

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: P332533-830

Luminaire Tested: **S124DIP-S350D1205U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332533-830
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: S124DIP-S350D1205U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5361.3 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

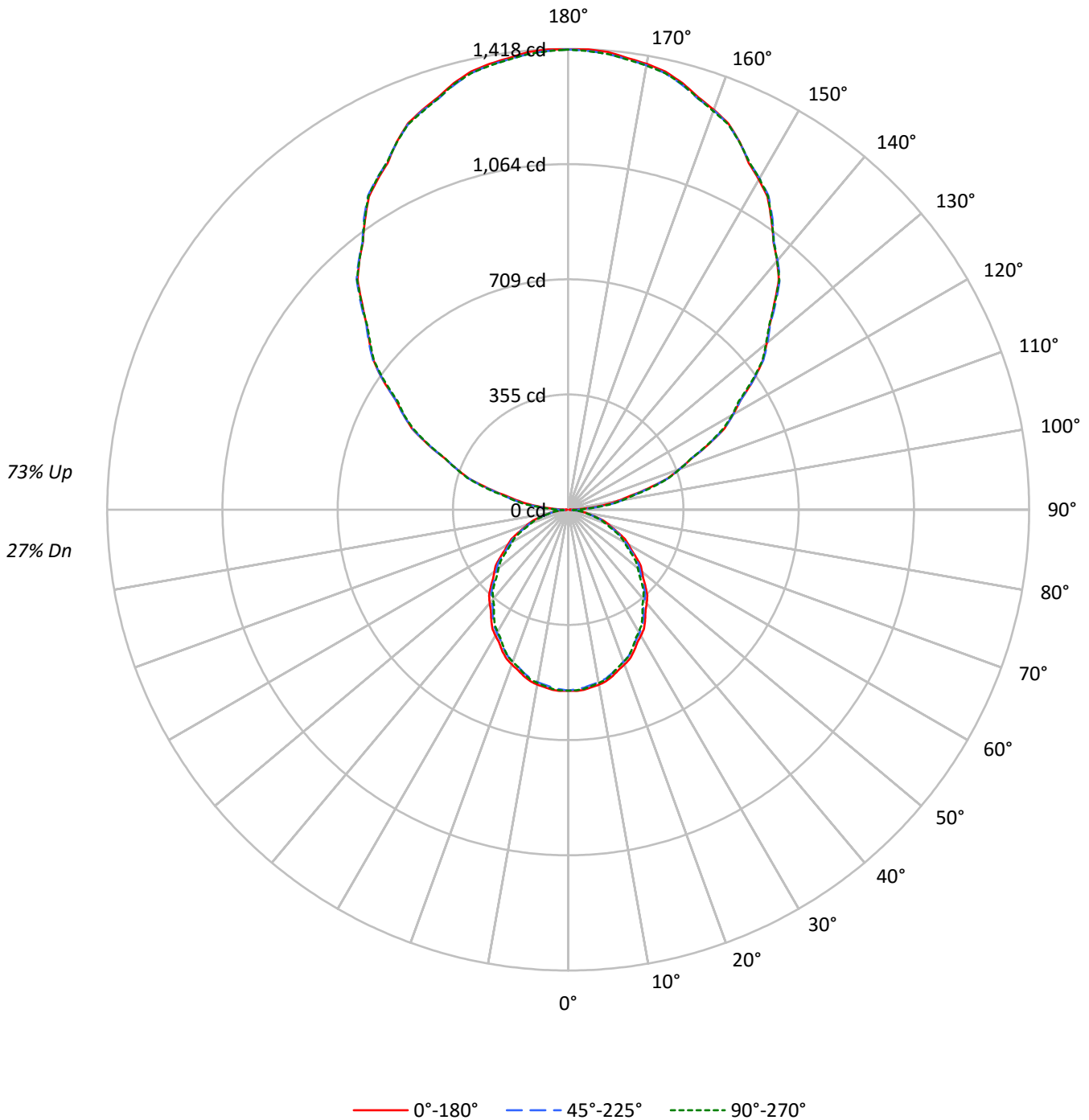
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	93	88	85	81	82	79	76	73	61	59	57	45	44	43	31	30	29	22
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25	19
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	24	22	21	16
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18	14
5	64	53	45	40	57	48	41	36	37	33	29	28	25	22	19	17	16	12
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14	10
7	54	43	35	30	48	38	32	27	30	26	22	23	20	17	16	14	12	9
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10	7
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4495	4495	4495
5°	4508	4454	4486
10°	4480	4418	4440
15°	4425	4355	4367
20°	4354	4277	4281
25°	4272	4188	4177
30°	4172	4084	4047
35°	4066	3975	3921
40°	3958	3851	3780
45°	3846	3729	3658
50°	3720	3620	3508
55°	3586	3478	3365
60°	3450	3321	3219
65°	3299	3171	3043
70°	3127	2969	2854
75°	2866	2729	2658
80°	2552	2450	2385
85°	2232	2149	2103



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	1.0
10°-20°	147.7	2.8
20°-30°	217.4	4.1
30°-40°	252.8	4.7
40°-50°	252.8	4.7
50°-60°	221.1	4.1
60°-70°	164.2	3.1
70°-80°	93.3	1.7
80°-90°	31.2	0.6
90°-100°	93.4	1.7
100°-110°	276.7	5.2
110°-120°	469.6	8.8
120°-130°	619.1	11.5
130°-140°	695.3	13.0
140°-150°	683.3	12.7
150°-160°	574.7	10.7
160°-170°	382.4	7.1
170°-180°	133.9	2.5
0°-30°	417.6	7.8
0°-40°	670.4	12.5
0°-60°	1144.3	21.3
0°-90°	1433.0	26.7
90°-120°	839.6	15.7
90°-150°	2837.4	52.9
90°-180°	3928.0	73.3
0°-180°	5361.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	556	554	550	554	554	53
15°	530	528	521	524	522	149
25°	480	476	470	471	469	221
35°	413	409	403	400	398	258
45°	337	333	327	322	320	260
55°	255	253	247	242	239	228
65°	173	170	166	162	159	171
75°	92	90	88	86	85	98
85°	24	24	23	23	23	27
90°	3	15	24	30	33	5
95°	66	75	83	86	86	73
105°	255	256	261	264	267	271
115°	477	477	475	474	473	471
125°	695	695	694	692	690	620
135°	897	903	903	901	898	694
145°	1090	1094	1095	1094	1091	682
155°	1248	1248	1247	1251	1247	574
