

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: P332396-927

Luminaire Tested: **S123RDIW-S340D755U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332396-927
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: S123RDIW-S340D755U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3423.1 lumens
Efficiency: N/A
Efficacy: 112.6 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

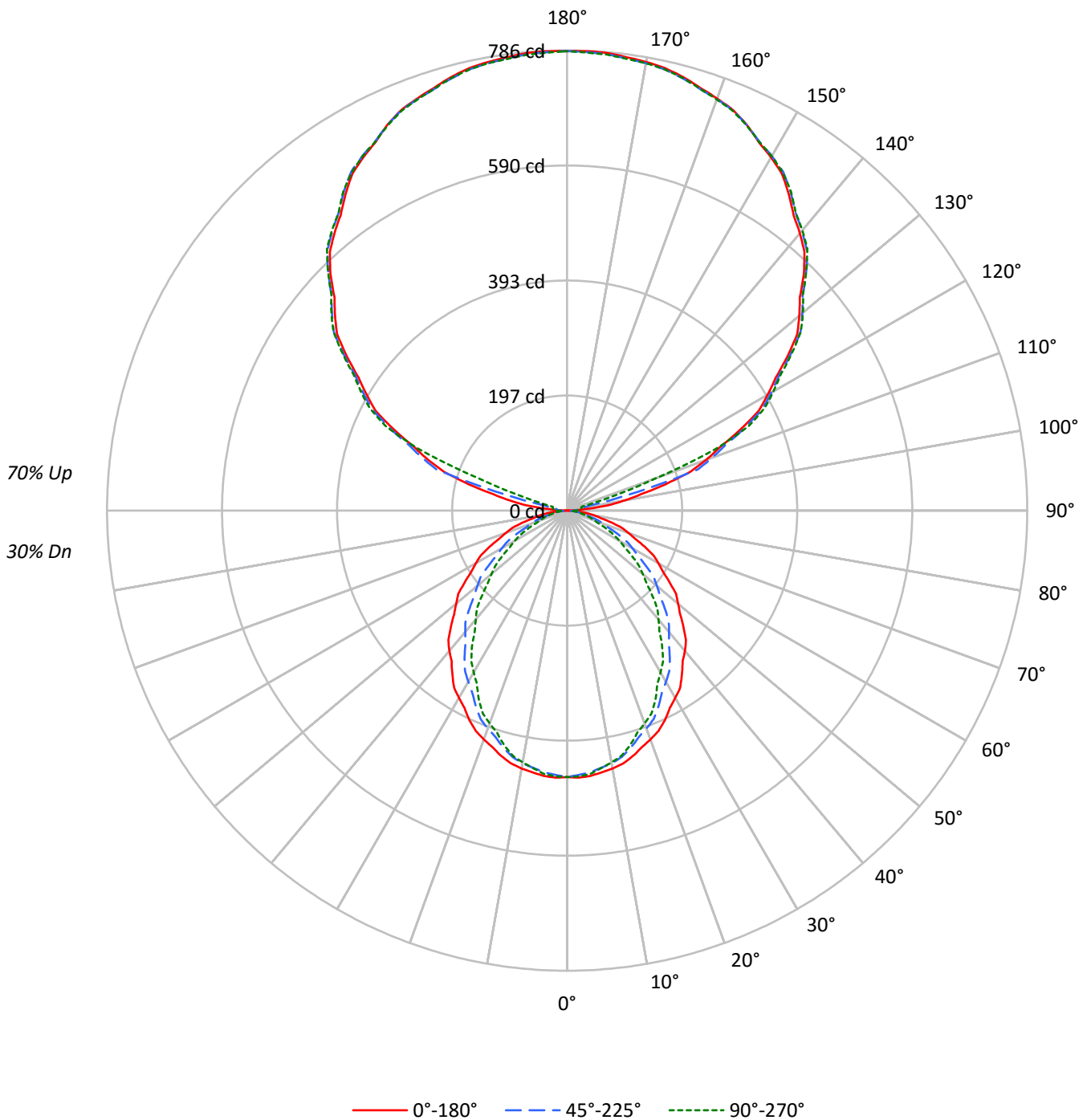
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30
1	94	89	86	82	84	80	77	74	63	61	60	48	47	45	34	33	32	26
2	85	78	72	68	76	70	66	61	56	52	50	42	40	38	30	29	27	22
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24	19
4	71	61	53	48	64	55	49	44	44	39	36	34	30	28	24	22	20	16
5	65	54	47	41	58	49	42	37	39	34	31	30	27	24	22	20	18	14
6	60	49	41	35	54	44	37	32	35	30	27	27	24	21	20	17	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	21	19	18	16	14	11
8	51	40	32	27	46	36	30	25	29	24	21	23	19	17	16	14	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	21	40	30	24	20	24	20	17	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4899	4899	4899
5°	4917	4850	4878
10°	4889	4790	4773
15°	4837	4677	4628
20°	4765	4537	4431
25°	4691	4380	4240
30°	4593	4197	3967
35°	4491	4016	3720
40°	4398	3801	3413
45°	4276	3589	3136
50°	4141	3349	2825
55°	4003	3076	2535
60°	3877	2781	2217
65°	3713	2463	1897
70°	3509	2068	1533
75°	3211	1626	1443
80°	2858	1444	1327
85°	2421	1272	1186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	1.2
10°-20°	118.9	3.5
20°-30°	171.2	5.0
30°-40°	192.9	5.6
40°-50°	184.5	5.4
50°-60°	151.1	4.4
60°-70°	101.9	3.0
70°-80°	51.3	1.5
80°-90°	15.8	0.5
90°-100°	28.5	0.8
100°-110°	136.0	4.0
110°-120°	326.6	9.5
120°-130°	415.9	12.1
130°-140°	444.3	13.0
140°-150°	415.5	12.1
150°-160°	335.2	9.8
160°-170°	216.3	6.3
170°-180°	74.5	2.2
0°-30°	332.9	9.7
0°-40°	525.7	15.4
0°-60°	861.4	25.2
0°-90°	1030.4	30.1
90°-120°	491.1	14.3
90°-150°	1766.8	51.6
90°-180°	2393.0	69.9
0°-180°	3423.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	455	453	449	452	452	43
15°	434	430	420	418	415	122
25°	395	385	369	361	357	182
35°	342	328	306	290	283	214
45°	281	264	236	215	206	217
55°	213	195	164	143	135	191
65°	146	125	97	79	74	144
75°	77	59	39	36	35	82
85°	20	12	10	10	10	22
90°	1	7	14	16	18	3
95°	36	13	18	22	22	44
