

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: P331970-935

Luminaire Tested: **S123DIP-S775D585U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331970-935
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: S123DIP-S775D585U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4745.8 lumens
Efficiency: N/A
Efficacy: 117.8 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

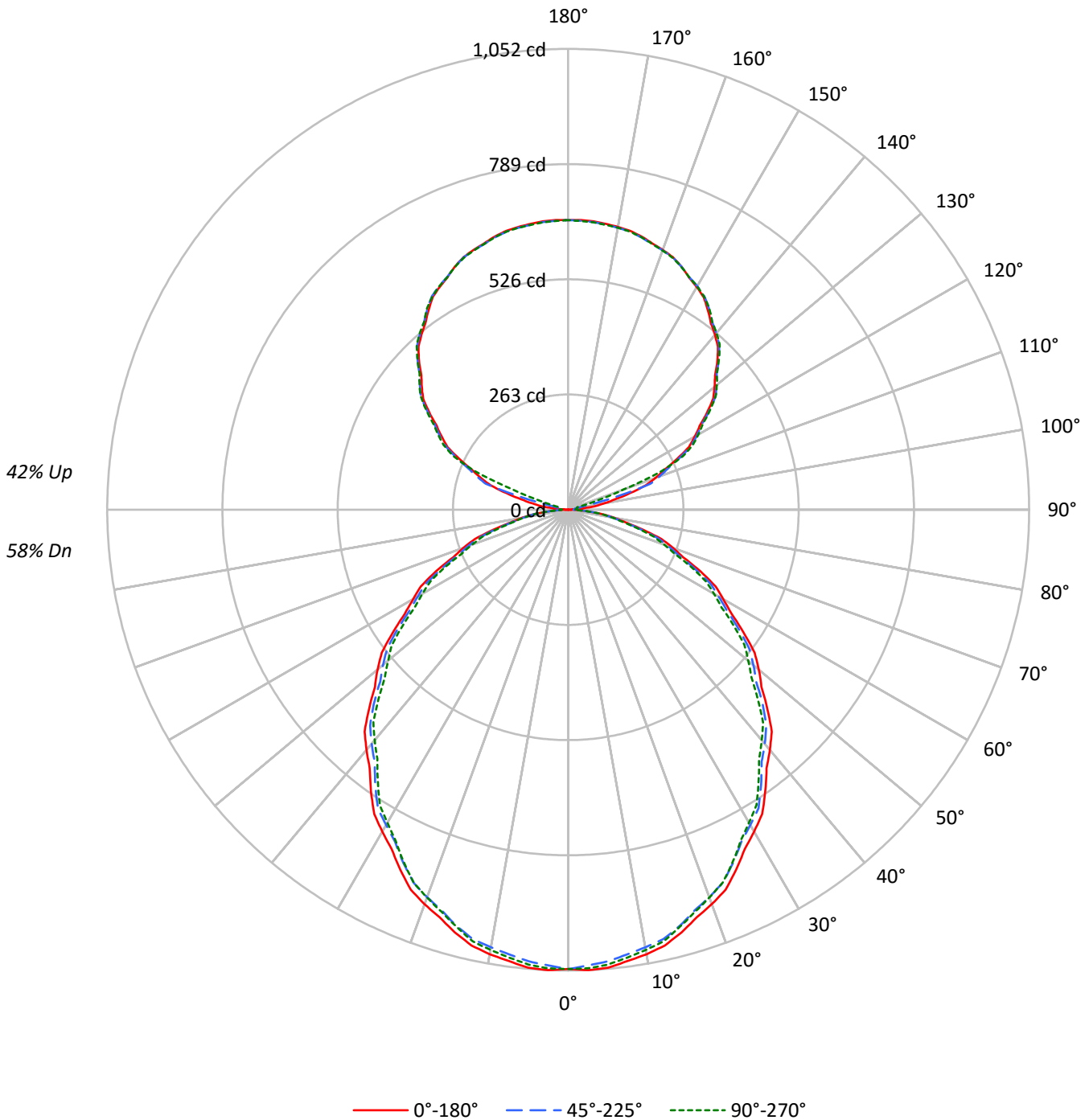
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	88	88	88	75	75	75	63	63	63	58
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	90	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	40
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	40	38	34
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	35	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	28	25
6	64	52	43	37	59	48	41	36	42	37	32	37	32	29	32	28	25	22
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11286	11286	11286
5°	11339	11182	11261
10°	11262	11086	11154
15°	11131	10961	10981
20°	10977	10781	10791
25°	10772	10568	10546
30°	10544	10331	10253
35°	10307	10081	9950
40°	10058	9805	9653
45°	9785	9552	9319
50°	9512	9239	8982
55°	9154	8916	8646
60°	8792	8540	8269
65°	8474	8130	7875
70°	8003	7660	7320
75°	7311	7049	6750
80°	6595	6316	6261
85°	5780	5570	5348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	2.1
10°-20°	278.9	5.9
20°-30°	411.9	8.7
30°-40°	481.2	10.1
40°-50°	483.8	10.2
50°-60°	425.0	9.0
60°-70°	316.6	6.7
70°-80°	180.4	3.8
80°-90°	53.6	1.1
90°-100°	24.0	0.5
100°-110°	114.5	2.4
110°-120°	275.1	5.8
120°-130°	350.3	7.4
130°-140°	374.3	7.9
140°-150°	350.0	7.4
150°-160°	282.3	5.9
160°-170°	182.2	3.8
170°-180°	62.8	1.3
0°-30°	789.6	16.6
0°-40°	1270.8	26.8
0°-60°	2179.5	45.9
0°-90°	2730.1	57.5
90°-120°	413.7	8.7
90°-150°	1488.3	31.4
90°-180°	2016.0	42.5
0°-180°	4745.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1049	1045	1035	1043	1042	99
15°	999	995	984	990	985	281
25°	907	901	890	890	888	418
35°	784	779	767	762	757	490
45°	643	639	628	617	612	496
55°	488	486	475	466	461	437
65°	333	328	319	312	309	328
75°	176	172	170	165	162	188
85°	47	45	45	43	43	51
90°	0	5	12	14	15	4
95°	30	11	15	18	19	37
105°	146	149	108	26	22	155
115°	274	278	282	287	289	271
125°	387	391	393	394	395	345
135°	482	485	487	488	487	371
145°	556	559	560	561	561	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1052.1	1051.5	1050.9	1050.2	1049.6	1048.4	1046.5	1044.8	1043.0	1041.3	1042.8
5°	1049.4	1048.4	1047.4	1046.4	1045.3	1043.8	1041.6	1039.4	1037.2	1034.9	1037.0
