

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: P332160-940

Luminaire Tested: **S123DIW-S775D755U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332160-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D755U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5521.4 lumens
Efficiency: N/A
Efficacy: 122.7 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: General Diffuse

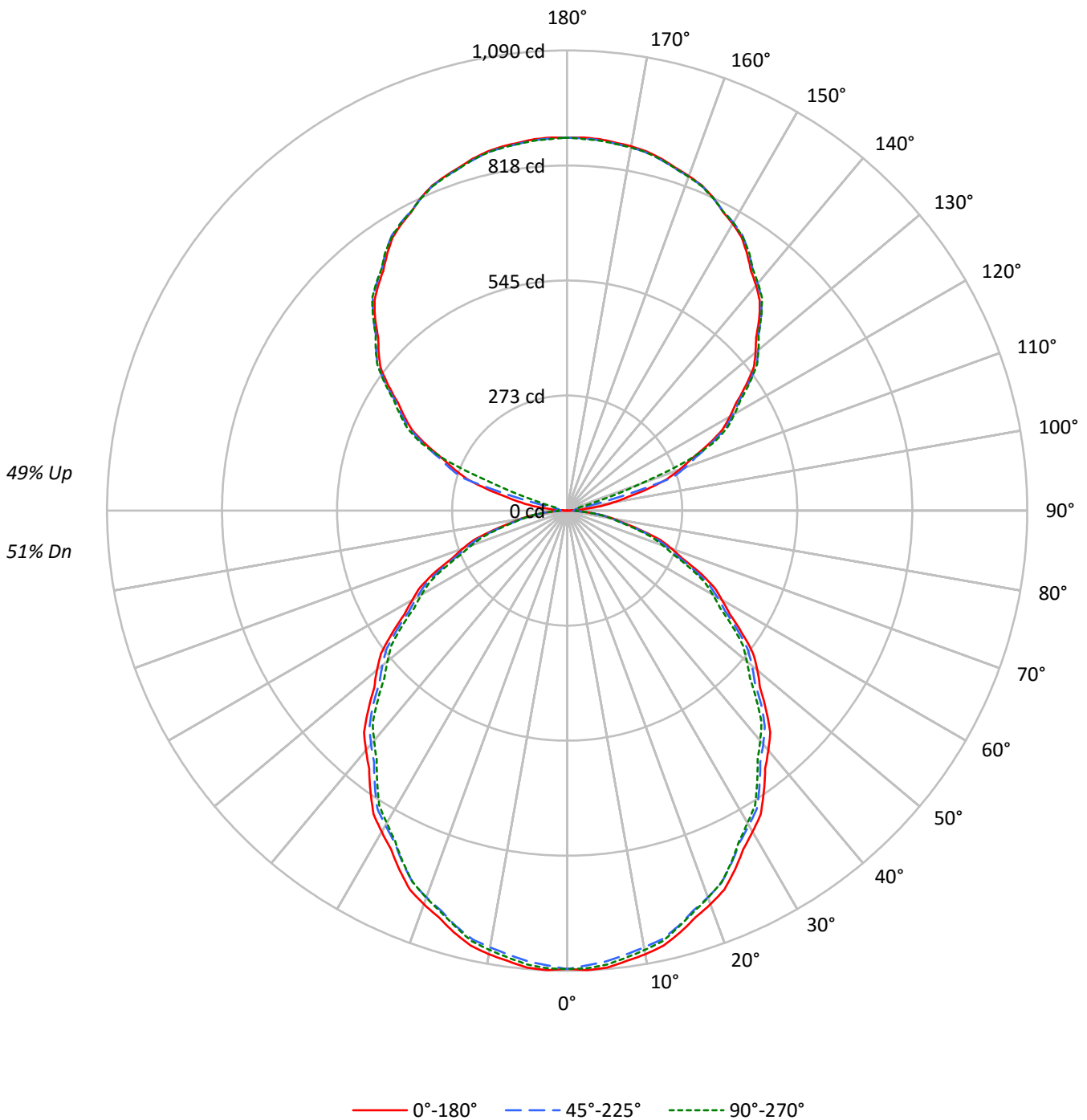
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	50	49	48	43
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	34	30
4	74	64	56	49	68	59	52	47	50	45	41	43	38	35	35	32	30	26
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	32	28	26	23
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	29	25	23	20
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13

