

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: P332317-930

Luminaire Tested: **S123RDIP-S775D805U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332317-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D805U930-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4749.4 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

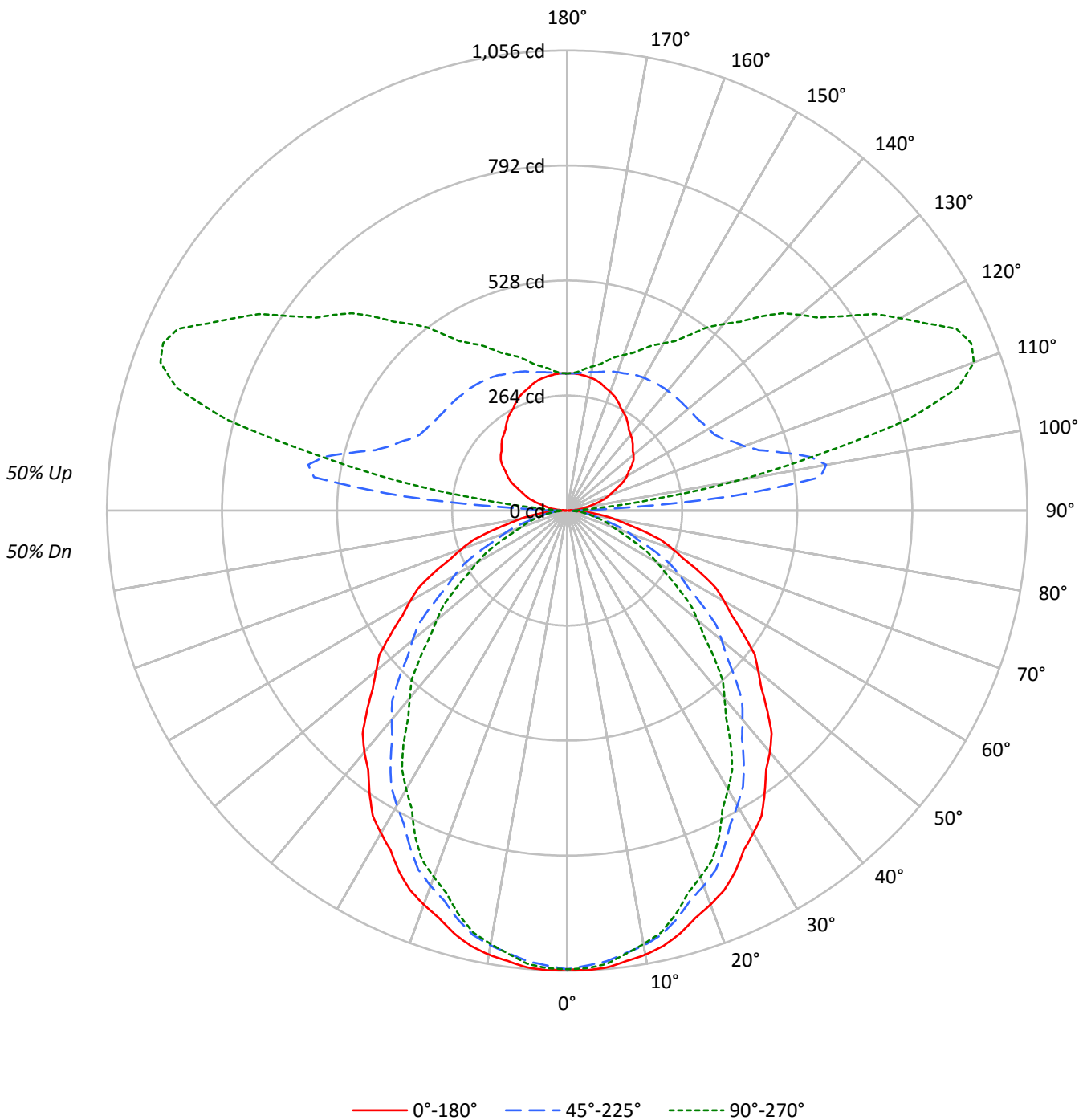
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332317-930

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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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	98	94	90	87	90	87	84	81	74	71	69		61	60	58		50	49	48	43
2	90	82	76	71	82	76	71	67	65	61	58		54	52	49		45	43	41	36
3	82	73	66	60	75	67	61	56	57	53	49		48	45	42		40	37	35	31
4	75	65	57	51	69	60	53	48	51	46	42		43	39	36		36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36		39	35	32		32	29	27	24
6	64	52	44	38	59	48	41	36	42	36	32		35	31	28		29	26	24	21
7	59	47	39	34	54	44	37	32	38	32	28		32	28	25		27	24	21	19
8	55	43	35	30	51	40	33	28	34	29	25		29	25	22		25	22	19	17
9	51	39	32	27	47	36	30	25	32	26	23		27	23	20		23	20	17	15
10	48	36	29	24	44	34	27	23	29	24	20		25	21	18		21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11330	11330	11330
5°	11373	11217	11282
10°	11309	11075	11038
15°	11188	10816	10702
20°	11021	10493	10247
25°	10849	10128	9804
30°	10621	9708	9178
35°	10387	9289	8604
40°	10172	8792	7893
45°	9889	8304	7252
50°	9577	7748	6532
55°	9259	7112	5863
60°	8968	6433	5126
65°	8588	5695	4391
70°	8113	4784	3547
75°	7419	3764	3335
80°	6614	3335	3068
85°	5582	2952	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	2.1
10°-20°	275.0	5.8
20°-30°	396.0	8.3
30°-40°	446.1	9.4
40°-50°	426.7	9.0
50°-60°	349.5	7.4
60°-70°	235.8	5.0
70°-80°	118.6	2.5
80°-90°	33.8	0.7
90°-100°	175.2	3.7
100°-110°	496.2	10.4
110°-120°	488.1	10.3
120°-130°	389.3	8.2
130°-140°	307.0	6.5
140°-150°	229.1	4.8
150°-160°	159.7	3.4
160°-170°	93.8	2.0
170°-180°	30.5	0.6
0°-30°	769.9	16.2
0°-40°	1215.9	25.6
0°-60°	1992.1	41.9
0°-90°	2380.3	50.1
90°-120°	1159.6	24.4
90°-150°	2085.0	43.9
90°-180°	2369.0	49.9
0°-180°	4749.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1053	1048	1038	1045	1044	100
15°	1004	994	971	966	960	283
25°	914	891	853	835	826	420
35°	790	759	707	671	655	495
45°	650	610	546	498	476	501
55°	493	450	379	331	312	442
