

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: P331570-940

Luminaire Tested: **S122DIW-S865D970U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331570-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D970U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6111.7 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

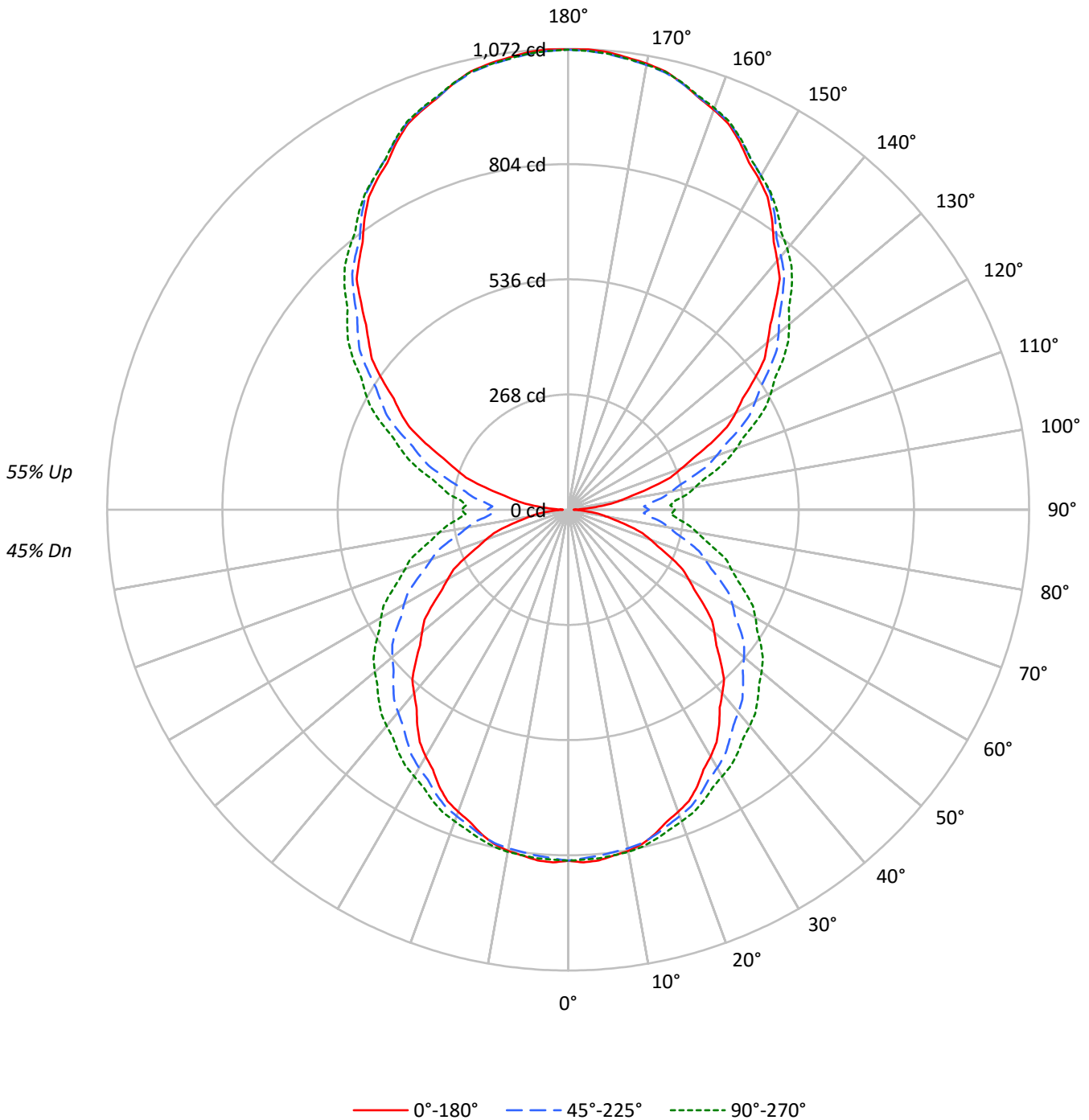
Input Watts (W): 61.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	95	90	86	82	87	83	79	76	69	66	63	56	54	52	44	42	41	35				
2	86	78	72	66	79	72	66	61	59	55	51	48	45	42	38	35	34	29				
3	78	68	60	54	71	63	56	50	52	47	43	42	38	35	33	30	28	24				
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20				
5	65	53	45	39	60	49	42	36	41	35	31	33	29	25	26	23	20	17				
6	60	48	39	33	55	44	36	31	37	31	27	30	25	22	24	20	18	15				
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13				
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	20	16	14	11				
9	48	35	28	23	44	33	26	21	28	22	18	23	18	15	18	15	13	10				
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.3
10°-20°	221.8	3.6
20°-30°	336.2	5.5
30°-40°	409.5	6.7
40°-50°	440.5	7.2
50°-60°	427.8	7.0
60°-70°	373.5	6.1
70°-80°	287.6	4.7
80°-90°	197.3	3.2
90°-100°	200.8	3.3
100°-110°	307.7	5.0
110°-120°	424.2	6.9
120°-130°	509.3	8.3
130°-140°	546.4	8.9
140°-150°	523.7	8.6
150°-160°	437.0	7.2
160°-170°	289.9	4.7
170°-180°	101.3	1.7
0°-30°	635.4	10.4
0°-40°	1044.8	17.1
0°-60°	1913.1	31.3
0°-90°	2771.5	45.3
90°-120°	932.6	15.3
90°-150°	2512.0	41.1
90°-180°	3340.0	54.6
0°-180°	6111.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	13	93	188	232	248	10
95°	56	122	194	237	251	61
105°	200	239	300	342	357	212
115°	366	386	436	469	481	362
125°	528	538	571	599	610	472
135°	681	691	705	728	736	526
145°	826	832	837	845	848	516
155°	944	946	949	953	951	434
165°	1027	1026	1026	1032	1028	289
175°	1068	1066	1064	1070	1065	101
180°	1070	1070	1070	1070	1070	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.4	39.5	55.6	71.9	88.0	105.0	122.6	140.4	158.0	175.8	186.4
90°	12.8	30.4	48.1	65.7	83.4	102.8	124.0	145.3	166.6	187.8	198.0
92.5°	26.9	42.9	58.9	74.8	90.9	107.5	124.7	141.9	159.2	176.4	186.8
95°	56.4	70.8	85.2	99.5	113.9	129.2	145.3	161.5	177.7	193.9	203.8
97.5°	94.1	106.8	119.6	132.3	145.1	159.4	175.3	191.3	207.1	223.1	232.8