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	1.9
10°-20°	288.8	5.2
20°-30°	426.6	7.7
30°-40°	498.4	9.0
40°-50°	501.0	9.1
50°-60°	440.1	8.0
60°-70°	327.9	5.9
70°-80°	186.8	3.4
80°-90°	56.1	1.0
90°-100°	32.1	0.6
100°-110°	153.0	2.8
110°-120°	367.6	6.7
120°-130°	468.1	8.5
130°-140°	500.2	9.1
140°-150°	467.7	8.5
150°-160°	377.3	6.8
160°-170°	243.5	4.4
170°-180°	83.9	1.5
0°-30°	817.7	14.8
0°-40°	1316.1	23.8
0°-60°	2257.3	40.9
0°-90°	2828.1	51.2
90°-120°	552.8	10.0
90°-150°	1988.7	36.0
90°-180°	2693.0	48.8
0°-180°	5521.4	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°	1	7	16	18	20	5
95°	40	15	20	25	25	49
105°	196	199	144	34	29	207
115°	367	371	377	383	386	362
125°	517	522	525	526	528	462
135°	644	648	650	652	650	495
145°	743	747	749	750	750	465
155°	818	817	818	821	817	377
165°	863	861	860	865	861	244
175°	883	880	881	885	880	84
180°	883	883	883	883	883	



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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°	19.5	19.4	19.2	18.9	18.7	18.7	18.9	19.2	19.4	19.6	19.5
90°	0.6	2.1	3.6	5.0	6.5	8.2	10.1	11.9	13.8	15.8	16.3
92.5°	12.2	11.8	11.4	11.0	10.6	11.1	12.5	13.9	15.3	16.8	17.7
95°	40.0	34.1	28.1	22.1	16.1	13.9	15.5	17.1	18.7	20.3	21.4
97.5°	80.4	77.8	75.1	72.4	69.7	63.1	52.6	42.1	31.7	21.1	22.3
100°	110.9	113.8	116.7	119.7	122.5	112.6	89.9	67.1	44.4	21.7	22.8
102.5°	145.5	147.7	149.7	151.9	153.9	142.6	117.7	92.8	68.0	43.2	39.6
105°	195.6	197.2	198.8	200.4	202.0	196.2	183.1	170.0	156.9	143.7	117.9
107.5°	248.3	249.6	250.8	252.2	253.4	255.1	257.2	259.2	261.4	263.4	244.4
110°	283.5	284.6	285.8	287.0	288.1	289.5	291.1	292.7	294.4	296.0	291.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	317.1	318.1	319.1	320.2	321.3	322.6	324.2	325.8	327.4	329.0	329.1
115°	366.8	367.7	368.5	369.4	370.3	371.4	372.7	374.0	375.3	376.7	378.1
117.5°	415.0	416.1	417.1	418.2	419.3	420.2	420.8	421.5	422.1	422.8	424.0
120°	444.9	446.2	447.5	448.8	450.1	451.0	451.5	451.9	452.4	452.7	454.0
122.5°	475.4	476.4	477.5	478.6	479.7	480.5	481.0	481.6	482.1	482.7	483.5
125°	517.1	518.3	519.4	520.6	521.7	522.6	523.2	523.8	524.3	525.0	525.2
127.5°	557.5	558.7	559.8	561.0	562.1	563.1	563.8	564.5	565.2	565.9	566.3
130°	582.6	583.9	585.1	586.2	587.4	588.3	588.8	589.4	590.0	590.6	591.1
132.5°	606.8	608.0	609.1	610.3	611.5	612.3	612.8	613.2	613.7	614.2	614.7
135°	643.7	644.6	645.4	646.3	647.2	647.9	648.5	649.1	649.7	650.2	650.7
137.5°	675.2	676.3	677.4	678.5	679.7	680.4	680.6	681.0	681.4	681.6	682.3
140°	696.2	697.1	697.9	698.8	699.7	700.3	700.8	701.2	701.7	702.1	702.7
142.5°	715.6	716.5	717.4	718.3	719.2	719.8	720.2	720.7	721.1	721.6	722.0
145°	742.8	743.8	744.8	745.8	746.9	747.5	747.8	748.1	748.4	748.7	748.9
147.5°	768.4	769.0	769.7	770.3	771.1	771.5	771.9	772.1	772.4	772.7	773.0
150°	784.2	784.5	785.0	785.4	785.9	786.2	786.6	786.8	787.1	787.4	787.7
152.5°	798.3	798.5	798.7	798.9	799.2	799.3	799.5	799.7	799.9	800.0	800.5
155°	818.2	818.0	817.7	817.3	817.1	817.0	817.2	817.3	817.4	817.6	818.3
157.5°	833.7	833.7	833.7	833.7	833.7	833.6	833.4	833.2	833.1	832.9	833.8
160°	843.2	843.0	842.9	842.8	842.6	842.5	842.3	842.1	842.0	841.9	842.8
162.5°	852.1	851.8	851.3	851.0	850.6	850.3	850.2	850.1	849.9	849.7	850.8
165°	862.9	862.5	862.0	861.6	861.1	860.9	860.7	860.5	860.4	860.2	861.4
167.5°	871.3	870.7	870.1	869.5	869.0	868.6	868.6	868.6	868.6	868.6	869.8
170°	876.0	875.4	874.9	874.2	873.7	873.3	873.3	873.3	873.3	873.3	874.5
172.5°	879.1	878.4	877.7	877.1	876.4	876.0	876.2	876.3	876.4	876.6	877.7
175°	883.2	882.4	881.7	881.0	880.3	880.0	880.1	880.3	880.5	880.6	881.6
177.5°	884.2	883.7	883.1	882.5	881.9	881.7	881.8	881.9	882.1	882.2	883.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2



