

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: P332917-935

Luminaire Tested: **S124RDIP-S575D1035U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332917-935
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: S124RDIP-S575D1035U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5107.9 lumens
Efficiency: N/A
Efficacy: 114.8 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: Semi-Indirect

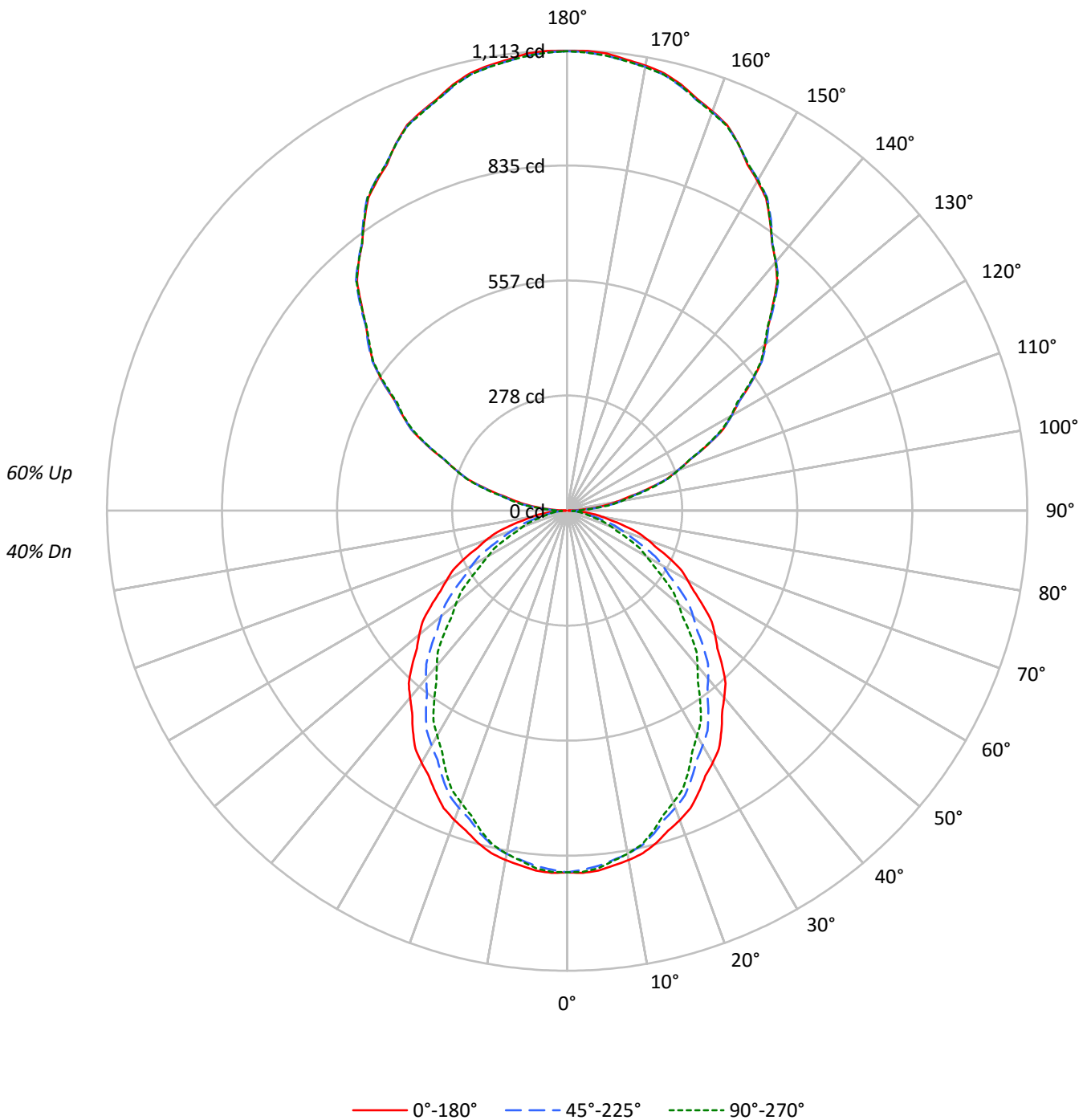
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40								
1	96	91	88	84	87	83	80	77	68	66	64	54	53	52	41	41	40	34								
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	37	35	34	29								
3	80	71	63	58	72	64	58	53	53	49	45	43	39	37	33	31	29	24								
4	73	62	55	49	66	57	51	45	47	42	38	38	34	32	29	27	25	21								
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	27	24	22	18								
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16								
7	57	45	37	32	52	41	35	30	35	29	26	28	24	21	22	19	17	15								
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	20	18	16	13								
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12								
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	17	15	13	11								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	1.6
10°-20°	229.2	4.5
20°-30°	331.0	6.5
30°-40°	375.2	7.3
40°-50°	362.3	7.1
50°-60°	301.3	5.9
60°-70°	208.0	4.1
70°-80°	105.4	2.1
80°-90°	30.4	0.6
90°-100°	73.3	1.4
100°-110°	217.1	4.3
110°-120°	368.5	7.2
120°-130°	485.9	9.5
130°-140°	545.7	10.7
140°-150°	536.2	10.5
150°-160°	451.0	8.8
160°-170°	300.1	5.9
170°-180°	105.1	2.1
0°-30°	642.4	12.6
0°-40°	1017.6	19.9
0°-60°	1681.1	32.9
0°-90°	2025.0	39.6
90°-120°	658.9	12.9
90°-150°	2226.8	43.6
90°-180°	3083.0	60.4
0°-180°	5107.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	3	12	19	24	26	5
95°	52	59	65	68	68	57
105°	200	201	205	207	210	213
115°	375	375	373	372	371	369
125°	546	546	545	543	541	486
135°	704	709	709	707	705	544
145°	855	858	859	858	856	535
155°	980	980	979	982	979	451
165°	1066	1064	1062	1067	1064	301
175°	1110	1105	1104	1110	1104	105
180°	1111	1111	1111	1111	1111	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.8	12.3	11.8	11.3	10.7	10.5	10.8	10.9	11.1	11.3	11.4
90°	2.6	4.6	6.8	8.9	11.0	12.8	14.3	15.8	17.4	18.9	20.1
92.5°	18.4	20.8	23.2	25.6	28.0	29.8	30.8	31.9	33.0	34.0	34.7
95°	51.6	53.3	55.0	56.7	58.5	59.9	61.3	62.7	64.0	65.3	65.9
