

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: P331424-927

Luminaire Tested: **SA2XXDIP-C1005D330U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331424-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C1005D330U927-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

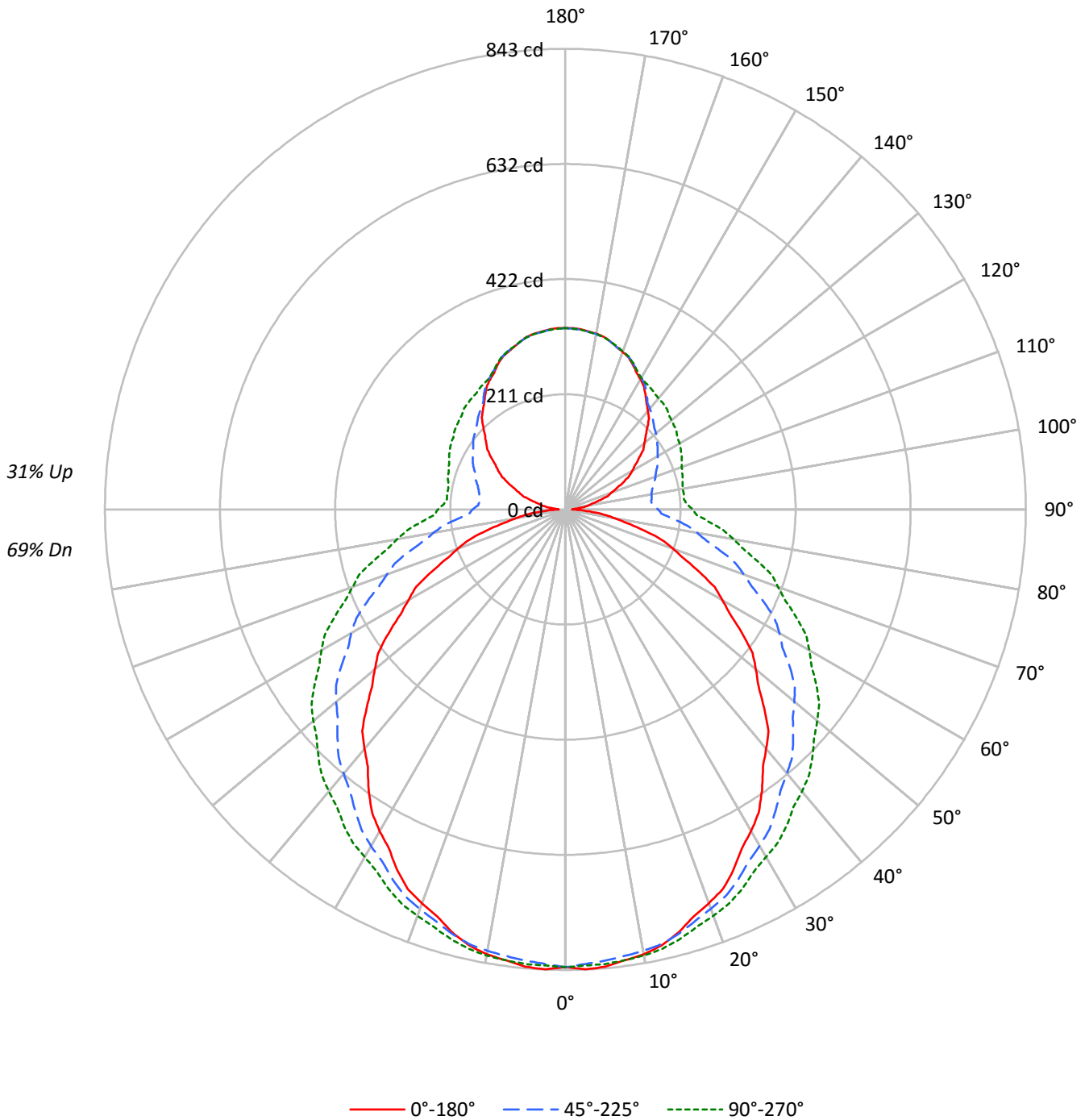
Lumens per Lamp: N/A  
Luminaire Lumens: 4124.5 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

Input Watts (W): 49.8  
Input Voltage (V): 120  
Input Current (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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69				
1	100	95	90	85	94	89	85	81	79	76	73	70	68	65	62	60	58	54				
2	90	81	74	68	85	77	70	65	68	63	59	60	56	53	53	50	47	43				
3	82	71	63	56	77	67	59	53	60	54	49	53	48	44	46	43	39	36				
4	75	62	54	47	70	59	51	45	53	46	41	47	41	37	41	37	33	30				
5	68	55	46	40	64	53	44	38	47	40	35	42	36	32	37	32	29	26				
6	63	50	41	34	59	47	39	33	42	35	30	38	32	28	33	29	25	22				
7	58	45	36	30	55	43	35	29	38	31	27	34	29	24	30	26	22	20				
8	54	41	32	27	51	39	31	26	35	28	24	31	26	22	28	23	20	17				
9	50	37	29	24	47	35	28	23	32	26	21	29	23	19	26	21	18	16				
10	47	34	26	21	44	33	25	21	29	23	19	27	21	18	24	19	16	14				

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

	0°	45°	90°
0°	13525	13525	13525
5°	13591	13020	12971
10°	13506	12635	12493
15°	13320	12228	11990
20°	13085	11791	11506
25°	12852	11370	11066
30°	12525	10939	10626
35°	12192	10521	10314
40°	11845	10165	10004
45°	11515	9846	9739
50°	11159	9559	9477
55°	10787	9249	9211
60°	10329	8927	8928
65°	9856	8551	8595
70°	9323	8147	8233
75°	8642	7750	7901
80°	7567	7345	7563
85°	6539	6995	7303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.4	1.9
10°-20°	227.6	5.5
20°-30°	344.9	8.4
30°-40°	420.1	10.2
40°-50°	452.0	11.0
50°-60°	438.9	10.6
60°-70°	383.2	9.3
70°-80°	295.0	7.2
80°-90°	199.3	4.8
90°-100°	157.4	3.8
100°-110°	164.9	4.0
110°-120°	177.4	4.3
120°-130°	183.4	4.4
130°-140°	180.1	4.4
140°-150°	164.1	4.0
150°-160°	135.4	3.3
160°-170°	89.8	2.2
170°-180°	31.4	0.8
0°-30°	651.9	15.8
0°-40°	1072.0	26.0
0°-60°	1962.9	47.6
0°-90°	2840.5	68.9
90°-120°	499.7	12.1
90°-150°	1027.3	24.9
90°-180°	1284.0	31.1
0°-180°	4124.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	840	836	829	836	835	80
15°	801	804	804	814	813	226
25°	728	737	748	762	766	335
35°	628	648	671	697	706	392
45°	515	548	590	626	640	397
