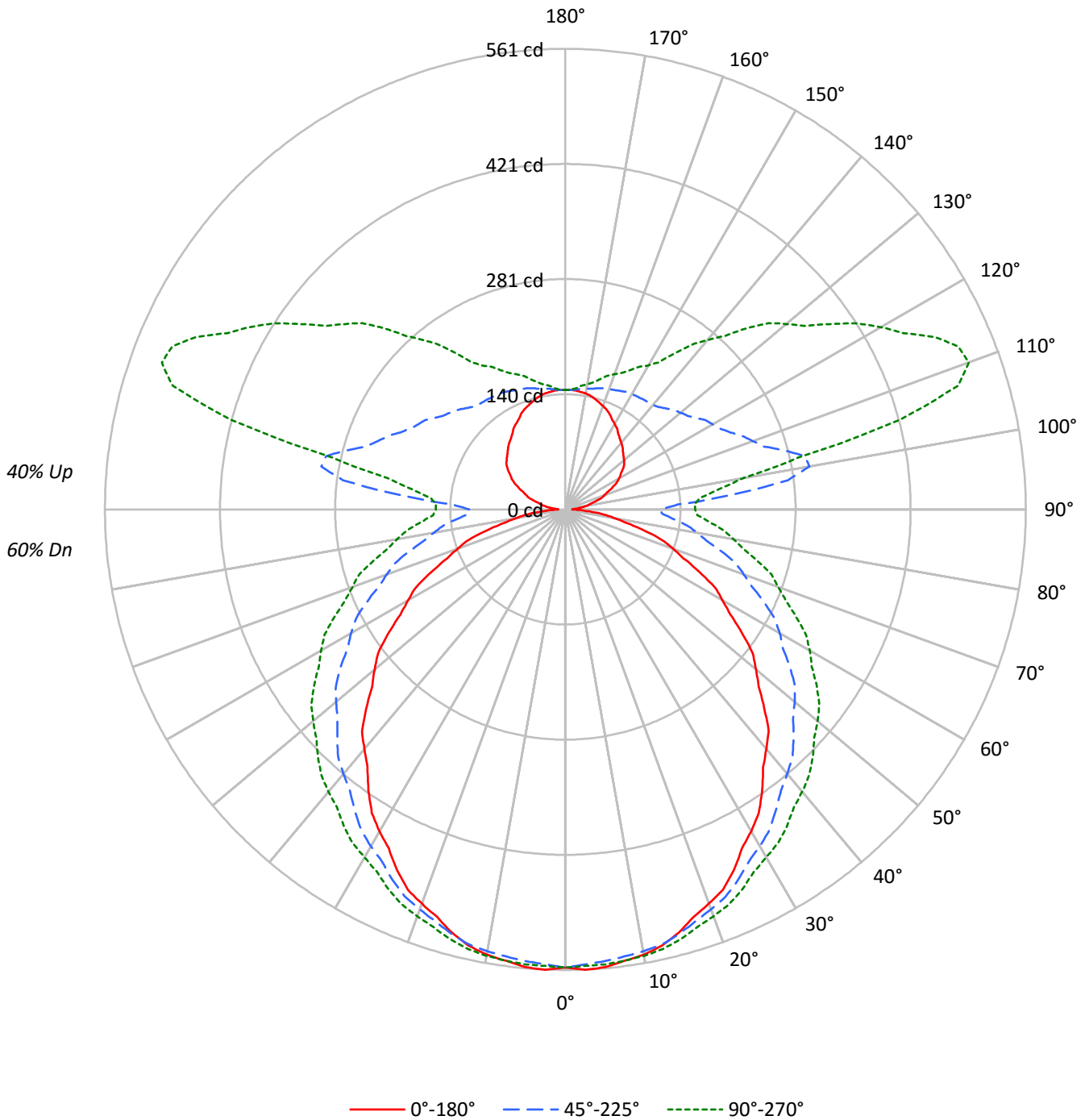
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331335-927

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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°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	1.7
10°-20°	151.6	4.8
20°-30°	229.8	7.3
30°-40°	279.8	8.9
40°-50°	301.1	9.6
50°-60°	292.4	9.3
60°-70°	255.3	8.1
70°-80°	196.5	6.3
80°-90°	133.2	4.2
90°-100°	149.1	4.7
100°-110°	263.8	8.4
110°-120°	253.6	8.1
120°-130°	197.2	6.3
130°-140°	149.0	4.7
140°-150°	106.6	3.4
150°-160°	73.7	2.3
160°-170°	43.4	1.4
170°-180°	14.1	0.4
0°-30°	434.3	13.8
0°-40°	714.1	22.7
0°-60°	1307.5	41.6
0°-90°	1892.6	60.2
90°-120°	666.5	21.2
90°-150°	1119.3	35.6
90°-180°	1250.0	39.8
0°-180°	3143.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	8	59	116	147	158	6
95°	16	69	203	164	165	15
105°	38	80	277	468	422	41
115°	63	90	222	430	497	63
125°	86	102	194	339	393	76
135°	99	119	174	269	311	77
145°	112	129	164	208	232	71
155°	128	138	159	180	187	59
165°	139	144	153	162	164	39
175°	145	145	147	148	148	14
180°	146	146	146	146	146	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	15.9	26.8	37.7	48.6	59.3	70.7	82.4	94.3	106.2	117.7	125.0
90°	8.4	19.6	31.2	42.1	53.2	65.0	77.9	91.3	104.5	116.3	123.2
92.5°	10.9	22.1	33.8	44.8	56.3	69.3	86.7	106.7	125.7	137.3	138.7
95°	16.2	25.8	37.1	48.0	61.0	77.3	100.9	136.1	179.4	202.7	195.8
97.5°	21.6	30.7	41.1	52.4	65.1	81.7	108.2	152.4	216.7	273.4	289.1
100°	27.3	34.7	43.9	55.0	67.3	83.4	108.4	152.6	223.1	302.0	349.0
102.5°	31.7	38.4	47.0	57.6	69.5	85.2	108.7	148.9	214.6	298.6	368.4
105°	38.2	44.5	51.7	61.1	72.5	87.6	110.1	144.3	199.9	276.9	357.7
107.5°	46.1	51.2	57.2	65.3	75.5	90.0	111.7	142.4	189.5	254.4	326.2
110°	50.8	55.5	60.8	68.0	77.5	91.8	113.0	141.9	184.9	243.0	306.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	55.8	59.9	64.8	71.2	79.9	94.0	114.2	141.6	181.0	233.5	291.4
115°	63.4	66.8	70.4	75.8	83.3	95.9	116.1	141.2	176.5	222.0	271.6
