

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: P331868-927

Luminaire Tested: **S123DIP-S340D365U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U927-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2288.8 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

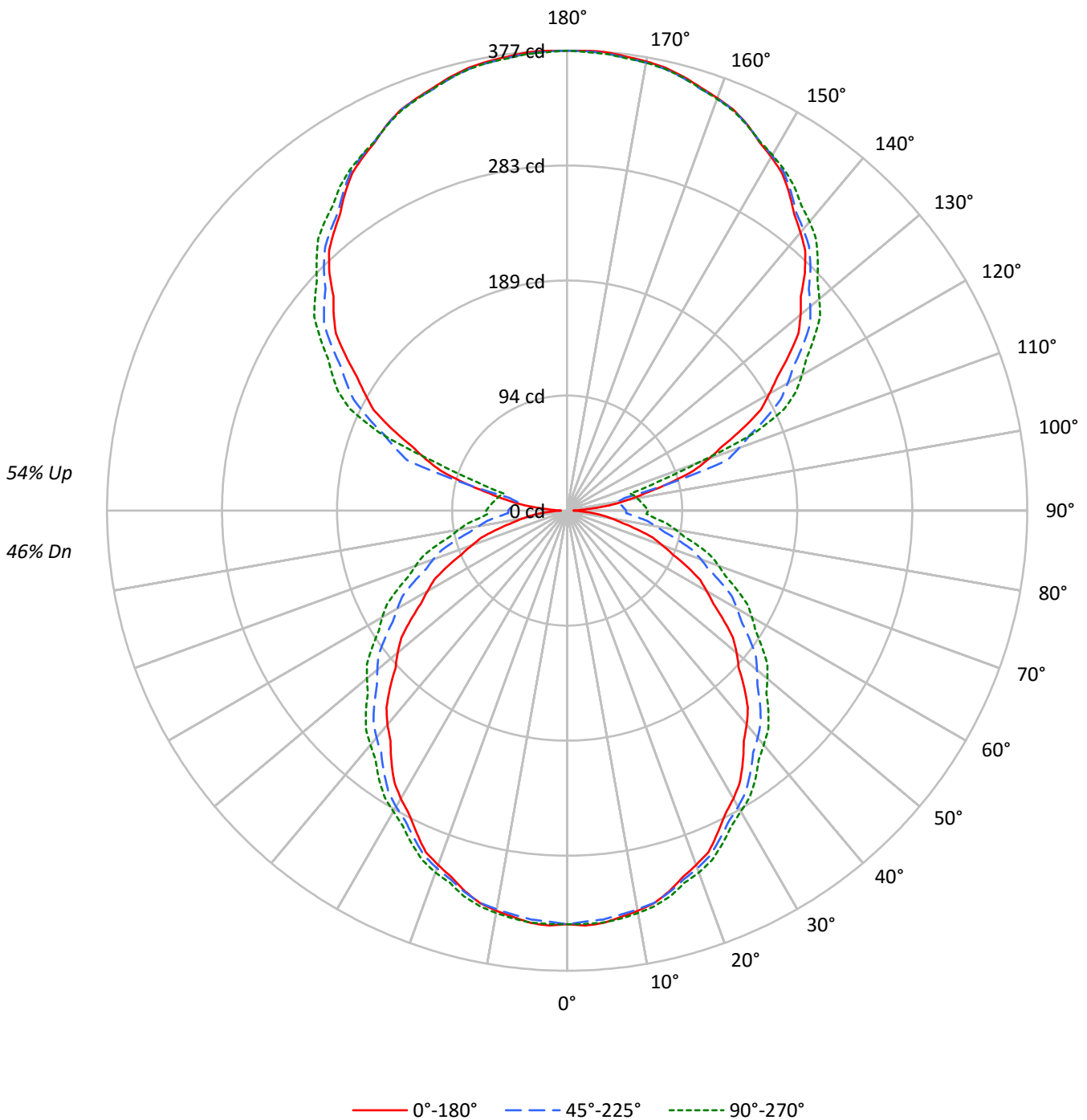
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-927

