

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: P332188-935

Luminaire Tested: **S123DIW-S1000D755U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332188-935
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-S1000D755U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6218.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

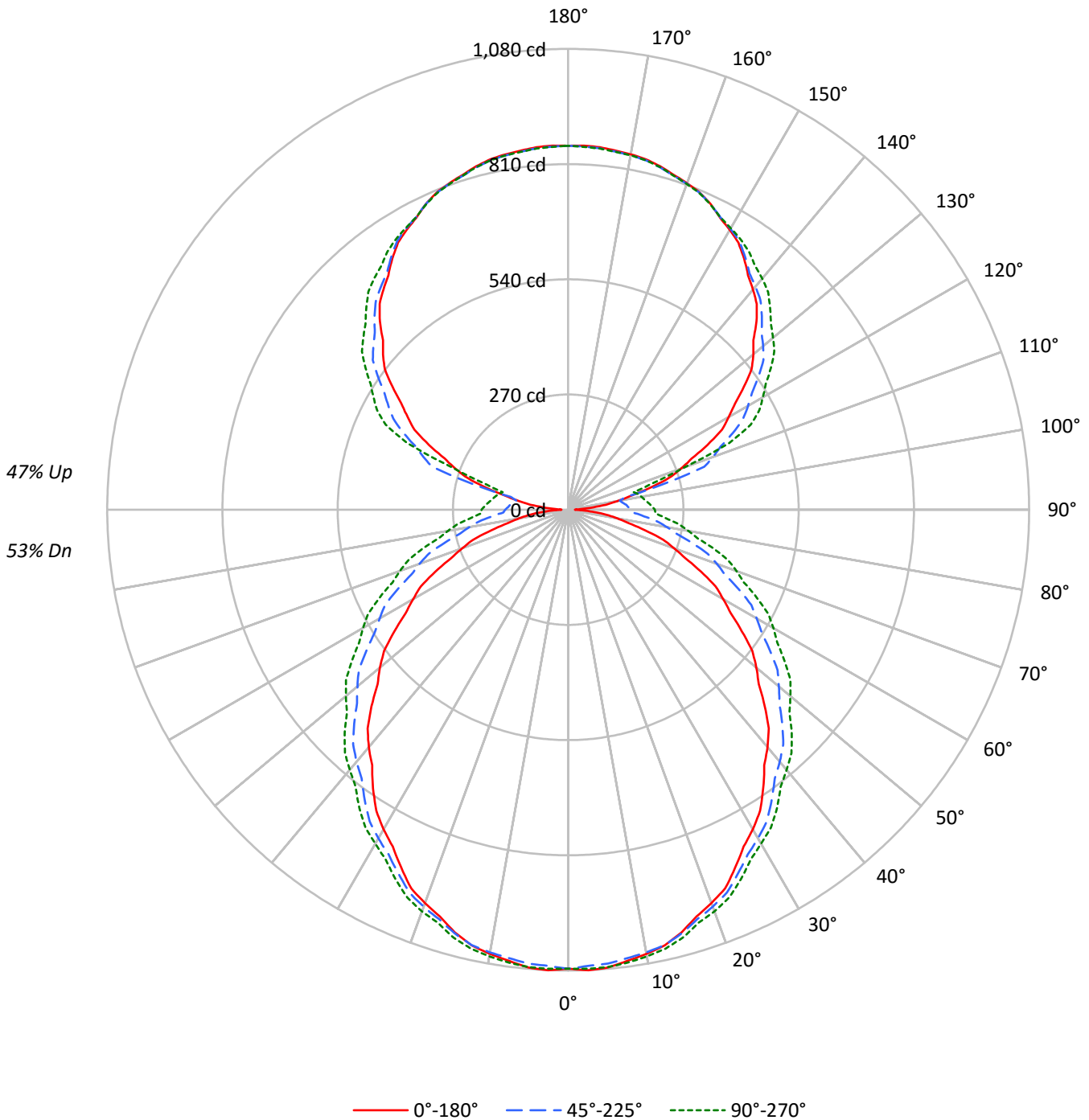
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	38	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	25
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	46	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	32	25	20	27	22	18	24	19	16	20	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.6
10°-20°	290.7	4.7
20°-30°	434.8	7.0
30°-40°	519.2	8.4
40°-50°	543.3	8.7
50°-60°	509.8	8.2
60°-70°	425.8	6.8
70°-80°	304.6	4.9
80°-90°	184.1	3.0
90°-100°	145.0	2.3
100°-110°	231.5	3.7
110°-120°	410.9	6.6
120°-130°	483.9	7.8
130°-140°	497.3	8.0
140°-150°	454.7	7.3
150°-160°	364.3	5.9
160°-170°	235.1	3.8
170°-180°	81.0	1.3
0°-30°	827.5	13.3
0°-40°	1346.7	21.7
0°-60°	2399.8	38.6
0°-90°	3314.3	53.3
90°-120°	787.4	12.7
90°-150°	2223.3	35.8
90°-180°	2904.0	46.7
0°-180°	6218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	80	148	188	203	12
95°	52	74	136	175	188	58
105°	198	231	227	152	159	210
115°	360	380	426	459	472	356
125°	503	510	544	569	580	449
135°	624	627	642	664	669	480
145°	718	722	723	733	738	449
155°	790	789	790	792	789	364
165°	833	831	831	835	831	235
175°	853	850	850	854	850	81
180°	853	853	853	853	853	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.5	57.8	71.0	84.3	97.7	111.4	125.0	138.7	152.3	161.3
90°	15.8	30.0	44.2	58.4	72.6	87.2	102.3	117.4	132.5	147.7	157.0
92.5°	26.1	37.2	48.3	59.4	70.5	83.3	97.8	112.3	126.7	141.1	150.7
95°	51.6	56.0	60.3	64.7	69.1	78.4	92.7	107.0	121.3	135.7	144.7
97.5°	89.2	95.7	102.3	108.9	115.5	119.8	121.8	123.9	126.0	127.9	136.9
100°	117.6	128.8	139.9	151.1	162.2	162.8	152.8	142.8	132.9	122.9	131.6
102.5°	150.2	159.6	169.2	178.7	188.2	186.9	174.7	162.5	150.2	138.0	141.9
105°	198.2	206.0	213.8	221.5	229.4	232.6	231.1	229.6	228.1	226.6	209.1