105°	174	177	128	30	26	184
115°	326	329	335	340	343	322
125°	459	464	466	468	469	410
135°	572	575	578	579	578	440
145°	660	664	665	666	666	413
155°	727	726	726	729	726	335
165°	767	765	764	768	765	216
175°	785	782	782	786	782	75
180°	785	785	785	785	785	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	456.6	456.3	456.1	455.8	455.6	455.0	454.2	453.4	452.7	451.9	452.6
5°	455.1	454.7	454.3	453.9	453.4	452.8	451.8	450.8	449.8	448.9	449.6
7.5°	450.9	450.4	450.0	449.6	449.2	448.3	447.0	445.8	444.4	443.1	443.5
10°	447.3	446.8	446.2	445.7	445.0	444.0	442.6	441.1	439.6	438.2	438.2
12.5°	442.4	441.7	441.1	440.5	439.8	438.6	436.7	435.0	433.2	431.3	431.3
15°	434.1	433.2	432.3	431.3	430.5	428.9	426.6	424.3	422.0	419.7	419.3
17.5°	423.7	422.6	421.6	420.5	419.5	417.5	414.5	411.6	408.8	405.8	405.0
20°	416.0	414.7	413.4	412.1	410.7	408.5	405.4	402.3	399.2	396.1	395.0
22.5°	407.4	405.9	404.4	402.9	401.4	399.0	395.7	392.4	389.0	385.7	384.4
25°	395.0	392.9	390.9	388.8	386.7	383.8	380.1	376.3	372.5	368.8	367.0
27.5°	379.9	377.6	375.3	373.0	370.7	367.6	363.4	359.1	354.9	350.7	348.3
30°	369.5	367.0	364.6	362.1	359.7	356.1	351.5	346.9	342.3	337.7	334.9
32.5°	359.2	356.3	353.6	350.8	348.0	344.2	339.3	334.5	329.6	324.7	321.7
35°	341.8	338.8	335.9	333.0	330.0	326.0	320.9	315.8	310.7	305.6	302.1
37.5°	324.2	320.9	317.7	314.4	311.1	306.7	301.3	295.9	290.5	285.0	281.1
40°	313.0	309.4	305.8	302.2	298.6	293.8	288.0	282.2	276.4	270.5	266.3
42.5°	300.3	296.7	293.1	289.5	285.9	281.1	275.0	269.0	263.0	257.0	252.3
45°	280.9	277.2	273.5	269.8	266.1	261.1	254.8	248.5	242.2	235.8	231.2
47.5°	261.5	257.5	253.3	249.3	245.3	240.1	233.8	227.4	221.2	214.8	209.8
50°	247.3	243.4	239.6	235.8	231.9	226.6	220.0	213.3	206.7	200.0	195.0
52.5°	234.6	230.4	226.2	222.0	217.9	212.5	205.9	199.3	192.7	186.2	180.9
55°	213.3	209.3	205.3	201.3	197.3	191.8	184.8	177.8	170.9	163.9	159.1
57.5°	193.7	189.3	185.0	180.5	176.2	170.5	163.5	156.5	149.5	142.5	138.0
60°	180.1	175.6	171.1	166.6	162.1	156.5	149.6	142.8	136.0	129.2	124.8
62.5°	166.5	162.0	157.5	153.0	148.5	142.8	136.0	129.2	122.4	115.6	111.5
65°	145.8	141.3	136.8	132.3	127.8	122.3	115.9	109.5	103.1	96.7	92.7
67.5°	125.1	120.5	115.9	111.4	106.8	101.5	95.3	89.2	83.0	76.9	73.9
70°	111.5	107.0	102.6	98.2	93.8	88.6	82.9	77.2	71.5	65.7	62.8