55°	395	439	501	544	561	353
65°	270	330	401	449	466	268
75°	149	218	295	345	363	158
85°	44	119	197	246	265	47
90°	12	87	170	216	233	9
95°	24	85	158	202	218	24
105°	66	104	166	207	222	70
115°	117	134	186	221	235	115
125°	165	170	206	237	248	148
135°	212	216	228	252	262	164
145°	256	258	259	267	272	160
155°	292	293	294	295	295	135
165°	318	318	318	320	318	90
175°	331	330	330	331	330	31
180°	332	332	332	332	332	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	842.6	841.9	841.2	840.6	840.0	838.8	837.3	835.8	834.3	832.8	833.9
5°	840.1	839.3	838.5	837.7	836.9	835.7	834.1	832.4	830.8	829.2	830.8
7.5°	832.6	832.0	831.5	831.0	830.4	829.6	828.3	827.0	825.9	824.6	826.5
10°	826.8	826.2	825.7	825.1	824.6	823.9	823.2	822.3	821.5	820.7	822.8
12.5°	817.1	817.1	817.3	817.4	817.5	817.2	816.7	816.0	815.5	814.8	817.1
15°	801.3	801.8	802.3	802.9	803.4	803.7	803.7	803.7	803.7	803.7	806.1
17.5°	780.9	782.0	783.2	784.3	785.4	786.4	787.3	788.1	789.0	789.9	792.4
20°	767.3	768.7	770.0	771.3	772.7	773.9	775.0	776.0	777.1	778.2	781.2
22.5°	752.7	754.2	755.8	757.4	759.0	760.5	762.0	763.5	765.0	766.5	769.5
25°	728.4	730.3	732.2	734.1	736.0	738.2	740.5	743.0	745.4	747.8	751.1
27.5°	699.3	702.3	705.4	708.5	711.6	714.5	717.4	720.3	723.1	726.0	730.1
30°	679.9	683.3	686.9	690.4	693.9	697.4	700.9	704.4	707.9	711.5	715.7
32.5°	658.5	662.4	666.4	670.3	674.2	678.3	682.5	686.6	690.8	694.9	699.9
35°	627.6	632.2	636.8	641.4	646.0	650.9	656.0	661.1	666.2	671.4	677.3
37.5°	594.1	599.4	604.8	610.0	615.3	621.2	627.9	634.5	641.2	647.8	654.4
40°	571.8	577.7	583.7	589.6	595.6	602.1	609.4	616.7	624.0	631.3	638.3
42.5°	550.5	556.3	562.3	568.2	574.2	581.3	589.7	598.1	606.4	614.8	622.4
45°	514.8	522.0	529.3	536.6	543.9	552.2	561.7	571.2	580.6	590.0	598.4
47.5°	479.6	487.5	495.4	503.4	511.3	520.8	531.9	542.9	554.0	565.0	573.8
50°	455.3	463.7	472.0	480.4	488.7	499.0	511.1	523.2	535.4	547.6	556.7
52.5°	432.0	440.8	449.6	458.4	467.1	477.9	490.7	503.5	516.3	529.1	538.4
55°	394.6	404.3	414.0	423.7	433.4	445.3	459.3	473.3	487.4	501.4	511.1
57.5°	357.7	368.6	379.5	390.5	401.5	414.1	428.4	442.7	457.0	471.3	481.7
60°	331.4	343.0	354.7	366.2	377.9	391.3	406.7	422.1	437.4	452.8	463.1
62.5°	308.2	320.1	332.2	344.2	356.2	369.9	385.3	400.7	416.1	431.5	442.4
65°	269.5	282.7	296.0	309.2	322.4	337.0	352.9	368.8	384.7	400.6	411.7
67.5°	234.1	247.9	261.7	275.5	289.3	304.4	320.7	337.0	353.2	369.6	380.7
