

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: P331300-840

Luminaire Tested: **SA2XXDIP-C485D530U840-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331300-840
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-C485D530U840-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

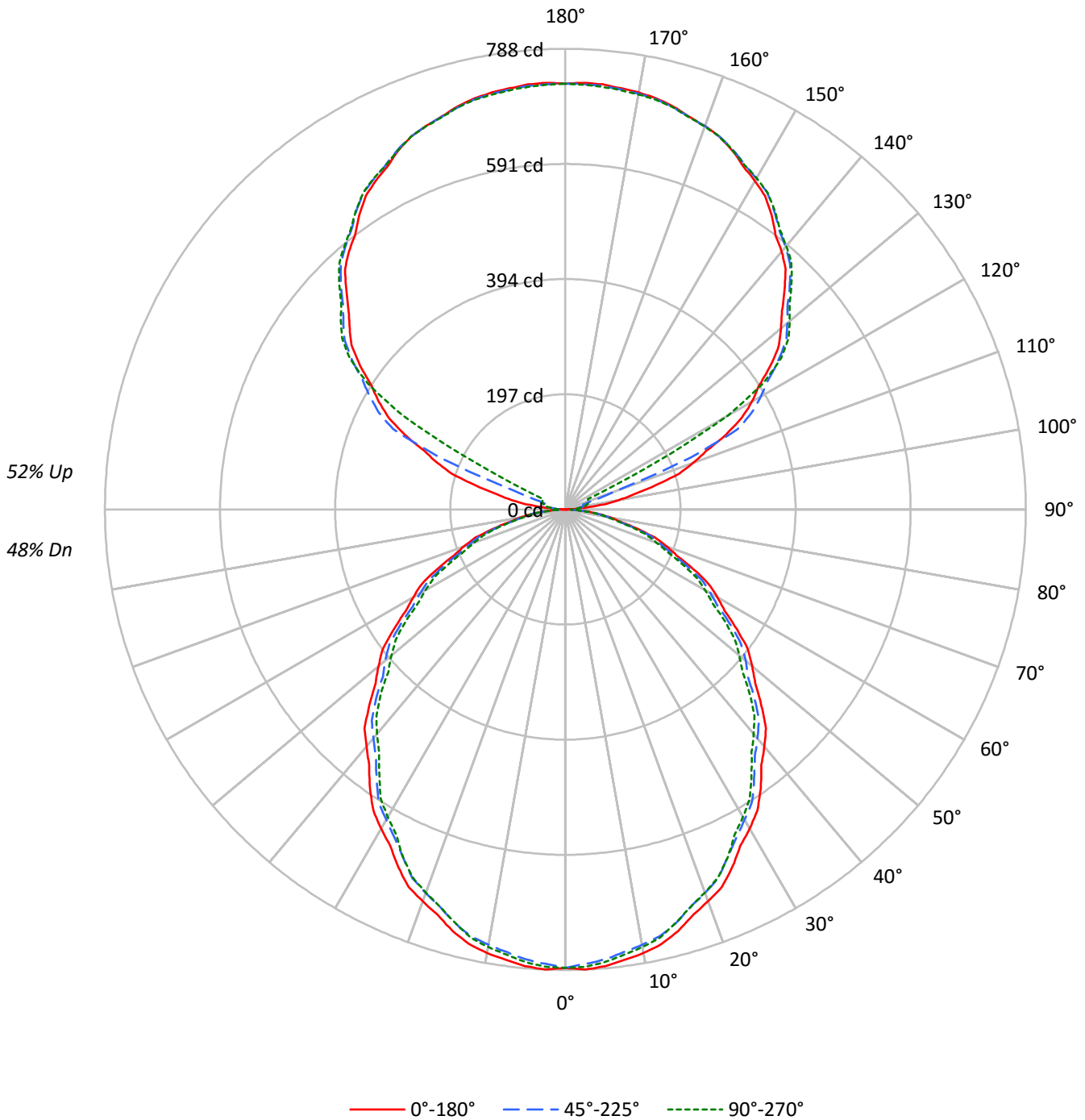
Lumens per Lamp: N/A
Luminaire Lumens: 4131.8 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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							
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10				
RCR																								
0	107	107	107	107	98	98	98	98	82	82	82	82	68	68	68	68	55	55	55	55	48	48	48	48
1	97	93	89	86	90	86	82	79	72	70	68	68	60	58	57	57	48	47	46	46	41	41	41	41
2	89	81	75	70	81	75	70	65	63	59	56	56	52	50	47	47	42	41	39	39	34	34	34	34
3	81	71	64	58	74	66	60	54	56	51	47	47	46	43	40	40	38	35	33	33	29	29	29	29
4	74	63	55	49	68	59	52	46	50	44	40	40	41	37	34	34	34	31	28	28	25	25	25	25
5	68	56	48	42	62	52	45	40	44	39	35	35	37	33	30	30	30	27	25	25	22	22	22	22
6	63	51	42	37	57	47	40	34	40	34	30	30	34	29	26	26	27	24	22	22	19	19	19	19
7	58	46	38	32	53	42	35	30	36	31	27	27	30	26	23	23	25	22	19	19	17	17	17	17
8	54	41	34	28	49	39	32	27	33	28	24	24	28	24	20	20	23	20	17	17	15	15	15	15
9	50	38	30	25	46	35	28	24	30	25	21	21	26	21	18	18	21	18	16	16	14	14	14	14
10	47	35	27	23	43	32	26	21	28	23	19	19	24	20	17	17	20	17	14	14	12	12	12	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12665	12665	12665
5°	12713	12530	12603
10°	12637	12403	12463
15°	12481	12242	12227
20°	12259	12000	11986
25°	12039	11703	11703
30°	11757	11432	11332
35°	11491	11105	10941
40°	11160	10779	10570
45°	10832	10453	10195
50°	10477	10115	9756
55°	10106	9723	9362
60°	9691	9255	8913
65°	9249	8787	8382
70°	8686	8224	7832
75°	7904	7573	7392
80°	7011	6797	6453
85°	5724	5446	4891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	1.8
10°-20°	207.5	5.0
20°-30°	305.0	7.4
30°-40°	354.3	8.6
40°-50°	354.0	8.6
50°-60°	308.7	7.5
60°-70°	228.2	5.5
70°-80°	129.3	3.1
80°-90°	36.5	0.9
90°-100°	24.3	0.6
100°-110°	89.1	2.2
110°-120°	238.2	5.8
120°-130°	393.1	9.5
130°-140°	418.1	10.1
140°-150°	388.6	9.4
150°-160°	312.4	7.6
160°-170°	201.3	4.9
170°-180°	69.3	1.7
0°-30°	586.3	14.2
0°-40°	940.7	22.8
0°-60°	1603.3	38.8
0°-90°	1997.3	48.3
90°-120°	351.5	8.5
90°-150°	1551.4	37.5
90°-180°	2134.0	51.6