117.5°	70.6	73.0	76.0	80.2	86.9	99.1	117.7	141.2	172.5	212.8	256.6
120°	75.5	77.3	79.7	82.9	89.3	101.1	119.1	141.5	170.2	207.3	248.0
122.5°	80.2	81.4	83.3	86.3	92.2	103.9	120.8	141.6	168.3	202.6	240.1
125°	85.6	86.4	88.1	91.5	97.0	107.7	123.6	142.0	165.1	194.3	228.0
127.5°	90.5	91.4	93.6	97.1	102.3	112.6	127.1	143.0	162.7	187.5	216.7
130°	93.4	94.3	97.0	100.7	106.2	115.7	129.4	143.8	161.5	183.2	209.4
132.5°	96.1	97.3	100.1	104.1	109.7	118.9	131.2	144.5	160.3	179.1	202.6
135°	99.3	100.4	103.8	108.0	114.5	123.2	134.0	145.5	158.5	173.7	193.5
137.5°	103.1	104.4	107.7	112.3	118.6	126.2	135.9	145.8	156.8	169.0	185.7
140°	106.1	107.0	110.2	114.5	120.4	127.8	136.6	145.6	155.5	166.2	181.1
142.5°	108.9	109.7	112.6	116.9	122.7	129.4	137.7	146.2	155.1	164.9	177.7
145°	112.5	113.7	116.5	120.6	126.3	132.4	140.0	147.8	155.6	164.0	174.0
147.5°	117.2	118.0	120.7	124.6	129.3	134.8	141.9	148.8	155.8	163.0	171.0
150°	120.3	121.2	123.4	127.1	131.3	136.3	142.8	149.2	155.6	162.3	169.1
152.5°	123.5	123.9	126.1	129.3	133.3	137.8	143.6	149.4	155.2	161.2	167.5
155°	127.9	128.2	129.8	132.9	136.0	140.2	145.0	149.7	154.5	159.2	164.6
157.5°	131.6	131.9	133.2	135.9	138.4	141.9	145.9	149.7	153.2	157.2	161.8
160°	134.0	134.4	135.5	137.7	140.0	143.1	146.4	149.7	152.6	155.9	159.8
162.5°	136.6	136.3	137.5	139.3	141.3	143.7	146.6	149.5	151.9	154.8	158.0
165°	139.4	139.1	139.7	141.3	142.8	144.4	146.9	148.9	150.6	152.6	155.0
167.5°	141.7	141.4	141.9	143.0	144.0	145.0	146.9	148.5	149.3	150.6	152.2
170°	143.3	142.8	143.1	143.9	144.4	145.3	146.6	148.1	148.6	149.5	150.6
172.5°	144.2	143.9	143.7	144.6	144.9	145.5	146.5	147.4	147.7	148.1	149.0
175°	145.3	145.0	144.7	145.3	145.3	145.5	146.1	146.6	146.4	146.6	146.9
177.5°	145.8	145.3	145.1	145.5	145.5	145.5	145.8	146.2	145.8	145.5	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	132.3	139.5	146.9	151.8	154.1	156.4	158.7	161.0
90°	130.1	136.7	144.5	149.4	151.5	153.8	155.9	158.0
92.5°	139.4	143.0	147.7	150.6	152.5	153.8	156.1	157.8