165°	1359	1356	1354	1359	1356	383
175°	1414	1408	1407	1414	1407	134
180°	1416	1416	1416	1416	1416	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8
2.5°	558.2	558.0	557.7	557.5	557.2	556.7	555.8	555.0	554.1	553.2	554.0
5°	556.3	555.9	555.5	555.2	554.8	554.0	552.9	551.9	550.7	549.6	550.7
7.5°	551.2	550.7	550.4	550.0	549.6	548.7	547.5	546.4	545.2	543.9	544.8
10°	546.5	546.1	545.7	545.4	545.0	544.1	542.8	541.5	540.3	538.9	539.7
12.5°	540.5	540.1	539.7	539.2	538.9	538.0	536.6	535.3	533.9	532.5	533.4
15°	529.5	529.1	528.8	528.4	528.0	527.1	525.6	524.1	522.5	521.1	521.7
17.5°	516.4	515.9	515.5	515.0	514.4	513.5	512.1	510.7	509.3	507.8	508.2
20°	506.8	506.3	505.9	505.3	504.8	503.9	502.4	500.9	499.4	497.9	498.2
22.5°	496.4	495.8	495.1	494.5	493.8	492.8	491.3	489.8	488.3	486.8	487.4
25°	479.6	478.9	478.2	477.5	476.8	475.8	474.4	473.0	471.6	470.2	470.3
27.5°	460.3	459.6	458.9	458.2	457.5	456.5	455.2	453.9	452.6	451.3	451.1
30°	447.5	446.7	445.9	445.1	444.3	443.3	442.0	440.6	439.4	438.1	437.7
32.5°	433.9	433.2	432.4	431.8	431.0	430.0	428.7	427.3	425.9	424.5	424.0
35°	412.6	412.0	411.3	410.6	409.9	408.9	407.5	406.0	404.7	403.3	402.7
37.5°	390.3	389.6	389.0	388.4	387.8	386.7	385.2	383.7	382.2	380.7	379.9
40°	375.6	374.8	374.1	373.2	372.5	371.4	369.9	368.3	366.8	365.4	364.4
42.5°	360.0	359.5	359.0	358.5	358.1	356.9	355.3	353.6	352.0	350.4	349.2
45°	336.9	336.1	335.5	334.8	334.0	332.9	331.3	329.7	328.2	326.6	325.5
47.5°	312.6	312.2	311.7	311.2	310.8	309.8	308.3	306.8	305.4	303.9	302.7
50°	296.2	295.9	295.5	295.0	294.6	293.8	292.4	291.0	289.5	288.2	286.8
52.5°	280.2	279.7	279.2	278.7	278.2	277.3	275.8	274.4	272.9	271.5	270.2
55°	254.8	254.5	254.1	253.8	253.5	252.7	251.3	250.0	248.5	247.1	246.0
57.5°	230.5	230.2	229.8	229.5	229.1	228.3	226.9	225.6	224.1	222.8	221.7
60°	213.7	213.2	212.7	212.2	211.7	210.8	209.5	208.2	207.0	205.7	204.8
62.5°	197.3	196.9	196.4	196.0	195.6	194.7	193.3	192.0	190.6	189.3	188.4
65°	172.7	172.2	171.6	171.2	170.7	169.9	168.9	168.0	166.9	166.0	164.9
67.5°	147.9	147.4	146.9	146.5	146.0	145.3	144.4	143.5	142.5	141.5	140.5
70°	132.5	131.8	131.1	130.4	129.7	128.9	128.2	127.4	126.6	125.8	125.0
72.5°	116.1	115.4	114.7	114.0	113.3	112.6	112.0	111.4	110.7	110.1	109.4
75°	91.9	91.4	91.0	90.4	89.9	89.4	89.0	88.4	87.9	87.5	87.1
77.5°	68.8	68.6	68.3	68.1	68.0	67.6	67.2	66.7	66.3	65.9	65.7
