

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: P331423-930

Luminaire Tested: **S122DIP-S1005D330U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331423-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D330U930-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4357.6 lumens  
Efficiency: N/A  
Efficacy: 87.5 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: Semi-Direct

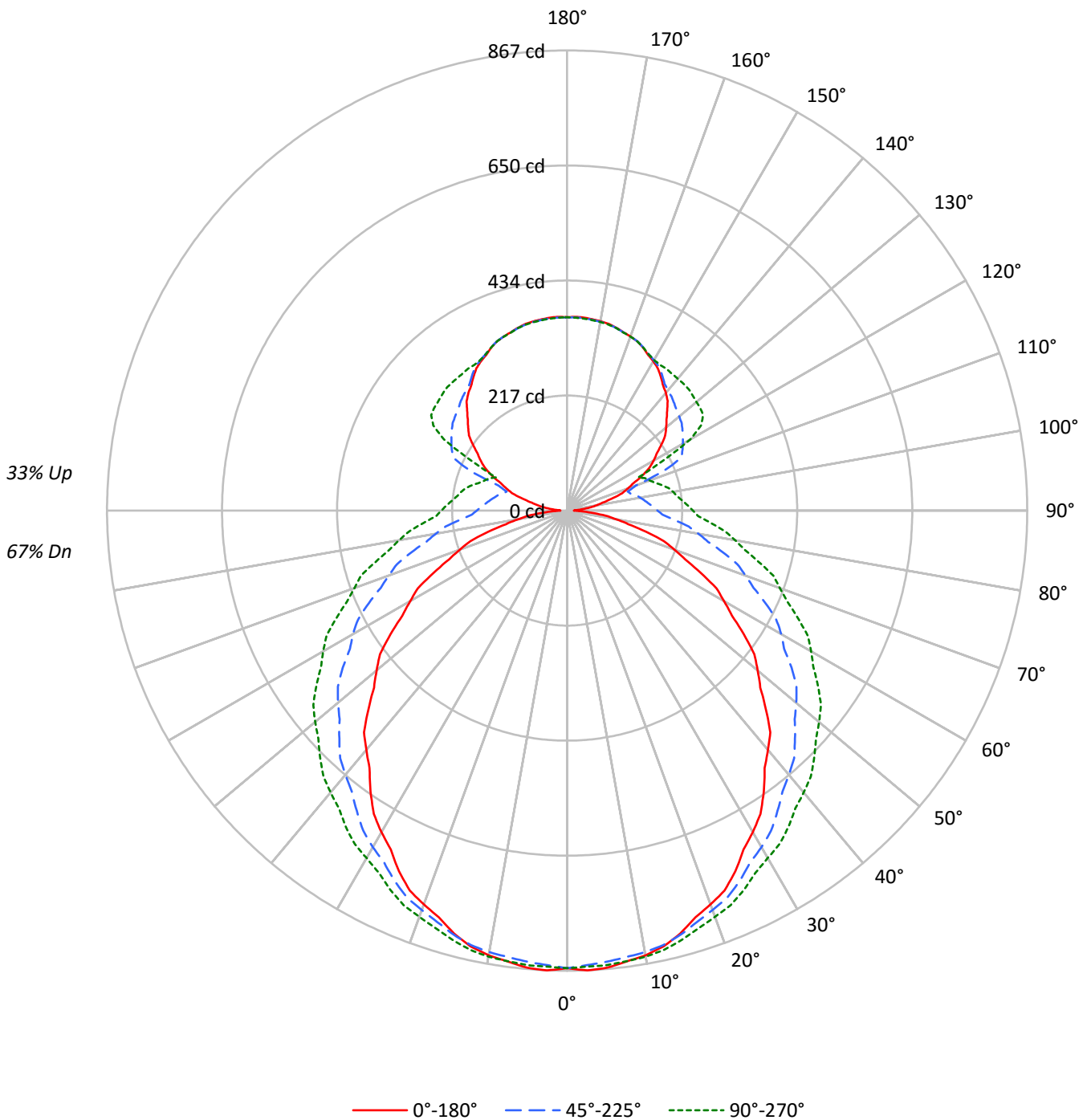
Input Watts (W): 49.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331423-930

