

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: P331291-930

Luminaire Tested: **SA2XXDIP-C485D330U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

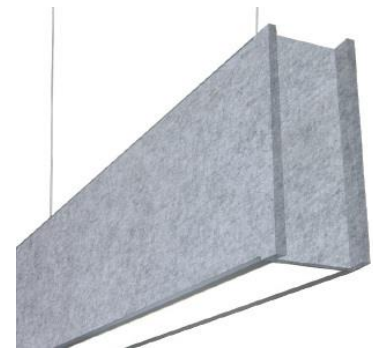
Test Information

Test Method: LM-79-08
Report Number: P331291-930
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-C485D330U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2679.6 lumens
Efficiency: N/A
Efficacy: 97.4 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: Semi-Direct

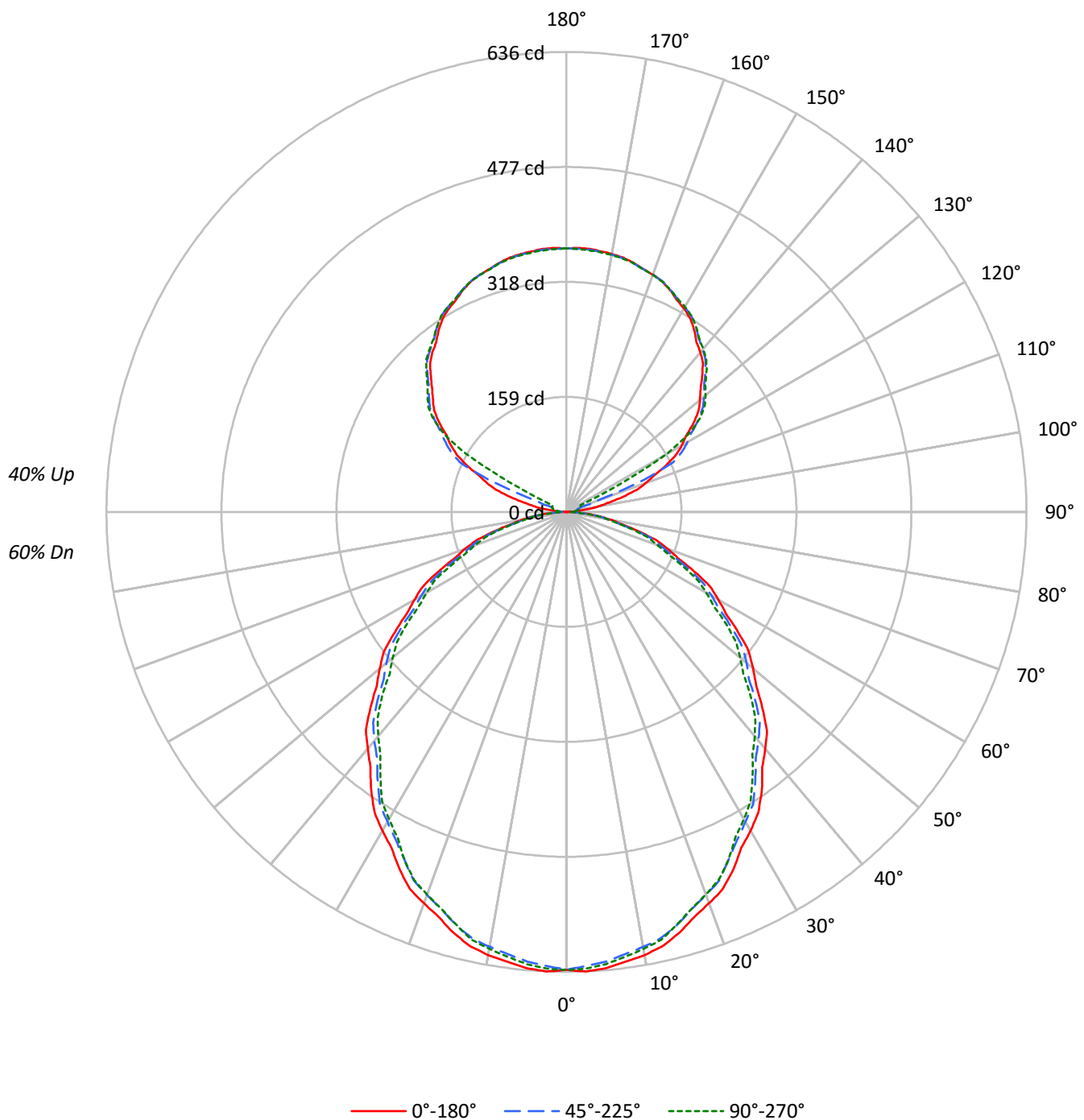
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55
2	91	84	77	72	85	78	73	68	68	64	61	59	56	53	51	49	47
3	83	73	66	60	77	69	62	57	60	55	51	52	49	45	45	42	40
4	76	65	57	51	71	61	54	48	54	48	44	47	42	39	40	37	34
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	2.2
10°-20°	167.6	6.3
20°-30°	246.3	9.2
30°-40°	286.1	10.7
40°-50°	285.8	10.7
50°-60°	249.2	9.3
60°-70°	184.3	6.9
70°-80°	104.4	3.9
80°-90°	29.0	1.1
90°-100°	12.1	0.5
100°-110°	44.6	1.7
110°-120°	119.1	4.4
120°-130°	196.6	7.3
130°-140°	209.1	7.8
140°-150°	194.4	7.3
150°-160°	156.3	5.8
160°-170°	100.7	3.8
170°-180°	34.7	1.3
0°-30°	473.4	17.7
0°-40°	759.4	28.3
0°-60°	1294.4	48.3
0°-90°	1612.0	60.2
90°-120°	175.8	6.6
90°-150°	776.0	29.0
90°-180°	1068.0	39.9
0°-180°	2679.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	0	3	5	7	7	2
95°	17	9	10	12	11	21
105°	80	84	16	19	20	86
115°	152	156	163	46	22	149
125°	214	218	223	225	225	191
135°	265	269	272	274	274	205
145°	308	308	312	314	312	192
155°	339	337	340	341	339	156
165°	357	356	356	358	356	101
175°	365	363	364	365	363	35
180°	364	364	364	364	364	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.8	8.7	8.6	8.6	8.5	8.4	8.2	8.2	8.0	7.9	7.6
90°	0.2	0.9	1.5	2.2	2.9	3.4	3.8	4.3	4.8	5.3	5.5
92.5°	5.3	5.3	5.2	5.1	5.1	5.2	5.4	5.6	5.9	6.1	6.3
95°	17.1	15.2	13.3	11.3	9.4	8.6	9.0	9.5	9.9	10.3	10.6
97.5°	34.0	28.5	23.1	17.7	12.2	9.9	10.9	11.8	12.8	13.8	14.0
100°	46.6	38.6	30.6	22.6	14.6	11.0	12.1	13.0	14.0	15.0	15.5
102.5°	60.6	58.9	57.2	55.5	53.8	48.8	40.4	32.1	23.8	15.4	16.1
105°	80.1	81.9	83.6	85.4	87.2	80.1	64.1	48.1	32.0	16.1	16.7
107.5°	102.4	103.9	105.3	106.7	108.1	99.2	80.1	60.9	41.7	22.5	21.9
110°	116.8	118.0	119.3	120.5	121.7	113.8	96.9	80.0	63.0	46.1	40.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.3	131.3	132.5	133.5	134.6	133.1	128.9	124.7	120.5	116.3	95.0
