

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: P331423-940

Luminaire Tested: **SA2XXDIP-C1005D330U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331423-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C1005D330U940-4F0-1E-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**

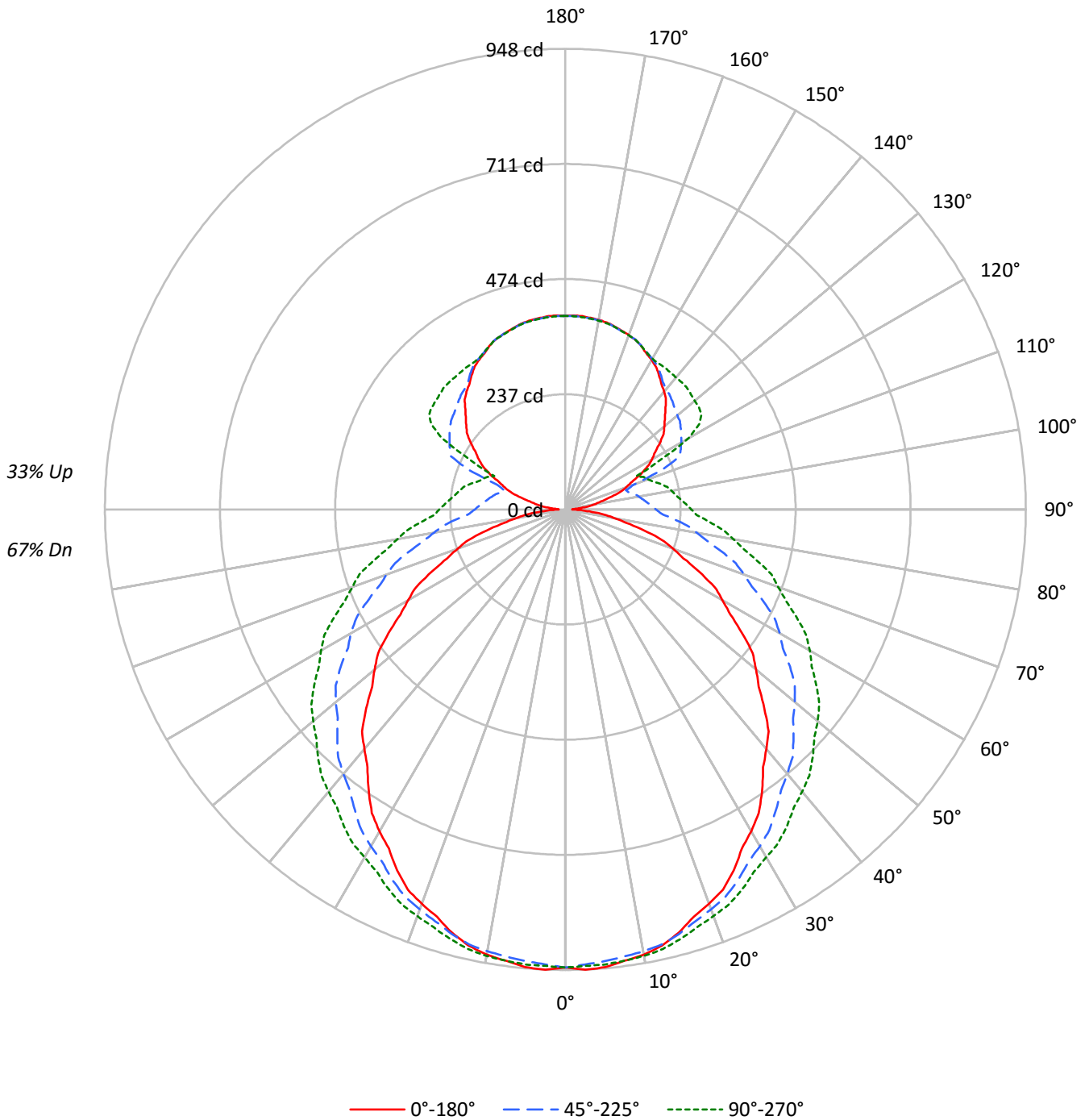
Lumens per Lamp: N/A  
Luminaire Lumens: 4766.0 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

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	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°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	1.9
10°-20°	256.2	5.4
20°-30°	388.3	8.1
30°-40°	472.9	9.9
40°-50°	508.8	10.7
50°-60°	494.1	10.4
60°-70°	431.4	9.1
70°-80°	332.1	7.0
80°-90°	223.9	4.7
90°-100°	166.8	3.5
100°-110°	160.9	3.4
110°-120°	204.3	4.3
120°-130°	256.4	5.4
130°-140°	246.1	5.2
140°-150°	215.6	4.5
150°-160°	170.9	3.6
160°-170°	110.1	2.3
170°-180°	37.9	0.8
0°-30°	733.8	15.4
0°-40°	1206.7	25.3
0°-60°	2209.5	46.4
0°-90°	3196.9	67.1
90°-120°	532.1	11.2
90°-150°	1250.1	26.2
90°-180°	1569.0	32.9
0°-180°	4766.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	14	97	186	240	259	10
95°	30	86	168	220	238	32
105°	94	140	135	184	202	101
115°	171	194	260	172	162	168
125°	237	243	290	328	342	212
135°	291	297	312	343	354	225
145°	336	336	341	351	357	211
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	



