

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: P331872-940

Luminaire Tested: **S123DIP-S340D365U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331872-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2370.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

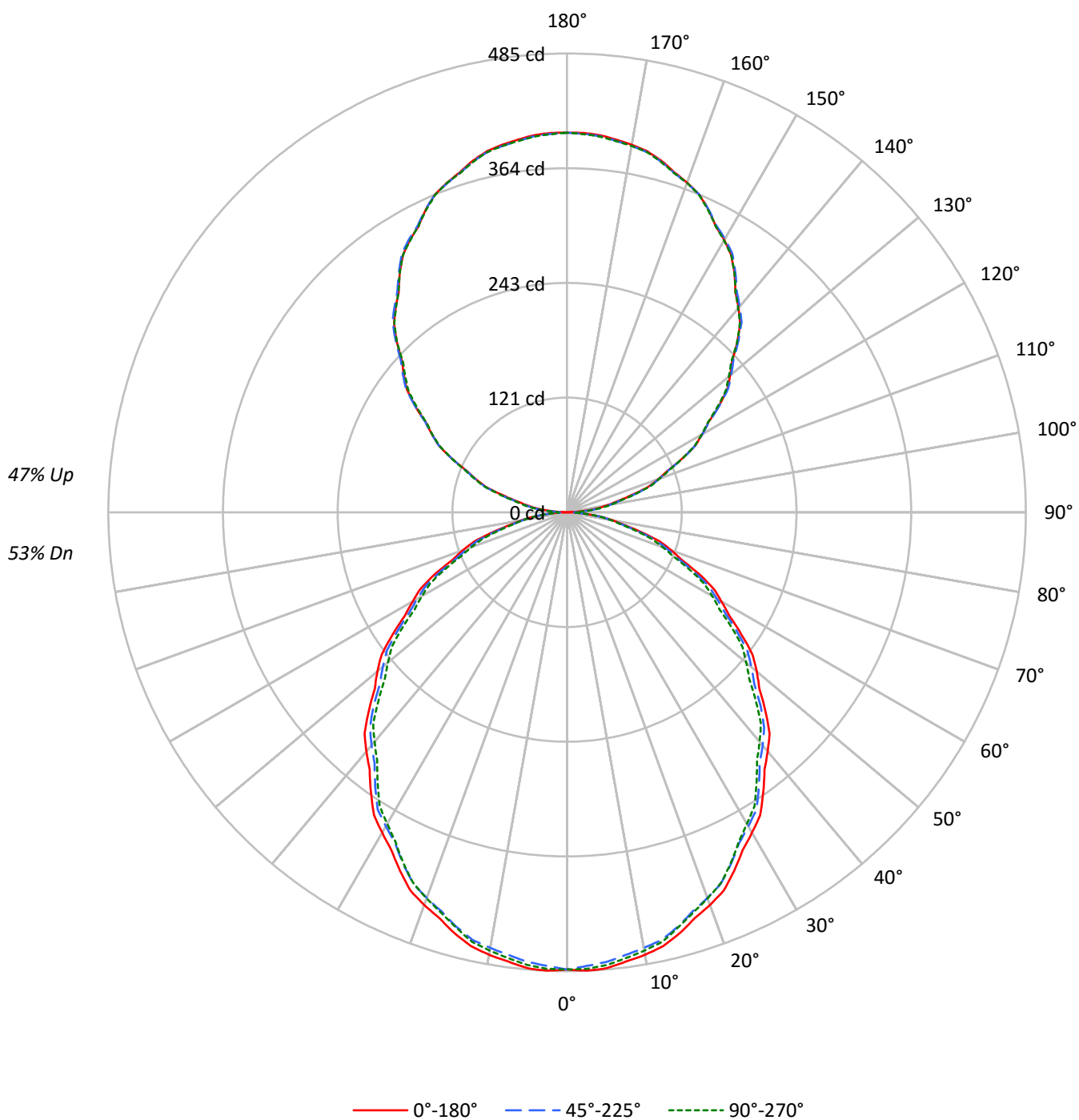
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53		
1	98	94	90	87	91	87	84	81	74	72	70	63	61	59	52	51	50	45		
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	37		
3	82	72	65	59	75	67	61	55	58	53	48	49	45	42	40	38	36	32		
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	31	27		
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	23		
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	30	26	23	21		
7	58	46	38	32	54	43	36	31	37	32	27	32	27	24	27	24	21	18		
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16		
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15		
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5201	5201	5201
5°	5226	5154	5190
10°	5191	5109	5141
15°	5131	5051	5060
20°	5060	4969	4974
25°	4963	4871	4861
30°	4860	4762	4724
35°	4750	4646	4586
40°	4636	4519	4449
45°	4509	4402	4294
50°	4382	4258	4140
55°	4219	4110	3984
60°	4052	3935	3810
65°	3904	3744	3629
70°	3688	3531	3374
75°	3373	3248	3111
80°	3037	2913	2882
85°	2668	2569	2470

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	1.9
10°-20°	128.5	5.4
20°-30°	189.9	8.0
30°-40°	221.8	9.4
40°-50°	223.0	9.4
50°-60°	195.8	8.3
60°-70°	145.9	6.2
70°-80°	83.1	3.5
80°-90°	25.0	1.1
90°-100°	26.1	1.1
100°-110°	78.2	3.3
110°-120°	133.0	5.6
120°-130°	175.0	7.4
130°-140°	196.7	8.3
140°-150°	193.3	8.2
150°-160°	162.8	6.9
160°-170°	108.3	4.6
170°-180°	37.9	1.6
0°-30°	363.9	15.4
0°-40°	585.7	24.7
0°-60°	1004.5	42.4
0°-90°	1258.6	53.1
90°-120°	237.4	10.0
90°-150°	802.4	33.9
90°-180°	1111.0	46.9
0°-180°	2370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	484	481	477	481	480	46
15°	460	458	453	456	454	130
25°	418	415	410	410	409	192
35°	362	359	354	351	349	226
45°	296	294	289	284	282	229
55°	225	224	219	215	212	201
65°	153	151	147	144	142	151
75°	81	79	78	76	75	87
85°	22	21	21	20	20	24
90°	0	4	8	9	10	2
95°	19	21	23	24	25	21
105°	71	72	74	74	75	76
115°	134	135	134	135	134	132
125°	196	197	196	195	194	175
135°	254	256	256	255	254	196
145°	308	309	310	310	308	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2
2.5°	484.9	484.6	484.3	484.0	483.7	483.1	482.3	481.5	480.7	479.9	480.6