7.5°	1039.1	1038.1	1037.1	1036.1	1035.1	1033.5	1031.1	1028.9	1026.6	1024.3	1026.1
10°	1030.4	1029.4	1028.5	1027.4	1026.5	1024.7	1022.0	1019.4	1016.8	1014.3	1016.1
12.5°	1018.9	1018.0	1017.3	1016.4	1015.5	1013.9	1011.5	1009.0	1006.6	1004.1	1005.5
15°	998.9	998.1	997.3	996.5	995.7	994.0	991.4	988.8	986.2	983.6	985.2
17.5°	975.6	974.6	973.5	972.5	971.5	969.7	967.1	964.4	961.8	959.2	960.4
20°	958.3	957.1	956.0	954.8	953.6	951.6	949.0	946.4	943.8	941.2	942.0
22.5°	938.8	937.6	936.4	935.2	934.0	932.1	929.5	927.0	924.4	921.7	922.4
25°	907.0	905.8	904.6	903.4	902.2	900.3	897.6	895.0	892.4	889.8	890.0
27.5°	872.9	871.7	870.6	869.4	868.2	866.3	863.4	860.7	857.8	855.0	855.1
30°	848.3	847.3	846.4	845.3	844.3	842.4	839.6	836.8	834.1	831.2	831.2
32.5°	823.8	822.5	821.1	819.8	818.6	816.8	814.6	812.4	810.3	808.1	807.0
35°	784.4	783.2	782.0	780.8	779.5	777.7	775.0	772.4	769.8	767.2	766.0
37.5°	743.9	742.4	740.9	739.3	737.9	735.8	733.1	730.5	727.8	725.2	723.8
40°	715.8	714.6	713.4	712.2	711.0	709.0	706.2	703.4	700.6	697.8	696.2
42.5°	687.7	686.3	684.9	683.6	682.3	680.2	677.3	674.5	671.8	668.9	667.4
45°	642.8	642.0	641.2	640.4	639.6	637.9	635.2	632.7	630.1	627.5	625.1
47.5°	598.2	597.1	595.9	594.8	593.6	591.8	589.4	586.9	584.4	582.0	579.6
50°	568.0	567.0	565.9	565.0	564.0	562.1	559.6	557.0	554.3	551.7	549.6
52.5°	536.2	535.5	534.9	534.2	533.5	531.8	529.0	526.2	523.5	520.7	518.8
55°	487.8	487.5	487.3	487.2	486.9	485.5	482.9	480.4	477.7	475.1	472.9
57.5°	441.6	440.9	440.2	439.5	438.9	437.5	435.4	433.3	431.2	429.1	427.1
60°	408.4	408.2	408.0	407.8	407.6	406.3	403.9	401.5	399.1	396.7	394.9
62.5°	378.8	378.3	377.8	377.3	376.8	375.3	372.9	370.5	368.1	365.7	363.9
65°	332.7	331.7	330.6	329.7	328.6	327.2	325.1	323.1	321.2	319.2	317.5
67.5°	283.8	282.9	282.1	281.1	280.3	279.1	277.6	276.0	274.5	273.0	271.6
70°	254.3	253.0	251.8	250.6	249.4	248.2	247.0	245.8	244.6	243.4	242.0
72.5°	223.3	222.3	221.4	220.6	219.7	218.6	217.2	215.9	214.5	213.1	211.9
75°	175.8	175.0	174.2	173.4	172.6	171.9	171.3	170.7	170.0	169.5	168.5
77.5°	133.8	133.4	132.9	132.5	132.0	131.5	130.7	130.0	129.3	128.5	127.9
80°	106.4	105.8	105.2	104.6	104.0	103.5	103.1	102.7	102.3	101.9	101.7
82.5°	79.7	79.6	79.5	79.3	79.2	79.1	79.0	79.0	78.9	78.8	78.4
85°	46.8	46.5	46.1	45.7	45.3	45.1	45.1	45.1	45.1	45.1	44.7
87.5°	18.9	18.6	18.3	18.1	17.8	17.7	17.8	18.0	18.1	18.3	18.2
90°	0.5	1.5	2.7	3.8	4.8	6.1	7.5	9.0	10.3	11.8	12.2
92.5°	9.1	8.9	8.5	8.2	7.9	8.3	9.4	10.4	11.5	12.6	13.3
