

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: P332250

Luminaire Tested: **S123RDIP-S340D585U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332250
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: S123RDIP-S340D585U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3311.8 lumens
Efficiency: N/A
Efficacy: 129.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

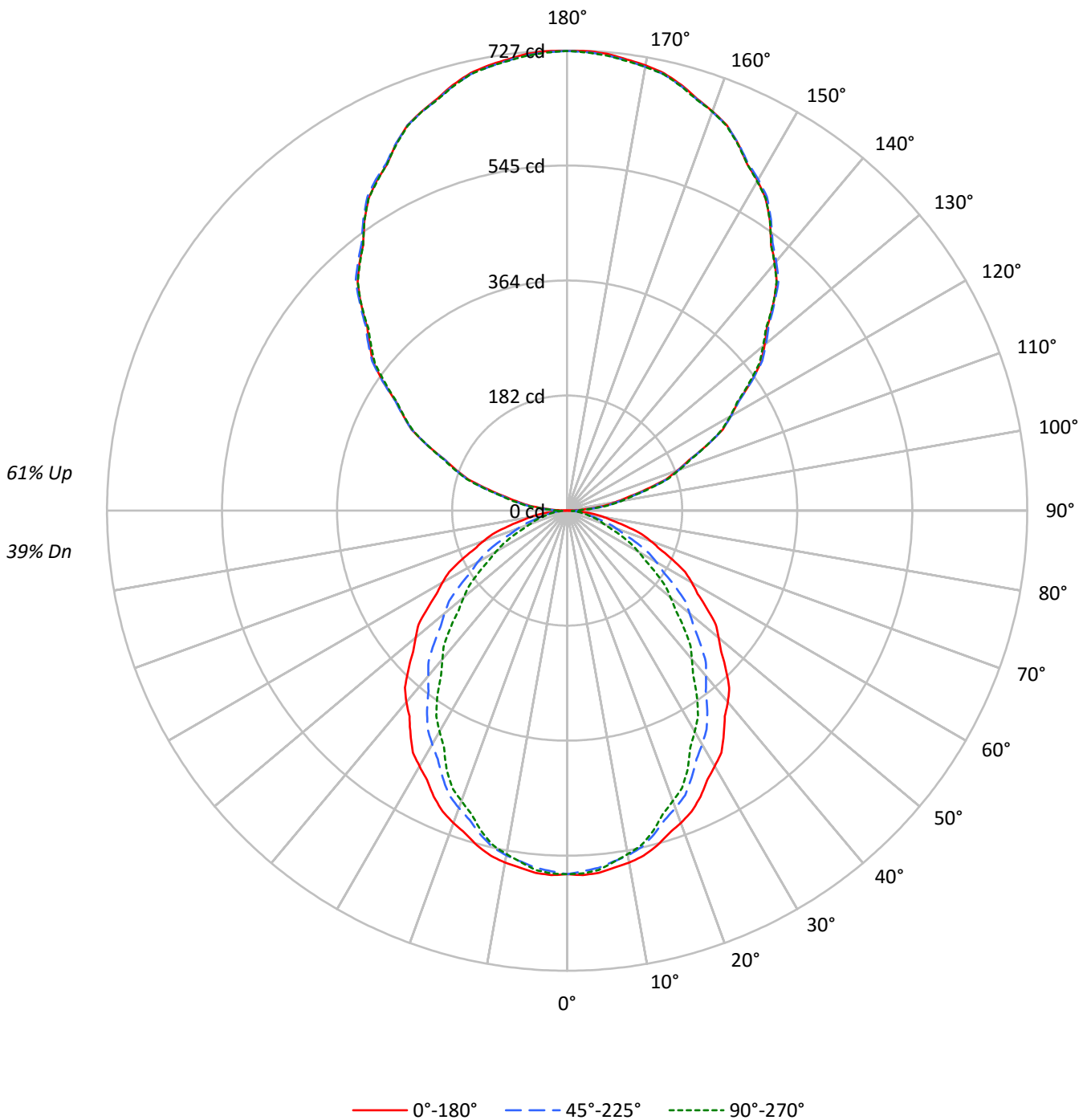
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	91	88	84	87	83	80	77	68	66	64	54	53	51	41	40	40	34
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	37	35	34	29
3	80	71	64	58	72	65	58	54	53	49	45	42	39	37	33	31	29	24
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	19
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	37	32	52	42	35	30	35	29	26	28	24	21	22	19	17	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	20	18	16	13
9	49	37	30	25	45	34	28	24	29	24	20	24	20	17	19	16	14	12
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6184	6184	6184
5°	6207	6122	6158
10°	6172	6045	6025
15°	6107	5904	5841
20°	6015	5727	5593
25°	5922	5529	5352
30°	5797	5299	5009
35°	5670	5070	4696
40°	5552	4799	4308
45°	5398	4532	3958
50°	5228	4228	3565
55°	5054	3883	3200
60°	4895	3511	2799
65°	4689	3110	2397
70°	4428	2609	1936
75°	4051	2054	1822
80°	3608	1822	1674
85°	3051	1606	1494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	1.6
10°-20°	150.1	4.5
20°-30°	216.1	6.5
30°-40°	243.5	7.4
40°-50°	232.9	7.0
50°-60°	190.7	5.8
60°-70°	128.7	3.9
70°-80°	64.7	2.0
80°-90°	19.3	0.6
90°-100°	47.3	1.4
100°-110°	141.6	4.3
110°-120°	240.8	7.3
120°-130°	316.7	9.6
130°-140°	356.0	10.7
140°-150°	349.9	10.6
150°-160°	294.6	8.9
160°-170°	196.1	5.9
170°-180°	68.7	2.1
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0°-30°	420.2	12.7
0°-40°	663.7	20.0
0°-60°	1087.3	32.8
0°-90°	1300.0	39.3
90°-120°	429.7	13.0
90°-150°	1452.4	43.9
90°-180°	2012.0	60.8
0°-180°	3311.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	572	567	570	570	54
15°	548	542	530	527	524	154
25°	499	486	466	456	451	229
35°	432	414	386	366	357	270
45°	355	333	298	272	260	273
55°	269	246	207	181	170	241
65°	184	158	122	100	94	182
75°	97	75	49	45	44	104
85°	25	15	13	12	12	28
90°	1	6	14	16	17	3
95°	34	38	42	44	44	38
105°	128	130	135	135	136	137