100°	123.0	134.3	145.6	157.0	168.4	181.6	197.0	212.3	227.7	243.0	252.7
102.5°	152.4	162.6	172.7	182.9	193.1	205.7	220.8	235.9	250.9	266.0	275.6
105°	200.1	208.3	216.6	224.8	233.0	244.2	258.2	272.3	286.4	300.4	310.0
107.5°	249.3	256.4	263.3	270.3	277.3	287.3	300.4	313.5	326.6	339.7	348.7
110°	280.2	286.7	293.1	299.6	306.0	315.8	328.6	341.5	354.4	367.3	375.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	314.9	320.5	326.1	331.7	337.3	346.3	358.3	370.4	382.5	394.6	402.5
115°	366.0	370.1	374.2	378.3	382.4	390.1	401.6	413.0	424.5	435.9	443.5
117.5°	415.7	419.3	422.8	426.2	429.7	436.4	446.2	456.0	465.8	475.6	483.0
120°	449.7	452.4	455.0	457.7	460.4	466.1	475.0	483.9	492.8	501.8	509.2
122.5°	480.8	483.1	485.4	487.9	490.2	495.7	504.5	513.3	522.0	530.7	537.4
125°	528.0	529.9	531.6	533.4	535.2	540.0	547.9	555.7	563.5	571.3	577.8
127.5°	575.2	577.2	579.2	581.2	583.3	587.3	593.3	599.4	605.5	611.5	617.3
130°	604.8	607.2	609.5	611.8	614.2	617.9	623.0	628.1	633.3	638.4	644.3
132.5°	638.0	639.9	641.8	643.6	645.5	648.5	652.9	657.3	661.6	665.9	671.2
135°	681.3	683.5	685.7	687.9	690.1	692.7	695.7	698.7	701.8	704.8	710.2
137.5°	728.1	729.8	731.6	733.3	735.0	736.8	738.4	740.1	741.8	743.5	748.1
140°	756.3	757.8	759.3	760.9	762.4	763.9	765.4	767.0	768.6	770.1	774.3
142.5°	785.2	786.7	788.2	789.8	791.3	792.5	793.3	794.1	794.9	795.6	799.2
145°	825.5	826.9	828.3	829.7	831.2	832.4	833.7	834.8	836.1	837.2	839.0
147.5°	862.6	864.2	865.9	867.5	869.2	870.5	871.3	872.1	872.9	873.7	874.4
150°	887.8	889.0	890.2	891.4	892.6	893.7	894.5	895.3	896.1	896.9	897.4
152.5°	910.3	911.4	912.7	913.8	915.1	916.1	917.1	918.0	919.0	920.0	920.7
155°	943.8	944.4	945.0	945.7	946.2	946.8	947.4	948.1	948.6	949.2	950.2
157.5°	972.5	972.9	973.3	973.7	974.1	974.6	974.9	975.3	975.6	976.0	977.3
160°	989.9	990.2	990.7	991.0	991.5	991.8	992.0	992.2	992.4	992.6	993.8
162.5°	1005.8	1005.8	1005.9	1006.0	1006.1	1006.2	1006.5	1006.7	1006.8	1007.0	1008.4
165°	1026.9	1026.7	1026.5	1026.3	1026.1	1026.0	1026.0	1026.0	1026.0	1026.0	1027.4
167.5°	1044.6	1044.0	1043.4	1042.8	1042.2	1041.9	1041.9	1041.8	1041.8	1041.7	1043.1
170°	1054.0	1053.4	1052.8	1052.2	1051.6	1051.2	1051.0	1050.8	1050.6	1050.4	1051.8
172.5°	1060.5	1059.9	1059.3	1058.7	1058.1	1057.7	1057.5	1057.3	1057.1	1056.9	1058.3
175°	1068.4	1067.8	1067.3	1066.7	1066.0	1065.5	1065.1	1064.7	1064.3	1063.9	1065.3
