

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: P331977-840

Luminaire Tested: **S123DIP-S775D805U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331977-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D805U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6049.8 lumens
Efficiency: N/A
Efficacy: 131.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

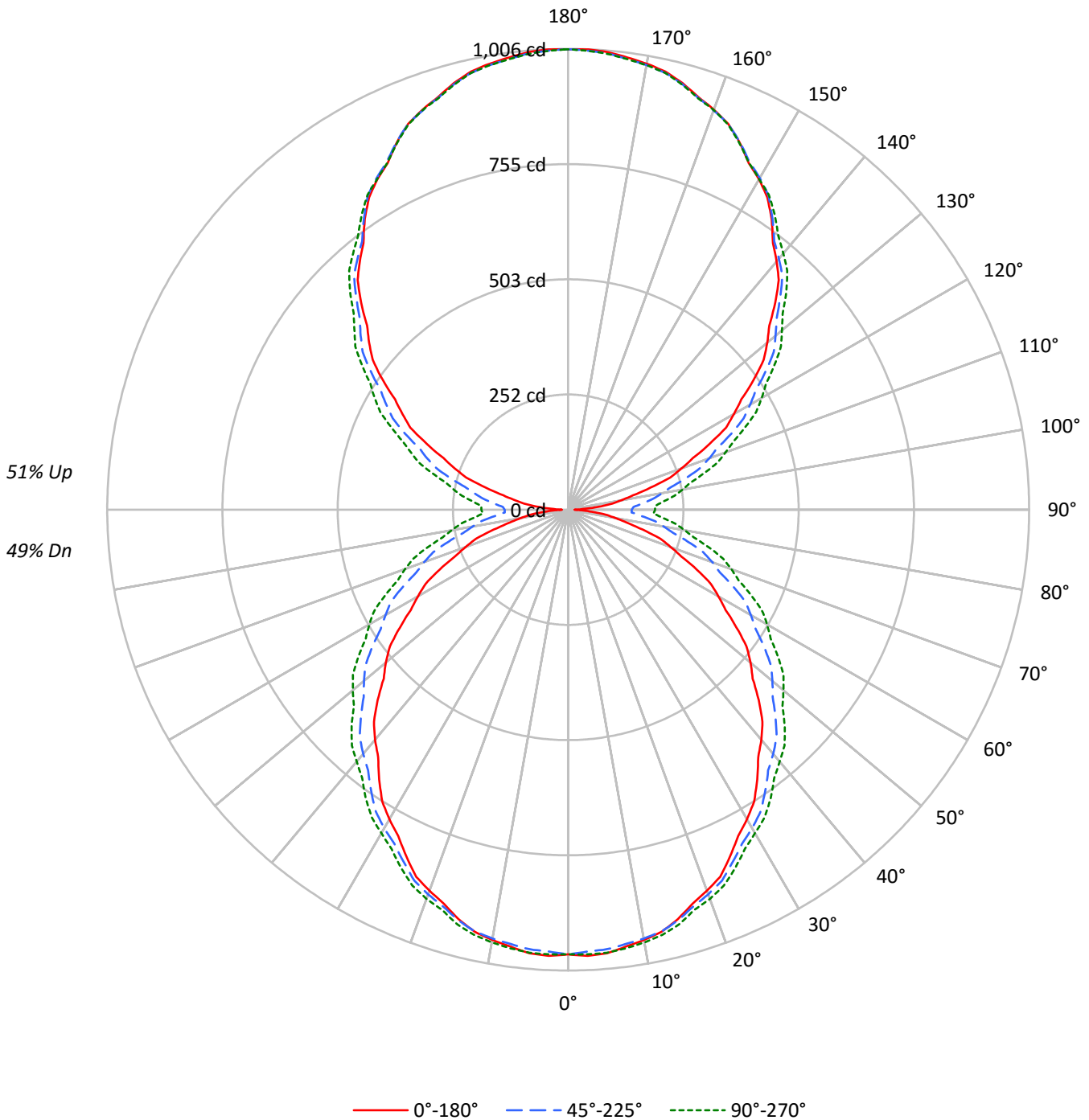
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	88	80	73	67	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.5
10°-20°	262.3	4.3
20°-30°	392.3	6.5
30°-40°	468.5	7.7
40°-50°	490.2	8.1
50°-60°	460.0	7.6
60°-70°	384.2	6.4
70°-80°	274.9	4.5
80°-90°	166.9	2.8
90°-100°	168.3	2.8
100°-110°	271.6	4.5
110°-120°	383.8	6.3
120°-130°	467.3	7.7
130°-140°	505.8	8.4
140°-150°	487.2	8.1
150°-160°	407.8	6.7
160°-170°	271.5	4.5
170°-180°	95.1	1.6
0°-30°	746.7	12.3
0°-40°	1215.2	20.1
0°-60°	2165.4	35.8
0°-90°	2991.5	49.4
90°-120°	823.7	13.6
90°-150°	2284.0	37.8
90°-180°	3058.0	50.5
0°-180°	6049.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	14	74	138	176	190	12
95°	58	106	163	198	210	61
105°	186	214	266	294	306	199
115°	341	357	392	418	426	337
125°	494	498	526	544	549	441
135°	639	643	654	669	673	492
145°	774	775	777	784	786	483
155°	885	885	886	889	884	407
165°	964	962	962	966	961	272
175°	1003	1000	1000	1004	999	95
180°	1005	1005	1005	1005	1005	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.3	40.3	52.4	64.4	76.4	88.8	101.2	113.6	126.0	138.6	146.6
90°	14.5	27.8	41.1	54.3	67.6	81.4	95.6	109.9	124.2	138.5	147.1
92.5°	32.0	43.6	55.1	66.8	78.4	90.7	103.7	116.8	130.0	143.0	151.4
95°	58.2	68.6	79.0	89.4	99.8	111.5	124.3	137.2	150.2	163.1	171.1
97.5°	93.1	102.3	111.5	120.7	129.9	140.5	152.5	164.5	176.5	188.5	196.3
100°	116.9	125.4	134.0	142.6	151.2	161.3	173.0	184.7	196.4	208.0	215.4
102.5°	144.5	151.9	159.3	166.6	174.1	183.7	195.4	207.2	219.0	230.8	237.9
105°	186.1	192.1	198.1	204.1	210.1	218.9	230.6	242.3	254.0	265.6	272.3
107.5°	233.5	238.5	243.5	248.5	253.5	261.2	271.4	281.6	291.8	301.9	308.8