70°	208.8	222.8	236.9	250.9	264.9	280.3	297.1	313.8	330.5	347.2	358.8
72.5°	185.5	199.9	214.4	228.9	243.4	259.0	276.0	292.9	309.9	326.9	338.2
75°	149.3	164.5	179.5	194.6	209.8	225.9	243.2	260.5	277.7	295.0	306.6
77.5°	114.4	130.2	146.0	161.8	177.6	194.2	211.8	229.3	246.8	264.4	276.0
80°	91.0	107.5	124.0	140.5	156.9	173.9	191.4	209.0	226.5	244.0	255.3
82.5°	71.6	87.9	104.1	120.3	136.6	153.6	171.3	189.1	206.8	224.6	235.9
85°	43.7	60.4	77.2	93.9	110.6	127.6	144.9	162.2	179.4	196.7	208.0
87.5°	23.8	40.1	56.3	72.6	88.8	105.7	123.2	140.7	158.3	175.8	186.8
90°	12.4	28.8	45.2	61.6	78.0	95.5	114.2	132.8	151.4	170.1	180.7
92.5°	16.2	31.3	46.4	61.5	76.6	92.6	109.6	126.5	143.5	160.4	171.0
95°	24.2	37.5	50.9	64.2	77.5	92.3	108.6	124.9	141.2	157.6	167.8
97.5°	35.1	46.9	58.7	70.6	82.4	96.2	111.9	127.7	143.5	159.3	169.3
100°	44.0	54.5	65.0	75.5	86.0	98.9	114.2	129.4	144.7	160.0	170.0
102.5°	52.4	62.0	71.5	81.0	90.5	102.7	117.6	132.6	147.5	162.4	172.2
105°	66.2	74.2	82.2	90.3	98.3	109.4	123.5	137.7	151.9	166.0	175.5
107.5°	81.4	87.9	94.4	100.9	107.5	117.5	130.9	144.3	157.7	171.2	180.3
110°	90.2	96.0	101.8	107.5	113.3	122.8	136.0	149.2	162.5	175.7	184.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	101.0	105.8	110.7	115.7	120.6	129.3	141.8	154.3	166.8	179.4	187.9
115°	116.8	120.2	123.5	126.8	130.2	137.8	149.9	161.8	173.9	185.9	193.9
117.5°	131.3	133.8	136.3	138.7	141.2	147.8	158.7	169.5	180.5	191.3	199.2
120°	141.9	143.5	145.0	146.6	148.2	154.2	164.5	174.8	185.1	195.4	202.9
122.5°	151.5	152.6	153.6	154.6	155.7	161.1	170.9	180.6	190.4	200.3	207.4
125°	165.3	165.9	166.4	167.0	167.5	172.1	180.5	188.9	197.4	205.8	212.9
127.5°	179.9	180.4	180.8	181.3	181.6	185.3	192.0	198.8	205.5	212.2	218.7
130°	189.1	189.6	190.2	190.8	191.2	194.3	199.9	205.4	211.0	216.5	222.8
132.5°	199.4	199.8	200.2	200.6	201.0	203.4	207.8	212.1	216.6	220.9	227.0
135°	212.0	212.6	213.3	214.0	214.7	216.4	219.3	222.1	224.9	227.8	233.4
137.5°	226.5	227.0	227.4	228.0	228.5	229.4	230.8	232.1	233.5	234.8	239.7
140°	235.2	235.5	235.8	236.1	236.4	236.9	237.7	238.6	239.5	240.3	244.6
142.5°	244.2	244.5	244.7	245.0	245.3	245.6	245.9	246.3	246.6	246.9	250.4
145°	255.8	256.3	256.7	257.1	257.5	257.9	258.3	258.7	259.0	259.4	261.1
147.5°	267.3	267.8	268.3	268.9	269.3	269.7	270.0	270.3	270.5	270.8	271.1
150°	275.1	275.5	275.8	276.2	276.6	276.9	277.2	277.4	277.7	277.9	278.1
