

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: P331666-930

Luminaire Tested: **SA2XXRDIP-C485D925U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331666-930  
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: SA2XXRDIP-C485D925U930-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

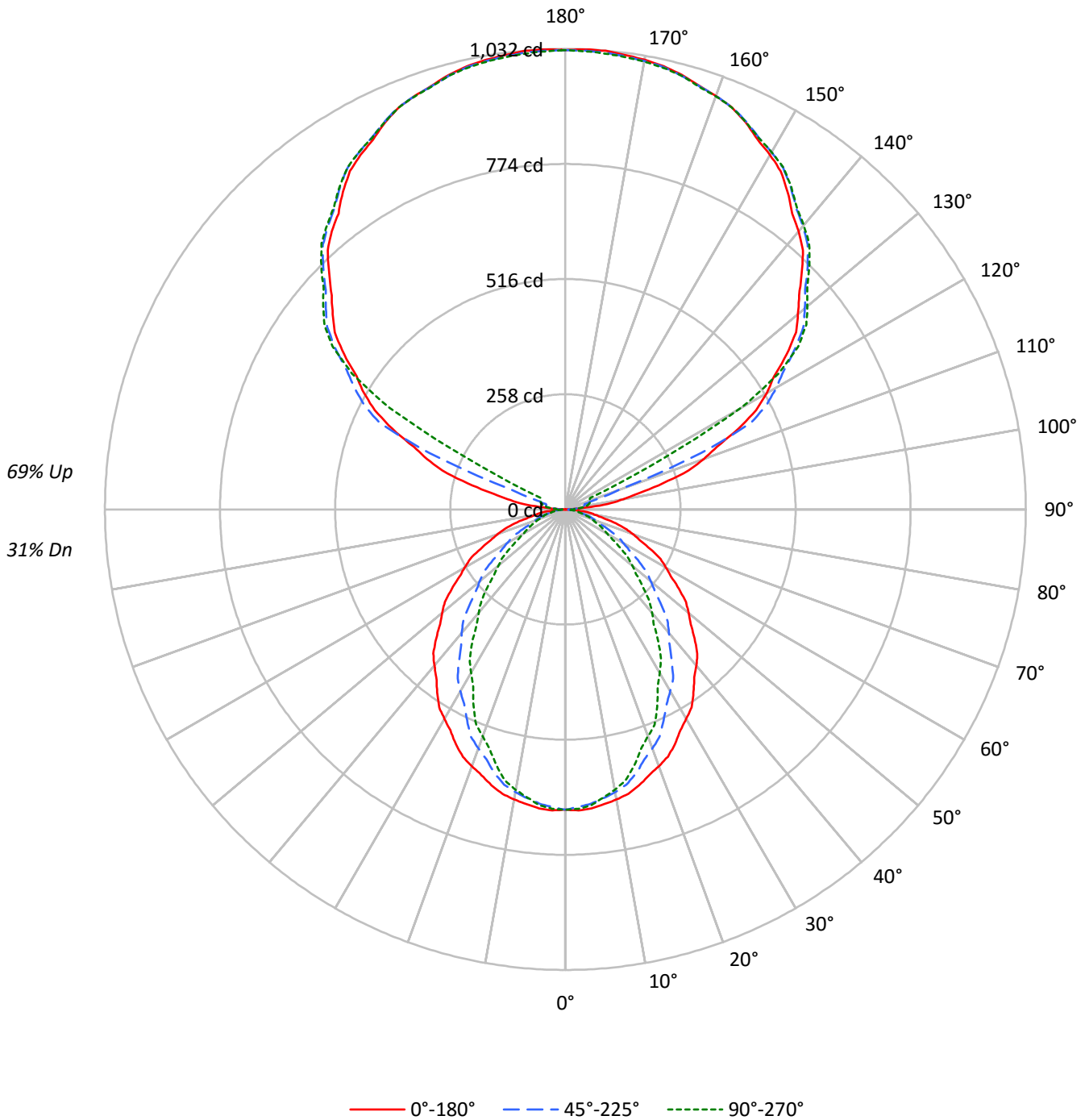
Lumens per Lamp: N/A  
Luminaire Lumens: 4402.0 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	27
2	86	79	73	68	77	71	66	62	57	53	50	43	41	39	31	30	29	23
3	78	69	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	31	29	25	23	22	17
5	66	55	47	41	59	50	43	38	40	35	32	31	28	25	23	21	19	15
6	61	49	42	36	54	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	22	23	20	18	17	15	14	11
9	48	37	30	25	44	33	27	23	27	23	19	22	18	16	16	14	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9