97.5°	90.1	91.4	92.8	94.2	95.6	97.0	98.6	100.1	101.8	103.3	104.0
100°	120.3	121.1	121.8	122.6	123.4	124.6	126.3	128.0	129.8	131.5	131.9
102.5°	152.0	152.2	152.6	152.8	153.2	154.1	155.7	157.2	158.8	160.4	160.9
105°	200.3	200.4	200.6	200.8	201.0	201.5	202.2	203.0	203.8	204.6	205.1
107.5°	251.0	251.2	251.4	251.7	251.8	252.0	252.2	252.3	252.4	252.5	253.0
110°	285.3	285.7	286.1	286.5	286.9	287.0	286.7	286.5	286.4	286.2	285.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	321.1	321.2	321.2	321.3	321.4	321.2	320.9	320.6	320.2	319.9	319.8
115°	374.7	374.7	374.7	374.7	374.7	374.5	374.1	373.8	373.3	373.0	372.8
117.5°	425.2	425.4	425.5	425.7	425.9	425.8	425.5	425.2	425.0	424.7	424.0
120°	458.9	459.7	460.5	461.2	462.0	462.1	461.5	460.9	460.4	459.8	458.8
122.5°	494.0	494.3	494.6	494.9	495.2	495.2	495.0	494.6	494.4	494.1	493.5
125°	545.7	545.7	545.7	545.7	545.7	545.6	545.4	545.3	545.0	544.8	544.5
127.5°	592.6	593.2	593.7	594.3	595.0	595.0	594.8	594.4	594.2	593.8	593.5
130°	625.6	626.2	626.8	627.3	627.9	628.2	628.2	628.2	628.2	628.2	627.8
132.5°	659.4	659.8	660.1	660.6	661.0	661.2	661.0	660.8	660.6	660.6	660.1
135°	703.9	705.0	706.1	707.3	708.4	709.0	709.0	709.0	709.0	709.0	708.6
137.5°	752.3	752.9	753.4	753.9	754.5	754.8	755.2	755.5	755.8	756.1	755.6
140°	784.6	785.0	785.4	785.7	786.2	786.4	786.4	786.4	786.4	786.4	786.2
142.5°	814.2	814.6	814.9	815.4	815.7	815.8	815.7	815.5	815.4	815.2	815.2
145°	855.1	855.8	856.6	857.4	858.2	858.6	858.8	859.0	859.2	859.4	859.2
147.5°	895.7	896.6	897.5	898.5	899.3	899.7	899.6	899.4	899.2	899.1	899.0
150°	920.4	921.2	922.0	922.7	923.5	923.9	923.9	923.9	923.9	923.9	923.9
152.5°	943.8	944.3	944.7	945.2	945.6	945.9	946.1	946.2	946.4	946.5	947.0
155°	979.7	979.7	979.7	979.7	979.7	979.6	979.4	979.2	979.0	978.9	979.6
157.5°	1010.0	1009.6	1009.3	1008.9	1008.6	1008.4	1008.3	1008.3	1008.3	1008.2	1008.8
160°	1027.9	1027.6	1027.4	1027.3	1027.1	1026.9	1026.7	1026.5	1026.3	1026.1	1026.7
162.5°	1044.3	1043.9	1043.4	1042.8	1042.3	1042.0	1041.8	1041.6	1041.5	1041.2	1042.2
165°	1066.5	1065.9	1065.4	1064.8	1064.2	1063.8	1063.3	1063.0	1062.6	1062.2	1063.3
167.5°	1083.6	1082.7	1081.9	1081.2	1080.3	1080.0	1080.0	1080.0	1080.0	1080.1	1081.2
170°	1093.1	1092.2	1091.2	1090.3	1089.3	1088.9	1089.2	1089.3	1089.5	1089.7	1090.9
172.5°	1100.0	1099.2	1098.5	1097.6	1096.8	1096.4	1096.5	1096.5	1096.6	1096.6	1097.9