0°-180°	4131.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	784	781	773	779	778	74
15°	747	742	732	735	732	210
25°	676	669	657	658	657	311
35°	583	575	563	559	555	364
45°	474	469	458	450	446	366
55°	359	354	345	337	333	321
65°	242	237	230	223	219	239
75°	127	125	121	117	118	135
85°	31	30	29	27	26	35
90°	0	6	10	13	14	3
95°	34	18	21	23	23	42
105°	160	167	32	38	40	171
115°	303	312	325	93	43	298
125°	428	436	445	449	451	382
135°	530	538	543	548	548	409
145°	615	615	624	627	624	385
155°	677	673	679	682	678	312
165°	714	711	712	715	712	202
175°	730	726	727	730	726	69
180°	728	728	728	728	728	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	788.0	787.3	786.7	786.0	785.3	784.3	782.7	781.3	779.8	778.3	779.7
5°	784.4	783.7	783.0	782.3	781.7	780.4	778.6	776.8	774.9	773.1	774.4
7.5°	777.4	776.4	775.4	774.3	773.3	771.8	769.9	768.1	766.2	764.3	765.7
10°	770.8	769.6	768.4	767.3	766.1	764.5	762.4	760.5	758.5	756.5	757.8
12.5°	761.7	760.7	759.6	758.6	757.6	756.1	754.1	752.0	750.0	748.0	748.9
15°	746.7	745.7	744.7	743.7	742.7	741.0	738.8	736.7	734.5	732.4	733.0
17.5°	727.3	726.4	725.4	724.4	723.4	721.8	719.5	717.3	715.1	712.9	713.7
20°	713.5	712.5	711.4	710.4	709.4	707.8	705.4	703.1	700.7	698.4	698.9
22.5°	699.6	698.2	696.8	695.4	694.0	692.2	689.9	687.7	685.5	683.3	683.4
25°	675.8	674.4	673.1	671.8	670.4	668.3	665.5	662.6	659.7	656.9	657.2
27.5°	648.6	647.4	646.2	645.0	643.8	642.1	639.9	637.5	635.3	633.1	632.6
30°	630.6	629.1	627.8	626.5	625.1	623.2	620.7	618.2	615.7	613.2	612.7
32.5°	611.2	610.2	609.0	607.9	606.9	605.0	602.4	599.8	597.1	594.5	593.6
35°	583.0	581.3	579.7	577.9	576.3	574.1	571.5	568.8	566.0	563.4	562.4
37.5°	551.2	549.7	548.3	546.7	545.2	543.2	540.5	537.9	535.1	532.5	531.2
40°	529.5	528.1	526.7	525.4	524.1	522.1	519.4	516.7	514.0	511.4	509.9
42.5°	508.4	507.0	505.6	504.3	503.0	501.0	498.3	495.6	492.9	490.2	488.6
45°	474.4	473.2	472.0	470.9	469.7	467.9	465.3	462.8	460.3	457.8	456.0
47.5°	440.6	439.5	438.4	437.3	436.2	434.3	431.7	429.1	426.5	423.8	421.9
50°	417.1	416.3	415.4	414.5	413.7	412.1	409.8	407.5	405.1	402.7	400.4
52.5°	394.2	393.0	391.9	390.8	389.7	388.1	385.9	383.6	381.4	379.2	377.3
55°	359.0	358.0	357.0	356.0	355.0	353.5	351.4	349.4	347.4	345.4	343.5
57.5°	323.7	322.9	322.0	321.3	320.5	319.0	316.8	314.6	312.4	310.1	308.1
60°	300.1	299.5	298.8	298.1	297.5	296.0	293.7	291.2	288.9	286.6	284.8