72.5°	97.9	93.6	89.2	84.8	80.4	75.7	70.4	65.2	60.0	54.7	52.4
75°	77.2	73.2	69.2	65.4	61.4	57.2	52.7	48.2	43.6	39.1	38.3
77.5°	58.2	54.7	51.1	47.5	44.0	40.8	37.9	34.9	32.1	29.2	28.8
80°	46.1	42.8	39.5	36.0	32.7	30.2	28.4	26.7	25.0	23.3	23.0
82.5°	34.6	31.7	28.8	25.9	23.0	21.2	20.4	19.6	18.8	17.9	17.7
85°	19.6	17.7	15.9	14.2	12.4	11.3	11.1	10.9	10.6	10.3	10.1
87.5°	7.2	6.7	6.3	5.8	5.4	5.3	5.6	5.9	6.3	6.7	6.7
90°	0.6	1.9	3.2	4.4	5.8	7.3	9.0	10.6	12.3	14.0	14.5
92.5°	10.9	10.5	10.1	9.7	9.4	9.8	11.1	12.4	13.6	14.9	15.8
95°	35.6	30.3	25.0	19.6	14.3	12.4	13.8	15.2	16.6	18.1	19.0
97.5°	71.5	69.1	66.7	64.3	61.9	56.1	46.7	37.4	28.1	18.8	19.8
100°	98.5	101.1	103.7	106.3	108.8	100.1	79.9	59.7	39.5	19.3	20.3
102.5°	129.3	131.2	133.0	134.9	136.7	126.7	104.6	82.5	60.4	38.3	35.2
105°	173.7	175.2	176.6	178.0	179.4	174.3	162.6	151.0	139.3	127.7	104.7
107.5°	220.5	221.7	222.8	224.0	225.1	226.6	228.5	230.3	232.2	234.0	217.1
110°	251.8	252.9	253.9	254.9	256.0	257.2	258.6	260.1	261.5	262.9	258.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.7	282.6	283.5	284.5	285.4	286.6	288.0	289.5	290.9	292.3	292.4
115°	325.8	326.6	327.4	328.2	329.0	329.9	331.1	332.2	333.4	334.6	335.9
117.5°	368.7	369.6	370.6	371.5	372.5	373.3	373.8	374.5	375.0	375.7	376.7
120°	395.2	396.4	397.6	398.7	399.9	400.7	401.1	401.5	401.9	402.2	403.3
122.5°	422.3	423.3	424.2	425.2	426.1	426.8	427.3	427.9	428.3	428.8	429.5
125°	459.4	460.4	461.4	462.5	463.5	464.3	464.8	465.3	465.8	466.4	466.6
127.5°	495.3	496.3	497.3	498.4	499.4	500.3	500.9	501.5	502.1	502.7	503.1
130°	517.6	518.7	519.8	520.8	521.8	522.6	523.1	523.6	524.1	524.7	525.1
132.5°	539.1	540.1	541.1	542.2	543.3	544.0	544.4	544.8	545.2	545.7	546.1
135°	571.9	572.7	573.4	574.2	575.0	575.6	576.2	576.6	577.2	577.7	578.1
137.5°	599.8	600.8	601.8	602.8	603.8	604.4	604.7	605.0	605.3	605.5	606.2
140°	618.5	619.2	620.0	620.8	621.6	622.2	622.6	623.0	623.4	623.8	624.2
142.5°	635.7	636.5	637.3	638.1	638.9	639.4	639.8	640.2	640.6	641.0	641.4
145°	659.9	660.8	661.7	662.6	663.5	664.1	664.3	664.6	664.9	665.1	665.4
147.5°	682.6	683.2	683.8	684.4	685.0	685.4	685.7	686.0	686.2	686.4	686.7
150°	696.6	697.0	697.4	697.8	698.2	698.5	698.8	699.0	699.3	699.5	699.8
152.5°	709.2	709.4	709.6	709.7	710.0	710.1	710.3	710.4	710.6	710.7	711.1