65°	337	289	224	184	172	334
75°	178	137	90	82	80	190
85°	45	27	24	22	22	51
90°	1	8	16	18	18	4
95°	22	70	378	110	74	23
105°	74	109	512	896	811	79
115°	131	163	392	860	986	129
125°	182	214	366	663	778	161
135°	213	254	361	546	630	164
145°	243	278	356	448	493	152
155°	276	298	345	392	408	127
165°	302	310	330	350	356	85
175°	314	315	317	321	321	30
180°	315	315	315	315	315	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1056.0	1055.4	1054.8	1054.2	1053.6	1052.4	1050.5	1048.7	1046.9	1045.1	1046.8
5°	1052.6	1051.7	1050.7	1049.8	1048.8	1047.2	1044.9	1042.6	1040.3	1038.1	1039.8
7.5°	1042.8	1041.9	1040.8	1039.8	1038.8	1036.7	1033.8	1030.9	1027.9	1024.9	1025.9
10°	1034.7	1033.3	1032.0	1030.7	1029.3	1027.0	1023.5	1020.2	1016.8	1013.3	1013.5
12.5°	1023.0	1021.6	1020.1	1018.6	1017.2	1014.3	1010.2	1006.0	1001.8	997.6	997.5
15°	1004.0	1001.8	999.7	997.7	995.6	991.9	986.6	981.3	975.9	970.6	969.7
17.5°	979.8	977.5	975.0	972.6	970.1	965.6	958.8	952.0	945.3	938.6	936.5
20°	962.1	959.0	956.0	953.0	950.0	944.9	937.6	930.4	923.2	916.0	913.5
22.5°	942.3	938.8	935.3	931.8	928.3	922.8	915.1	907.4	899.8	892.1	889.0
25°	913.5	908.7	903.9	899.2	894.5	887.7	879.0	870.3	861.5	852.8	848.8
27.5°	878.4	873.2	868.0	862.7	857.5	850.0	840.3	830.6	820.8	811.1	805.6
30°	854.5	848.8	843.2	837.5	831.8	823.6	813.0	802.3	791.7	781.1	774.7
32.5°	830.6	824.2	817.7	811.3	804.9	796.0	784.7	773.6	762.3	751.1	744.0
35°	790.5	783.7	776.8	770.1	763.2	753.9	742.2	730.3	718.6	706.9	698.7
37.5°	749.9	742.2	734.7	727.1	719.5	709.5	696.9	684.4	671.8	659.3	650.0
40°	723.9	715.6	707.2	698.9	690.6	679.6	666.2	652.7	639.2	625.7	615.9
42.5°	694.6	686.2	677.8	669.5	661.2	650.0	636.1	622.2	608.3	594.4	583.6
45°	649.6	641.2	632.6	624.0	615.5	604.0	589.3	574.7	560.1	545.5	534.7
47.5°	604.8	595.4	586.0	576.7	567.3	555.3	540.7	526.0	511.4	496.8	485.1
50°	571.9	563.0	554.2	545.2	536.3	524.2	508.8	493.4	478.1	462.7	450.9
52.5°	542.6	533.0	523.3	513.6	503.9	491.5	476.2	461.1	445.8	430.6	418.4
55°	493.4	484.1	474.8	465.5	456.2	443.5	427.4	411.3	395.2	379.0	368.0
57.5°	448.0	437.9	427.8	417.6	407.5	394.4	378.1	361.9	345.7	329.5	319.1
60°	416.6	406.2	395.7	385.3	374.9	361.7	346.0	330.3	314.5	298.8	288.5
62.5°	385.1	374.7	364.3	353.8	343.5	330.4	314.6	298.9	283.2	267.3	257.7
65°	337.2	326.8	316.3	305.9	295.5	282.8	268.1	253.2	238.5	223.6	214.3