5°	483.7	483.1	482.7	482.2	481.8	481.1	480.0	479.0	478.0	477.0	477.9
7.5°	478.9	478.4	478.0	477.5	477.1	476.3	475.3	474.2	473.1	472.1	472.9
10°	474.9	474.5	473.9	473.5	473.1	472.3	471.0	469.8	468.6	467.4	468.2
12.5°	469.6	469.2	468.8	468.4	468.1	467.3	466.2	465.0	463.9	462.8	463.4
15°	460.4	460.0	459.6	459.2	458.9	458.1	456.9	455.7	454.5	453.3	454.1
17.5°	449.6	449.2	448.7	448.2	447.7	446.9	445.7	444.5	443.3	442.1	442.6
20°	441.7	441.1	440.6	440.0	439.4	438.5	437.4	436.1	435.0	433.8	434.2
22.5°	432.7	432.1	431.6	431.1	430.5	429.6	428.4	427.2	426.0	424.8	425.1
25°	417.9	417.4	416.9	416.3	415.8	414.9	413.7	412.5	411.3	410.1	410.2
27.5°	402.3	401.7	401.2	400.6	400.1	399.2	398.0	396.6	395.4	394.0	394.1
30°	391.0	390.5	390.0	389.6	389.1	388.3	387.0	385.7	384.4	383.1	383.1
32.5°	379.7	379.1	378.4	377.8	377.3	376.4	375.4	374.4	373.4	372.5	371.9
35°	361.5	361.0	360.3	359.8	359.3	358.4	357.2	356.0	354.8	353.6	353.0
37.5°	342.9	342.1	341.4	340.7	340.1	339.1	337.9	336.6	335.5	334.2	333.6
40°	329.9	329.3	328.8	328.2	327.7	326.7	325.5	324.1	322.9	321.6	320.8
42.5°	316.9	316.3	315.7	315.0	314.4	313.4	312.2	310.9	309.6	308.3	307.6
45°	296.2	295.9	295.5	295.2	294.8	294.0	292.7	291.6	290.3	289.2	288.1
47.5°	275.7	275.2	274.6	274.1	273.6	272.8	271.6	270.5	269.4	268.2	267.2
50°	261.7	261.3	260.8	260.4	259.9	259.0	257.9	256.7	255.5	254.3	253.2
52.5°	247.1	246.8	246.5	246.2	245.8	245.0	243.8	242.5	241.3	240.0	239.2
55°	224.8	224.7	224.6	224.5	224.4	223.7	222.6	221.3	220.2	219.0	217.9
57.5°	203.5	203.2	202.9	202.6	202.2	201.6	200.6	199.7	198.8	197.8	196.9
60°	188.2	188.2	188.1	188.0	187.9	187.3	186.1	185.0	184.0	182.8	182.0
62.5°	174.6	174.3	174.2	173.9	173.6	173.0	171.8	170.8	169.6	168.5	167.7
65°	153.3	152.8	152.4	151.9	151.5	150.8	149.9	148.9	148.0	147.0	146.3
67.5°	130.8	130.4	130.0	129.6	129.2	128.6	128.0	127.2	126.5	125.8	125.2
70°	117.2	116.6	116.1	115.5	114.9	114.4	113.9	113.2	112.7	112.2	111.6
72.5°	102.9	102.5	102.1	101.7	101.2	100.8	100.1	99.5	98.9	98.3	97.6
75°	81.1	80.6	80.3	79.9	79.5	79.2	78.9	78.6	78.4	78.1	77.7
77.5°	61.6	61.4	61.3	61.1	60.8	60.5	60.3	59.9	59.6	59.2	58.9
80°	49.0	48.8	48.5	48.2	47.9	47.7	47.5	47.3	47.2	47.0	46.8
82.5°	36.7	36.6	36.6	36.6	36.5	36.5	36.4	36.4	36.4	36.3	36.1
85°	21.6	21.4	21.2	21.0	20.9	20.8	20.8	20.8	20.8	20.8	20.6
87.5°	8.7	8.6	8.6	8.5	8.4	8.4	8.5	8.6	8.7	8.8	8.8
90°	0.4	1.0	1.7	2.4	3.1	3.9	4.8	5.7	6.7	7.6	7.8
92.5°	7.7	8.1	8.6	9.1	9.5	10.0	10.5	11.1	11.6	12.1	12.3