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CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	26.8	45.1	63.3	81.6	99.8	118.7	138.2	157.7	177.3	196.9	209.3
90°	13.9	32.3	50.6	68.9	87.2	106.4	126.3	146.2	166.2	186.2	198.6
92.5°	18.4	34.7	51.1	67.4	83.7	101.4	120.4	139.3	158.3	177.3	189.3
95°	29.7	41.8	53.9	66.2	78.3	93.7	112.4	131.1	149.7	168.4	180.3
97.5°	46.7	53.5	60.2	67.0	73.7	86.3	104.9	123.4	142.0	160.4	171.9
100°	60.6	63.0	65.5	67.9	70.4	80.7	98.8	116.9	135.0	153.1	164.9
102.5°	74.7	83.1	91.6	100.0	108.3	116.3	123.7	131.1	138.5	145.9	157.6
105°	94.5	105.2	115.9	126.7	137.4	141.9	140.2	138.5	136.8	135.1	146.4
107.5°	118.6	127.2	135.8	144.4	153.0	154.4	148.5	142.7	136.8	130.9	140.4
110°	133.2	140.6	148.0	155.4	162.8	164.8	161.1	157.5	153.8	150.3	153.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.9	154.3	160.5	166.8	173.2	181.0	190.6	200.2	209.8	219.4	205.7
115°	171.2	175.7	180.1	184.5	189.0	198.9	214.1	229.3	244.6	259.8	239.3
117.5°	190.7	194.1	197.5	200.9	204.3	212.9	226.6	240.3	254.0	267.8	269.7
120°	205.9	208.1	210.3	212.4	214.6	222.4	235.7	249.0	262.3	275.5	284.8
122.5°	218.8	220.3	221.9	223.4	224.8	231.9	244.6	257.3	269.9	282.6	291.3
125°	237.1	238.0	238.8	239.6	240.5	246.4	257.3	268.2	279.2	290.1	298.7
127.5°	254.9	255.6	256.2	256.8	257.4	262.1	270.8	279.6	288.4	297.1	305.2
130°	266.3	267.0	267.7	268.4	269.1	273.0	280.1	287.2	294.3	301.4	309.3
132.5°	277.8	278.4	278.9	279.5	280.1	283.1	288.7	294.4	300.1	305.7	313.3
135°	291.4	292.5	293.5	294.5	295.5	297.8	301.5	305.1	308.7	312.3	319.3
137.5°	306.6	307.2	307.9	308.5	309.2	310.5	312.5	314.5	316.5	318.5	324.7
140°	316.5	316.7	316.9	317.1	317.4	318.1	319.4	320.7	322.0	323.3	328.8
142.5°	324.8	324.9	325.1	325.3	325.5	326.0	326.9	327.8	328.8	329.7	334.1
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	343.3
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	352.1
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	221.8	234.3	246.6	254.9	258.8	262.7	266.6	270.5
90°	211.1	223.6	236.0	244.2	247.9	251.7	255.5	259.2
92.5°	201.3	213.5	225.5	233.4	237.1	240.9	244.6	248.3
95°	192.2	204.0	215.9	223.6	227.1	230.7	234.3	237.9
97.5°	183.4	194.9	206.4	214.0	217.7	221.3	225.0	228.6
100°	176.6	188.3	200.1	207.7	211.2	214.6	218.1	221.6
102.5°	169.2	180.8	192.5	200.1	203.7	207.1	210.7	214.2
105°	157.7	169.2	180.5	187.9	191.5	195.1	198.7	202.3
107.5°	149.9	159.4	168.9	175.4	179.1	182.6	186.2	189.8
110°	156.9	160.2	163.5	166.9	170.5	174.1	177.7	181.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	192.1	178.4	164.8	159.7	163.3	166.7	170.3	173.9
115°	218.7	198.2	177.6	166.7	165.5	164.3	162.9	161.7
117.5°	271.4	273.2	275.1	269.9	257.9	245.8	233.8	221.7
120°	294.1	303.4	312.6	314.6	309.3	304.0	298.7	293.4
122.5°	300.1	308.8	317.5	322.4	323.6	324.8	326.0	327.2
125°	307.4	316.0	324.7	330.5	333.4	336.4	339.2	342.1
127.5°	313.4	321.6	329.8	335.3	338.0	340.7	343.4	346.2
130°	317.4	325.4	333.3	338.5	340.9	343.2	345.6	347.9
132.5°	320.9	328.6	336.3	341.3	343.6	346.0	348.3	350.7
135°	326.4	333.3	340.4	345.0	347.3	349.6	352.0	354.2
137.5°	330.9	337.2	343.3	347.4	349.2	351.1	352.9	354.8
140°	334.2	339.7	345.1	348.6	350.1	351.5	353.0	354.5
142.5°	338.5	343.0	347.3	350.2	351.4	352.7	353.9	355.2
145°	345.6	347.9	350.2	351.9	353.1	354.3	355.5	356.7
147.5°	352.8	353.3	353.9	354.4	354.8	355.3	355.8	356.2
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

(END OF REPORT)