62.5°	277.2	276.2	275.1	274.0	273.0	271.6	269.7	267.9	266.1	264.3	262.6
65°	242.1	241.1	240.0	239.0	238.1	236.7	235.1	233.4	231.7	230.0	228.5
67.5°	206.3	205.5	204.7	203.9	203.1	202.0	200.5	198.9	197.4	195.9	194.8
70°	184.0	183.4	182.7	182.0	181.4	180.3	178.7	177.2	175.7	174.2	173.1
72.5°	161.1	160.5	159.8	159.1	158.4	157.6	156.6	155.6	154.7	153.7	152.5
75°	126.7	126.3	126.0	125.7	125.3	124.8	123.9	123.1	122.3	121.4	120.4
77.5°	95.9	95.3	94.8	94.2	93.6	93.2	92.9	92.5	92.2	91.9	91.4
80°	75.4	75.2	75.1	74.9	74.7	74.5	74.1	73.8	73.5	73.1	72.6
82.5°	56.1	56.0	56.0	56.0	55.9	55.8	55.6	55.4	55.2	55.0	54.4
85°	30.9	30.8	30.6	30.4	30.3	30.1	29.9	29.8	29.6	29.4	28.9
87.5°	11.0	10.9	10.9	10.9	10.9	10.9	10.8	10.7	10.6	10.6	10.3
90°	0.5	1.8	3.1	4.3	5.7	6.8	7.8	8.7	9.6	10.5	11.1
92.5°	10.6	10.5	10.4	10.3	10.2	10.4	10.8	11.3	11.7	12.2	12.5
95°	34.2	30.4	26.6	22.6	18.8	17.3	18.1	18.9	19.7	20.6	21.1
97.5°	68.0	57.1	46.3	35.3	24.4	19.9	21.8	23.7	25.7	27.5	28.0
100°	93.3	77.3	61.2	45.1	29.1	22.1	24.0	26.1	28.1	30.0	31.0
102.5°	121.1	117.8	114.3	110.9	107.6	97.5	80.9	64.2	47.6	30.9	32.1
105°	160.2	163.7	167.2	170.8	174.3	160.1	128.1	96.1	64.1	32.1	33.4
107.5°	204.8	207.6	210.5	213.3	216.1	198.3	160.1	121.7	83.3	45.0	43.7
110°	233.5	235.9	238.4	240.9	243.3	227.6	193.8	160.0	126.0	92.2	80.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	260.4	262.7	264.8	267.0	269.1	266.1	257.7	249.3	241.0	232.7	189.9
115°	303.1	305.0	307.0	309.0	311.0	313.5	316.4	319.3	322.2	325.2	270.9
117.5°	341.1	343.4	345.6	347.8	350.0	352.1	354.2	356.2	358.2	360.1	347.1
120°	368.9	370.6	372.4	374.2	376.0	377.9	380.0	382.1	384.2	386.3	387.7
122.5°	392.5	394.4	396.3	398.1	399.9	402.0	404.2	406.6	408.9	411.2	412.0
125°	428.5	430.0	431.5	433.0	434.5	436.5	438.7	440.9	443.1	445.4	446.2
127.5°	461.0	462.7	464.4	466.1	467.8	469.5	471.1	472.8	474.4	476.2	477.3
130°	481.7	483.5	485.4	487.4	489.2	490.8	492.1	493.3	494.6	495.9	497.3
132.5°	502.8	504.3	505.9	507.6	509.2	510.6	511.9	513.2	514.4	515.7	516.8
135°	530.2	532.1	533.9	535.8	537.7	539.2	540.2	541.3	542.3	543.3	544.5
137.5°	558.0	559.2	560.5	561.8	563.1	564.4	565.6	566.8	567.9	569.2	570.4
140°	576.0	576.9	577.9	578.9	579.8	580.9	582.2	583.5	584.7	586.0	587.1
142.5°	591.2	592.1	592.9	593.7	594.6	595.7	597.2	598.6	600.2	601.7	602.6
145°	615.0	614.9	614.8	614.7	614.6	615.5	617.5	619.5	621.5	623.5	624.3
147.5°	635.8	635.3	634.9	634.5	634.0	634.8	636.7	638.7	640.7	642.7	643.3