**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	1.4
10°-20°	172.9	3.9
20°-30°	242.8	5.5
30°-40°	264.8	6.0
40°-50°	243.5	5.5
50°-60°	191.2	4.3
60°-70°	124.7	2.8
70°-80°	64.3	1.5
80°-90°	19.2	0.4
90°-100°	34.3	0.8
100°-110°	125.9	2.9
110°-120°	336.5	7.6
120°-130°	555.4	12.6
130°-140°	590.7	13.4
140°-150°	549.0	12.5
150°-160°	441.4	10.0
160°-170°	284.5	6.5
170°-180°	97.9	2.2
0°-30°	478.7	10.9
0°-40°	743.5	16.9
0°-60°	1178.2	26.8
0°-90°	1386.4	31.5
90°-120°	496.7	11.3
90°-150°	2191.9	49.8
90°-180°	3016.0	68.5
0°-180°	4402.0	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	9	15	18	20	3
95°	48	26	29	33	32	59
105°	226	236	45	53	57	242
115°	428	441	459	131	61	421
125°	605	615	629	634	637	540
135°	749	761	768	775	774	578
145°	869	869	881	886	882	543
155°	957	951	959	963	958	441
165°	1008	1004	1006	1011	1006	285
175°	1031	1026	1028	1032	1025	98
180°	1029	1029	1029	1029	1029	



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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	7.4	6.9	6.4	6.0	5.8	6.1	6.4	6.6	6.8	6.9
90°	0.7	2.5	4.4	6.2	8.0	9.6	10.9	12.2	13.5	14.9	15.7
92.5°	15.0	14.8	14.7	14.5	14.3	14.6	15.3	16.0	16.6	17.3	17.7
95°	48.4	43.0	37.5	32.0	26.6	24.4	25.6	26.7	27.9	29.0	29.8
97.5°	96.0	80.6	65.3	49.9	34.5	28.1	30.8	33.5	36.2	38.9	39.5
100°	131.8	109.1	86.4	63.8	41.1	31.2	34.0	36.9	39.6	42.5	43.8
102.5°	171.1	166.3	161.5	156.7	151.9	137.8	114.2	90.7	67.2	43.6	45.3
105°	226.3	231.3	236.3	241.2	246.2	226.1	180.9	135.7	90.6	45.4	47.2
107.5°	289.3	293.3	297.3	301.3	305.4	280.3	226.1	171.9	117.7	63.6	61.7
110°	329.9	333.4	336.8	340.3	343.7	321.6	273.8	225.9	178.1	130.3	113.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	367.9	371.0	374.1	377.2	380.3	375.9	364.1	352.3	340.5	328.6	268.3
115°	428.1	431.0	433.7	436.6	439.4	442.9	447.0	451.2	455.3	459.4	382.8
117.5°	481.9	485.0	488.2	491.4	494.5	497.5	500.3	503.2	506.1	508.8	490.3
120°	521.2	523.7	526.2	528.6	531.2	533.9	536.9	539.8	542.8	545.8	547.8
122.5°	554.6	557.2	559.8	562.4	565.0	567.9	571.2	574.5	577.7	581.0	582.1
125°	605.4	607.5	609.7	611.8	614.0	616.6	619.8	622.9	626.1	629.2	630.4
127.5°	651.3	653.8	656.2	658.5	660.9	663.2	665.6	668.0	670.3	672.7	674.3
130°	680.6	683.2	685.8	688.5	691.1	693.4	695.2	697.0	698.9	700.7	702.5
132.5°	710.4	712.6	714.9	717.1	719.3	721.4	723.3	725.0	726.8	728.6	730.3
135°	749.1	751.7	754.4	757.0	759.7	761.7	763.2	764.8	766.2	767.7	769.3
137.5°	788.2	790.1	792.0	793.8	795.7	797.4	799.1	800.8	802.5	804.2	805.8
140°	813.8	815.2	816.5	817.8	819.1	820.8	822.6	824.3	826.2	828.0	829.5
142.5°	835.3	836.5	837.7	838.9	840.1	841.7	843.8	845.9	848.0	850.0	851.4
145°	868.9	868.8	868.6	868.5	868.3	869.6	872.5	875.2	878.1	880.8	882.0
147.5°	898.3	897.6	897.1	896.4	895.8	896.8	899.6	902.5	905.2	908.0	908.8
150°	917.4	916.2	915.0	913.9	912.7	913.5	916.2	918.8	921.5	924.1	925.0
152.5°	933.4	932.1	930.8	929.6	928.3	928.9	931.4	933.9	936.5	939.0	940.0
155°	956.8	955.4	953.8	952.4	950.9	951.1	953.1	955.1	957.1	959.0	960.0
157.5°	975.1	973.9	972.7	971.3	970.1	970.2	971.6	973.0	974.4	975.8	976.9
160°	985.9	984.9	983.9	982.8	981.9	981.9	982.8	983.9	984.9	985.9	986.8
162.5°	995.4	994.4	993.4	992.4	991.4	991.3	992.2	993.0	993.9	994.8	995.9
165°	1008.2	1007.2	1006.2	1005.2	1004.2	1004.0	1004.4	1004.9	1005.5	1006.0	1007.1
167.5°	1017.7	1016.8	1015.8	1014.7	1013.7	1013.5	1014.0	1014.4	1014.9	1015.4	1016.5
170°	1023.1	1022.1	1021.1	1020.1	1019.1	1018.8	1019.1	1019.5	1019.8	1020.1	1021.2
172.5°	1026.6	1025.6	1024.7	1023.7	1022.7	1022.4	1022.7	1023.0	1023.4	1023.7	1024.8
175°	1031.3	1030.1	1029.0	1027.8	1026.6	1026.2	1026.5	1026.9	1027.2	1027.5	1028.7
177.5°	1032.0	1031.1	1030.2	1029.2	1028.3	1027.9	1028.1	1028.2	1028.3	1028.4	1029.4
180°	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1



