

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: P331811-930

Luminaire Tested: **S122RDIW-S675D710U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331811-930  
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-S675D710U930-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 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: 4205.0 lumens  
Efficiency: N/A  
Efficacy: 93.4 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: General Diffuse

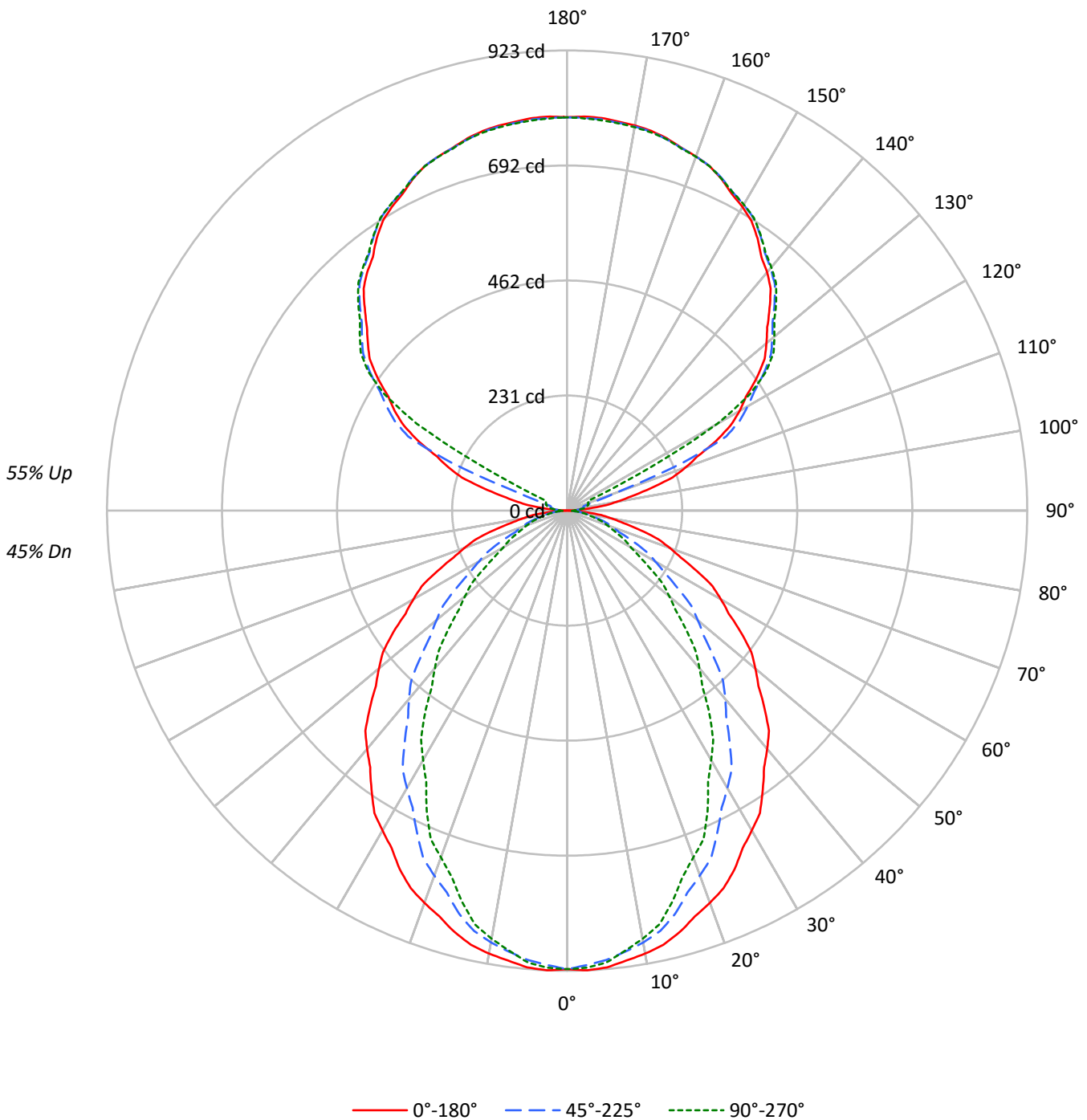
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	41	40	38	33
3	81	72	65	60	74	66	60	56	56	51	48	46	43	40	37	35	33	29
4	74	64	57	51	68	59	53	47	50	45	41	41	38	35	33	31	29	25
5	69	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22
6	63	52	44	38	58	48	41	36	41	35	31	34	30	27	28	25	22	19
7	59	47	39	34	54	43	36	32	37	32	28	31	27	24	25	22	20	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16
9	51	39	32	27	47	36	30	25	31	26	22	26	22	19	22	19	16	14
10	47	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15	13

