

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: P331498-840

Luminaire Tested: **S122DIW-S485D435U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331498-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D435U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3503.6 lumens
Efficiency: N/A
Efficacy: 116.0 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

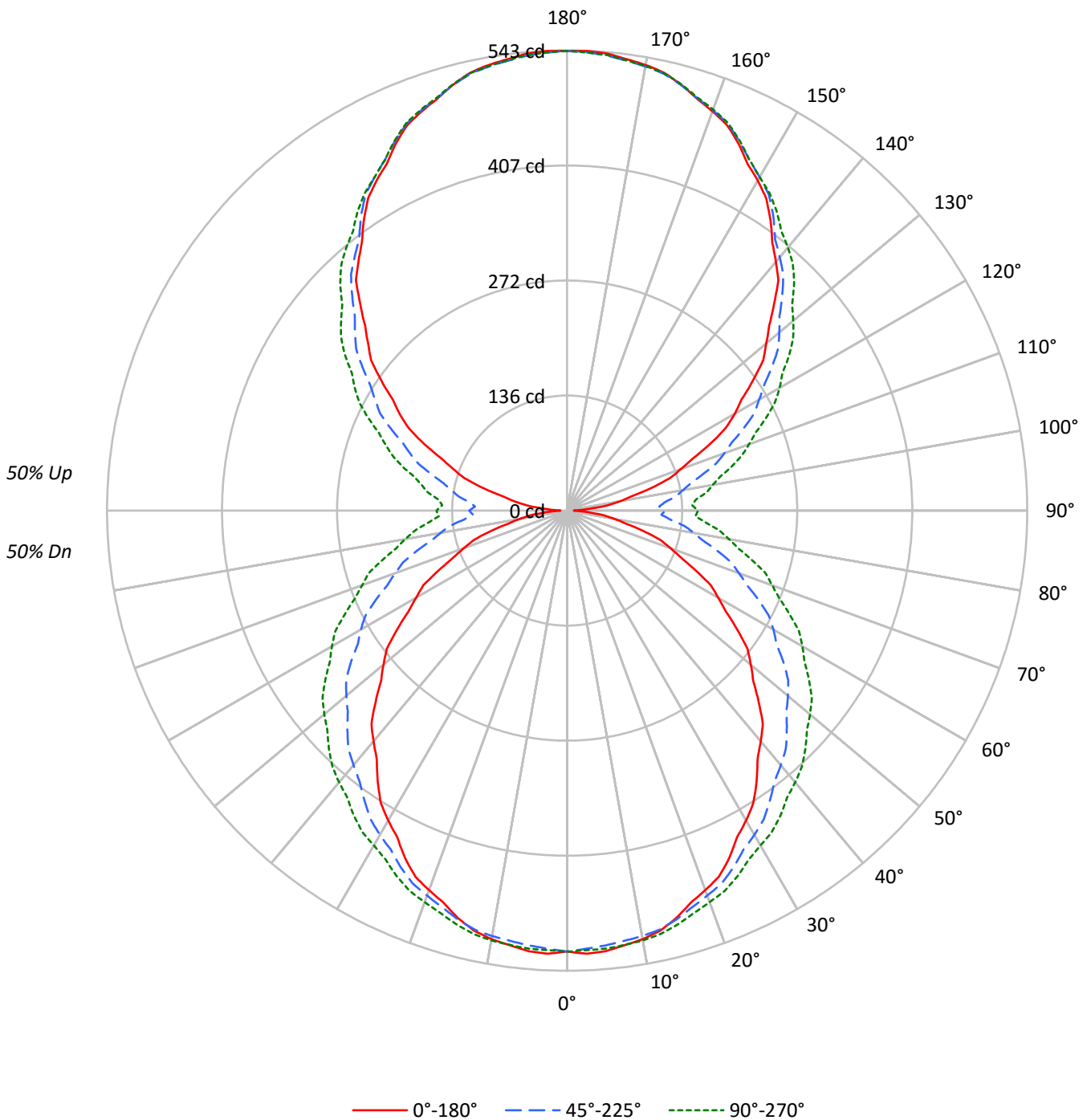
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	96	91	87	83	89	84	80	77	71	68	65	59	57	55	48	46	45	39
2	87	79	72	66	80	73	67	62	61	57	53	51	47	45	41	39	36	32
3	79	69	61	55	72	64	57	51	54	48	44	44	40	37	36	33	30	26
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	28	26	22
5	66	54	45	39	60	50	42	36	42	36	32	35	30	27	28	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	29	24	20	23	20	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	22	18	21	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11
10	45	33	25	20	42	30	24	19	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	1.4
10°-20°	141.4	4.0
20°-30°	214.3	6.1
30°-40°	261.0	7.4
40°-50°	280.8	8.0
50°-60°	272.7	7.8
60°-70°	238.1	6.8
70°-80°	183.3	5.2
80°-90°	125.2	3.6
90°-100°	119.1	3.4
100°-110°	168.6	4.8
110°-120°	223.3	6.4
120°-130°	262.7	7.5
130°-140°	278.8	8.0
140°-150°	265.6	7.6
150°-160°	221.4	6.3
160°-170°	146.8	4.2
170°-180°	51.3	1.5
0°-30°	405.0	11.6
0°-40°	666.0	19.0
0°-60°	1219.4	34.8
0°-90°	1766.0	50.4
90°-120°	510.9	14.6
90°-150°	1318.0	37.6
90°-180°	1738.0	49.6
0°-180°	3503.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	58	116	144	154	6
95°	30	70	116	144	153	32
105°	102	126	166	192	201	108
115°	186	198	230	251	259	184
125°	268	273	295	313	320	239
135°	345	350	359	374	379	267
145°	418	421	424	429	431	261
155°	478	480	481	483	482	220
165°	520	520	520	523	521	147
175°	541	540	539	542	540	51
180°	542	542	542	542	542	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.8	25.1	35.3	45.5	55.8	66.6	77.7	88.9	100.1	111.2	118.0
90°	8.0	19.0	29.9	40.8	51.8	63.7	76.6	89.7	102.6	115.5	122.1
92.5°	15.0	25.0	34.9	44.9	54.8	65.2	76.1	86.9	97.9	108.7	115.3
95°	29.8	38.7	47.6	56.6	65.4	74.9	85.2	95.5	105.7	116.0	122.4
97.5°	48.8	56.7	64.5	72.4	80.4	89.3	99.4	109.4	119.5	129.5	135.7