115°	242	244	243	244	243	240
125°	355	356	355	353	351	316
135°	460	464	463	461	460	355
145°	558	560	561	561	558	349
155°	639	639	640	642	638	294
165°	696	695	695	698	694	196
175°	724	722	722	725	722	69
180°	726	726	726	726	726	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	576.4	576.0	575.7	575.4	575.1	574.4	573.4	572.4	571.4	570.4	571.3
5°	574.5	574.0	573.5	573.0	572.4	571.6	570.3	569.1	567.8	566.6	567.5
7.5°	569.2	568.6	568.1	567.5	567.0	565.9	564.3	562.7	561.0	559.4	559.9
10°	564.7	564.0	563.3	562.6	561.8	560.5	558.7	556.8	554.9	553.1	553.2
12.5°	558.4	557.6	556.8	556.0	555.2	553.6	551.3	549.1	546.8	544.5	544.4
15°	548.0	546.8	545.7	544.5	543.4	541.4	538.5	535.6	532.7	529.8	529.3
17.5°	534.8	533.5	532.2	530.8	529.5	527.0	523.3	519.6	516.0	512.3	511.2
20°	525.1	523.5	521.8	520.2	518.5	515.7	511.8	507.8	503.9	500.0	498.6
22.5°	514.3	512.4	510.5	508.6	506.7	503.7	499.5	495.3	491.1	486.9	485.2
25°	498.6	496.0	493.4	490.8	488.2	484.5	479.8	475.0	470.2	465.5	463.3
27.5°	479.5	476.6	473.7	470.9	468.0	464.0	458.7	453.3	448.0	442.7	439.7
30°	466.4	463.3	460.2	457.1	454.0	449.5	443.7	437.9	432.1	426.3	422.8
32.5°	453.4	449.8	446.3	442.8	439.3	434.5	428.3	422.2	416.1	409.9	406.1
35°	431.5	427.7	424.0	420.3	416.6	411.5	405.1	398.6	392.2	385.8	381.4
37.5°	409.3	405.1	401.0	396.9	392.7	387.2	380.4	373.5	366.7	359.8	354.8
40°	395.1	390.6	386.0	381.5	376.9	370.9	363.6	356.2	348.9	341.5	336.2
42.5°	379.1	374.5	370.0	365.4	360.9	354.8	347.2	339.6	332.0	324.4	318.5
45°	354.6	349.9	345.3	340.6	335.9	329.6	321.7	313.7	305.7	297.7	291.8
47.5°	330.1	325.0	319.8	314.7	309.6	303.1	295.1	287.1	279.2	271.2	264.8
50°	312.2	307.3	302.5	297.6	292.7	286.1	277.7	269.3	260.9	252.5	246.1
52.5°	296.2	290.9	285.6	280.3	275.0	268.2	259.9	251.6	243.3	235.0	228.4
55°	269.3	264.2	259.2	254.1	249.0	242.1	233.3	224.5	215.7	206.9	200.9
57.5°	244.5	239.0	233.5	227.9	222.4	215.2	206.4	197.5	188.7	179.9	174.2
60°	227.4	221.7	216.0	210.3	204.6	197.5	188.9	180.3	171.7	163.1	157.5
62.5°	210.2	204.5	198.8	193.2	187.5	180.3	171.7	163.1	154.5	145.9	140.7
65°	184.1	178.4	172.7	167.0	161.3	154.4	146.3	138.2	130.2	122.1	117.0
67.5°	157.9	152.1	146.3	140.6	134.8	128.1	120.3	112.6	104.8	97.1	93.3
70°	140.7	135.1	129.5	123.9	118.4	111.9	104.7	97.4	90.2	82.9	79.3