95°	18.6	19.1	19.5	20.1	20.5	21.0	21.7	22.2	22.7	23.4	23.6
97.5°	33.0	33.3	33.8	34.2	34.5	34.9	35.3	35.7	36.1	36.5	36.8
100°	42.9	43.2	43.7	44.1	44.5	44.9	45.3	45.7	46.0	46.3	46.5
102.5°	54.2	54.5	54.7	54.9	55.2	55.6	56.0	56.5	57.0	57.4	57.6
105°	70.9	71.1	71.2	71.3	71.4	71.9	72.5	73.1	73.7	74.4	74.4
107.5°	90.3	90.4	90.5	90.6	90.7	90.8	91.0	91.3	91.6	91.8	92.0
110°	102.5	102.5	102.7	102.8	103.0	103.1	103.3	103.4	103.5	103.7	104.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.0	115.1	115.2	115.3	115.4	115.4	115.5	115.5	115.5	115.6	115.8
115°	133.9	134.1	134.4	134.6	134.7	134.8	134.6	134.6	134.4	134.2	134.3
117.5°	152.9	153.1	153.3	153.4	153.6	153.5	153.3	153.1	152.9	152.8	152.8
120°	164.8	165.2	165.7	166.0	166.5	166.5	166.2	165.9	165.5	165.1	165.1
122.5°	177.2	177.5	177.8	178.1	178.4	178.4	178.3	178.1	177.9	177.7	177.5
125°	196.0	196.2	196.4	196.6	196.9	196.9	196.7	196.6	196.4	196.4	196.0
127.5°	213.4	213.8	214.3	214.7	215.2	215.3	215.2	215.0	214.9	214.7	214.4
130°	225.0	225.5	226.1	226.7	227.2	227.4	227.2	227.0	226.8	226.6	226.3
132.5°	236.6	237.2	237.7	238.3	238.8	239.1	238.9	238.7	238.5	238.4	238.1
135°	254.3	254.8	255.1	255.6	256.0	256.2	256.1	256.0	255.9	255.9	255.6
137.5°	270.7	271.1	271.3	271.7	272.1	272.3	272.5	272.7	272.9	273.0	272.8
140°	282.0	282.4	282.8	283.1	283.5	283.7	283.7	283.7	283.8	283.9	283.8
142.5°	292.4	292.7	293.1	293.5	293.7	294.0	294.2	294.3	294.4	294.5	294.4
145°	308.5	308.6	308.8	308.9	309.1	309.2	309.4	309.7	309.9	310.0	310.0
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	324.7
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2
2.5°	481.3	482.1	482.9	483.2	483.1	483.0	483.0	482.9
5°	478.8	479.7	480.7	481.1	480.9	480.7	480.5	480.3
7.5°	473.8	474.6	475.4	475.7	475.6	475.5	475.5	475.3
10°	469.1	469.9	470.7	471.1	470.9	470.7	470.6	470.4
12.5°	464.0	464.6	465.2	465.5	465.4	465.2	465.1	465.0
15°	454.8	455.5	456.3	456.4	455.8	455.2	454.7	454.1
17.5°	443.1	443.6	444.2	444.3	444.1	443.9	443.7	443.5
20°	434.5	434.9	435.2	435.3	435.0	434.7	434.4	434.2
22.5°	425.3	425.7	426.0	426.0	425.6	425.3	424.9	424.5
25°	410.3	410.4	410.5	410.4	410.1	409.8	409.6	409.3
27.5°	394.2	394.3	394.3	394.2	393.9	393.5	393.2	392.8
30°	383.1	383.1	383.1	382.7	382.1	381.5	380.8	380.1
32.5°	371.4	370.9	370.4	370.0	369.6	369.3	368.9	368.5
35°	352.5	352.0	351.3	350.9	350.4	349.9	349.5	349.0
37.5°	332.9	332.3	331.5	331.1	330.8	330.5	330.2	329.9
40°	320.1	319.4	318.6	318.1	317.7	317.4	317.0	316.6