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

	0°	45°	90°
0°	14849	14849	14849
5°	14906	14663	14744
10°	14791	14423	14300
15°	14621	13996	13593
20°	14387	13385	12713
25°	14145	12691	11863
30°	13811	11979	10769
35°	13484	11203	9810
40°	13156	10404	8701
45°	12771	9501	7695
50°	12376	8593	6712
55°	11972	7614	5762
60°	11502	6584	4782
65°	10968	5532	4359
70°	10334	4556	4008
75°	9551	4155	3737
80°	8433	3710	3403
85°	6632	2927	2927



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	2.0
10°-20°	236.4	5.6
20°-30°	331.9	7.9
30°-40°	361.9	8.6
40°-50°	332.8	7.9
50°-60°	261.4	6.2
60°-70°	170.4	4.1
70°-80°	87.9	2.1
80°-90°	24.7	0.6
90°-100°	26.3	0.6
100°-110°	96.5	2.3
110°-120°	257.9	6.1
120°-130°	425.7	10.1
130°-140°	452.8	10.8
140°-150°	420.8	10.0
150°-160°	338.4	8.0
160°-170°	218.0	5.2
170°-180°	75.1	1.8
0°-30°	654.4	15.6
0°-40°	1016.3	24.2
0°-60°	1610.5	38.3
0°-90°	1893.5	45.0
90°-120°	380.7	9.1
90°-150°	1680.1	40.0
90°-180°	2312.0	55.0
0°-180°	4205.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	920	915	905	912	910	87
15°	875	864	837	822	813	246
25°	794	766	712	680	666	365
35°	684	640	568	518	498	428
45°	559	502	416	359	337	432
55°	425	359	270	222	205	380
65°	287	219	145	118	114	285
75°	153	96	67	61	60	162
85°	36	19	16	16	16	42
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°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	923.0	922.3	921.5	920.8	920.1	918.8	917.2	915.6	914.0	912.4	913.9
5°	919.7	918.8	917.9	916.9	916.0	914.4	911.9	909.5	907.1	904.7	906.4
7.5°	910.2	909.1	907.9	906.8	905.6	903.6	900.8	898.1	895.2	892.4	892.8
10°	902.2	900.9	899.6	898.3	897.0	894.5	890.8	887.1	883.5	879.7	879.2
12.5°	892.2	890.6	889.0	887.5	885.8	882.7	878.0	873.3	868.5	863.7	862.7
15°	874.7	872.7	870.7	868.6	866.6	862.4	856.1	849.9	843.6	837.3	833.8
17.5°	853.3	850.2	847.1	843.9	840.8	835.3	827.2	819.1	811.1	803.0	798.8
20°	837.3	833.6	829.9	826.2	822.5	816.0	806.7	797.5	788.3	779.0	774.4
22.5°	819.9	815.9	811.7	807.6	803.4	796.1	785.7	775.3	764.8	754.4	748.4
25°	794.0	788.1	782.2	776.2	770.4	761.2	749.1	736.9	724.6	712.4	704.8
27.5°	762.7	756.3	749.8	743.4	736.9	726.8	713.1	699.4	685.6	671.8	663.0
30°	740.8	733.7	726.7	719.7	712.7	701.7	686.9	672.1	657.3	642.5	633.1
32.5°	719.4	711.2	703.0	694.8	686.6	674.9	659.8	644.7	629.7	614.6	603.8
35°	684.1	674.7	665.3	655.8	646.5	633.6	617.3	601.0	584.7	568.4	556.8
37.5°	648.9	638.5	628.1	617.8	607.4	593.5	576.3	558.9	541.5	524.2	511.4
40°	624.2	613.1	602.0	590.9	579.8	565.3	547.4	529.5	511.5	493.6	480.5
42.5°	598.9	587.3	575.5	563.9	552.2	537.0	518.5	500.0	481.4	462.9	449.3
45°	559.3	546.9	534.5	522.1	509.7	493.8	474.4	455.0	435.5	416.1	403.0
47.5°	520.7	507.5	494.4	481.3	468.1	451.6	431.5	411.5	391.4	371.4	358.3
50°	492.7	479.6	466.4	453.3	440.2	423.5	403.1	382.8	362.4	342.1	329.3
52.5°	465.5	451.7	438.0	424.3	410.5	393.7	373.8	353.9	334.0	314.1	301.8