72.5°	123.6	118.1	112.6	107.0	101.5	95.5	88.9	82.3	75.7	69.1	66.2
75°	97.4	92.4	87.4	82.5	77.5	72.2	66.5	60.8	55.1	49.4	48.4
77.5°	73.5	69.0	64.5	60.0	55.6	51.5	47.8	44.1	40.5	36.8	36.3
80°	58.2	54.0	49.8	45.5	41.3	38.1	35.9	33.7	31.5	29.4	29.0
82.5°	43.7	40.0	36.4	32.7	29.0	26.7	25.7	24.7	23.7	22.6	22.3
85°	24.7	22.4	20.1	17.9	15.6	14.3	14.0	13.7	13.4	13.0	12.8
87.5°	9.1	8.4	7.7	7.1	6.4	6.3	6.6	6.9	7.3	7.6	7.6
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	13.8	14.7	15.5	16.4	17.3	18.2	19.1	20.0	21.0	21.9	22.3
95°	33.7	34.5	35.4	36.3	37.2	38.2	39.2	40.2	41.2	42.2	42.7
97.5°	59.8	60.4	61.1	61.8	62.4	63.1	63.8	64.6	65.3	66.1	66.6
100°	77.6	78.3	79.1	79.9	80.6	81.3	81.9	82.6	83.2	83.8	84.2
102.5°	98.1	98.6	99.0	99.5	99.9	100.6	101.4	102.3	103.1	103.9	104.3
105°	128.3	128.6	128.8	129.1	129.4	130.0	131.2	132.3	133.5	134.6	134.6
107.5°	163.5	163.6	163.8	163.9	164.1	164.4	164.8	165.3	165.8	166.2	166.6
110°	185.4	185.6	185.9	186.1	186.4	186.6	186.9	187.2	187.4	187.7	188.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.2	208.3	208.5	208.6	208.8	208.9	209.0	209.0	209.1	209.1	209.7
115°	242.4	242.8	243.2	243.6	243.9	244.0	243.7	243.5	243.2	243.0	243.1
117.5°	276.9	277.1	277.4	277.6	277.9	277.8	277.5	277.2	276.9	276.5	276.5
120°	298.3	299.1	299.8	300.6	301.4	301.4	300.8	300.2	299.5	298.9	298.8
122.5°	320.7	321.2	321.8	322.3	322.9	323.0	322.7	322.4	322.0	321.7	321.4
125°	354.8	355.2	355.5	355.9	356.3	356.4	356.1	355.9	355.6	355.4	354.8
127.5°	386.3	387.1	387.9	388.7	389.5	389.8	389.5	389.2	388.9	388.7	388.0
130°	407.3	408.3	409.3	410.3	411.3	411.6	411.3	410.9	410.5	410.1	409.6
132.5°	428.2	429.3	430.3	431.3	432.3	432.7	432.4	432.1	431.8	431.6	430.9
135°	460.3	461.1	461.8	462.6	463.3	463.7	463.5	463.4	463.3	463.2	462.7
137.5°	490.0	490.6	491.2	491.9	492.5	493.0	493.3	493.6	494.0	494.3	493.8
140°	510.5	511.1	511.8	512.4	513.0	513.4	513.5	513.7	513.8	513.9	513.8
142.5°	529.2	529.8	530.5	531.1	531.7	532.2	532.4	532.6	532.9	533.1	533.0
145°	558.4	558.7	558.9	559.2	559.4	559.7	560.1	560.5	560.9	561.3	561.1
147.5°	584.0	584.4	584.9	585.3	585.8	586.2	586.6	586.9	587.3	587.6	587.6
150°	601.8	602.0	602.3	602.5	602.8	603.0	603.3	603.5	603.8	604.0	604.0
152.5°	616.4	616.7	617.1	617.4	617.8	618.0	618.2	618.3	618.5	618.6	618.8