110°	263.0	267.5	272.2	276.7	281.2	288.4	298.2	307.9	317.7	327.4	334.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	294.6	298.2	301.9	305.6	309.3	315.7	324.8	333.9	343.0	352.0	358.8
115°	340.8	344.2	347.5	350.9	354.3	359.9	368.1	376.2	384.3	392.4	398.2
117.5°	388.3	390.4	392.5	394.6	396.7	401.5	409.0	416.5	423.9	431.4	437.0
120°	417.2	419.4	421.6	423.8	426.1	430.6	437.5	444.3	451.3	458.2	463.3
122.5°	448.1	449.5	450.9	452.2	453.6	457.8	464.7	471.6	478.6	485.4	490.3
125°	494.2	494.8	495.3	495.8	496.3	499.9	506.3	512.8	519.3	525.7	530.0
127.5°	537.9	538.8	539.7	540.5	541.4	544.5	549.8	555.0	560.3	565.5	569.2
130°	566.9	568.0	569.3	570.4	571.6	574.3	578.5	582.6	586.7	591.0	594.7
132.5°	595.1	596.5	597.8	599.2	600.6	602.9	606.3	609.7	613.0	616.4	619.9
135°	639.2	640.2	641.0	641.8	642.6	644.2	646.6	648.9	651.4	653.8	657.3
137.5°	680.1	680.9	681.6	682.2	682.9	684.2	686.1	688.0	689.9	691.9	694.8
140°	707.7	708.6	709.4	710.3	711.2	712.1	713.0	713.9	714.8	715.6	718.9
142.5°	733.6	734.3	735.0	735.7	736.4	736.9	737.4	737.8	738.3	738.7	741.7
145°	774.1	774.2	774.3	774.4	774.5	774.8	775.4	775.9	776.4	776.9	778.6
147.5°	808.4	809.0	809.6	810.2	810.9	811.4	811.9	812.4	812.9	813.4	814.0
150°	832.9	833.3	833.6	834.0	834.4	834.8	835.1	835.5	835.8	836.2	836.2
152.5°	853.2	853.6	854.1	854.6	855.2	855.6	855.8	856.0	856.2	856.4	856.7
155°	885.0	885.0	885.0	885.0	885.0	885.1	885.3	885.6	885.8	885.9	886.6
157.5°	912.2	912.0	911.8	911.6	911.4	911.4	911.5	911.7	911.8	911.9	912.7
160°	929.3	929.0	928.6	928.3	927.9	927.8	927.8	927.8	927.8	927.8	928.6
162.5°	944.4	944.0	943.5	943.0	942.5	942.3	942.5	942.6	942.7	942.9	943.7
165°	964.0	963.5	963.0	962.5	961.9	961.7	961.7	961.7	961.7	961.7	962.7
167.5°	979.7	979.0	978.3	977.5	976.8	976.6	976.7	976.8	977.0	977.1	978.3
170°	988.6	987.8	987.1	986.4	985.7	985.3	985.3	985.3	985.3	985.3	986.6
172.5°	995.4	994.8	994.1	993.4	992.7	992.3	992.3	992.3	992.3	992.3	993.4
175°	1002.7	1002.0	1001.4	1000.7	1000.0	999.6	999.6	999.6	999.6	999.6	1000.7
177.5°	1005.7	1005.2	1004.6	1004.0	1003.5	1003.2	1003.2	1003.2	1003.2	1003.2	1004.0
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	154.8	162.9	171.1	176.3	178.7	181.2	183.6	186.0
