

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: P331309-830

Luminaire Tested: **SA2XXDIP-C485D725U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331309-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D725U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

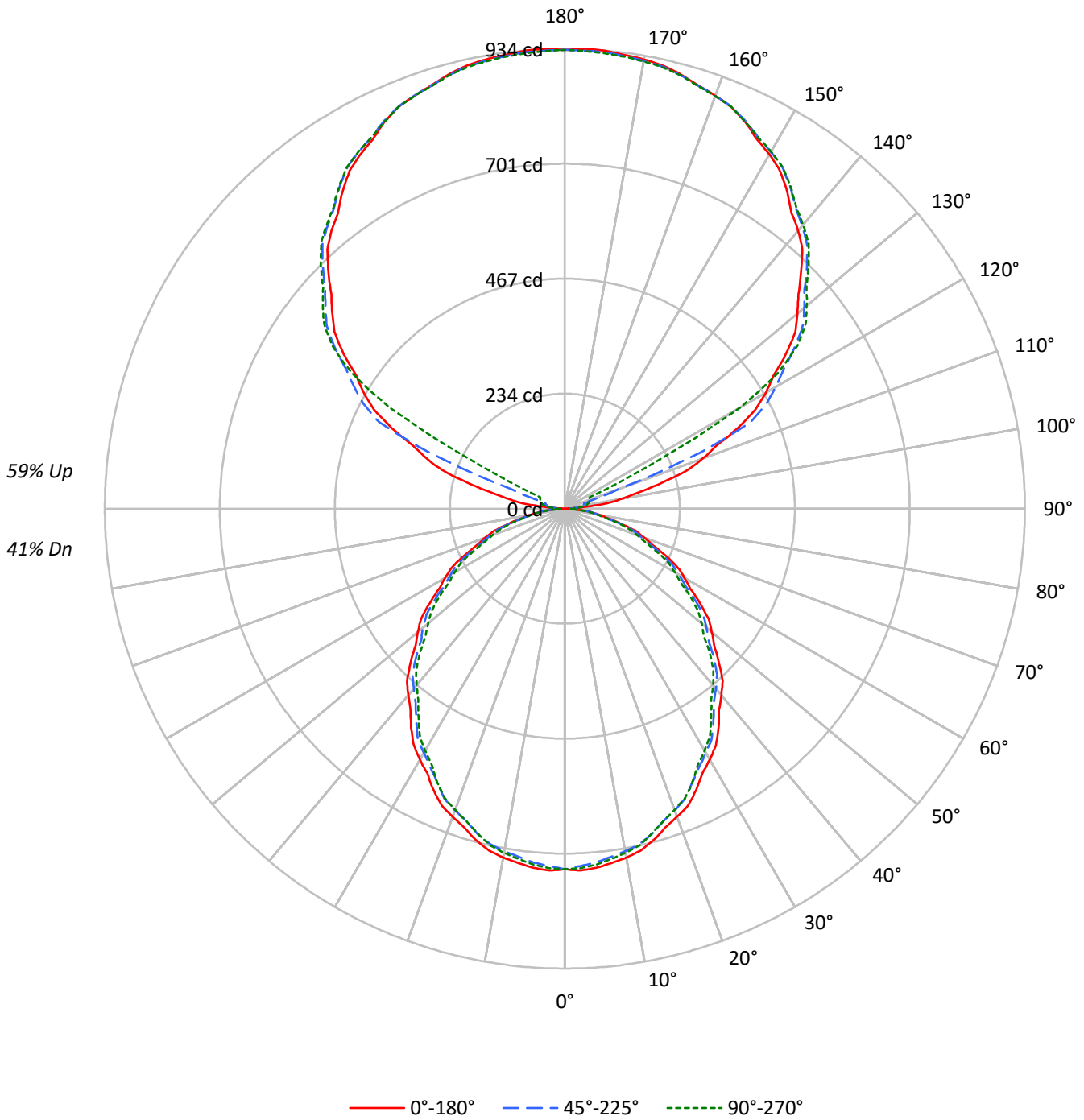
Lumens per Lamp: N/A
Luminaire Lumens: 4595.4 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 38.4
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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	47	47	47	47	47	47	41	
1	96	91	88	84	87	83	80	77	68	66	64	55	53	52	42	41	40	40	40	40	34	
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	34	34	34	29	
3	79	70	63	57	72	64	58	53	53	48	45	42	39	36	33	31	29	29	29	29	24	
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	25	25	25	21	
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	24	22	22	22	22	18	
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	19	19	19	16	
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	17	17	17	14	
8	53	40	33	28	48	37	30	26	31	26	22	25	21	19	20	17	15	15	15	15	13	
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14	14	14	14	11	
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	14	12	12	12	12	10	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	1.5
10°-20°	193.7	4.2
20°-30°	284.7	6.2
30°-40°	330.7	7.2
40°-50°	330.4	7.2
50°-60°	288.1	6.3
60°-70°	213.0	4.6
70°-80°	120.7	2.6
80°-90°	34.7	0.8
90°-100°	31.1	0.7
100°-110°	114.0	2.5
110°-120°	304.7	6.6
120°-130°	502.9	10.9
130°-140°	534.9	11.6
140°-150°	497.1	10.8
150°-160°	399.7	8.7
160°-170°	257.6	5.6
170°-180°	88.7	1.9
0°-30°	547.2	11.9
0°-40°	878.0	19.1
0°-60°	1496.4	32.6
0°-90°	1864.8	40.6
90°-120°	449.7	9.8
90°-150°	1984.7	43.2
90°-180°	2731.0	59.4
0°-180°	4595.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	1	8	14	17	18	3
95°	44	23	26	29	29	54
105°	205	214	41	48	51	219
115°	388	399	416	118	55	382
125°	548	557	570	574	576	489
135°	678	689	695	701	700	524
145°	787	787	798	802	799	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.3	10.4	10.5	10.6	10.6	10.7	10.7	10.6	10.6	10.6	10.4
90°	0.7	2.4	4.0	5.7	7.3	8.7	9.9	11.1	12.3	13.5	14.2
92.5°	13.6	13.5	13.3	13.2	13.0	13.3	13.9	14.4	15.1	15.6	16.0
95°	43.8	38.9	33.9	29.0	24.0	22.1	23.2	24.2	25.3	26.3	27.1
97.5°	87.0	73.0	59.1	45.1	31.2	25.4	27.9	30.3	32.8	35.2	35.8
100°	119.3	98.8	78.3	57.8	37.2	28.3	30.8	33.4	35.9	38.5	39.6
102.5°	155.0	150.6	146.3	141.9	137.5	124.7	103.4	82.1	60.8	39.5	41.1
105°	205.0	209.4	214.0	218.5	222.9	204.7	163.8	122.9	82.0	41.1	42.8
107.5°	262.0	265.6	269.3	272.9	276.5	253.8	204.7	155.7	106.6	57.6	55.9