155°	639.4	639.4	639.4	639.4	639.4	639.5	639.6	639.7	639.9	640.0	640.5
157.5°	659.0	658.9	658.7	658.6	658.4	658.4	658.5	658.6	658.7	658.8	659.3
160°	671.3	671.1	670.8	670.6	670.3	670.2	670.2	670.2	670.2	670.2	670.8
162.5°	682.3	681.9	681.6	681.2	680.9	680.8	680.9	681.0	681.1	681.2	681.8
165°	696.4	696.1	695.7	695.3	694.9	694.7	694.7	694.7	694.7	694.7	695.5
167.5°	707.7	707.2	706.7	706.2	705.7	705.5	705.6	705.7	705.8	705.9	706.7
170°	714.1	713.6	713.1	712.6	712.1	711.8	711.8	711.8	711.8	711.8	712.7
172.5°	719.1	718.6	718.1	717.6	717.1	716.9	716.9	716.9	716.9	716.9	717.7
175°	724.4	723.9	723.4	722.9	722.4	722.1	722.1	722.1	722.1	722.1	722.9
177.5°	726.6	726.2	725.8	725.3	724.9	724.7	724.7	724.7	724.7	724.7	725.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	572.2	573.1	574.1	574.4	574.3	574.1	573.9	573.8
5°	568.5	569.4	570.3	570.7	570.5	570.3	570.1	569.9
7.5°	560.5	561.0	561.5	561.6	561.2	560.9	560.5	560.2
10°	553.3	553.4	553.5	553.3	552.8	552.3	551.7	551.2
12.5°	544.4	544.3	544.3	543.9	543.3	542.7	542.1	541.5
15°	528.7	528.2	527.7	527.1	526.4	525.6	524.9	524.2
17.5°	510.1	509.0	507.9	506.8	505.7	504.6	503.6	502.5
20°	497.3	495.9	494.6	493.3	492.0	490.8	489.6	488.3
22.5°	483.6	481.9	480.2	478.8	477.6	476.5	475.3	474.2
25°	461.1	459.0	456.8	455.1	454.0	452.9	451.7	450.6
27.5°	436.7	433.7	430.7	428.3	426.5	424.8	423.1	421.3
30°	419.3	415.8	412.3	409.7	408.0	406.4	404.7	403.0
32.5°	402.2	398.4	394.5	391.7	390.0	388.3	386.5	384.8
35°	376.9	372.4	368.0	364.8	363.0	361.1	359.2	357.4
37.5°	349.7	344.6	339.6	335.9	333.6	331.3	329.0	326.7
40°	330.8	325.4	320.0	316.1	313.7	311.4	309.0	306.6
42.5°	312.6	306.8	300.9	296.9	294.7	292.6	290.5	288.3
45°	285.9	280.0	274.1	269.9	267.5	265.0	262.5	260.0
47.5°	258.3	251.9	245.5	241.2	239.0	236.8	234.5	232.3
50°	239.7	233.3	226.9	222.5	220.1	217.7	215.3	212.9
52.5°	221.7	215.0	208.4	204.0	201.8	199.7	197.6	195.4
55°	194.9	188.9	182.9	178.8	176.8	174.7	172.6	170.5
57.5°	168.5	162.8	157.2	153.4	151.7	149.9	148.2	146.4
60°	151.9	146.3	140.7	137.0	135.3	133.5	131.8	130.0
62.5°	135.4	130.2	124.9	121.3	119.5	117.7	115.8	114.0
65°	111.9	106.9	101.8	98.7	97.5	96.4	95.3	94.1
67.5°	89.5	85.7	81.9	79.4	78.2	77.0	75.8	74.6
70°	75.7	72.1	68.4	66.1	64.9	63.8	62.6	61.5
72.5°	63.2	60.3	57.3	55.6	55.1	54.6	54.2	53.7
75°	47.3	46.3	45.2	44.6	44.4	44.2	44.0	43.8