CATALOG NUMBER: S122DIP-S1005D330U930-4F0-1E-UDD-D

**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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	100	94	90	85	93	89	85	81	78	75	72	69	67	64	60	58	57	52
2	90	81	74	68	84	77	70	65	68	63	58	59	56	52	52	49	46	42
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	45	42	38	35
4	74	62	53	47	70	59	51	45	52	46	40	46	41	36	40	36	33	29
5	68	55	46	40	64	52	44	38	46	40	35	41	36	31	36	32	28	25
6	63	50	41	34	59	47	39	33	42	35	30	37	31	27	33	28	25	22
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22	19
8	54	41	32	26	50	38	31	25	34	28	23	31	25	21	27	23	19	17
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	1.9
10°-20°	234.3	5.4
20°-30°	355.0	8.1
30°-40°	432.4	9.9
40°-50°	465.2	10.7
50°-60°	451.7	10.4
60°-70°	394.4	9.1
70°-80°	303.7	7.0
80°-90°	204.7	4.7
90°-100°	152.5	3.5
100°-110°	147.1	3.4
110°-120°	186.8	4.3
120°-130°	234.4	5.4
130°-140°	225.0	5.2
140°-150°	197.1	4.5
150°-160°	156.3	3.6
160°-170°	100.7	2.3
170°-180°	34.7	0.8
0°-30°	670.9	15.4
0°-40°	1103.3	25.3
0°-60°	2020.2	46.4
0°-90°	2923.0	67.1
90°-120°	486.5	11.2
90°-150°	1143.0	26.2
90°-180°	1435.0	32.9
0°-180°	4357.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	13	88	170	220	237	9
95°	27	79	154	201	218	29
105°	86	128	124	168	185	93
115°	156	177	238	157	148	154
125°	217	223	265	300	313	194
135°	266	271	286	313	324	206
145°	308	308	312	321	326	193
155°	339	337	340	341	339	156
165°	357	356	356	358	356	101
175°	365	363	364	365	363	35
180°	364	364	364	364	364	