115°	151.6	152.5	153.6	154.6	155.6	156.8	158.2	159.7	161.2	162.7	135.5
117.5°	170.6	171.7	172.8	174.0	175.0	176.1	177.2	178.1	179.1	180.2	173.6
120°	184.5	185.4	186.3	187.2	188.0	189.0	190.0	191.1	192.2	193.2	194.0
122.5°	196.3	197.3	198.2	199.1	200.1	201.1	202.2	203.3	204.6	205.7	206.1
125°	214.3	215.1	215.8	216.6	217.4	218.3	219.4	220.5	221.6	222.7	223.1
127.5°	230.6	231.5	232.3	233.2	234.0	234.8	235.6	236.5	237.3	238.1	238.7
130°	240.9	241.9	242.8	243.8	244.7	245.5	246.1	246.8	247.4	248.1	248.7
132.5°	251.5	252.3	253.1	253.9	254.7	255.4	256.0	256.7	257.3	258.0	258.5
135°	265.2	266.1	267.1	268.0	269.0	269.7	270.2	270.8	271.3	271.8	272.4
137.5°	279.1	279.7	280.4	281.0	281.7	282.3	282.9	283.5	284.1	284.7	285.3
140°	288.1	288.6	289.0	289.5	290.0	290.6	291.2	291.9	292.5	293.1	293.7
142.5°	295.7	296.1	296.5	297.0	297.4	298.0	298.7	299.5	300.2	300.9	301.4
145°	307.6	307.6	307.5	307.4	307.4	307.9	308.8	309.9	310.9	311.9	312.3
147.5°	318.0	317.8	317.6	317.3	317.2	317.5	318.5	319.5	320.5	321.5	321.7
150°	324.7	324.3	323.9	323.5	323.1	323.4	324.3	325.3	326.2	327.2	327.5
152.5°	330.4	330.0	329.5	329.1	328.6	328.8	329.7	330.6	331.5	332.4	332.7
155°	338.8	338.2	337.7	337.1	336.6	336.7	337.5	338.1	338.8	339.5	339.9
157.5°	345.2	344.8	344.3	343.9	343.4	343.5	344.0	344.5	345.0	345.4	345.8
160°	349.0	348.7	348.3	348.0	347.6	347.6	348.0	348.3	348.7	349.0	349.4
162.5°	352.4	352.0	351.7	351.3	351.0	351.0	351.2	351.6	351.9	352.2	352.6
165°	356.9	356.6	356.2	355.9	355.6	355.5	355.6	355.8	356.0	356.1	356.5
167.5°	360.3	360.0	359.6	359.2	358.9	358.8	359.0	359.1	359.3	359.5	359.9
170°	362.2	361.8	361.5	361.2	360.8	360.7	360.8	360.9	361.0	361.2	361.6
172.5°	363.5	363.1	362.7	362.4	362.1	361.9	362.1	362.2	362.3	362.4	362.8
175°	365.1	364.7	364.3	363.9	363.5	363.3	363.5	363.5	363.7	363.8	364.2
177.5°	365.3	365.0	364.7	364.4	364.0	363.9	363.9	364.0	364.0	364.1	364.4
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	7.3	7.1	6.8	6.6	6.5	6.4	6.4	6.3
90°	5.9	6.1	6.4	6.7	6.8	6.8	7.0	7.1
92.5°	6.4	6.6	6.7	6.8	6.9	7.0	7.0	7.1
95°	10.8	11.2	11.4	11.6	11.5	11.4	11.4	11.3
97.5°	14.3	14.4	14.7	14.8	14.9	15.0	15.1	15.2
100°	16.0	16.5	16.9	17.2	17.3	17.4	17.5	17.7
102.5°	16.6	17.3	17.9	18.3	18.4	18.6	18.8	18.9
105°	17.4	18.0	18.7	19.1	19.3	19.6	19.8	20.1
107.5°	21.2	20.5	19.9	19.6	19.9	20.1	20.4	20.6
110°	34.4	28.5	22.7	19.9	20.1	20.4	20.6	20.8