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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	69	67	64	56	55	53	45	43	42	36
2	87	79	73	67	79	73	67	62	60	56	53	49	46	43	39	37	35	30
3	79	69	61	55	72	63	57	51	53	48	44	43	39	36	34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	42	37	42	36	32	34	30	27	27	24	21	18
6	61	48	40	34	55	45	37	32	37	32	27	31	26	23	24	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	25	21	18	20	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	23	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.4
10°-20°	91.6	4.0
20°-30°	137.0	6.0
30°-40°	163.6	7.1
40°-50°	171.1	7.5
50°-60°	160.6	7.0
60°-70°	134.1	5.9
70°-80°	96.0	4.2
80°-90°	58.3	2.5
90°-100°	49.6	2.2
100°-110°	91.7	4.0
110°-120°	174.4	7.6
120°-130°	209.8	9.2
130°-140°	217.9	9.5
140°-150°	200.5	8.8
150°-160°	161.0	7.0
160°-170°	103.9	4.5
170°-180°	35.8	1.6
0°-30°	260.6	11.4
0°-40°	424.2	18.5
0°-60°	755.9	33.0
0°-90°	1044.3	45.6
90°-120°	315.7	13.8
90°-150°	943.9	41.2
90°-180°	1244.0	54.4
0°-180°	2288.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	5	26	48	62	66	4
95°	21	25	45	58	62	24
105°	86	97	89	52	54	91
115°	158	165	180	191	196	156
125°	222	224	236	244	247	198
135°	275	277	282	289	290	212
145°	317	319	319	323	324	198
155°	349	349	349	350	348	161
165°	368	367	367	369	367	104
175°	377	376	376	377	375	36
180°	377	377	377	377	377	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	9.9	14.1	18.3	22.5	26.7	31.0	35.3	39.7	44.0	48.4	51.2
90°	5.1	9.7	14.3	19.0	23.6	28.4	33.4	38.4	43.4	48.4	51.5
92.5°	9.7	13.2	16.6	20.0	23.5	27.6	32.3	37.1	41.7	46.5	49.7
95°	21.2	21.8	22.4	23.1	23.8	26.4	31.1	35.8	40.5	45.2	48.2
97.5°	37.9	39.7	41.4	43.2	44.9	45.5	44.8	44.2	43.6	42.9	45.9
100°	50.6	54.5	58.4	62.3	66.1	65.0	59.2	53.2	47.3	41.4	44.2
102.5°	65.1	68.4	71.6	74.9	78.1	76.4	69.5	62.6	55.7	48.8	49.5
105°	86.3	89.0	91.7	94.3	97.0	97.3	95.2	93.2	91.0	89.0	80.2
107.5°	108.4	110.7	112.9	115.1	117.3	120.6	124.8	129.0	133.2	137.4	131.6
110°	123.2	125.1	127.1	129.0	131.0	134.0	138.0	142.0	145.9	149.9	150.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	137.4	139.1	140.8	142.4	144.1	146.9	150.7	154.6	158.4	162.2	164.3
115°	158.4	159.7	161.1	162.4	163.7	166.2	169.7	173.3	176.7	180.2	182.8
117.5°	178.8	179.9	180.9	182.0	183.1	185.1	188.2	191.2	194.3	197.3	199.8
120°	191.2	192.3	193.2	194.2	195.1	197.1	199.9	202.9	205.7	208.7	211.0
122.5°	204.2	204.9	205.6	206.3	206.9	208.7	211.5	214.3	217.1	219.9	222.1
125°	221.7	222.2	222.7	223.2	223.7	225.2	227.9	230.5	233.1	235.8	237.6
127.5°	238.9	239.3	239.8	240.2	240.6	241.9	244.2	246.4	248.7	251.0	252.9
130°	249.7	250.1	250.5	251.0	251.4	252.5	254.4	256.3	258.2	260.1	261.9
132.5°	259.7	260.2	260.6	261.1	261.7	262.6	264.1	265.6	267.1	268.6	270.4
135°	275.4	275.7	275.9	276.2	276.6	277.3	278.4	279.6	280.7	281.9	283.5
137.5°	288.8	289.1	289.5	289.9	290.3	290.9	291.5	292.2	292.8	293.4	295.0
140°	297.4	297.8	298.1	298.5	298.9	299.3	299.7	300.2	300.6	301.0	302.5
142.5°	305.7	305.9	306.3	306.6	306.9	307.1	307.4	307.6	307.8	308.1	309.4
145°	317.3	317.6	318.0	318.3	318.7	318.9	319.0	319.2	319.2	319.4	320.2