80°	54.9	54.6	54.3	54.0	53.7	53.4	53.3	53.1	52.9	52.7	52.4
82.5°	41.3	41.2	41.0	40.9	40.7	40.6	40.6	40.6	40.5	40.5	40.4
85°	24.1	24.1	24.1	24.1	24.1	24.0	23.8	23.6	23.4	23.2	23.2
87.5°	9.9	10.4	10.8	11.3	11.8	12.2	12.4	12.7	13.1	13.4	13.7
90°	3.3	5.9	8.7	11.3	13.9	16.3	18.3	20.2	22.1	24.1	25.5
92.5°	23.5	26.5	29.6	32.6	35.7	37.9	39.3	40.6	42.0	43.4	44.2
95°	65.7	67.9	70.1	72.3	74.5	76.4	78.1	79.8	81.5	83.2	84.0
97.5°	114.8	116.5	118.3	120.0	121.8	123.7	125.6	127.6	129.6	131.6	132.5
100°	153.4	154.3	155.2	156.2	157.2	158.8	161.0	163.2	165.3	167.6	168.1
102.5°	193.6	194.0	194.4	194.7	195.2	196.3	198.3	200.4	202.4	204.3	205.0
105°	255.1	255.4	255.6	255.9	256.1	256.7	257.7	258.6	259.7	260.6	261.4
107.5°	319.7	320.1	320.4	320.7	320.9	321.1	321.3	321.4	321.6	321.7	322.4
110°	363.5	364.0	364.5	365.0	365.5	365.6	365.4	365.1	364.9	364.7	364.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	409.1	409.3	409.3	409.4	409.5	409.3	408.9	408.5	408.0	407.6	407.5
115°	477.4	477.4	477.4	477.4	477.4	477.2	476.7	476.3	475.7	475.2	475.0
117.5°	541.9	542.1	542.2	542.4	542.6	542.5	542.2	541.9	541.5	541.2	540.4
120°	584.8	585.7	586.7	587.7	588.6	588.8	588.1	587.3	586.5	585.9	584.7
122.5°	629.4	629.8	630.2	630.6	631.0	631.0	630.7	630.4	630.0	629.6	628.9
125°	695.3	695.3	695.3	695.3	695.3	695.2	695.0	694.7	694.5	694.3	693.8
127.5°	755.2	755.9	756.6	757.3	758.1	758.3	757.8	757.4	757.1	756.7	756.2
130°	797.2	798.0	798.6	799.4	800.1	800.5	800.5	800.5	800.5	800.5	800.0
132.5°	840.1	840.7	841.2	841.7	842.3	842.4	842.3	842.1	841.9	841.7	841.1
135°	896.8	898.3	899.8	901.3	902.7	903.4	903.4	903.4	903.4	903.4	903.0
137.5°	958.6	959.3	960.0	960.6	961.3	961.9	962.2	962.6	963.0	963.4	962.8
140°	999.8	1000.2	1000.8	1001.3	1001.7	1001.9	1001.9	1001.9	1001.9	1001.9	1001.7
142.5°	1037.5	1037.9	1038.4	1038.9	1039.4	1039.5	1039.3	1039.2	1039.0	1038.8	1038.7
145°	1089.6	1090.5	1091.6	1092.5	1093.4	1094.1	1094.3	1094.6	1094.8	1095.0	1094.8
147.5°	1141.2	1142.5	1143.6	1144.7	1145.9	1146.4	1146.2	1146.0	1145.8	1145.7	1145.5
150°	1172.8	1173.7	1174.8	1175.7	1176.7	1177.1	1177.1	1177.1	1177.1	1177.1	1177.1
152.5°	1202.6	1203.2	1203.7	1204.3	1204.9	1205.3	1205.5	1205.7	1205.9	1206.1	1206.6
155°	1248.3	1248.3	1248.3	1248.3	1248.3	1248.2	1248.0	1247.7	1247.5	1247.3	1248.2
157.5°	1286.9	1286.5	1286.0	1285.6	1285.2	1284.9	1284.9	1284.8	1284.8	1284.7	1285.4