55°	425.3	410.9	396.5	382.0	367.6	350.4	330.4	310.5	290.5	270.5	259.4
57.5°	384.2	369.4	354.6	339.8	325.0	308.0	288.8	269.6	250.4	231.2	221.0
60°	356.2	341.4	326.6	311.9	297.0	280.1	261.1	242.0	223.0	203.9	194.4
62.5°	328.9	314.1	299.3	284.5	269.7	253.2	235.1	217.0	198.8	180.6	171.6
65°	287.1	272.1	257.1	242.2	227.2	211.4	194.8	178.1	161.4	144.8	138.5
67.5°	246.9	232.0	217.1	202.3	187.4	172.4	157.4	142.5	127.5	112.5	109.7
70°	218.9	204.5	190.0	175.6	161.2	147.6	134.9	122.1	109.3	96.5	94.7
72.5°	192.2	178.4	164.6	150.7	136.9	124.9	114.6	104.4	94.2	83.9	82.3
75°	153.1	140.2	127.3	114.3	101.3	91.7	85.4	79.2	72.9	66.6	65.3
77.5°	114.7	103.3	92.0	80.6	69.3	62.0	59.0	56.0	53.0	50.0	49.2
80°	90.7	81.3	71.8	62.5	53.0	47.4	45.5	43.6	41.8	39.9	39.2
82.5°	68.7	61.4	54.1	46.6	39.3	35.0	33.8	32.4	31.2	30.0	29.5
85°	35.8	31.9	28.0	24.1	20.2	18.0	17.4	17.0	16.4	15.8	15.8
87.5°	10.8	9.9	9.0	8.1	7.2	6.8	7.0	7.2	7.4	7.6	7.6
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°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	915.3	916.8	918.3	918.8	918.6	918.3	918.0	917.7
5°	908.0	909.7	911.3	911.9	911.3	910.8	910.3	909.7
7.5°	893.3	893.8	894.3	894.1	893.1	892.2	891.2	890.2
10°	878.6	878.1	877.5	876.7	875.5	874.5	873.3	872.2
12.5°	861.8	860.8	859.7	858.3	856.5	854.7	852.8	850.9
15°	830.3	826.7	823.2	820.5	818.7	816.8	815.0	813.2
17.5°	794.7	790.4	786.3	782.6	779.4	776.2	773.1	769.9
20°	769.8	765.2	760.5	756.2	752.1	748.0	744.0	739.9
22.5°	742.5	736.5	730.6	726.1	723.0	720.0	717.0	714.0
25°	697.2	689.7	682.1	676.9	674.2	671.4	668.6	665.9
27.5°	654.1	645.3	636.5	629.8	625.4	621.0	616.6	612.2
30°	623.7	614.2	604.8	597.6	592.6	587.6	582.6	577.6
32.5°	593.0	582.3	571.5	563.8	559.1	554.4	549.7	545.0
35°	545.2	533.5	521.9	514.0	509.9	505.8	501.8	497.7
37.5°	498.5	485.7	472.9	464.1	459.4	454.8	450.1	445.5
40°	467.2	454.1	441.0	432.0	427.2	422.4	417.6	412.8
42.5°	435.8	422.2	408.6	399.5	394.8	390.2	385.6	380.8
45°	389.9	376.7	363.6	354.8	350.4	345.9	341.5	337.0
47.5°	345.3	332.2	319.1	310.6	306.6	302.6	298.5	294.5
50°	316.6	303.8	291.1	282.7	278.8	274.9	271.1	267.2
52.5°	289.5	277.1	264.8	256.9	253.3	249.7	246.1	242.6
55°	248.3	237.2	226.1	218.8	215.3	211.7	208.2	204.7
57.5°	210.8	200.7	190.5	183.9	181.0	178.1	175.0	172.1
60°	185.1	175.6	166.2	160.0	157.0	154.1	151.1	148.1
62.5°	162.7	153.6	144.6	139.3	137.5	135.7	134.0	132.2
65°	132.2	126.0	119.7	116.3	115.7	115.1	114.5	114.1
67.5°	106.7	103.9	101.0	99.2	98.7	98.1	97.5	96.9
70°	92.9	91.0	89.1	87.9	87.1	86.3	85.6	84.9
72.5°	80.8	79.2	77.7	76.7	76.2	75.8	75.3	74.9
75°	64.0	62.7	61.4	60.7	60.5	60.3	60.1	59.9
77.5°	48.4	47.7	47.0	46.5	46.1	45.9	45.6	45.2
80°	38.5	37.7	37.0	36.6	36.6	36.6	36.6	36.6
82.5°	29.1	28.6	28.2	28.0	28.0	28.0	28.0	28.0
85°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	7.6	7.6	7.5	7.5	7.6	7.7	7.7	7.7
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)