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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°	7.0	7.0	7.1	7.2	7.3	7.3	7.3	7.4
90°	16.6	17.4	18.2	18.8	19.1	19.4	19.8	20.1
92.5°	18.1	18.6	19.0	19.3	19.5	19.7	19.9	20.1
95°	30.7	31.6	32.4	32.7	32.5	32.4	32.2	32.0
97.5°	40.2	40.8	41.5	41.9	42.2	42.3	42.6	42.7
100°	45.1	46.4	47.8	48.6	48.9	49.2	49.6	49.9
102.5°	47.0	48.8	50.5	51.6	52.1	52.5	53.0	53.5
105°	49.1	50.9	52.7	54.0	54.6	55.3	55.9	56.6
107.5°	59.8	58.0	56.2	55.6	56.3	56.9	57.6	58.2
110°	97.2	80.6	64.1	56.2	56.8	57.5	58.1	58.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	208.0	147.6	87.2	57.3	57.8	58.4	58.9	59.4
115°	306.2	229.6	153.0	108.7	96.8	84.9	73.0	61.1
117.5°	471.8	453.3	434.7	405.9	366.7	327.6	288.5	249.3
120°	549.8	551.8	553.8	543.6	521.2	498.9	476.5	454.2
122.5°	583.3	584.5	585.7	584.2	579.8	575.4	571.1	566.8
125°	631.5	632.7	633.8	634.6	635.1	635.6	636.2	636.7
127.5°	676.0	677.8	679.5	680.3	680.4	680.5	680.6	680.7
130°	704.3	706.1	707.9	708.8	708.7	708.4	708.3	708.1
132.5°	731.8	733.4	734.9	735.6	735.4	735.2	735.1	734.9
135°	771.0	772.7	774.3	774.9	774.6	774.3	774.0	773.6
137.5°	807.4	809.0	810.7	811.2	810.7	810.1	809.5	808.9
140°	831.0	832.5	834.0	834.3	833.5	832.7	831.8	831.0
142.5°	852.7	854.1	855.5	855.7	854.9	854.1	853.3	852.4
145°	883.2	884.4	885.5	885.7	884.8	884.0	883.2	882.4
147.5°	909.7	910.5	911.4	911.5	910.8	910.1	909.4	908.7
150°	926.0	927.1	928.1	928.1	927.3	926.4	925.6	924.8
152.5°	940.9	941.9	942.9	942.9	941.8	940.7	939.6	938.5
155°	961.1	962.1	963.0	962.9	961.6	960.2	958.9	957.6
157.5°	978.0	979.1	980.2	980.2	978.8	977.5	976.2	975.0
160°	987.8	988.9	989.9	989.8	988.6	987.4	986.3	985.1
162.5°	997.0	998.2	999.3	999.1	997.8	996.3	994.9	993.4
165°	1008.3	1009.4	1010.6	1010.6	1009.4	1008.3	1007.1	1006.0
167.5°	1017.7	1018.8	1020.0	1019.8	1018.3	1016.8	1015.4	1013.8
170°	1022.5	1023.6	1024.7	1024.6	1023.1	1021.6	1020.1	1018.6
172.5°	1026.0	1027.2	1028.3	1028.2	1026.6	1025.2	1023.7	1022.2
175°	1029.9	1031.0	1032.2	1031.9	1030.3	1028.7	1027.0	1025.3
177.5°	1030.3	1031.3	1032.2	1032.0	1030.9	1029.6	1028.4	1027.3
180°	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1

(END OF REPORT)