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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°	19.5	19.4	19.4	19.4	19.4	19.5	19.5	19.6
90°	16.9	17.5	18.1	18.5	18.8	19.1	19.4	19.7
92.5°	18.6	19.6	20.5	21.0	21.2	21.4	21.6	21.8
95°	22.4	23.4	24.4	25.0	25.0	25.0	25.0	25.0
97.5°	23.5	24.6	25.8	26.5	26.6	26.8	26.9	27.0
100°	24.0	25.1	26.3	27.0	27.1	27.3	27.4	27.6
102.5°	35.9	32.4	28.7	27.0	27.3	27.6	27.8	28.1
105°	92.1	66.3	40.5	27.7	28.0	28.3	28.6	28.9
107.5°	225.5	206.6	187.7	168.5	149.0	129.6	110.1	90.7
110°	286.3	281.5	276.7	263.9	243.0	222.1	201.3	180.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	329.2	329.3	329.4	327.2	322.8	318.4	314.0	309.6
115°	379.6	381.0	382.5	383.5	384.1	384.7	385.2	385.8
117.5°	425.2	426.3	427.5	428.1	428.3	428.4	428.5	428.6
120°	455.1	456.3	457.4	458.0	458.0	458.0	458.0	458.0
122.5°	484.3	485.1	486.0	486.4	486.5	486.6	486.8	486.9
125°	525.5	525.8	526.1	526.4	526.7	527.0	527.3	527.5
127.5°	566.9	567.3	567.8	567.8	567.6	567.2	566.9	566.7
130°	591.7	592.3	592.9	593.1	592.7	592.5	592.2	591.8
132.5°	615.4	615.9	616.5	616.6	616.2	615.8	615.4	614.9
135°	651.1	651.6	652.0	652.0	651.6	651.1	650.7	650.2
137.5°	683.1	683.8	684.5	684.7	684.4	684.0	683.8	683.5
140°	703.3	703.8	704.5	704.6	704.3	704.0	703.7	703.4
142.5°	722.5	722.9	723.4	723.4	723.0	722.6	722.2	721.8
145°	749.3	749.6	749.8	750.0	750.0	750.0	750.0	750.0
147.5°	773.3	773.6	773.9	773.6	773.0	772.3	771.7	771.0
150°	788.0	788.3	788.5	788.5	788.1	787.6	787.2	786.8
152.5°	801.0	801.6	802.1	802.0	801.4	800.7	800.0	799.3
155°	819.0	819.7	820.6	820.5	819.6	818.7	817.8	816.9
157.5°	834.7	835.5	836.4	836.3	835.2	834.0	832.9	831.8
160°	843.6	844.5	845.3	845.3	844.3	843.3	842.2	841.2
162.5°	851.8	852.7	853.7	853.7	852.8	851.9	851.0	850.2
165°	862.6	863.7	864.9	865.0	864.0	862.9	861.9	860.9
167.5°	870.9	872.2	873.3	873.3	872.2	870.9	869.8	868.6
170°	875.7	876.9	878.1	878.1	876.9	875.7	874.5	873.3
172.5°	878.9	880.0	881.2	881.1	879.9	878.6	877.3	876.0
175°	882.6	883.7	884.7	884.6	883.4	882.3	881.1	879.9
177.5°	884.0	884.9	885.9	885.7	884.6	883.4	882.3	881.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2

(END OF REPORT)