100°	63.4	70.4	77.5	84.4	91.5	99.8	109.5	119.2	128.9	138.6	144.7
102.5°	78.2	84.4	90.8	97.1	103.4	111.3	120.9	130.4	139.9	149.4	155.5
105°	102.1	107.3	112.5	117.6	122.8	129.9	138.8	147.6	156.6	165.5	171.6
107.5°	127.0	131.4	135.7	140.1	144.4	150.8	159.1	167.4	175.8	184.1	189.9
110°	142.6	146.5	150.5	154.4	158.4	164.5	172.7	181.0	189.1	197.3	202.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	160.2	163.6	167.0	170.4	173.8	179.5	187.1	194.9	202.6	210.4	215.4
115°	186.0	188.4	191.0	193.4	195.8	200.8	208.0	215.4	222.8	230.0	235.0
117.5°	211.1	213.1	215.1	217.1	219.1	223.4	229.7	236.2	242.6	248.9	253.7
120°	228.3	229.7	231.3	232.8	234.2	237.9	243.8	249.6	255.6	261.5	266.2
122.5°	244.0	245.3	246.5	247.7	249.0	252.5	258.2	264.0	269.6	275.4	279.7
125°	267.8	268.7	269.6	270.5	271.5	274.5	279.5	284.6	289.6	294.7	298.9
127.5°	291.6	292.7	293.7	294.7	295.6	298.1	302.1	306.0	310.0	314.0	317.7
130°	306.7	307.8	309.0	310.1	311.3	313.6	316.9	320.1	323.5	326.8	330.6
132.5°	323.6	324.5	325.4	326.3	327.2	329.0	331.7	334.5	337.3	340.0	343.5
135°	345.3	346.4	347.5	348.6	349.7	351.2	353.1	355.0	356.9	358.8	362.1
137.5°	369.0	369.8	370.7	371.6	372.5	373.4	374.5	375.5	376.5	377.5	380.4
140°	383.2	384.0	384.8	385.5	386.3	387.1	387.9	388.7	389.6	390.4	393.0
142.5°	397.9	398.6	399.4	400.1	400.9	401.4	401.8	402.3	402.7	403.1	405.4
145°	418.2	418.9	419.6	420.3	421.0	421.7	422.3	422.9	423.5	424.1	425.3
147.5°	437.0	437.8	438.7	439.5	440.4	441.0	441.4	441.8	442.2	442.6	442.9
150°	449.8	450.4	451.0	451.6	452.2	452.7	453.1	453.5	453.9	454.3	454.6
152.5°	461.1	461.7	462.3	462.9	463.5	464.1	464.5	465.0	465.5	466.1	466.5
155°	478.1	478.4	478.7	479.1	479.4	479.7	480.0	480.3	480.6	480.9	481.4
157.5°	492.7	492.9	493.1	493.3	493.5	493.6	493.8	494.0	494.2	494.4	495.1
160°	501.5	501.7	501.9	502.1	502.3	502.4	502.5	502.6	502.7	502.8	503.4
162.5°	509.5	509.6	509.6	509.6	509.7	509.8	509.9	510.0	510.1	510.2	510.8
165°	520.2	520.1	520.0	519.9	519.8	519.8	519.8	519.8	519.8	519.8	520.5
167.5°	529.2	528.9	528.6	528.3	528.0	527.8	527.8	527.8	527.8	527.8	528.5
170°	533.9	533.6	533.3	533.0	532.7	532.5	532.4	532.3	532.2	532.1	532.8
172.5°	537.2	536.9	536.6	536.3	536.0	535.8	535.7	535.6	535.5	535.4	536.1
175°	541.3	541.0	540.7	540.4	540.1	539.8	539.6	539.4	539.2	539.0	539.7
