

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: P333042-830

Luminaire Tested: **S124RDIW-S575D770U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333042-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S575D770U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4725.3 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

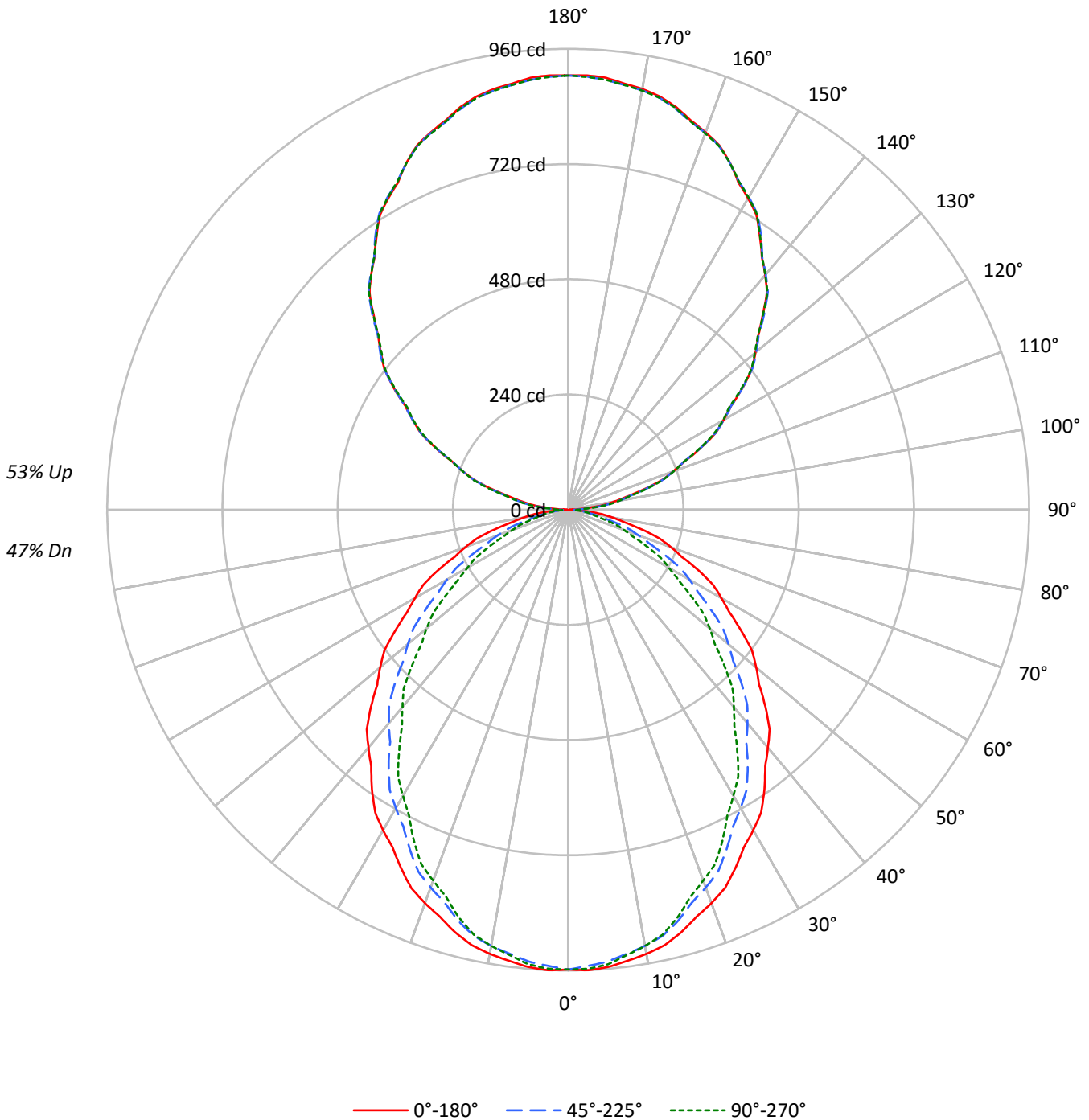
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	97	93	89	86	89	86	83	80	72	70	67	59	58	56	47	46	45	40
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39	34
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	29
4	74	64	56	50	68	59	52	47	50	45	41	41	38	35	34	31	29	25
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	30	27	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19
7	58	46	38	33	53	43	36	31	37	31	27	31	27	23	25	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.9
10°-20°	250.9	5.3
20°-30°	362.3	7.7
30°-40°	410.7	8.7
40°-50°	396.6	8.4
50°-60°	329.8	7.0
60°-70°	227.7	4.8
70°-80°	115.4	2.4
80°-90°	32.3	0.7
90°-100°	59.7	1.3
100°-110°	176.7	3.7
110°-120°	300.0	6.3
120°-130°	395.5	8.4
130°-140°	444.2	9.4
140°-150°	436.5	9.2
150°-160°	367.1	7.8
160°-170°	244.3	5.2
170°-180°	85.5	1.8
0°-30°	703.2	14.9
0°-40°	1113.9	23.6
0°-60°	1840.3	38.9
0°-90°	2215.8	46.9
90°-120°	536.4	11.4
90°-150°	1812.6	38.4
90°-180°	2510.0	53.1
0°-180°	4725.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	2	10	15	19	21	5
95°	42	48	53	55	55	47
105°	163	164	166	169	171	173
115°	305	305	304	303	302	301
125°	444	444	444	442	441	396
135°	573	577	577	576	574	443
145°	696	699	700	699	697	435
155°	798	797	797	799	797	367
165°	868	866	865	868	866	245
175°	903	900	899	903	899	86
180°	904	904	904	904	904	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	13.9	13.2	12.5	11.8	11.1	10.8	10.9	11.0	11.2	11.3	11.3
90°	2.1	3.8	5.6	7.3	9.0	10.5	11.7	12.9	14.1	15.4	16.3
92.5°	15.0	17.0	18.9	20.8	22.8	24.2	25.1	25.9	26.9	27.7	28.3
95°	41.9	43.4	44.8	46.2	47.6	48.8	49.9	51.0	52.1	53.2	53.6
97.5°	73.3	74.5	75.6	76.6	77.8	79.0	80.3	81.5	82.8	84.1	84.6
100°	97.9	98.6	99.2	99.8	100.4	101.4	102.8	104.2	105.7	107.1	107.4
102.5°	123.7	123.9	124.1	124.4	124.7	125.5	126.7	128.0	129.2	130.5	131.0