42.5°	306.8	306.0	305.3	304.8	304.4	304.1	303.7	303.3
45°	287.0	285.9	284.7	284.0	283.5	283.0	282.6	282.1
47.5°	266.1	265.0	263.9	263.1	262.7	262.3	261.9	261.5
50°	252.3	251.2	250.2	249.4	248.9	248.3	247.8	247.2
52.5°	238.3	237.4	236.5	235.8	235.2	234.7	234.2	233.6
55°	217.0	215.9	214.9	214.2	213.7	213.2	212.8	212.3
57.5°	196.0	195.0	194.1	193.4	192.9	192.3	191.8	191.3
60°	181.2	180.3	179.5	178.9	178.3	177.9	177.5	177.0
62.5°	166.8	166.0	165.2	164.6	164.3	164.0	163.7	163.4
65°	145.6	144.9	144.1	143.7	143.4	143.0	142.8	142.5
67.5°	124.5	123.9	123.2	122.7	122.3	121.9	121.5	121.2
70°	110.9	110.2	109.6	109.1	108.6	108.2	107.6	107.2
72.5°	97.1	96.5	95.9	95.5	95.3	95.1	94.8	94.5
75°	77.2	76.7	76.2	75.9	75.6	75.3	75.1	74.8
77.5°	58.6	58.3	58.0	57.9	57.9	57.9	57.9	57.9
80°	46.7	46.6	46.5	46.5	46.5	46.5	46.5	46.5
82.5°	36.0	35.8	35.7	35.5	35.5	35.4	35.3	35.2
85°	20.4	20.2	20.1	20.0	20.0	20.0	20.0	20.0
87.5°	8.8	8.7	8.7	8.7	8.8	8.8	8.8	8.8
90°	8.1	8.4	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	12.6	12.8	13.0	13.1	13.0	12.9	12.8	12.8
95°	23.9	24.2	24.4	24.6	24.6	24.6	24.6	24.6
97.5°	37.1	37.5	37.8	37.9	37.9	37.9	37.8	37.8
100°	46.7	47.0	47.2	47.3	47.4	47.6	47.8	47.9
102.5°	57.9	58.1	58.2	58.3	58.3	58.3	58.2	58.2
105°	74.4	74.4	74.4	74.5	74.5	74.7	74.9	75.0
107.5°	92.3	92.5	92.7	92.8	92.7	92.6	92.6	92.5
110°	104.2	104.5	104.8	104.9	104.7	104.6	104.4	104.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	116.2	116.5	116.9	117.0	117.0	117.0	116.9	116.9
115°	134.4	134.5	134.6	134.6	134.5	134.4	134.3	134.2
117.5°	152.8	152.8	152.8	152.6	152.4	152.2	152.0	151.9
120°	165.0	164.9	164.9	164.7	164.6	164.4	164.3	164.2
122.5°	177.4	177.2	177.0	176.8	176.6	176.4	176.2	176.0
125°	195.7	195.5	195.2	194.9	194.7	194.4	194.0	193.8
127.5°	213.9	213.6	213.1	212.8	212.5	212.1	211.9	211.5
130°	226.0	225.7	225.4	225.1	224.6	224.1	223.6	223.1
132.5°	237.7	237.4	237.1	236.7	236.3	235.9	235.6	235.2
135°	255.3	255.0	254.8	254.6	254.4	254.2	254.1	254.0
137.5°	272.5	272.2	271.9	271.6	271.3	271.1	270.8	270.5
140°	283.7	283.7	283.7	283.4	282.9	282.4	281.9	281.4
142.5°	294.4	294.3	294.3	294.0	293.6	293.3	292.8	292.5
145°	310.0	309.9	309.8	309.6	309.3	309.1	308.8	308.5
147.5°	324.7	324.7	324.7	324.4	324.0	323.6	323.2	322.7
150°	333.7	333.7	333.7	333.5	333.1	332.7	332.3	331.8
152.5°	342.0	342.1	342.2	342.1	341.7	341.3	341.0	340.6
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

(END OF REPORT)