155°	726.9	726.7	726.4	726.1	725.9	725.8	726.0	726.1	726.2	726.4	727.0
157.5°	740.7	740.7	740.6	740.6	740.6	740.5	740.4	740.2	740.1	740.0	740.8
160°	749.1	748.9	748.8	748.7	748.5	748.5	748.3	748.1	748.1	747.9	748.7
162.5°	757.0	756.7	756.3	756.0	755.7	755.4	755.3	755.2	755.0	754.9	755.8
165°	766.6	766.2	765.8	765.4	765.0	764.8	764.6	764.5	764.4	764.2	765.2
167.5°	774.0	773.5	773.0	772.5	772.0	771.7	771.7	771.7	771.7	771.7	772.7
170°	778.2	777.7	777.2	776.7	776.2	775.9	775.9	775.9	775.9	775.9	776.9
172.5°	781.0	780.4	779.7	779.2	778.6	778.2	778.4	778.5	778.6	778.7	779.7
175°	784.7	783.9	783.3	782.7	782.0	781.8	781.9	782.0	782.2	782.3	783.2
177.5°	785.5	785.1	784.5	784.0	783.5	783.3	783.4	783.5	783.6	783.7	784.5
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	453.3	454.0	454.8	455.0	455.0	454.8	454.6	454.6
5°	450.4	451.1	451.8	452.1	451.9	451.8	451.6	451.5
7.5°	444.0	444.4	444.8	444.9	444.6	444.3	444.0	443.8
10°	438.3	438.4	438.5	438.3	437.9	437.5	437.0	436.7
12.5°	431.3	431.2	431.2	430.9	430.4	429.9	429.4	429.0
15°	418.8	418.4	418.0	417.6	417.0	416.4	415.8	415.3
17.5°	404.1	403.2	402.3	401.5	400.6	399.7	398.9	398.1
20°	394.0	392.8	391.8	390.8	389.8	388.8	387.9	386.8
22.5°	383.1	381.8	380.4	379.3	378.3	377.5	376.5	375.7
25°	365.3	363.6	361.9	360.5	359.7	358.8	357.8	357.0
27.5°	345.9	343.6	341.2	339.3	337.9	336.5	335.2	333.7
30°	332.2	329.4	326.6	324.6	323.2	321.9	320.6	319.2
32.5°	318.6	315.6	312.5	310.3	309.0	307.6	306.2	304.8
35°	298.6	295.0	291.5	289.0	287.6	286.1	284.6	283.1
37.5°	277.0	273.0	269.0	266.1	264.3	262.4	260.6	258.8
40°	262.1	257.8	253.5	250.4	248.5	246.7	244.8	242.9
42.5°	247.6	243.0	238.4	235.2	233.5	231.8	230.1	228.4
45°	226.5	221.8	217.1	213.8	211.9	209.9	207.9	206.0
47.5°	204.6	199.6	194.5	191.1	189.3	187.6	185.8	184.0
50°	189.9	184.8	179.7	176.3	174.4	172.5	170.6	168.7
52.5°	175.6	170.3	165.1	161.6	159.9	158.2	156.5	154.8
55°	154.4	149.6	144.9	141.6	140.1	138.4	136.7	135.1
57.5°	133.5	129.0	124.5	121.5	120.2	118.7	117.4	116.0
60°	120.3	115.9	111.5	108.5	107.2	105.8	104.4	103.0
62.5°	107.3	103.1	98.9	96.1	94.7	93.2	91.7	90.3
65°	88.6	84.7	80.6	78.2	77.2	76.4	75.5	74.5
67.5°	70.9	67.9	64.9	62.9	61.9	61.0	60.0	59.1
70°	60.0	57.1	54.2	52.4	51.4	50.5	49.6	48.7
72.5°	50.1	47.8	45.4	44.0	43.6	43.3	42.9	42.5