90°	155.8	164.5	173.2	178.8	181.6	184.3	187.0	189.7
92.5°	159.8	168.1	176.5	181.7	183.6	185.5	187.5	189.5
95°	179.0	187.0	195.0	200.3	202.6	204.9	207.2	209.6
97.5°	204.1	212.0	219.7	224.8	227.0	229.3	231.7	233.9
100°	222.8	230.0	237.4	242.5	245.1	247.8	250.5	253.3
102.5°	245.1	252.3	259.4	264.1	266.4	268.6	270.9	273.3
105°	278.8	285.4	292.0	296.5	298.9	301.4	303.9	306.4
107.5°	315.7	322.6	329.4	333.8	335.7	337.5	339.3	341.2
110°	341.0	347.9	354.7	358.8	360.4	361.9	363.5	365.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	365.6	372.3	379.1	383.4	385.5	387.5	389.5	391.5
115°	404.0	409.8	415.7	419.4	421.1	422.8	424.5	426.3
117.5°	442.5	448.1	453.6	457.1	458.5	459.8	461.1	462.4
120°	468.6	473.8	479.1	482.3	483.6	484.9	486.1	487.5
122.5°	495.0	499.8	504.5	507.5	508.7	509.8	511.0	512.1
125°	534.2	538.5	542.7	545.2	546.2	547.1	548.1	549.1
127.5°	572.8	576.5	580.2	582.4	583.2	584.0	584.8	585.5
130°	598.4	602.3	606.0	607.9	608.1	608.3	608.5	608.7
132.5°	623.3	626.7	630.2	632.2	632.9	633.5	634.1	634.8
135°	660.9	664.4	667.9	670.0	671.0	671.8	672.6	673.4
137.5°	697.8	700.7	703.8	705.5	706.0	706.5	707.0	707.5
140°	722.4	725.7	729.0	730.6	730.6	730.5	730.5	730.4
142.5°	744.7	747.7	750.6	752.2	752.5	752.8	753.0	753.2
145°	780.3	782.0	783.8	784.7	785.0	785.2	785.5	785.7
147.5°	814.6	815.1	815.7	815.9	815.7	815.5	815.3	815.0
150°	836.2	836.2	836.2	835.9	835.3	834.7	834.1	833.5
152.5°	856.9	857.2	857.5	857.2	856.4	855.6	854.7	853.9
155°	887.3	888.0	888.7	888.4	887.2	886.0	884.7	883.5
157.5°	913.4	914.1	914.8	914.7	913.8	912.8	911.8	910.8
160°	929.5	930.4	931.2	931.3	930.6	929.9	929.2	928.5
162.5°	944.6	945.5	946.4	946.2	945.1	944.0	942.9	941.8
165°	963.8	964.8	965.9	965.8	964.6	963.3	962.1	960.9
167.5°	979.4	980.4	981.5	981.5	980.4	979.4	978.3	977.1
170°	987.8	989.1	990.3	990.3	989.1	987.8	986.6	985.3
172.5°	994.5	995.6	996.6	996.6	995.3	994.1	992.9	991.7
175°	1001.7	1002.7	1003.8	1003.7	1002.5	1001.3	1000.0	998.8
177.5°	1004.9	1005.7	1006.5	1006.5	1005.5	1004.5	1003.6	1002.6
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1

(END OF REPORT)