

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: P331791-930

Luminaire Tested: **S122RDIW-S485D710U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331791-930  
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: S122RDIW-S485D710U930-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 710 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3697.3 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

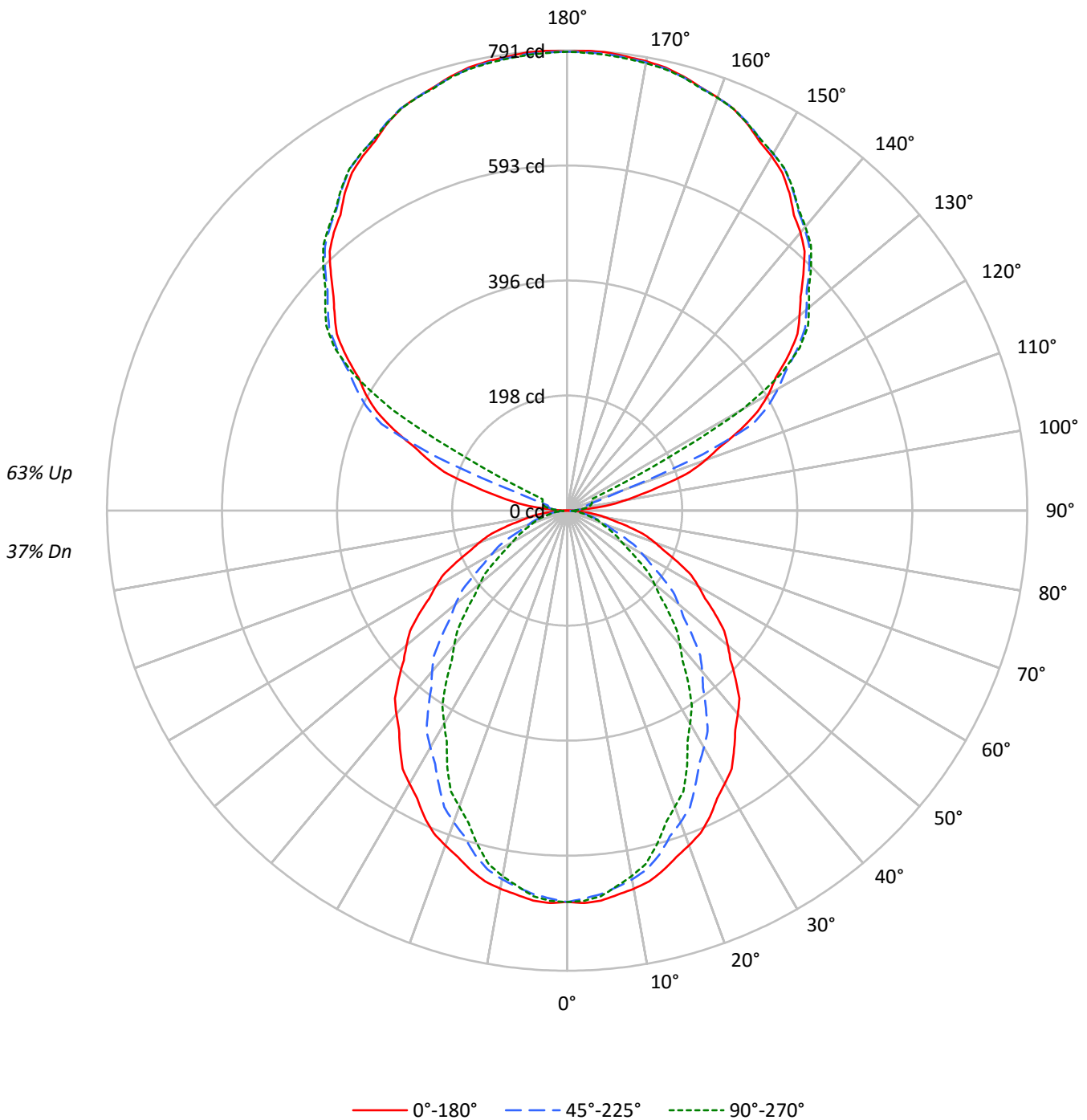
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	88	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32
2	87	80	74	69	79	73	68	64	59	56	53	47	45	43	36	34	33	28
3	80	71	64	58	72	64	58	54	53	48	45	42	39	36	32	30	28	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	27	26	24	22	18
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	17	16	13
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11