160°	1309.7	1309.5	1309.2	1308.9	1308.7	1308.4	1308.2	1308.0	1307.7	1307.5	1308.2
162.5°	1330.7	1330.0	1329.5	1328.8	1328.1	1327.8	1327.5	1327.3	1327.0	1326.7	1328.0
165°	1359.0	1358.2	1357.4	1356.8	1356.0	1355.4	1354.9	1354.4	1354.0	1353.5	1354.9
167.5°	1380.6	1379.6	1378.6	1377.5	1376.6	1376.0	1376.1	1376.1	1376.2	1376.2	1377.7
170°	1392.9	1391.7	1390.4	1389.2	1388.0	1387.5	1387.8	1388.0	1388.3	1388.6	1390.0
172.5°	1401.7	1400.6	1399.6	1398.5	1397.6	1397.0	1397.1	1397.2	1397.2	1397.3	1398.9
175°	1413.7	1412.5	1411.3	1410.0	1408.8	1408.1	1407.9	1407.6	1407.4	1407.1	1408.8
177.5°	1417.7	1416.6	1415.7	1414.8	1413.7	1413.2	1413.2	1413.2	1413.2	1413.2	1414.7
180°	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8
2.5°	554.8	555.6	556.4	556.8	556.7	556.6	556.5	556.4
5°	551.9	552.9	554.0	554.4	554.2	554.0	553.8	553.6
7.5°	545.6	546.6	547.4	547.8	547.7	547.5	547.4	547.3
10°	540.5	541.3	542.2	542.4	542.2	542.0	541.8	541.6
12.5°	534.2	535.1	536.0	536.3	536.0	535.7	535.5	535.2
15°	522.3	522.8	523.5	523.6	523.3	523.0	522.7	522.5
17.5°	508.6	509.0	509.3	509.4	509.3	509.1	508.9	508.7
20°	498.5	498.8	499.1	499.2	498.9	498.7	498.5	498.3
22.5°	487.9	488.4	489.0	489.1	488.7	488.3	488.0	487.7
25°	470.4	470.5	470.6	470.5	470.0	469.7	469.3	468.9
27.5°	450.8	450.6	450.3	450.0	449.5	449.0	448.5	448.0
30°	437.3	437.0	436.5	436.1	435.5	435.1	434.6	434.1
32.5°	423.6	423.1	422.6	422.2	421.7	421.1	420.7	420.2
35°	401.9	401.2	400.5	399.9	399.4	399.0	398.4	397.9
37.5°	379.2	378.4	377.7	377.0	376.4	375.7	375.0	374.4
40°	363.4	362.4	361.5	360.7	360.1	359.7	359.2	358.7
42.5°	348.1	346.9	345.8	345.1	344.7	344.4	344.0	343.7
45°	324.4	323.3	322.3	321.5	321.2	320.9	320.7	320.4
47.5°	301.4	300.2	299.0	298.0	297.3	296.5	295.8	295.0
50°	285.4	284.1	282.7	281.6	281.1	280.5	279.8	279.3
52.5°	269.0	267.8	266.6	265.5	264.8	264.0	263.3	262.5
55°	244.8	243.6	242.4	241.5	240.9	240.3	239.7	239.1
57.5°	220.6	219.4	218.3	217.4	216.9	216.3	215.7	215.1
60°	203.9	203.0	202.1	201.4	201.0	200.4	199.9	199.4
62.5°	187.7	186.8	186.0	185.3	184.8	184.4	183.9	183.3
65°	164.0	163.0	162.0	161.3	160.8	160.2	159.8	159.3
67.5°	139.6	138.6	137.7	137.1	137.0	136.9	136.8	136.6
70°	124.2	123.5	122.6	122.1	121.8	121.5	121.2	120.9
72.5°	108.9	108.2	107.5	107.1	106.8	106.5	106.2	105.9
75°	86.6	86.2	85.9	85.6	85.5	85.4	85.3	85.2
77.5°	65.6	65.5	65.4	65.2	64.9	64.7	64.4	64.2