175°	1109.5	1108.5	1107.6	1106.6	1105.7	1105.1	1104.9	1104.7	1104.5	1104.3	1105.7
177.5°	1112.6	1111.8	1111.0	1110.3	1109.5	1109.1	1109.1	1109.1	1109.1	1109.1	1110.2
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	11.5	11.6	11.7	11.9	12.1	12.3	12.5	12.7
90°	21.2	22.4	23.5	24.3	24.6	25.1	25.4	25.7
92.5°	35.4	36.1	36.8	37.3	37.5	37.7	38.0	38.1
95°	66.5	67.1	67.6	67.9	67.9	67.9	67.9	67.9
97.5°	104.7	105.4	106.1	106.4	106.4	106.4	106.4	106.4
100°	132.2	132.6	133.0	133.2	133.2	133.2	133.2	133.2
102.5°	161.4	162.0	162.5	162.8	163.0	163.2	163.3	163.4
105°	205.7	206.3	206.8	207.4	207.9	208.5	209.1	209.7
107.5°	253.6	254.1	254.6	254.9	254.9	254.8	254.8	254.7
110°	285.4	285.0	284.6	284.7	285.3	285.9	286.5	287.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.7	319.6	319.6	319.6	319.7	319.8	319.9	320.0
115°	372.6	372.4	372.2	372.0	371.9	371.6	371.4	371.3
117.5°	423.4	422.8	422.1	421.6	421.2	420.9	420.4	420.1
120°	457.9	456.9	456.0	455.6	456.1	456.4	456.8	457.2
122.5°	492.8	492.2	491.5	490.9	490.2	489.5	488.8	488.1
125°	544.1	543.7	543.3	542.9	542.6	542.2	541.8	541.4
127.5°	593.1	592.7	592.3	591.9	591.7	591.3	591.1	590.7
130°	627.5	627.1	626.7	626.1	625.3	624.6	623.8	623.0
132.5°	659.8	659.4	659.0	658.7	658.3	658.1	657.7	657.5
135°	708.3	707.8	707.5	707.0	706.5	705.8	705.2	704.7
137.5°	755.1	754.6	754.1	753.9	754.1	754.1	754.2	754.4
140°	786.0	785.7	785.6	785.4	785.2	785.0	784.8	784.6
142.5°	815.1	815.1	815.1	815.0	815.0	814.9	814.9	814.9
145°	859.0	858.8	858.6	858.2	857.6	857.1	856.5	855.9
147.5°	898.8	898.6	898.5	898.3	898.1	897.9	897.8	897.6
150°	923.9	923.9	923.9	923.8	923.6	923.3	923.2	923.0
152.5°	947.4	947.9	948.4	948.4	947.9	947.4	946.8	946.3
155°	980.4	981.1	981.9	981.9	981.1	980.4	979.6	978.9
157.5°	1009.4	1010.0	1010.6	1010.5	1009.9	1009.2	1008.6	1007.9
160°	1027.3	1027.9	1028.4	1028.2	1027.3	1026.3	1025.4	1024.4
162.5°	1043.3	1044.3	1045.3	1045.4	1044.5	1043.5	1042.6	1041.6
165°	1064.5	1065.7	1066.8	1067.0	1066.3	1065.5	1064.7	1063.9
167.5°	1082.4	1083.6	1084.7	1084.7	1083.5	1082.3	1081.1	1080.0
170°	1092.0	1093.1	1094.3	1094.2	1092.9	1091.5	1090.2	1088.8
172.5°	1099.2	1100.4	1101.8	1101.7	1100.4	1099.1	1097.8	1096.4
175°	1107.0	1108.4	1109.7	1109.7	1108.4	1107.0	1105.7	1104.3
177.5°	1111.3	1112.3	1113.4	1113.4	1112.2	1110.9	1109.7	1108.5
180°	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2	1111.2

(END OF REPORT)