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

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.0	1.7
10°-20°	172.9	4.7
20°-30°	242.8	6.6
30°-40°	264.8	7.2
40°-50°	243.5	6.6
50°-60°	191.2	5.2
60°-70°	124.7	3.4
70°-80°	64.3	1.7
80°-90°	18.6	0.5
90°-100°	26.3	0.7
100°-110°	96.5	2.6
110°-120°	257.9	7.0
120°-130°	425.7	11.5
130°-140°	452.8	12.2
140°-150°	420.8	11.4
150°-160°	338.4	9.2
160°-170°	218.0	5.9
170°-180°	75.1	2.0
0°-30°	478.7	12.9
0°-40°	743.5	20.1
0°-60°	1178.2	31.9
0°-90°	1385.8	37.5
90°-120°	380.7	10.3
90°-150°	1680.1	45.4
90°-180°	2312.0	62.5
0°-180°	3697.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	1	7	11	14	15	3
95°	37	20	22	25	24	45
105°	174	181	35	41	43	185
115°	328	338	352	100	47	323
125°	464	472	482	486	488	414
135°	574	583	588	594	593	443
145°	666	666	675	679	676	416
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	7.9	7.3	6.8	6.1	5.5	5.4	5.5	5.8	6.0	6.2	6.2
90°	0.6	2.0	3.3	4.7	6.1	7.3	8.4	9.4	10.4	11.4	12.1
92.5°	11.5	11.4	11.3	11.2	11.0	11.3	11.7	12.2	12.7	13.2	13.5
95°	37.1	32.9	28.7	24.5	20.4	18.7	19.6	20.5	21.4	22.3	22.9
97.5°	73.6	61.8	50.1	38.2	26.4	21.6	23.6	25.7	27.7	29.8	30.3
100°	101.0	83.6	66.3	48.9	31.6	23.9	26.1	28.2	30.4	32.5	33.5
102.5°	131.2	127.5	123.8	120.1	116.4	105.6	87.6	69.5	51.4	33.4	34.7
105°	173.5	177.3	181.2	184.9	188.7	173.3	138.7	104.0	69.5	34.8	36.2
107.5°	221.8	224.9	228.0	231.0	234.1	214.8	173.3	131.8	90.3	48.8	47.3
110°	252.8	255.5	258.2	260.8	263.5	246.5	209.9	173.2	136.6	99.9	87.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	282.1	284.5	286.8	289.1	291.5	288.1	279.1	270.0	261.0	251.9	205.7
115°	328.2	330.4	332.5	334.7	336.8	339.5	342.7	345.8	348.9	352.1	293.4
117.5°	369.4	371.8	374.2	376.6	379.0	381.3	383.5	385.7	387.8	390.0	375.9
120°	399.5	401.5	403.3	405.2	407.2	409.2	411.5	413.8	416.0	418.3	419.9
122.5°	425.1	427.1	429.1	431.1	433.1	435.4	437.8	440.3	442.8	445.3	446.2
125°	464.0	465.7	467.3	469.0	470.6	472.6	475.1	477.4	479.9	482.2	483.1
127.5°	499.3	501.1	503.0	504.8	506.6	508.4	510.2	512.0	513.8	515.6	516.9
130°	521.6	523.7	525.7	527.7	529.8	531.5	532.9	534.3	535.7	537.1	538.5
132.5°	544.5	546.3	548.0	549.7	551.4	552.9	554.3	555.7	557.2	558.6	559.7
135°	574.2	576.2	578.2	580.2	582.3	583.9	585.1	586.2	587.3	588.5	589.7
137.5°	604.2	605.6	607.1	608.5	609.8	611.2	612.5	613.8	615.1	616.4	617.7
140°	623.9	624.8	625.8	626.9	627.9	629.1	630.5	631.9	633.2	634.7	635.9
142.5°	640.3	641.2	642.1	643.0	643.9	645.1	646.8	648.4	650.0	651.6	652.6
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	676.1
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.7
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	6.2	6.2	6.3	6.3	6.4	6.4	6.4	6.5
90°	12.7	13.3	13.9	14.4	14.7	14.9	15.2	15.4
92.5°	13.9	14.3	14.6	14.8	14.9	15.1	15.2	15.4
95°	23.6	24.1	24.8	25.0	24.9	24.8	24.7	24.5
97.5°	30.8	31.3	31.8	32.1	32.3	32.4	32.6	32.8
100°	34.6	35.5	36.6	37.3	37.5	37.7	38.0	38.2
102.5°	36.1	37.4	38.7	39.5	39.9	40.3	40.6	41.0
105°	37.6	39.0	40.4	41.3	41.8	42.4	42.9	43.4
107.5°	45.9	44.5	43.0	42.6	43.1	43.6	44.1	44.6
110°	74.5	61.8	49.2	43.0	43.5	44.1	44.6	45.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	159.4	113.2	66.9	43.9	44.4	44.8	45.2	45.6
115°	234.7	175.9	117.2	83.3	74.2	65.1	55.9	46.8
117.5°	361.7	347.4	333.2	311.1	281.1	251.1	221.1	191.1
120°	421.4	422.9	424.4	416.6	399.5	382.4	365.3	348.1
122.5°	447.1	448.0	449.0	447.8	444.4	441.1	437.8	434.5
125°	484.0	484.9	485.8	486.5	486.8	487.2	487.6	488.0
127.5°	518.2	519.5	520.8	521.5	521.5	521.6	521.7	521.8
130°	539.9	541.3	542.7	543.3	543.2	543.1	542.9	542.8
132.5°	560.9	562.1	563.3	563.9	563.7	563.6	563.5	563.4
135°	591.0	592.2	593.5	594.0	593.8	593.5	593.3	593.0
137.5°	618.9	620.1	621.4	621.8	621.3	620.9	620.5	620.0
140°	637.0	638.1	639.3	639.5	638.9	638.2	637.6	637.0
142.5°	653.6	654.7	655.7	655.9	655.3	654.7	654.0	653.4
145°	676.9	677.8	678.7	678.9	678.2	677.6	676.9	676.4
147.5°	697.3	698.0	698.6	698.7	698.1	697.7	697.1	696.5
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

(END OF REPORT)