177.5°	1071.7	1071.2	1070.8	1070.2	1069.8	1069.3	1069.1	1068.7	1068.4	1068.1	1069.1
180°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	197.1	207.7	218.4	225.4	228.8	232.2	235.6	239.0
90°	208.0	218.1	228.3	235.0	238.4	241.7	245.0	248.4
92.5°	197.2	207.6	217.9	224.7	227.9	231.1	234.3	237.6
95°	213.8	223.8	233.8	240.2	243.0	245.8	248.5	251.2
97.5°	242.5	252.3	262.0	268.4	271.4	274.6	277.6	280.6
100°	262.4	272.2	281.9	288.1	290.8	293.5	296.1	298.8
102.5°	285.3	295.0	304.7	310.9	313.5	316.3	319.0	321.6
105°	319.7	329.3	338.9	345.1	348.0	350.9	353.8	356.7
107.5°	357.7	366.7	375.7	381.2	383.2	385.1	387.1	389.1
110°	384.1	392.5	400.9	406.3	408.6	410.8	413.1	415.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	410.5	418.4	426.3	431.5	434.0	436.4	438.9	441.3
115°	451.3	459.0	466.6	471.6	473.9	476.2	478.5	480.8
117.5°	490.3	497.6	504.9	509.5	511.7	513.7	515.8	517.9
120°	516.5	523.9	531.2	536.1	538.3	540.6	543.0	545.2
122.5°	544.1	550.8	557.5	561.8	563.8	565.9	567.9	569.9
125°	584.2	590.8	597.3	601.6	603.8	605.9	608.1	610.3
127.5°	623.1	628.9	634.7	638.5	640.2	641.9	643.5	645.2
130°	650.2	656.1	662.0	665.7	666.9	668.2	669.5	670.8
132.5°	676.4	681.6	686.8	690.2	691.6	693.0	694.6	696.0
135°	715.5	720.8	726.1	729.5	731.0	732.5	734.1	735.6
137.5°	752.9	757.5	762.2	765.1	766.1	767.0	768.0	769.0
140°	778.5	782.7	786.9	789.3	790.1	790.9	791.8	792.5
142.5°	802.7	806.2	809.8	811.8	812.3	812.9	813.5	814.0
145°	840.8	842.6	844.4	845.5	846.1	846.5	847.0	847.6
147.5°	875.0	875.7	876.4	876.6	876.5	876.4	876.2	876.1
150°	898.0	898.7	899.3	899.3	898.7	898.0	897.4	896.9
152.5°	921.5	922.3	923.0	923.0	922.3	921.5	920.7	920.0
155°	951.3	952.3	953.2	953.4	952.9	952.3	951.6	951.0
157.5°	978.7	980.1	981.4	981.6	980.7	979.7	978.7	977.8
160°	995.0	996.2	997.4	997.6	996.8	996.0	995.2	994.4
162.5°	1009.8	1011.1	1012.5	1012.7	1011.7	1010.8	1009.8	1008.9
165°	1028.9	1030.2	1031.6	1031.8	1030.8	1029.8	1028.9	1027.8
167.5°	1044.6	1046.0	1047.3	1047.5	1046.5	1045.4	1044.4	1043.4
170°	1053.2	1054.6	1056.1	1056.1	1054.9	1053.7	1052.5	1051.3
172.5°	1059.7	1061.1	1062.5	1062.7	1061.4	1060.2	1059.0	1057.8
175°	1066.8	1068.2	1069.5	1069.7	1068.4	1067.3	1066.0	1064.9
177.5°	1070.1	1070.9	1071.9	1071.9	1070.9	1070.1	1069.1	1068.1
180°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2

(END OF REPORT)