95°	30.0	25.5	21.0	16.5	12.1	10.4	11.6	12.8	14.0	15.2	16.0
97.5°	60.2	58.2	56.2	54.2	52.2	47.3	39.3	31.5	23.7	15.8	16.7
100°	83.0	85.2	87.4	89.5	91.7	84.3	67.2	50.3	33.2	16.2	17.0
102.5°	108.9	110.5	112.1	113.7	115.2	106.7	88.1	69.5	50.9	32.3	29.6
105°	146.4	147.6	148.8	149.9	151.1	146.8	137.0	127.2	117.4	107.5	88.3
107.5°	185.8	186.8	187.8	188.7	189.7	190.9	192.4	194.0	195.5	197.1	183.0
110°	212.2	213.0	213.9	214.7	215.6	216.7	217.8	219.0	220.2	221.4	217.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	237.3	238.1	238.8	239.6	240.4	241.4	242.6	243.8	245.0	246.2	246.3
115°	274.5	275.2	275.8	276.5	277.2	277.9	279.0	279.9	280.9	281.9	283.0
117.5°	310.6	311.3	312.2	313.0	313.7	314.4	315.0	315.5	316.0	316.4	317.4
120°	332.9	333.9	334.9	335.9	336.9	337.5	337.9	338.2	338.5	338.8	339.8
122.5°	355.8	356.5	357.3	358.2	359.0	359.6	360.0	360.4	360.8	361.3	361.9
125°	386.9	387.9	388.7	389.6	390.5	391.2	391.6	392.0	392.4	392.9	393.0
127.5°	417.2	418.1	419.0	419.8	420.7	421.4	421.9	422.5	423.0	423.5	423.9
130°	436.1	437.0	437.8	438.7	439.5	440.2	440.7	441.1	441.5	442.0	442.4
132.5°	454.2	455.0	455.9	456.8	457.6	458.2	458.6	458.9	459.3	459.7	460.1
135°	481.7	482.4	483.0	483.7	484.4	484.9	485.3	485.8	486.2	486.6	487.0
137.5°	505.3	506.2	507.0	507.8	508.6	509.2	509.4	509.6	509.9	510.1	510.7
140°	521.0	521.7	522.4	523.0	523.7	524.2	524.4	524.8	525.1	525.5	525.9
142.5°	535.5	536.2	536.9	537.5	538.2	538.6	539.0	539.3	539.7	540.0	540.4
145°	555.9	556.6	557.4	558.2	559.0	559.5	559.6	559.9	560.1	560.3	560.5
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	578.5
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1044.5	1046.1	1047.7	1048.4	1048.3	1048.1	1047.9	1047.8
5°	1039.0	1040.9	1043.0	1043.8	1043.4	1043.0	1042.6	1042.2
7.5°	1027.9	1029.8	1031.6	1032.3	1032.1	1031.8	1031.6	1031.4
10°	1017.9	1019.6	1021.4	1022.2	1021.7	1021.3	1021.0	1020.5
12.5°	1006.8	1008.1	1009.4	1010.0	1009.7	1009.4	1009.3	1009.0
15°	986.8	988.3	990.0	990.2	988.9	987.7	986.6	985.4
17.5°	961.5	962.6	963.7	964.1	963.6	963.2	962.8	962.3
20°	942.8	943.6	944.4	944.5	943.9	943.3	942.7	942.1
22.5°	923.0	923.7	924.3	924.2	923.5	922.7	922.0	921.2
25°	890.2	890.4	890.6	890.4	889.8	889.2	888.6	888.0
27.5°	855.3	855.5	855.7	855.3	854.6	853.9	853.1	852.3
30°	831.2	831.2	831.2	830.5	829.1	827.7	826.3	824.9
32.5°	805.9	804.8	803.7	802.7	801.9	801.2	800.4	799.7
35°	764.8	763.6	762.4	761.3	760.3	759.3	758.3	757.2
37.5°	722.3	720.8	719.5	718.4	717.7	717.1	716.4	715.8