67.5°	289.3	278.7	268.2	257.6	247.0	234.6	220.5	206.3	192.1	177.9	171.0
70°	257.8	247.6	237.3	227.1	216.9	205.0	191.8	178.6	165.3	152.0	145.3
72.5°	226.4	216.3	206.2	196.1	186.1	175.0	162.9	150.8	138.8	126.7	121.2
75°	178.4	169.3	160.2	151.1	142.0	132.2	121.8	111.4	100.9	90.5	88.6
77.5°	134.7	126.5	118.2	110.0	101.7	94.3	87.6	80.9	74.2	67.4	66.4
80°	106.7	98.9	91.2	83.4	75.6	69.7	65.7	61.7	57.8	53.8	53.2
82.5°	80.1	73.4	66.6	59.9	53.2	48.9	47.0	45.2	43.4	41.5	40.9
85°	45.2	41.1	36.9	32.7	28.5	26.2	25.6	25.0	24.5	23.9	23.6
87.5°	16.6	15.2	13.8	12.6	11.1	10.5	10.9	11.3	11.7	12.1	11.8
90°	1.3	2.5	3.8	5.7	7.0	8.3	10.2	12.1	14.0	15.9	15.3
92.5°	7.9	11.7	17.1	22.1	27.4	36.9	53.6	81.0	107.9	98.0	73.9
95°	21.7	23.6	30.6	41.4	58.0	82.8	137.1	232.0	336.6	378.0	306.6
97.5°	36.9	37.6	43.1	52.5	68.8	95.7	147.5	254.6	428.8	585.8	626.7
100°	47.2	47.8	52.3	61.2	76.5	101.3	145.9	240.3	408.0	603.6	729.2
102.5°	57.9	59.0	62.9	71.4	85.2	107.9	148.0	228.0	377.3	570.5	734.3
105°	73.9	75.8	79.7	87.3	99.5	119.2	153.6	219.2	339.7	512.5	695.5
107.5°	91.0	92.9	96.6	104.1	115.5	133.9	164.0	218.7	315.8	461.2	627.4
110°	103.3	105.2	108.4	115.4	126.2	144.1	172.8	221.2	306.6	432.2	584.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	114.5	116.4	119.6	126.6	137.5	154.7	181.4	226.2	301.5	412.8	547.3
115°	130.7	133.2	137.1	143.4	154.3	171.5	195.7	234.6	299.6	392.0	502.3
117.5°	146.8	149.8	153.0	158.8	171.0	186.9	210.8	245.6	300.8	379.8	475.2
120°	158.1	160.0	163.1	169.6	181.6	197.6	220.5	253.7	302.8	374.1	460.9
122.5°	167.8	169.7	172.8	179.8	191.4	208.3	230.7	261.3	306.3	370.6	449.1
125°	181.6	183.0	186.8	193.8	205.9	223.1	245.4	273.5	311.7	365.9	434.1
127.5°	192.2	194.1	198.9	206.0	219.4	236.6	258.1	283.4	317.8	363.6	420.9
130°	198.9	200.8	206.5	214.2	227.6	244.8	265.8	290.0	321.9	362.1	413.7
132.5°	204.0	206.4	212.6	221.8	235.2	251.9	272.4	296.1	325.0	361.5	407.1
135°	212.9	215.5	222.5	232.0	245.4	262.6	282.3	304.0	329.5	360.8	398.4
137.5°	221.3	224.0	230.9	241.1	254.3	270.3	289.3	309.9	332.6	359.4	390.9
140°	226.9	230.1	236.5	246.7	259.4	275.3	293.8	313.0	334.7	358.9	386.3
142.5°	233.0	235.7	242.6	251.8	264.6	279.4	297.4	316.0	336.1	357.8	382.2
145°	242.9	244.8	250.5	260.1	270.9	285.6	302.1	319.4	337.2	356.3	376.7
147.5°	252.8	254.0	259.6	267.8	278.3	290.8	306.0	321.4	337.2	353.9	371.4
150°	259.4	260.1	265.1	273.5	282.3	293.8	308.5	321.9	337.2	351.9	367.8