107.5°	247.7	254.3	260.8	267.3	273.9	283.5	296.1	308.8	321.4	334.0	322.7
110°	280.8	286.5	292.4	298.2	304.0	312.9	324.9	336.8	348.8	360.8	362.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.1	318.1	322.9	327.8	332.6	340.9	352.4	363.9	375.5	387.0	393.7
115°	360.1	364.0	368.0	372.0	375.9	383.2	393.8	404.5	415.2	425.8	433.4
117.5°	406.3	409.2	412.2	415.2	418.2	424.4	433.9	443.2	452.7	462.2	469.5
120°	434.3	436.8	439.4	442.0	444.5	450.3	459.3	468.4	477.3	486.4	493.5
122.5°	463.6	465.4	467.1	468.8	470.5	475.7	484.5	493.2	501.9	510.6	517.1
125°	502.7	503.9	505.1	506.2	507.3	511.9	520.0	528.1	536.2	544.3	550.1
127.5°	541.8	542.7	543.5	544.4	545.3	549.1	556.1	563.0	569.9	576.9	582.5
130°	566.1	567.0	567.8	568.7	569.6	572.9	578.7	584.4	590.2	596.0	601.5
132.5°	588.5	589.6	590.6	591.8	592.8	595.6	600.3	604.9	609.5	614.2	619.4
135°	623.9	624.5	625.1	625.6	626.2	628.2	631.6	635.1	638.5	642.0	647.0
137.5°	654.0	655.0	655.8	656.7	657.5	658.9	660.8	662.7	664.7	666.6	671.4
140°	673.4	674.2	675.1	676.0	676.7	677.8	679.0	680.2	681.4	682.6	687.1
142.5°	692.2	692.8	693.4	694.1	694.7	695.3	695.9	696.5	697.1	697.6	701.5
145°	718.4	719.1	719.8	720.6	721.3	721.8	722.0	722.4	722.6	722.9	725.3
147.5°	741.9	742.5	743.2	743.8	744.5	744.9	745.3	745.5	745.8	746.1	747.0
150°	757.2	757.5	757.9	758.4	758.8	759.1	759.5	759.7	760.0	760.3	760.6
152.5°	770.8	771.0	771.2	771.4	771.6	771.8	772.0	772.1	772.3	772.5	772.9
155°	790.1	789.8	789.5	789.2	788.9	788.8	789.0	789.2	789.3	789.5	790.1
157.5°	805.0	805.0	804.9	804.9	804.9	804.9	804.7	804.5	804.4	804.3	805.1
160°	814.2	814.0	813.9	813.7	813.6	813.5	813.3	813.1	813.0	812.9	813.7
162.5°	822.8	822.4	822.0	821.7	821.3	821.0	820.9	820.8	820.6	820.4	821.5
165°	833.2	832.8	832.3	831.9	831.5	831.2	831.0	830.9	830.8	830.6	831.7
167.5°	841.3	840.7	840.2	839.6	839.0	838.7	838.7	838.7	838.7	838.7	839.8
170°	845.8	845.2	844.7	844.1	843.6	843.3	843.3	843.3	843.3	843.3	844.4
172.5°	848.9	848.2	847.5	846.9	846.2	845.8	846.0	846.1	846.2	846.4	847.5
175°	852.8	852.0	851.4	850.7	850.0	849.7	849.8	850.0	850.2	850.2	851.3
177.5°	853.8	853.3	852.6	852.1	851.5	851.4	851.4	851.5	851.7	851.8	852.6