147.5°	327.8	328.1	328.4	328.7	328.9	329.2	329.3	329.4	329.5	329.6	329.9
150°	334.5	334.7	334.9	335.1	335.3	335.4	335.6	335.6	335.8	335.9	336.0
152.5°	340.6	340.6	340.7	340.8	340.9	341.0	341.0	341.1	341.2	341.3	341.5
155°	349.1	349.0	348.8	348.7	348.6	348.6	348.6	348.6	348.7	348.8	349.1
157.5°	355.7	355.7	355.7	355.6	355.6	355.6	355.5	355.5	355.4	355.4	355.7
160°	359.7	359.7	359.6	359.5	359.5	359.4	359.3	359.3	359.3	359.2	359.5
162.5°	363.5	363.4	363.2	363.1	362.9	362.7	362.7	362.7	362.6	362.5	362.9
165°	368.1	367.9	367.7	367.6	367.3	367.3	367.2	367.1	367.0	367.0	367.5
167.5°	371.7	371.5	371.2	371.0	370.7	370.6	370.6	370.6	370.6	370.6	371.1
170°	373.7	373.4	373.2	373.0	372.7	372.6	372.6	372.6	372.6	372.6	373.1
172.5°	375.0	374.8	374.5	374.1	373.8	373.8	373.8	373.8	373.9	373.9	374.5
175°	376.8	376.4	376.1	375.9	375.6	375.4	375.5	375.6	375.6	375.7	376.1
177.5°	377.2	377.0	376.8	376.5	376.2	376.1	376.2	376.2	376.3	376.4	376.8
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	54.0	56.9	59.7	61.6	62.4	63.3	64.1	65.0
90°	54.5	57.5	60.6	62.6	63.5	64.5	65.4	66.4
92.5°	52.8	55.8	59.0	61.0	61.8	62.7	63.5	64.3
95°	51.2	54.2	57.1	59.0	59.9	60.7	61.5	62.3
97.5°	48.8	51.7	54.7	56.6	57.4	58.3	59.3	60.1
100°	47.1	50.0	52.8	54.7	55.6	56.5	57.4	58.3
102.5°	50.3	51.1	51.8	52.7	53.6	54.6	55.5	56.4
105°	71.5	62.8	54.1	50.2	51.1	52.0	52.8	53.6
107.5°	125.7	119.9	114.0	107.3	99.7	92.1	84.5	76.9
110°	150.0	150.1	150.2	146.1	137.8	129.6	121.4	113.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	166.4	168.5	170.6	171.1	169.9	168.8	167.6	166.4
115°	185.4	188.0	190.6	192.3	193.3	194.2	195.0	196.0
117.5°	202.2	204.7	207.2	208.7	209.5	210.1	210.8	211.5
120°	213.4	215.8	218.2	219.7	220.2	220.9	221.4	222.0
122.5°	224.3	226.5	228.6	230.0	230.6	231.2	231.9	232.5
125°	239.5	241.3	243.1	244.4	245.1	245.8	246.5	247.2
127.5°	254.7	256.5	258.3	259.4	259.8	260.3	260.7	261.2
130°	263.6	265.5	267.3	268.4	268.7	269.1	269.5	269.8
132.5°	272.1	273.9	275.6	276.7	277.1	277.4	277.8	278.2
135°	285.2	286.8	288.5	289.5	289.7	289.9	290.1	290.3
137.5°	296.7	298.3	299.8	300.8	301.0	301.3	301.7	301.9
140°	304.0	305.5	306.9	307.8	308.1	308.4	308.6	309.0
142.5°	310.7	312.0	313.3	314.1	314.3	314.6	314.8	315.1
145°	321.0	321.8	322.5	323.1	323.4	323.8	324.1	324.4
147.5°	330.3	330.6	331.0	331.1	331.1	331.1	331.1	331.1
150°	336.2	336.3	336.4	336.4	336.4	336.4	336.4	336.4
152.5°	341.7	342.0	342.2	342.1	341.9	341.7	341.4	341.2
155°	349.4	349.7	350.1	350.0	349.7	349.3	348.9	348.5
157.5°	356.1	356.5	356.9	356.8	356.3	355.8	355.3	354.8
160°	359.9	360.3	360.7	360.6	360.2	359.7	359.3	358.9
162.5°	363.4	363.8	364.2	364.2	363.8	363.5	363.1	362.7
165°	368.0	368.5	369.0	369.0	368.6	368.1	367.7	367.3
167.5°	371.5	372.1	372.6	372.6	372.1	371.5	371.1	370.6
170°	373.6	374.1	374.5	374.5	374.1	373.6	373.1	372.6
172.5°	374.9	375.4	375.9	375.9	375.3	374.8	374.2	373.7
175°	376.5	377.0	377.4	377.4	376.9	376.4	375.9	375.4
177.5°	377.2	377.6	378.0	377.9	377.4	376.9	376.4	375.9
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8

(END OF REPORT)