150°	649.2	648.4	647.6	646.8	646.0	646.5	648.4	650.3	652.2	654.0	654.7
152.5°	660.7	659.7	658.8	657.9	657.0	657.4	659.2	661.1	662.8	664.6	665.3
155°	677.2	676.2	675.1	674.1	673.0	673.2	674.6	676.0	677.4	678.8	679.5
157.5°	690.1	689.3	688.4	687.5	686.6	686.7	687.6	688.6	689.6	690.6	691.4
160°	697.8	697.1	696.4	695.7	695.0	695.0	695.7	696.4	697.1	697.8	698.5
162.5°	704.5	703.8	703.1	702.4	701.8	701.7	702.3	702.9	703.5	704.1	704.9
165°	713.6	712.9	712.2	711.4	710.7	710.6	710.9	711.2	711.7	712.0	712.9
167.5°	720.3	719.6	718.9	718.2	717.5	717.3	717.6	718.0	718.3	718.6	719.4
170°	724.1	723.5	722.8	722.1	721.3	721.0	721.3	721.5	721.8	722.1	722.9
172.5°	726.7	726.0	725.3	724.6	723.9	723.6	723.9	724.1	724.3	724.6	725.4
175°	729.9	729.1	728.3	727.5	726.6	726.4	726.6	726.8	727.0	727.3	728.1
177.5°	730.4	729.8	729.1	728.5	727.8	727.5	727.6	727.7	727.8	727.9	728.6
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	781.0	782.3	783.7	784.3	784.0	783.7	783.5	783.2
5°	775.8	777.1	778.4	778.9	778.6	778.2	777.9	777.6
7.5°	767.0	768.3	769.7	770.1	769.8	769.4	769.0	768.7
10°	759.1	760.5	761.8	762.2	761.7	761.2	760.7	760.2
12.5°	749.9	750.8	751.7	752.0	751.6	751.3	750.9	750.5
15°	733.7	734.4	735.0	734.9	734.1	733.3	732.5	731.5
17.5°	714.4	715.2	716.0	715.9	715.1	714.4	713.6	712.8
20°	699.4	699.9	700.4	700.3	699.6	698.9	698.3	697.6
22.5°	683.5	683.6	683.7	683.6	683.2	682.8	682.4	682.0
25°	657.6	657.9	658.2	658.2	657.9	657.6	657.2	656.9
27.5°	632.1	631.6	631.1	630.5	629.7	628.8	628.0	627.2
30°	612.2	611.7	611.2	610.6	609.9	609.3	608.5	607.8
32.5°	592.7	591.8	590.9	590.1	589.4	588.8	588.0	587.3
35°	561.4	560.4	559.4	558.5	557.6	556.7	555.9	555.1
37.5°	530.0	528.8	527.6	526.4	525.6	524.8	524.0	523.3
40°	508.4	506.9	505.3	504.2	503.5	502.9	502.2	501.5
42.5°	487.0	485.3	483.6	482.4	481.4	480.5	479.6	478.6
45°	454.1	452.3	450.4	449.2	448.5	447.9	447.2	446.5
47.5°	420.0	418.0	416.1	414.7	413.6	412.7	411.7	410.7
50°	398.1	395.7	393.3	391.7	390.9	390.1	389.2	388.4
52.5°	375.4	373.3	371.4	369.9	368.8	367.7	366.6	365.5
55°	341.4	339.4	337.4	336.0	335.1	334.3	333.5	332.6
57.5°	306.2	304.2	302.3	300.9	300.2	299.6	299.0	298.3
60°	282.9	281.0	279.2	278.0	277.5	277.0	276.5	276.0
62.5°	260.8	259.1	257.4	256.3	255.6	255.0	254.4	253.7
65°	227.0	225.5	224.0	222.8	222.0	221.2	220.4	219.4
67.5°	193.6	192.4	191.3	190.4	189.7	188.9	188.3	187.6