105°	163.0	163.2	163.3	163.4	163.6	164.0	164.7	165.2	165.9	166.5	166.9
107.5°	204.2	204.4	204.6	204.8	205.0	205.2	205.3	205.4	205.5	205.6	205.9
110°	232.2	232.5	232.9	233.2	233.5	233.6	233.4	233.3	233.1	232.9	232.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.4	261.4	261.5	261.6	261.6	261.5	261.2	260.9	260.6	260.3	260.3
115°	305.0	305.0	305.0	305.0	305.0	304.8	304.5	304.3	303.9	303.6	303.4
117.5°	346.1	346.3	346.4	346.5	346.7	346.6	346.4	346.2	345.9	345.7	345.2
120°	373.5	374.2	374.8	375.4	376.1	376.1	375.7	375.2	374.8	374.3	373.4
122.5°	402.1	402.4	402.6	402.8	403.1	403.1	402.9	402.7	402.5	402.3	401.7
125°	444.2	444.2	444.2	444.2	444.2	444.1	443.9	443.8	443.7	443.5	443.2
127.5°	482.4	482.9	483.3	483.8	484.3	484.4	484.1	483.9	483.6	483.4	483.1
130°	509.3	509.7	510.2	510.7	511.1	511.3	511.3	511.3	511.3	511.3	511.0
132.5°	536.7	537.1	537.3	537.7	538.1	538.2	538.0	537.9	537.8	537.6	537.3
135°	573.0	573.8	574.8	575.7	576.6	577.1	577.1	577.1	577.1	577.1	576.8
137.5°	612.4	612.8	613.2	613.7	614.2	614.4	614.7	614.9	615.2	615.5	615.0
140°	638.7	638.9	639.3	639.6	639.9	640.1	640.1	640.1	640.1	640.1	639.9
142.5°	662.7	663.1	663.4	663.6	664.0	664.1	663.9	663.8	663.7	663.5	663.5
145°	696.1	696.6	697.3	698.0	698.5	698.9	699.1	699.3	699.4	699.6	699.4
147.5°	729.1	729.8	730.6	731.3	732.1	732.4	732.3	732.1	732.0	731.9	731.7
150°	749.2	749.8	750.5	751.1	751.7	752.1	752.1	752.1	752.1	752.1	752.1
152.5°	768.3	768.6	769.0	769.4	769.8	770.0	770.1	770.2	770.3	770.4	770.8
155°	797.5	797.5	797.5	797.5	797.5	797.4	797.2	797.1	796.9	796.8	797.4
157.5°	822.1	821.8	821.5	821.2	821.0	820.9	820.8	820.8	820.8	820.7	821.1
160°	836.7	836.5	836.3	836.2	836.0	835.8	835.8	835.6	835.4	835.3	835.8
162.5°	850.1	849.7	849.2	848.9	848.5	848.2	848.0	847.9	847.7	847.5	848.4
165°	868.2	867.7	867.2	866.8	866.3	865.9	865.5	865.3	865.0	864.6	865.5
167.5°	881.9	881.4	880.7	880.1	879.4	879.0	879.1	879.1	879.1	879.2	880.1
170°	889.9	889.0	888.3	887.5	886.7	886.4	886.6	886.7	886.8	887.0	888.0
172.5°	895.4	894.8	894.1	893.4	892.8	892.5	892.5	892.6	892.6	892.6	893.7
175°	903.1	902.3	901.5	900.8	900.0	899.6	899.4	899.2	899.1	898.9	900.0