152.5°	282.1	282.4	282.8	283.2	283.5	283.9	284.2	284.5	284.8	285.1	285.3
155°	292.5	292.6	292.9	293.0	293.2	293.4	293.6	293.7	294.0	294.1	294.5
157.5°	301.3	301.5	301.6	301.7	301.9	302.0	302.1	302.2	302.3	302.5	302.9
160°	306.7	306.9	307.0	307.1	307.2	307.4	307.4	307.4	307.5	307.6	307.9
162.5°	311.6	311.7	311.7	311.7	311.8	311.8	311.9	312.0	312.0	312.0	312.5
165°	318.2	318.1	318.1	318.1	318.0	317.9	317.9	317.9	317.9	317.9	318.4
167.5°	323.7	323.5	323.4	323.1	323.0	322.9	322.8	322.8	322.8	322.8	323.2
170°	326.6	326.5	326.2	326.1	325.9	325.7	325.7	325.6	325.6	325.5	325.9
172.5°	328.6	328.4	328.3	328.0	327.9	327.7	327.7	327.6	327.6	327.5	328.0
175°	331.1	330.9	330.7	330.5	330.3	330.2	330.1	329.9	329.8	329.7	330.1
177.5°	332.1	331.9	331.8	331.7	331.5	331.4	331.3	331.2	331.1	331.0	331.3
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	835.0	836.1	837.2	837.5	837.0	836.6	836.1	835.8
5°	832.4	834.1	835.7	836.3	836.1	835.8	835.5	835.3
7.5°	828.5	830.4	832.3	833.2	832.9	832.7	832.3	832.1
10°	825.0	827.2	829.3	830.3	830.0	829.7	829.5	829.2
12.5°	819.2	821.3	823.5	824.4	824.2	823.9	823.6	823.4
15°	808.6	811.0	813.4	814.5	814.2	814.0	813.7	813.4
17.5°	795.0	797.5	800.0	801.3	801.3	801.3	801.3	801.3
20°	784.1	787.1	790.0	791.5	791.5	791.5	791.5	791.5
22.5°	772.5	775.5	778.4	780.1	780.5	781.0	781.4	781.9
25°	754.3	757.6	760.8	762.8	763.7	764.5	765.2	766.0
27.5°	734.2	738.3	742.4	744.7	745.4	745.9	746.6	747.1
30°	720.1	724.4	728.7	731.3	732.1	732.8	733.7	734.5
32.5°	704.9	709.8	714.8	718.0	719.5	720.9	722.4	723.8
35°	683.3	689.2	695.1	699.0	700.9	702.8	704.7	706.5
37.5°	661.0	667.6	674.1	678.4	680.4	682.5	684.4	686.4
40°	645.3	652.4	659.3	664.1	666.5	668.9	671.4	673.8
42.5°	630.1	637.8	645.5	650.5	652.9	655.4	657.7	660.2
45°	606.7	615.1	623.4	629.0	631.7	634.4	637.1	639.8
47.5°	582.5	591.2	600.0	605.9	608.8	611.8	614.7	617.7
50°	565.9	575.0	584.2	590.3	593.3	596.2	599.2	602.1
52.5°	547.9	557.2	566.6	572.9	576.1	579.3	582.5	585.7
55°	520.9	530.5	540.3	546.8	550.3	553.9	557.4	560.9
57.5°	492.3	502.7	513.2	520.1	523.7	527.3	530.8	534.4
60°	473.3	483.6	493.8	500.9	504.6	508.4	512.2	515.9
62.5°	453.3	464.1	475.1	482.3	485.8	489.4	493.0	496.5
65°	422.8	433.8	444.9	452.2	455.7	459.1	462.7	466.2
67.5°	391.9	403.1	414.2	421.7	425.3	429.0	432.7	436.3
70°	370.4	382.0	393.6	401.0	404.3	407.5	410.7	414.0
72.5°	349.6	361.0	372.3	380.0	383.9	387.8	391.7	395.5