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	170.3	179.3	188.2	194.0	196.7	199.3	202.0	204.7
90°	166.4	175.9	185.3	191.5	194.3	197.3	200.1	203.0
92.5°	160.2	169.8	179.3	185.4	188.0	190.5	193.0	195.6
95°	153.8	162.8	171.9	177.7	180.3	183.0	185.5	188.1
97.5°	145.8	154.6	163.5	169.4	172.1	174.9	177.5	180.3
100°	140.3	148.9	157.6	163.2	166.0	168.8	171.5	174.3
102.5°	145.7	149.6	153.4	156.8	159.6	162.5	165.3	168.2
105°	191.4	173.7	156.1	148.6	151.3	153.9	156.5	159.1
107.5°	311.4	300.1	288.8	274.9	258.5	241.9	225.5	209.0
110°	365.0	367.1	369.2	361.3	343.2	325.2	307.1	289.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.4	407.0	413.6	415.9	414.1	412.1	410.1	408.1
115°	441.1	448.8	456.4	461.6	464.3	466.8	469.5	472.2
117.5°	476.8	484.1	491.5	496.2	498.3	500.5	502.7	504.8
120°	500.6	507.7	514.9	519.4	521.2	523.0	524.8	526.6
122.5°	523.7	530.3	536.8	541.1	543.0	545.0	546.9	548.9
125°	555.9	561.6	567.4	571.3	573.4	575.5	577.6	579.7
127.5°	588.1	593.7	599.3	602.9	604.3	605.8	607.3	608.8
130°	607.0	612.5	618.0	621.5	622.8	624.0	625.3	626.5
132.5°	624.7	630.0	635.3	638.7	640.1	641.4	642.8	644.2
135°	652.1	657.3	662.4	665.4	666.2	667.1	668.0	668.9
137.5°	676.1	681.0	685.8	688.6	689.7	690.7	691.7	692.8
140°	691.6	696.0	700.5	703.3	704.3	705.2	706.3	707.3
142.5°	705.5	709.5	713.3	715.8	716.7	717.6	718.5	719.5
145°	727.6	730.0	732.4	734.1	735.1	736.2	737.2	738.2
147.5°	748.0	748.8	749.8	750.4	750.6	750.9	751.2	751.5
150°	760.9	761.1	761.4	761.6	761.7	761.8	761.9	762.0
152.5°	773.4	774.0	774.5	774.5	774.0	773.4	772.8	772.3
155°	790.8	791.5	792.3	792.2	791.3	790.5	789.6	788.8
157.5°	806.0	806.8	807.6	807.5	806.4	805.3	804.3	803.1
160°	814.6	815.5	816.2	816.2	815.2	814.2	813.2	812.3
162.5°	822.4	823.4	824.3	824.3	823.5	822.6	821.7	820.9
165°	832.8	834.0	835.1	835.2	834.2	833.2	832.2	831.2
167.5°	840.9	842.1	843.3	843.3	842.1	840.9	839.8	838.7
170°	845.5	846.7	847.8	847.8	846.7	845.5	844.4	843.3
172.5°	848.6	849.7	850.8	850.8	849.5	848.3	847.1	845.8
175°	852.2	853.3	854.2	854.1	853.0	851.9	850.8	849.6
177.5°	853.6	854.5	855.4	855.2	854.1	853.0	851.9	850.8
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8

(END OF REPORT)