177.5°	905.6	905.0	904.4	903.8	903.1	902.9	902.9	902.9	902.9	902.9	903.7
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	11.4	11.5	11.5	11.7	11.9	12.1	12.3	12.4
90°	17.2	18.2	19.1	19.7	20.1	20.4	20.6	21.0
92.5°	28.8	29.4	30.0	30.3	30.5	30.7	30.9	31.1
95°	54.1	54.6	55.0	55.2	55.2	55.2	55.2	55.2
97.5°	85.2	85.8	86.3	86.6	86.6	86.6	86.6	86.6
100°	107.6	107.9	108.3	108.4	108.4	108.4	108.4	108.4
102.5°	131.4	131.9	132.2	132.5	132.7	132.8	132.9	133.1
105°	167.4	167.9	168.3	168.8	169.3	169.8	170.2	170.7
107.5°	206.4	206.8	207.3	207.5	207.5	207.5	207.4	207.4
110°	232.3	232.1	231.7	231.8	232.2	232.7	233.2	233.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.2	260.1	260.1	260.1	260.2	260.3	260.4	260.5
115°	303.3	303.1	302.9	302.8	302.7	302.6	302.4	302.2
117.5°	344.7	344.1	343.6	343.2	342.9	342.5	342.2	342.0
120°	372.7	371.9	371.2	370.9	371.3	371.6	371.8	372.1
122.5°	401.1	400.7	400.1	399.5	399.0	398.4	397.9	397.4
125°	442.9	442.6	442.2	442.0	441.7	441.3	441.0	440.7
127.5°	482.8	482.5	482.1	481.8	481.6	481.4	481.1	480.9
130°	510.8	510.4	510.1	509.6	509.1	508.4	507.7	507.2
132.5°	537.1	536.8	536.4	536.1	535.9	535.6	535.4	535.2
135°	576.5	576.2	575.9	575.5	575.0	574.6	574.1	573.6
137.5°	614.6	614.3	613.9	613.7	613.8	613.9	614.0	614.1
140°	639.8	639.6	639.4	639.3	639.1	638.9	638.9	638.7
142.5°	663.5	663.5	663.5	663.5	663.4	663.4	663.4	663.3
145°	699.3	699.1	698.9	698.6	698.1	697.7	697.2	696.7
147.5°	731.6	731.5	731.3	731.2	731.0	730.9	730.8	730.6
150°	752.1	752.1	752.1	752.0	751.8	751.6	751.5	751.3
152.5°	771.2	771.6	771.9	771.9	771.6	771.2	770.7	770.3
155°	798.1	798.6	799.3	799.3	798.6	798.1	797.4	796.8
157.5°	821.6	822.1	822.6	822.6	822.0	821.5	821.0	820.4
160°	836.2	836.7	837.2	837.0	836.2	835.4	834.6	833.9
162.5°	849.2	850.1	850.9	850.9	850.2	849.4	848.7	847.8
165°	866.5	867.4	868.4	868.6	867.9	867.2	866.7	866.0
167.5°	881.1	881.9	882.9	882.9	881.9	881.0	880.1	879.0
170°	888.9	889.9	890.8	890.7	889.6	888.5	887.4	886.4
172.5°	894.8	895.8	896.8	896.8	895.7	894.7	893.5	892.5
175°	901.1	902.2	903.2	903.2	902.2	901.1	900.0	898.9
177.5°	904.6	905.4	906.3	906.3	905.2	904.3	903.2	902.3
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5

(END OF REPORT)