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CATALOG NUMBER: S122DIP-S1005D330U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.5	41.3	57.9	74.6	91.2	108.5	126.4	144.2	162.1	180.0	191.4
90°	12.7	29.5	46.2	63.0	79.7	97.3	115.4	133.7	152.0	170.2	181.6
92.5°	16.8	31.7	46.7	61.6	76.6	92.7	110.1	127.3	144.7	162.1	173.1
95°	27.1	38.2	49.3	60.5	71.6	85.7	102.7	119.8	136.9	154.0	164.9
97.5°	42.7	48.9	55.0	61.2	67.4	78.9	95.9	112.8	129.8	146.7	157.2
100°	55.4	57.6	59.9	62.1	64.4	73.8	90.3	106.9	123.4	140.0	150.7
102.5°	68.3	76.0	83.7	91.4	99.1	106.3	113.1	119.8	126.6	133.4	144.1
105°	86.4	96.2	106.0	115.9	125.6	129.7	128.2	126.6	125.1	123.5	133.9
107.5°	108.4	116.3	124.2	132.0	139.9	141.1	135.7	130.4	125.1	119.7	128.4
110°	121.8	128.6	135.3	142.1	148.9	150.7	147.3	144.0	140.6	137.4	140.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	135.3	141.0	146.8	152.5	158.3	165.5	174.3	183.0	191.8	200.6	188.1
115°	156.5	160.6	164.7	168.7	172.8	181.8	195.8	209.7	223.6	237.6	218.8
117.5°	174.4	177.5	180.6	183.7	186.8	194.6	207.2	219.7	232.3	244.8	246.5
120°	188.3	190.3	192.2	194.2	196.2	203.3	215.5	227.6	239.8	251.9	260.4
122.5°	200.1	201.5	202.8	204.2	205.5	212.1	223.6	235.2	246.8	258.4	266.4
125°	216.8	217.6	218.3	219.1	219.9	225.3	235.2	245.2	255.3	265.2	273.1
127.5°	233.1	233.7	234.2	234.8	235.4	239.6	247.6	255.7	263.7	271.7	279.1
130°	243.4	244.1	244.8	245.4	246.1	249.6	256.1	262.6	269.0	275.6	282.8
132.5°	254.0	254.5	255.0	255.5	256.1	258.9	264.0	269.2	274.3	279.5	286.4
135°	266.4	267.4	268.3	269.3	270.2	272.3	275.7	278.9	282.3	285.5	292.0
137.5°	280.3	280.9	281.5	282.1	282.7	283.9	285.8	287.6	289.3	291.2	296.9
140°	289.3	289.6	289.8	289.9	290.2	290.8	292.0	293.3	294.4	295.6	300.6
142.5°	296.9	297.1	297.3	297.4	297.6	298.1	298.9	299.7	300.6	301.4	305.5
145°	307.6	307.6	307.5	307.4	307.4	307.9	308.8	309.9	310.9	311.9	313.9
147.5°	318.0	317.8	317.6	317.3	317.2	317.5	318.5	319.5	320.5	321.5	322.0
150°	324.7	324.3	323.9	323.5	323.1	323.4	324.3	325.3	326.2	327.2	327.5
152.5°	330.4	330.0	329.5	329.1	328.6	328.8	329.7	330.6	331.5	332.4	332.7
155°	338.8	338.2	337.7	337.1	336.6	336.7	337.5	338.1	338.8	339.5	339.9
157.5°	345.2	344.8	344.3	343.9	343.4	343.5	344.0	344.5	345.0	345.4	345.8
160°	349.0	348.7	348.3	348.0	347.6	347.6	348.0	348.3	348.7	349.0	349.4
162.5°	352.4	352.0	351.7	351.3	351.0	351.0	351.2	351.6	351.9	352.2	352.6
165°	356.9	356.6	356.2	355.9	355.6	355.5	355.6	355.8	356.0	356.1	356.5
167.5°	360.3	360.0	359.6	359.2	358.9	358.8	359.0	359.1	359.3	359.5	359.9
170°	362.2	361.8	361.5	361.2	360.8	360.7	360.8	360.9	361.0	361.2	361.6
172.5°	363.5	363.1	362.7	362.4	362.1	361.9	362.1	362.2	362.3	362.4	362.8
175°	365.1	364.7	364.3	363.9	363.5	363.3	363.5	363.5	363.7	363.8	364.2
177.5°	365.3	365.0	364.7	364.4	364.0	363.9	363.9	364.0	364.0	364.1	364.4
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	202.8	214.2	225.5	233.0	236.6	240.2	243.8	247.3
90°	193.0	204.4	215.8	223.2	226.7	230.2	233.6	237.0
92.5°	184.1	195.2	206.2	213.4	216.8	220.2	223.6	227.1
95°	175.7	186.5	197.4	204.4	207.7	210.9	214.3	217.5
97.5°	167.7	178.2	188.7	195.7	199.0	202.4	205.7	209.0
100°	161.4	172.2	183.0	189.9	193.1	196.2	199.4	202.6
102.5°	154.7	165.3	176.0	183.0	186.2	189.4	192.7	195.8
105°	144.2	154.7	165.0	171.8	175.1	178.4	181.6	185.0
107.5°	137.1	145.8	154.4	160.4	163.7	167.0	170.2	173.6
110°	143.4	146.4	149.4	152.6	155.9	159.1	162.5	165.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	175.6	163.1	150.7	146.0	149.3	152.5	155.7	159.0
115°	200.0	181.2	162.4	152.5	151.3	150.2	149.0	147.8
117.5°	248.2	249.8	251.5	246.8	235.8	224.8	213.8	202.7
120°	268.9	277.4	285.8	287.6	282.8	277.9	273.1	268.2
122.5°	274.3	282.3	290.3	294.8	295.9	296.9	298.1	299.1
125°	281.0	288.9	296.9	302.1	304.8	307.5	310.1	312.8
127.5°	286.6	294.1	301.6	306.6	309.0	311.5	314.0	316.5
130°	290.2	297.5	304.8	309.5	311.7	313.8	316.0	318.1
132.5°	293.4	300.4	307.4	312.0	314.1	316.3	318.5	320.7
135°	298.4	304.8	311.2	315.4	317.6	319.7	321.8	323.8
137.5°	302.6	308.3	313.9	317.6	319.3	321.0	322.7	324.4
140°	305.6	310.5	315.5	318.7	320.1	321.4	322.8	324.2
142.5°	309.5	313.6	317.6	320.2	321.3	322.5	323.6	324.7
145°	316.0	318.0	320.2	321.7	322.9	323.9	325.1	326.1
147.5°	322.5	323.0	323.6	324.0	324.4	324.9	325.3	325.7
150°	327.8	328.2	328.6	328.6	328.3	328.0	327.7	327.4
152.5°	333.1	333.5	333.8	333.8	333.4	333.0	332.6	332.2
155°	340.2	340.6	341.0	340.9	340.4	340.0	339.5	339.0
157.5°	346.3	346.7	347.0	347.0	346.5	346.1	345.6	345.2
160°	349.8	350.1	350.4	350.4	350.0	349.6	349.2	348.8
162.5°	352.9	353.4	353.8	353.8	353.2	352.7	352.2	351.7
165°	356.9	357.3	357.8	357.8	357.3	356.9	356.5	356.1
167.5°	360.3	360.7	361.1	361.0	360.5	360.0	359.5	358.9
170°	362.0	362.4	362.8	362.7	362.2	361.7	361.2	360.6
172.5°	363.2	363.6	364.0	364.0	363.5	363.0	362.4	361.9
175°	364.6	365.0	365.4	365.3	364.8	364.2	363.5	363.0
177.5°	364.8	365.1	365.4	365.3	364.9	364.5	364.1	363.7
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3

(END OF REPORT)