77.5°	35.7	35.1	34.6	34.2	34.0	33.8	33.6	33.4
80°	28.7	28.4	28.1	27.9	27.6	27.4	27.2	27.0
82.5°	22.0	21.7	21.4	21.2	21.2	21.1	21.1	21.1
85°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
87.5°	7.6	7.6	7.7	7.7	7.6	7.6	7.6	7.5
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	22.7	23.1	23.5	23.7	23.5	23.3	23.2	23.0
95°	43.2	43.7	44.2	44.5	44.5	44.5	44.5	44.5
97.5°	67.2	67.8	68.4	68.6	68.6	68.5	68.5	68.4
100°	84.6	85.0	85.4	85.7	85.9	86.2	86.4	86.7
102.5°	104.7	105.1	105.4	105.6	105.6	105.5	105.5	105.4
105°	134.6	134.6	134.6	134.7	135.0	135.2	135.5	135.8
107.5°	167.0	167.4	167.8	168.0	167.8	167.7	167.5	167.4
110°	188.7	189.2	189.7	189.8	189.6	189.3	189.1	188.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.3	210.9	211.5	211.8	211.8	211.7	211.7	211.6
115°	243.2	243.4	243.5	243.5	243.4	243.2	243.1	243.0
117.5°	276.5	276.4	276.4	276.2	275.9	275.5	275.2	274.8
120°	298.6	298.5	298.4	298.2	297.9	297.7	297.4	297.2
122.5°	321.0	320.7	320.4	320.0	319.7	319.3	319.0	318.6
125°	354.3	353.8	353.3	352.8	352.3	351.8	351.3	350.8
127.5°	387.2	386.5	385.8	385.2	384.6	384.0	383.4	382.8
130°	409.1	408.6	408.1	407.4	406.5	405.6	404.7	403.8
132.5°	430.3	429.7	429.1	428.5	427.8	427.1	426.4	425.7
135°	462.1	461.6	461.1	460.7	460.5	460.2	460.0	459.7
137.5°	493.2	492.7	492.2	491.7	491.2	490.7	490.2	489.7
140°	513.7	513.5	513.4	512.9	512.0	511.1	510.2	509.4
142.5°	532.8	532.7	532.6	532.2	531.5	530.8	530.1	529.4
145°	561.0	560.9	560.8	560.4	559.9	559.4	558.9	558.4
147.5°	587.6	587.6	587.6	587.2	586.5	585.7	585.0	584.2
150°	604.0	604.0	604.0	603.7	602.9	602.1	601.4	600.6
152.5°	619.1	619.3	619.5	619.2	618.6	617.9	617.3	616.6
155°	641.0	641.5	642.0	641.8	640.9	640.0	639.2	638.3
157.5°	659.9	660.4	660.9	660.8	660.1	659.4	658.7	658.0
160°	671.5	672.1	672.7	672.8	672.3	671.8	671.3	670.8
162.5°	682.4	683.1	683.7	683.6	682.8	682.0	681.2	680.4
165°	696.3	697.0	697.8	697.7	696.8	695.9	695.1	694.2
167.5°	707.5	708.3	709.1	709.1	708.3	707.5	706.7	705.9
170°	713.6	714.5	715.4	715.4	714.5	713.6	712.7	711.8
172.5°	718.4	719.2	720.0	720.0	719.1	718.2	717.3	716.4
175°	723.6	724.4	725.2	725.1	724.2	723.3	722.4	721.5
177.5°	726.0	726.6	727.2	727.1	726.4	725.7	725.0	724.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1

(END OF REPORT)