70°	171.9	170.7	169.6	168.6	167.9	167.2	166.6	165.9
72.5°	151.4	150.2	149.1	148.1	147.6	147.0	146.5	146.0
75°	119.4	118.5	117.4	117.0	117.4	117.8	118.1	118.5
77.5°	90.9	90.4	89.9	89.4	88.9	88.5	88.0	87.5
80°	72.1	71.6	71.2	70.7	70.4	70.1	69.7	69.4
82.5°	53.8	53.1	52.5	52.1	52.1	52.0	51.9	51.9
85°	28.4	27.9	27.4	27.1	26.9	26.8	26.6	26.4
87.5°	10.0	9.7	9.4	9.2	9.2	9.1	9.0	8.9
90°	11.7	12.3	12.9	13.3	13.5	13.7	14.0	14.2
92.5°	12.8	13.1	13.4	13.6	13.8	13.9	14.1	14.2
95°	21.7	22.3	22.9	23.1	23.0	22.9	22.8	22.6
97.5°	28.5	28.9	29.4	29.7	29.8	30.0	30.1	30.3
100°	31.9	32.8	33.8	34.3	34.6	34.8	35.0	35.3
102.5°	33.3	34.5	35.7	36.6	36.9	37.2	37.5	37.9
105°	34.7	36.1	37.3	38.2	38.7	39.1	39.6	40.1
107.5°	42.4	41.1	39.8	39.4	39.8	40.3	40.7	41.2
110°	68.8	57.1	45.3	39.8	40.2	40.7	41.2	41.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	147.1	104.4	61.7	40.6	40.9	41.3	41.7	42.0
115°	216.7	162.5	108.3	77.0	68.5	60.1	51.6	43.2
117.5°	334.0	320.8	307.7	287.3	259.5	231.9	204.2	176.4
120°	389.1	390.5	391.9	384.8	368.9	353.1	337.3	321.4
122.5°	412.8	413.7	414.5	413.4	410.4	407.3	404.2	401.1
125°	447.0	447.8	448.6	449.2	449.6	449.9	450.3	450.6
127.5°	478.5	479.7	480.9	481.5	481.6	481.7	481.7	481.8
130°	498.5	499.8	501.1	501.7	501.5	501.4	501.3	501.2
132.5°	518.0	519.1	520.2	520.6	520.5	520.4	520.3	520.2
135°	545.7	546.8	548.1	548.6	548.3	548.1	547.9	547.5
137.5°	571.5	572.6	573.8	574.1	573.7	573.3	573.0	572.6
140°	588.1	589.2	590.3	590.5	589.9	589.4	588.8	588.1
142.5°	603.6	604.5	605.5	605.7	605.1	604.5	603.9	603.3
145°	625.1	625.9	626.7	626.8	626.3	625.7	625.1	624.5
147.5°	643.9	644.5	645.1	645.1	644.7	644.2	643.7	643.2
150°	655.4	656.1	656.8	656.9	656.3	655.7	655.1	654.6
152.5°	666.0	666.7	667.4	667.3	666.6	665.8	665.0	664.3
155°	680.2	681.0	681.7	681.5	680.5	679.6	678.7	677.7
157.5°	692.2	693.0	693.8	693.8	692.8	691.9	690.9	690.0
160°	699.1	699.8	700.5	700.5	699.7	698.9	698.0	697.2
162.5°	705.7	706.5	707.3	707.2	706.2	705.2	704.2	703.2
165°	713.7	714.5	715.3	715.3	714.5	713.7	712.9	712.0
167.5°	720.2	721.1	722.0	721.9	720.7	719.7	718.6	717.6
170°	723.7	724.5	725.3	725.2	724.1	723.1	722.1	720.9
172.5°	726.2	727.0	727.8	727.7	726.7	725.6	724.6	723.5
175°	728.9	729.7	730.5	730.4	729.2	728.0	726.9	725.7
177.5°	729.2	729.9	730.5	730.4	729.6	728.7	727.9	727.1
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3

(END OF REPORT)