110°	298.7	301.8	305.0	308.1	311.2	291.2	247.9	204.6	161.3	118.0	103.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	333.2	336.0	338.7	341.6	344.3	340.4	329.7	319.0	308.3	297.6	243.0
115°	387.7	390.2	392.8	395.3	397.8	401.1	404.7	408.5	412.3	416.0	346.7
117.5°	436.4	439.2	442.1	444.9	447.7	450.4	453.1	455.6	458.2	460.8	444.0
120°	471.9	474.2	476.5	478.7	481.0	483.4	486.2	488.8	491.5	494.2	496.0
122.5°	502.2	504.5	506.9	509.3	511.6	514.3	517.3	520.2	523.1	526.0	527.1
125°	548.2	550.1	552.0	554.0	555.9	558.4	561.2	564.0	566.8	569.8	570.8
127.5°	589.8	592.0	594.2	596.3	598.4	600.6	602.8	604.8	607.0	609.1	610.7
130°	616.2	618.7	621.0	623.4	625.8	627.8	629.5	631.1	632.8	634.4	636.1
132.5°	643.2	645.3	647.3	649.3	651.4	653.2	654.9	656.5	658.2	659.8	661.2
135°	678.3	680.7	683.1	685.5	687.9	689.8	691.1	692.4	693.8	695.1	696.6
137.5°	713.8	715.4	717.1	718.8	720.5	722.1	723.6	725.1	726.6	728.2	729.6
140°	737.0	738.1	739.3	740.6	741.7	743.2	744.8	746.5	748.1	749.8	751.1
142.5°	756.4	757.4	758.6	759.6	760.6	762.1	764.0	765.9	767.8	769.7	770.9
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	798.7
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	822.9
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	10.1	9.9	9.7	9.5	9.4	9.4	9.3	9.2
90°	15.0	15.7	16.5	17.0	17.3	17.6	17.9	18.2
92.5°	16.4	16.8	17.2	17.5	17.6	17.8	18.0	18.2
95°	27.8	28.6	29.3	29.6	29.4	29.3	29.1	29.0
97.5°	36.4	36.9	37.6	38.0	38.2	38.4	38.5	38.7
100°	40.8	42.0	43.3	44.0	44.3	44.6	44.9	45.1
102.5°	42.6	44.2	45.7	46.8	47.1	47.6	48.0	48.4
105°	44.4	46.1	47.7	48.8	49.5	50.0	50.6	51.3
107.5°	54.2	52.5	50.9	50.3	50.9	51.6	52.1	52.7
110°	88.0	73.0	58.1	50.9	51.5	52.0	52.7	53.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	188.3	133.7	79.0	51.8	52.4	52.9	53.3	53.8
115°	277.3	207.9	138.6	98.4	87.7	76.8	66.1	55.3
117.5°	427.3	410.4	393.6	367.5	332.1	296.6	261.2	225.7
120°	497.9	499.6	501.4	492.2	471.9	451.8	431.5	411.3
122.5°	528.2	529.2	530.4	529.0	525.0	521.0	517.2	513.2
125°	571.8	572.9	573.9	574.7	575.1	575.6	576.0	576.5
127.5°	612.2	613.7	615.2	616.0	616.1	616.2	616.3	616.4
130°	637.7	639.4	641.0	641.8	641.7	641.5	641.3	641.2
132.5°	662.6	664.0	665.4	666.1	665.9	665.8	665.6	665.4
135°	698.1	699.6	701.2	701.7	701.4	701.2	700.8	700.5
137.5°	731.1	732.5	734.1	734.5	734.1	733.5	733.0	732.4
140°	752.4	753.8	755.2	755.4	754.7	753.9	753.2	752.4
142.5°	772.1	773.4	774.6	774.9	774.1	773.4	772.6	771.8
145°	799.7	800.8	801.8	801.9	801.3	800.5	799.7	799.0
147.5°	823.7	824.5	825.3	825.4	824.7	824.1	823.5	822.8
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

(END OF REPORT)