80°	52.2	52.0	51.8	51.7	51.6	51.5	51.4	51.3
82.5°	40.2	40.2	40.1	40.0	39.9	39.7	39.6	39.5
85°	23.2	23.2	23.2	23.2	23.1	23.0	22.8	22.7
87.5°	13.9	14.2	14.5	14.7	14.8	15.0	15.1	15.2
90°	27.1	28.5	30.0	30.9	31.4	31.9	32.3	32.9
92.5°	45.1	46.0	46.8	47.4	47.8	48.1	48.4	48.6
95°	84.6	85.4	86.1	86.5	86.5	86.5	86.5	86.5
97.5°	133.4	134.2	135.2	135.5	135.5	135.5	135.5	135.5
100°	168.5	169.0	169.5	169.8	169.8	169.8	169.8	169.8
102.5°	205.7	206.4	207.1	207.5	207.7	207.9	208.1	208.3
105°	262.1	262.8	263.5	264.3	265.0	265.7	266.5	267.2
107.5°	323.1	323.8	324.4	324.8	324.7	324.7	324.6	324.6
110°	363.6	363.2	362.7	362.8	363.5	364.3	365.0	365.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	407.4	407.3	407.2	407.2	407.4	407.5	407.6	407.8
115°	474.8	474.5	474.3	474.0	473.8	473.5	473.3	473.1
117.5°	539.5	538.7	537.8	537.2	536.7	536.2	535.7	535.3
120°	583.4	582.2	581.0	580.6	581.1	581.5	582.1	582.6
122.5°	628.0	627.2	626.3	625.5	624.6	623.8	622.8	622.0
125°	693.2	692.8	692.3	691.8	691.4	690.9	690.3	689.8
127.5°	755.7	755.3	754.7	754.3	753.9	753.5	753.1	752.7
130°	799.5	799.0	798.5	797.8	796.8	795.9	794.8	793.9
132.5°	840.7	840.2	839.7	839.2	838.9	838.5	838.1	837.7
135°	902.5	901.9	901.4	900.9	900.1	899.4	898.6	898.0
137.5°	962.1	961.5	960.9	960.6	960.8	960.9	961.1	961.2
140°	1001.5	1001.3	1001.0	1000.8	1000.5	1000.2	1000.0	999.8
142.5°	1038.7	1038.6	1038.6	1038.5	1038.5	1038.4	1038.4	1038.3
145°	1094.6	1094.3	1094.1	1093.5	1092.9	1092.1	1091.4	1090.7
147.5°	1145.3	1145.1	1144.8	1144.6	1144.4	1144.2	1143.9	1143.7
150°	1177.1	1177.1	1177.1	1177.0	1176.8	1176.6	1176.3	1176.1
152.5°	1207.2	1207.9	1208.4	1208.4	1207.8	1207.1	1206.5	1205.9
155°	1249.2	1250.2	1251.1	1251.1	1250.2	1249.2	1248.2	1247.3
157.5°	1286.2	1286.9	1287.6	1287.6	1286.8	1285.9	1285.1	1284.3
160°	1308.9	1309.7	1310.4	1310.1	1308.9	1307.7	1306.6	1305.3
162.5°	1329.4	1330.7	1332.0	1332.1	1330.9	1329.6	1328.4	1327.2
165°	1356.4	1357.8	1359.3	1359.5	1358.6	1357.6	1356.6	1355.7
167.5°	1379.1	1380.6	1382.1	1382.1	1380.5	1379.0	1377.5	1376.0
170°	1391.5	1392.9	1394.4	1394.2	1392.5	1390.8	1389.1	1387.4
172.5°	1400.6	1402.2	1403.9	1403.9	1402.1	1400.4	1398.7	1397.0
175°	1410.5	1412.2	1413.9	1413.9	1412.2	1410.5	1408.8	1407.1
177.5°	1416.0	1417.4	1418.7	1418.6	1417.0	1415.5	1413.9	1412.4
180°	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9

(END OF REPORT)