152.5°	266.0	266.2	271.3	278.6	286.4	297.4	310.1	322.9	335.7	349.3	363.7
155°	276.0	276.0	279.8	286.2	293.2	302.1	313.0	323.2	334.0	344.9	357.6
157.5°	283.9	284.4	287.5	293.1	299.1	306.0	314.6	323.8	331.8	340.9	350.7
160°	290.0	290.0	292.6	297.7	302.1	308.5	316.2	323.8	330.8	337.9	346.1
162.5°	294.6	294.6	296.7	300.8	304.7	310.1	316.7	323.3	328.8	334.8	341.5
165°	301.5	300.8	302.1	305.3	307.9	312.3	317.4	321.9	325.7	330.2	335.3
167.5°	306.7	306.0	306.6	309.0	310.8	313.6	317.3	320.9	322.7	325.6	329.3
170°	309.8	308.5	309.2	311.0	312.3	313.6	316.8	319.4	320.7	322.5	325.7
172.5°	311.9	311.0	311.2	312.6	313.3	314.1	316.8	318.9	319.1	320.0	322.1
175°	314.2	313.6	313.0	314.2	314.2	314.9	316.2	317.4	316.8	316.8	318.0
177.5°	315.4	314.9	314.4	314.9	314.9	314.9	315.4	316.4	315.4	314.9	315.4
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1048.4	1050.1	1051.7	1052.5	1052.1	1051.8	1051.5	1051.2
5°	1041.5	1043.2	1044.9	1045.5	1045.2	1044.8	1044.4	1044.1
7.5°	1026.9	1027.8	1028.7	1028.9	1028.3	1027.6	1027.0	1026.3
10°	1013.7	1013.9	1014.1	1013.7	1012.8	1011.8	1010.9	1009.9
12.5°	997.4	997.3	997.2	996.5	995.5	994.3	993.3	992.1
15°	968.7	967.8	966.9	965.7	964.4	963.0	961.7	960.4
17.5°	934.5	932.5	930.5	928.5	926.5	924.5	922.6	920.6
20°	911.1	908.6	906.1	903.8	901.5	899.2	896.9	894.6
22.5°	886.0	882.9	879.8	877.2	875.1	872.9	870.8	868.7
25°	844.9	840.9	836.9	833.9	831.8	829.6	827.6	825.5
27.5°	800.1	794.6	789.0	784.6	781.5	778.3	775.1	771.9
30°	768.3	761.7	755.3	750.6	747.5	744.5	741.4	738.4
32.5°	736.9	729.9	722.8	717.7	714.5	711.3	708.2	705.0
35°	690.6	682.4	674.3	668.5	665.0	661.6	658.2	654.8
37.5°	640.7	631.4	622.2	615.5	611.2	607.0	602.8	598.6
40°	606.0	596.1	586.3	579.2	574.8	570.5	566.1	561.7
42.5°	572.7	562.0	551.2	543.9	540.0	536.1	532.1	528.2
45°	523.9	513.1	502.2	494.6	490.0	485.4	480.9	476.4
47.5°	473.3	461.5	449.8	441.9	437.8	433.7	429.7	425.7
50°	439.2	427.4	415.6	407.6	403.2	398.8	394.5	390.1
52.5°	406.2	394.0	381.7	373.7	369.7	365.8	361.9	358.0
55°	357.0	346.0	335.0	327.6	323.8	320.0	316.3	312.4
57.5°	308.8	298.3	288.0	281.1	277.9	274.7	271.4	268.2
60°	278.3	268.1	257.8	251.1	247.9	244.6	241.4	238.1
62.5°	248.1	238.5	228.9	222.3	218.9	215.6	212.2	208.8
65°	205.0	195.8	186.5	180.8	178.7	176.6	174.6	172.4
67.5°	164.0	157.1	150.1	145.5	143.3	141.0	138.8	136.6
70°	138.7	132.0	125.4	121.1	119.0	116.8	114.8	112.7
