

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: P331962-940

Luminaire Tested: **S123DIP-S775D365U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331962-940
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-S775D365U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3938.2 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

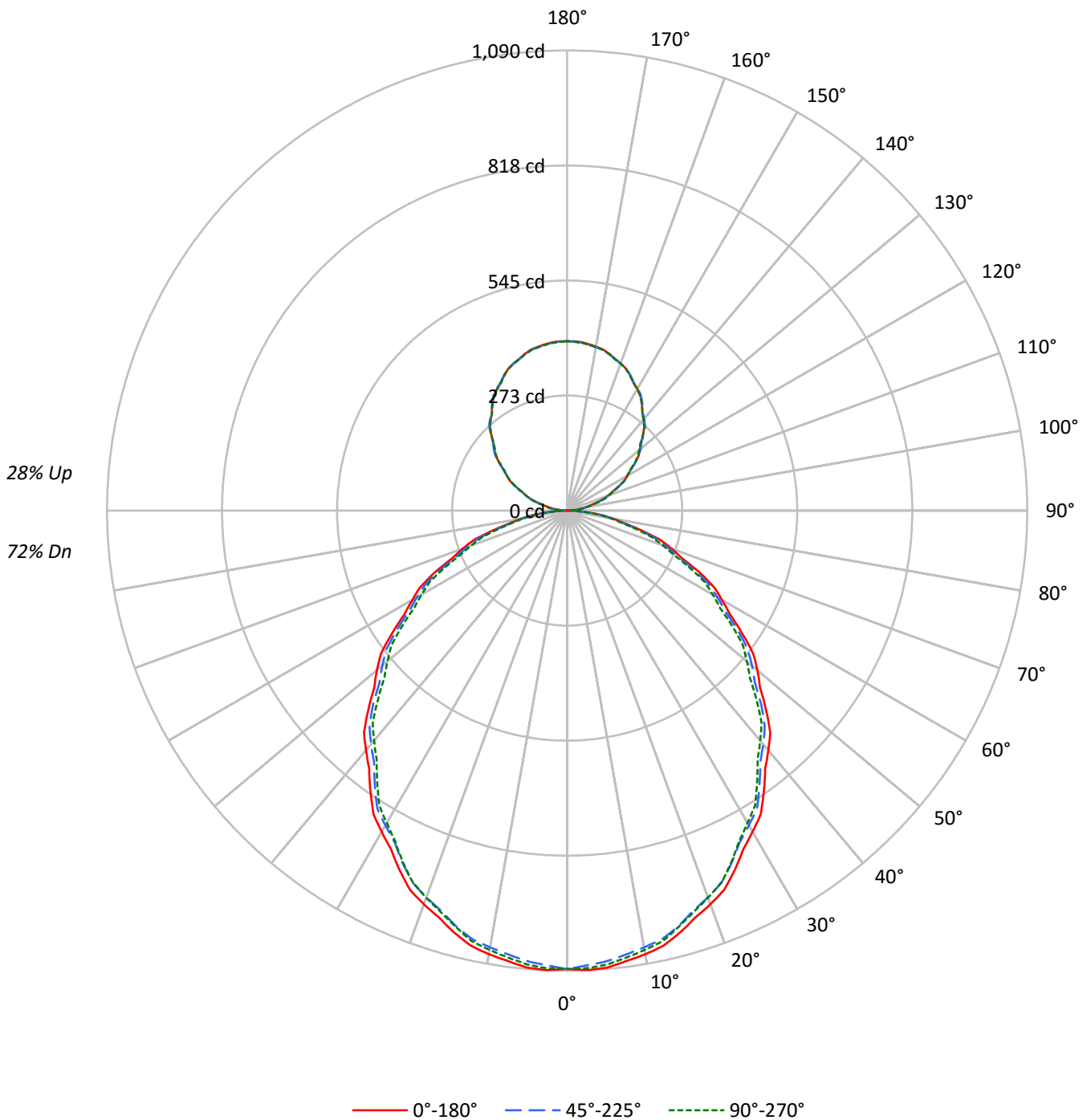
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72
1	103	98	94	90	97	93	89	86	84	81	78	75	73	71	67	66	64	60
2	93	86	79	74	88	81	76	71	73	69	65	66	62	59	59	56	54	50
3	85	75	68	61	80	72	65	59	65	59	55	58	54	50	52	49	46	43
4	78	67	58	52	74	64	56	50	58	51	47	52	47	43	47	43	40	37
5	72	60	51	45	68	57	49	43	52	45	40	47	41	37	42	38	34	32
6	66	54	45	39	62	51	43	38	47	40	35	42	37	33	38	34	30	28
7	61	48	40	34	58	46	39	33	42	36	31	39	33	29	35	30	27	25
8	57	44	36	31	54	42	35	30	39	32	28	35	30	26	32	28	24	22
9	53	40	33	27	50	39	32	27	36	29	25	33	27	23	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	28	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	2.6
10°-20°	288.8	7.3
20°-30°	426.6	10.8
30°-40°	498.4	12.7
40°-50°	501.0	12.7
50°-60°	440.1	11.2
60°-70°	327.9	8.3
70°-80°	186.8	4.7
80°-90°	54.8	1.4
90°-100°	26.1	0.7
100°-110°	78.2	2.0
110°-120°	133.0	3.4
120°-130°	175.0	4.4
130°-140°	196.7	5.0
140°-150°	193.3	4.9
150°-160°	162.8	4.1
160°-170°	108.3	2.8
170°-180°	37.9	1.0
0°-30°	817.7	20.8
0°-40°	1316.1	33.4
0°-60°	2257.3	57.3
0°-90°	2826.8	71.8
90°-120°	237.4	6.0
90°-150°	802.4	20.4
90°-180°	1111.0	28.2
0°-180°	3938.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
90°	0	4	8	9	10	4
95°	19	21	23	24	25	21
105°	71	72	74	74	75	76
115°	134	135	134	135	134	132
125°	196	197	196	195	194	175
135°	254	256	256	255	254	196
145°	308	309	310	310	308	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.4	19.1	18.7	18.4	18.0	17.9	17.9	17.9	17.9	17.9	17.8
90°	0.4	1.0	1.7	2.4	3.1	3.9	4.8	5.7	6.7	7.6	7.8
92.5°	7.7	8.1	8.6	9.1	9.5	10.0	10.5	11.1	11.6	12.1	12.3
95°	18.6	19.1	19.5	20.1	20.5	21.0	21.7	22.2	22.7	23.4	23.6
97.5°	33.0	33.3	33.8	34.2	34.5	34.9	35.3	35.7	36.1	36.5	36.8
100°	42.9	43.2	43.7	44.1	44.5	44.9	45.3	45.7	46.0	46.3	46.5
102.5°	54.2	54.5	54.7	54.9	55.2	55.6	56.0	56.5	57.0	57.4	57.6
105°	70.9	71.1	71.2	71.3	71.4	71.9	72.5	73.1	73.7	74.4	74.4
107.5°	90.3	90.4	90.5	90.6	90.7	90.8	91.0	91.3	91.6	91.8	92.0
110°	102.5	102.5	102.7	102.8	103.0	103.1	103.3	103.4	103.5	103.7	104.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.0	115.1	115.2	115.3	115.4	115.4	115.5	115.5	115.5	115.6	115.8