75°	318.2	329.8	341.4	349.0	352.4	356.0	359.5	363.0
77.5°	287.5	299.0	310.6	318.3	322.0	325.8	329.6	333.4
80°	266.6	278.1	289.4	296.9	300.7	304.4	308.2	312.0
82.5°	247.2	258.6	269.9	277.3	280.9	284.5	288.0	291.6
85°	219.4	230.7	242.0	249.5	253.3	257.1	260.9	264.7
87.5°	197.8	208.7	219.8	227.0	230.4	233.9	237.3	240.8
90°	191.4	202.1	212.7	219.7	223.0	226.3	229.6	232.9
92.5°	181.6	192.2	202.8	209.8	213.0	216.3	219.5	222.8
95°	178.0	188.3	198.5	205.3	208.3	211.4	214.5	217.7
97.5°	179.3	189.3	199.2	205.8	209.0	212.1	215.3	218.5
100°	180.0	190.0	199.9	206.4	209.3	212.2	215.1	218.0
102.5°	182.0	191.9	201.7	208.0	211.0	213.8	216.7	219.7
105°	185.1	194.7	204.2	210.5	213.5	216.4	219.4	222.4
107.5°	189.4	198.5	207.6	213.6	216.3	218.9	221.6	224.3
110°	192.9	201.5	210.2	215.9	218.7	221.5	224.3	227.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	196.4	204.9	213.3	219.0	221.8	224.7	227.5	230.3
115°	202.0	210.0	218.0	223.5	226.2	229.0	231.8	234.6
117.5°	207.0	214.8	222.6	227.8	230.4	233.0	235.5	238.1
120°	210.4	218.0	225.5	230.7	233.5	236.2	239.1	241.9
122.5°	214.6	221.8	229.0	233.8	236.1	238.6	241.0	243.4
125°	220.1	227.1	234.2	239.0	241.3	243.7	246.1	248.4
127.5°	225.1	231.6	238.1	242.4	244.5	246.8	248.9	251.1
130°	229.2	235.5	241.9	246.0	247.9	249.9	251.8	253.7
132.5°	232.9	238.9	244.9	248.8	250.8	252.8	254.8	256.7
135°	238.9	244.5	250.2	254.0	255.9	257.9	259.8	261.8
137.5°	244.6	249.5	254.4	257.7	259.3	260.9	262.4	264.0
140°	249.0	253.3	257.6	260.5	261.8	263.2	264.5	265.9
142.5°	253.9	257.4	260.9	263.2	264.4	265.5	266.7	267.8
145°	262.8	264.5	266.2	267.6	268.6	269.7	270.8	272.0
147.5°	271.5	271.8	272.2	272.5	273.0	273.4	273.8	274.2
150°	278.3	278.5	278.7	278.7	278.5	278.3	278.1	277.9
152.5°	285.6	285.8	286.1	286.1	285.8	285.6	285.3	285.1
155°	294.8	295.1	295.4	295.5	295.2	295.1	294.9	294.7
157.5°	303.2	303.7	304.1	304.2	303.9	303.6	303.3	303.0
160°	308.3	308.7	309.1	309.1	308.9	308.6	308.4	308.2
162.5°	312.9	313.3	313.8	313.8	313.5	313.2	312.9	312.6
165°	318.8	319.2	319.6	319.7	319.4	319.1	318.8	318.5
167.5°	323.7	324.1	324.6	324.6	324.3	323.9	323.6	323.3
170°	326.4	326.8	327.3	327.3	326.9	326.5	326.1	325.7
172.5°	328.4	328.8	329.2	329.3	328.9	328.5	328.2	327.8
175°	330.6	331.0	331.4	331.4	331.1	330.7	330.3	329.9
177.5°	331.6	331.8	332.2	332.2	331.8	331.6	331.3	331.0
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7

(END OF REPORT)