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	73.6	52.3	30.9	20.3	20.5	20.6	20.9	21.0
115°	108.4	81.3	54.1	38.5	34.2	30.1	25.8	21.6
117.5°	167.1	160.5	153.9	143.7	129.9	116.0	102.2	88.3
120°	194.6	195.3	196.0	192.4	184.5	176.6	168.7	160.8
122.5°	206.5	206.9	207.3	206.8	205.3	203.7	202.2	200.6
125°	223.6	224.0	224.4	224.7	224.9	225.0	225.2	225.3
127.5°	239.4	239.9	240.5	240.8	240.9	240.9	240.9	241.0
130°	249.3	250.0	250.6	250.9	250.9	250.8	250.8	250.7
132.5°	259.1	259.6	260.2	260.4	260.3	260.3	260.2	260.2
135°	273.0	273.5	274.1	274.3	274.3	274.1	274.0	273.9
137.5°	285.8	286.4	287.0	287.1	287.0	286.8	286.6	286.4
140°	294.2	294.7	295.2	295.4	295.1	294.8	294.5	294.2
142.5°	301.9	302.4	302.9	303.0	302.6	302.4	302.1	301.7
145°	312.7	313.1	313.5	313.6	313.2	313.0	312.7	312.3
147.5°	322.0	322.4	322.7	322.7	322.5	322.2	322.0	321.7
150°	327.8	328.2	328.6	328.6	328.3	328.0	327.7	327.4
152.5°	333.1	333.5	333.8	333.8	333.4	333.0	332.6	332.2
155°	340.2	340.6	341.0	340.9	340.4	340.0	339.5	339.0
157.5°	346.3	346.7	347.0	347.0	346.5	346.1	345.6	345.2
160°	349.8	350.1	350.4	350.4	350.0	349.6	349.2	348.8
162.5°	352.9	353.4	353.8	353.8	353.2	352.7	352.2	351.7
165°	356.9	357.3	357.8	357.8	357.3	356.9	356.5	356.1
167.5°	360.3	360.7	361.1	361.0	360.5	360.0	359.5	358.9
170°	362.0	362.4	362.8	362.7	362.2	361.7	361.2	360.6
172.5°	363.2	363.6	364.0	364.0	363.5	363.0	362.4	361.9
175°	364.6	365.0	365.4	365.3	364.8	364.2	363.5	363.0
177.5°	364.8	365.1	365.4	365.3	364.9	364.5	364.1	363.7
180°	364.3	364.3	364.3	364.3	364.3	364.3	364.3	364.3

(END OF REPORT)