115°	133.9	134.1	134.4	134.6	134.7	134.8	134.6	134.6	134.4	134.2	134.3
117.5°	152.9	153.1	153.3	153.4	153.6	153.5	153.3	153.1	152.9	152.8	152.8
120°	164.8	165.2	165.7	166.0	166.5	166.5	166.2	165.9	165.5	165.1	165.1
122.5°	177.2	177.5	177.8	178.1	178.4	178.4	178.3	178.1	177.9	177.7	177.5
125°	196.0	196.2	196.4	196.6	196.9	196.9	196.7	196.6	196.4	196.4	196.0
127.5°	213.4	213.8	214.3	214.7	215.2	215.3	215.2	215.0	214.9	214.7	214.4
130°	225.0	225.5	226.1	226.7	227.2	227.4	227.2	227.0	226.8	226.6	226.3
132.5°	236.6	237.2	237.7	238.3	238.8	239.1	238.9	238.7	238.5	238.4	238.1
135°	254.3	254.8	255.1	255.6	256.0	256.2	256.1	256.0	255.9	255.9	255.6
137.5°	270.7	271.1	271.3	271.7	272.1	272.3	272.5	272.7	272.9	273.0	272.8
140°	282.0	282.4	282.8	283.1	283.5	283.7	283.7	283.7	283.8	283.9	283.8
142.5°	292.4	292.7	293.1	293.5	293.7	294.0	294.2	294.3	294.4	294.5	294.4
145°	308.5	308.6	308.8	308.9	309.1	309.2	309.4	309.7	309.9	310.0	310.0
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	324.7
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	17.7	17.7	17.5	17.5	17.5	17.5	17.6	17.6
90°	8.1	8.4	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	12.6	12.8	13.0	13.1	13.0	12.9	12.8	12.8
95°	23.9	24.2	24.4	24.6	24.6	24.6	24.6	24.6
97.5°	37.1	37.5	37.8	37.9	37.9	37.9	37.8	37.8
100°	46.7	47.0	47.2	47.3	47.4	47.6	47.8	47.9
102.5°	57.9	58.1	58.2	58.3	58.3	58.3	58.2	58.2
105°	74.4	74.4	74.4	74.5	74.5	74.7	74.9	75.0
107.5°	92.3	92.5	92.7	92.8	92.7	92.6	92.6	92.5
110°	104.2	104.5	104.8	104.9	104.7	104.6	104.4	104.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	116.2	116.5	116.9	117.0	117.0	117.0	116.9	116.9
115°	134.4	134.5	134.6	134.6	134.5	134.4	134.3	134.2
117.5°	152.8	152.8	152.8	152.6	152.4	152.2	152.0	151.9
120°	165.0	164.9	164.9	164.7	164.6	164.4	164.3	164.2
122.5°	177.4	177.2	177.0	176.8	176.6	176.4	176.2	176.0
125°	195.7	195.5	195.2	194.9	194.7	194.4	194.0	193.8
127.5°	213.9	213.6	213.1	212.8	212.5	212.1	211.9	211.5
130°	226.0	225.7	225.4	225.1	224.6	224.1	223.6	223.1
132.5°	237.7	237.4	237.1	236.7	236.3	235.9	235.6	235.2
135°	255.3	255.0	254.8	254.6	254.4	254.2	254.1	254.0
137.5°	272.5	272.2	271.9	271.6	271.3	271.1	270.8	270.5
140°	283.7	283.7	283.7	283.4	282.9	282.4	281.9	281.4
142.5°	294.4	294.3	294.3	294.0	293.6	293.3	292.8	292.5
145°	310.0	309.9	309.8	309.6	309.3	309.1	308.8	308.5
147.5°	324.7	324.7	324.7	324.4	324.0	323.6	323.2	322.7
150°	333.7	333.7	333.7	333.5	333.1	332.7	332.3	331.8
152.5°	342.0	342.1	342.2	342.1	341.7	341.3	341.0	340.6
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

(END OF REPORT)