75°	37.5	36.7	35.8	35.3	35.2	35.0	34.9	34.7
77.5°	28.3	27.8	27.4	27.1	26.9	26.8	26.6	26.5
80°	22.7	22.5	22.3	22.1	21.9	21.7	21.5	21.4
82.5°	17.4	17.2	17.0	16.8	16.8	16.7	16.7	16.7
85°	10.0	9.8	9.7	9.6	9.6	9.6	9.6	9.6
87.5°	6.7	6.7	6.8	6.8	6.8	6.8	6.7	6.7
90°	15.1	15.5	16.1	16.5	16.7	17.0	17.2	17.5
92.5°	16.6	17.4	18.2	18.7	18.9	19.0	19.2	19.3
95°	19.9	20.8	21.7	22.2	22.2	22.2	22.2	22.2
97.5°	20.8	21.9	22.9	23.5	23.6	23.8	23.9	24.0
100°	21.3	22.3	23.4	24.0	24.1	24.2	24.3	24.5
102.5°	31.9	28.8	25.5	24.0	24.2	24.5	24.7	25.0
105°	81.8	58.9	36.0	24.6	24.9	25.1	25.4	25.7
107.5°	200.3	183.5	166.8	149.7	132.4	115.1	97.8	80.6
110°	254.4	250.1	245.8	234.4	215.9	197.3	178.8	160.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.5	292.6	292.6	290.7	286.8	282.9	278.9	275.0
115°	337.2	338.5	339.8	340.7	341.2	341.7	342.2	342.8
117.5°	377.7	378.7	379.8	380.3	380.5	380.6	380.6	380.8
120°	404.3	405.4	406.4	406.9	406.9	406.9	406.9	406.9
122.5°	430.2	430.9	431.7	432.1	432.2	432.3	432.5	432.5
125°	466.8	467.1	467.4	467.6	467.9	468.2	468.4	468.7
127.5°	503.6	504.0	504.4	504.5	504.2	503.9	503.7	503.4
130°	525.7	526.2	526.7	526.9	526.6	526.3	526.1	525.8
132.5°	546.7	547.2	547.7	547.8	547.4	547.1	546.7	546.3
135°	578.5	578.8	579.2	579.2	578.8	578.5	578.1	577.7
137.5°	606.8	607.4	608.1	608.2	608.0	607.7	607.4	607.2
140°	624.8	625.3	625.8	626.0	625.7	625.4	625.2	624.9
142.5°	641.8	642.2	642.6	642.7	642.3	642.0	641.6	641.2
145°	665.7	665.9	666.1	666.3	666.3	666.3	666.3	666.3
147.5°	687.0	687.2	687.5	687.3	686.7	686.1	685.6	684.9
150°	700.1	700.3	700.5	700.5	700.1	699.7	699.3	698.9
152.5°	711.6	712.1	712.6	712.5	711.9	711.3	710.7	710.1
155°	727.6	728.3	729.0	728.9	728.1	727.3	726.5	725.7
157.5°	741.6	742.3	743.1	743.0	742.0	740.9	740.0	738.9
160°	749.5	750.3	751.0	751.0	750.0	749.2	748.2	747.3
162.5°	756.7	757.6	758.4	758.4	757.6	756.9	756.1	755.3
165°	766.3	767.3	768.3	768.4	767.5	766.6	765.7	764.8
167.5°	773.7	774.8	775.9	775.9	774.8	773.7	772.7	771.7
170°	777.9	779.0	780.1	780.1	779.0	777.9	776.9	775.9
172.5°	780.8	781.8	782.8	782.8	781.6	780.5	779.3	778.2
175°	784.1	785.1	785.9	785.8	784.8	783.8	782.8	781.7
177.5°	785.4	786.2	787.0	786.9	785.8	784.8	783.8	782.8
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7

(END OF REPORT)