40°	694.6	693.0	691.4	690.2	689.4	688.5	687.8	687.0
42.5°	665.7	664.1	662.5	661.3	660.6	659.7	658.9	658.1
45°	622.7	620.3	617.9	616.1	615.2	614.2	613.1	612.2
47.5°	577.3	575.0	572.6	570.9	570.1	569.2	568.3	567.4
50°	547.3	545.1	542.9	541.2	540.0	538.8	537.6	536.4
52.5°	516.9	515.1	513.2	511.7	510.5	509.3	508.1	506.9
55°	470.7	468.5	466.3	464.7	463.6	462.7	461.7	460.7
57.5°	425.2	423.3	421.3	419.7	418.5	417.4	416.2	415.1
60°	393.0	391.2	389.4	388.1	387.0	386.1	385.0	384.1
62.5°	362.1	360.2	358.4	357.2	356.5	355.9	355.2	354.5
65°	315.9	314.4	312.7	311.6	311.0	310.4	309.8	309.2
67.5°	270.2	268.8	267.3	266.2	265.4	264.6	263.7	262.9
70°	240.6	239.2	237.8	236.6	235.6	234.6	233.6	232.6
72.5°	210.6	209.4	208.2	207.2	206.7	206.2	205.7	205.2
75°	167.5	166.5	165.5	164.7	164.1	163.5	162.9	162.3
77.5°	127.2	126.5	125.8	125.5	125.5	125.5	125.5	125.5
80°	101.5	101.3	101.1	101.0	101.0	101.0	101.0	101.0
82.5°	78.1	77.7	77.3	77.1	77.0	76.8	76.6	76.5
85°	44.3	43.9	43.5	43.3	43.3	43.3	43.3	43.3
87.5°	18.1	18.0	17.9	17.9	18.0	18.0	18.1	18.1
90°	12.7	13.1	13.5	13.9	14.1	14.3	14.6	14.7
92.5°	13.9	14.6	15.3	15.8	15.9	16.0	16.2	16.3
95°	16.8	17.5	18.3	18.7	18.7	18.7	18.7	18.7
97.5°	17.6	18.4	19.3	19.8	19.9	20.0	20.1	20.2
100°	17.9	18.9	19.7	20.1	20.3	20.4	20.5	20.7
102.5°	26.9	24.2	21.5	20.2	20.4	20.7	20.8	21.0
105°	68.9	49.6	30.3	20.8	20.9	21.2	21.4	21.6
107.5°	168.8	154.6	140.4	126.1	111.5	96.9	82.4	67.8
110°	214.3	210.7	207.1	197.4	181.8	166.3	150.7	135.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.3	246.4	246.5	244.9	241.6	238.2	235.0	231.7
115°	284.0	285.2	286.3	287.0	287.4	287.9	288.3	288.8
117.5°	318.2	319.1	319.9	320.5	320.6	320.6	320.7	320.8
120°	340.6	341.5	342.3	342.8	342.8	342.8	342.8	342.8
122.5°	362.5	363.1	363.7	364.0	364.1	364.2	364.3	364.4
125°	393.3	393.5	393.7	394.0	394.2	394.4	394.6	394.9
127.5°	424.2	424.6	424.9	425.0	424.7	424.6	424.3	424.1
130°	442.8	443.2	443.7	443.8	443.6	443.4	443.2	443.0
132.5°	460.5	461.0	461.4	461.5	461.2	460.8	460.5	460.2
135°	487.3	487.7	487.9	487.9	487.7	487.3	487.0	486.6
137.5°	511.2	511.7	512.2	512.4	512.1	512.0	511.7	511.5
140°	526.3	526.8	527.2	527.3	527.1	526.8	526.7	526.4
142.5°	540.7	541.1	541.4	541.4	541.1	540.8	540.4	540.2
145°	560.8	560.9	561.2	561.3	561.3	561.3	561.3	561.3
147.5°	578.8	578.9	579.2	579.0	578.5	578.0	577.6	577.0
150°	589.7	590.0	590.1	590.1	589.8	589.4	589.1	588.8
152.5°	599.5	599.9	600.3	600.2	599.8	599.3	598.7	598.2
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)