95°	180.0	169.8	164.9	163.2	161.7	161.6	162.9	165.3
97.5°	270.5	246.0	222.4	206.5	195.3	190.5	188.5	188.3
100°	349.7	321.6	289.9	260.4	239.2	229.1	222.9	219.9
102.5°	400.2	398.9	377.3	345.7	322.4	303.9	295.7	290.8
105°	422.2	460.1	470.1	464.9	449.6	434.2	424.1	422.2
107.5°	394.0	447.7	482.8	500.4	504.5	505.6	505.2	501.9
110°	371.5	427.3	468.9	495.7	509.7	517.0	521.5	523.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	350.3	404.2	448.2	478.4	497.1	507.9	514.7	518.2
115°	323.3	371.8	413.8	446.3	468.2	483.0	492.3	496.8
117.5°	301.1	344.3	382.9	413.5	435.6	451.0	460.5	464.5
120°	289.1	328.8	363.5	392.4	414.1	429.2	439.3	444.0
122.5°	278.8	315.5	348.6	374.9	394.1	408.7	417.6	421.7
125°	263.3	297.1	326.5	350.8	368.6	380.9	389.4	393.3
127.5°	248.0	278.6	306.3	328.7	344.4	356.0	363.6	367.0
130°	238.3	266.6	293.1	314.5	329.6	340.6	347.6	351.3
132.5°	228.8	255.2	279.7	299.8	314.8	325.7	332.3	335.8
135°	215.5	237.7	259.9	278.2	291.7	302.4	308.9	311.4
137.5°	203.8	222.6	240.6	256.5	268.7	277.8	283.5	286.4
140°	196.6	212.9	228.6	243.0	252.9	261.3	266.6	269.3
142.5°	191.0	204.7	218.1	230.0	239.5	247.0	251.7	252.9
145°	183.8	194.2	203.9	213.0	220.6	226.2	230.0	231.7
147.5°	178.6	185.9	192.9	199.1	205.1	209.3	211.7	212.5
150°	175.8	182.0	187.8	192.8	197.0	200.4	202.1	202.4
152.5°	173.3	179.0	184.0	188.4	191.7	194.6	195.8	195.9
155°	169.9	174.4	178.6	181.6	184.7	186.7	187.8	187.3
157.5°	166.0	169.7	173.2	175.6	177.8	179.4	179.9	179.9
160°	163.4	166.5	169.6	171.6	173.6	174.9	175.2	175.2
162.5°	161.0	163.7	166.3	167.8	169.8	170.7	171.0	170.7
165°	157.3	159.2	161.2	162.3	163.4	164.6	164.6	164.3
167.5°	153.8	155.3	156.6	157.6	158.1	158.8	158.7	158.4
170°	152.0	152.8	153.9	154.5	154.8	155.6	155.3	154.8
172.5°	150.0	150.6	151.5	151.8	152.1	152.5	152.2	151.9
175°	147.8	148.1	148.4	148.6	148.6	148.9	148.6	148.1
177.5°	146.2	146.2	146.5	146.5	146.5	146.5	146.2	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5

(END OF REPORT)