177.5°	542.9	542.7	542.4	542.2	541.9	541.7	541.6	541.4	541.2	541.1	541.6
180°	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	124.8	131.6	138.4	142.9	145.0	147.2	149.4	151.6
90°	128.6	135.1	141.6	145.9	147.9	150.1	152.2	154.3
92.5°	121.9	128.6	135.1	139.5	141.5	143.5	145.5	147.5
95°	128.8	135.1	141.5	145.6	147.3	149.2	151.0	152.8
97.5°	141.9	148.0	154.3	158.3	160.4	162.3	164.2	166.2
100°	151.0	157.1	163.4	167.3	169.1	170.9	172.6	174.3
102.5°	161.7	167.7	173.9	177.8	179.7	181.4	183.1	184.8
105°	177.6	183.7	189.8	193.8	195.6	197.4	199.2	201.2
107.5°	195.5	201.3	207.0	210.6	211.9	213.3	214.7	216.0
110°	208.0	213.5	218.8	222.3	223.8	225.3	226.9	228.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	220.6	225.7	230.8	234.2	235.8	237.4	239.0	240.7
115°	239.9	244.9	249.8	253.1	254.6	256.1	257.6	259.2
117.5°	258.4	263.2	267.8	270.9	272.4	273.7	275.1	276.5
120°	270.8	275.6	280.2	283.4	284.9	286.4	288.0	289.5
122.5°	284.1	288.3	292.7	295.5	296.9	298.2	299.5	300.9
125°	303.1	307.3	311.5	314.4	315.8	317.2	318.6	320.0
127.5°	321.5	325.3	329.1	331.5	332.8	333.9	335.1	336.2
130°	334.5	338.2	342.0	344.5	345.4	346.3	347.3	348.2
132.5°	346.9	350.3	353.8	356.0	357.0	358.0	359.0	360.0
135°	365.6	369.0	372.4	374.7	375.7	376.8	377.8	378.8
137.5°	383.4	386.5	389.5	391.3	392.0	392.8	393.5	394.3
140°	395.8	398.5	401.1	402.7	403.3	403.9	404.6	405.2
142.5°	407.6	409.8	412.0	413.3	413.8	414.2	414.8	415.3
145°	426.4	427.5	428.6	429.3	429.8	430.2	430.6	431.0
147.5°	443.3	443.7	444.0	444.2	444.2	444.2	444.2	444.3
150°	454.9	455.2	455.6	455.6	455.2	454.9	454.6	454.3
152.5°	466.8	467.2	467.6	467.6	467.2	466.8	466.5	466.1
155°	481.9	482.4	482.9	483.0	482.7	482.4	482.1	481.8
157.5°	495.7	496.4	497.2	497.3	496.8	496.2	495.8	495.3
160°	504.0	504.6	505.2	505.3	504.9	504.5	504.1	503.7
162.5°	511.5	512.2	512.9	513.0	512.5	512.0	511.5	511.1
165°	521.2	521.9	522.6	522.7	522.2	521.7	521.2	520.7
167.5°	529.2	529.9	530.6	530.7	530.1	529.6	529.1	528.6
170°	533.5	534.2	534.9	535.0	534.4	533.8	533.2	532.6
172.5°	536.8	537.6	538.3	538.3	537.7	537.0	536.4	535.8
175°	540.4	541.1	541.8	541.9	541.3	540.7	540.1	539.5
177.5°	542.1	542.5	543.0	543.0	542.5	542.1	541.6	541.1
180°	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2

(END OF REPORT)