72.5°	115.9	110.4	105.0	101.8	100.9	100.1	99.2	98.3
75°	86.7	84.8	82.9	81.8	81.4	81.0	80.6	80.2
77.5°	65.4	64.3	63.3	62.6	62.3	61.9	61.5	61.1
80°	52.7	52.1	51.5	51.0	50.6	50.3	49.9	49.5
82.5°	40.4	39.8	39.2	38.9	38.8	38.7	38.6	38.6
85°	23.2	22.7	22.4	22.2	22.2	22.2	22.2	22.2
87.5°	11.7	11.7	11.7	11.8	11.6	11.5	11.5	11.2
90°	15.9	16.6	17.2	18.5	17.9	18.5	19.2	18.5
92.5°	53.6	42.6	37.6	34.3	33.2	31.2	31.9	30.7
95°	229.5	155.6	121.7	98.8	86.7	81.0	76.5	73.9
97.5°	572.0	458.2	375.9	299.7	252.7	224.0	206.8	201.3
100°	751.5	699.9	625.3	534.8	470.4	423.9	399.0	399.7
102.5°	811.1	809.5	766.1	708.7	658.6	621.7	601.0	586.3
105°	828.7	892.3	904.5	887.9	858.6	834.4	814.0	810.8
107.5°	778.4	881.9	937.8	960.4	961.0	952.8	945.9	940.0
110°	730.5	847.7	928.1	972.7	990.5	995.6	994.3	993.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	683.1	802.9	892.9	950.2	982.9	998.7	1003.6	1003.8
115°	620.2	731.1	824.8	894.3	942.1	970.1	982.9	986.1
117.5°	574.7	670.4	754.6	825.1	874.9	907.0	925.4	929.8
120°	550.7	636.7	713.3	777.6	828.0	863.7	879.0	882.8
122.5°	531.9	609.8	680.6	740.5	785.1	817.3	834.1	838.9
125°	506.7	576.3	637.4	688.4	729.2	757.2	773.1	777.6
127.5°	484.9	546.7	602.0	648.4	684.7	708.7	723.1	727.2
130°	471.1	528.4	580.1	623.4	657.2	680.1	693.5	698.6
132.5°	458.3	511.1	559.1	600.5	632.2	655.2	667.0	670.6
135°	441.1	486.3	527.7	564.1	595.3	614.5	625.9	630.4
137.5°	425.4	462.5	498.2	529.7	556.0	575.4	585.1	588.0
140°	416.2	448.7	479.3	506.7	531.0	548.8	559.1	558.4
142.5°	407.6	435.5	462.0	485.8	506.5	522.3	531.5	530.8
145°	397.1	418.2	438.5	457.1	473.0	486.3	491.5	492.7
147.5°	388.6	405.3	421.8	434.9	446.9	456.0	460.9	461.4
150°	382.5	397.1	410.5	422.6	432.2	439.2	443.0	443.0
152.5°	376.8	389.5	401.3	411.4	418.9	425.4	427.7	427.7
155°	368.4	378.6	388.2	395.8	401.5	406.7	408.0	408.5
157.5°	359.5	368.0	375.4	381.4	386.4	390.2	391.3	391.1
160°	354.4	361.4	367.8	372.3	376.7	380.5	380.5	379.9
162.5°	348.3	354.2	360.1	364.1	367.0	370.3	370.3	369.7
165°	340.4	344.2	348.7	351.9	354.4	356.9	356.3	356.3
167.5°	333.5	336.4	339.0	341.3	342.4	344.2	343.6	343.6
170°	328.9	330.8	333.4	334.7	335.3	336.6	335.9	335.9
172.5°	324.8	326.2	328.2	329.1	329.1	330.4	329.3	328.8
175°	319.4	320.0	321.2	321.2	321.2	321.9	321.2	320.7
177.5°	315.9	316.4	316.9	316.9	316.4	316.9	315.9	315.9
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9

(END OF REPORT)