

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: P331302-830

Luminaire Tested: **SA2XXDIP-C485D530U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331302-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D530U830-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

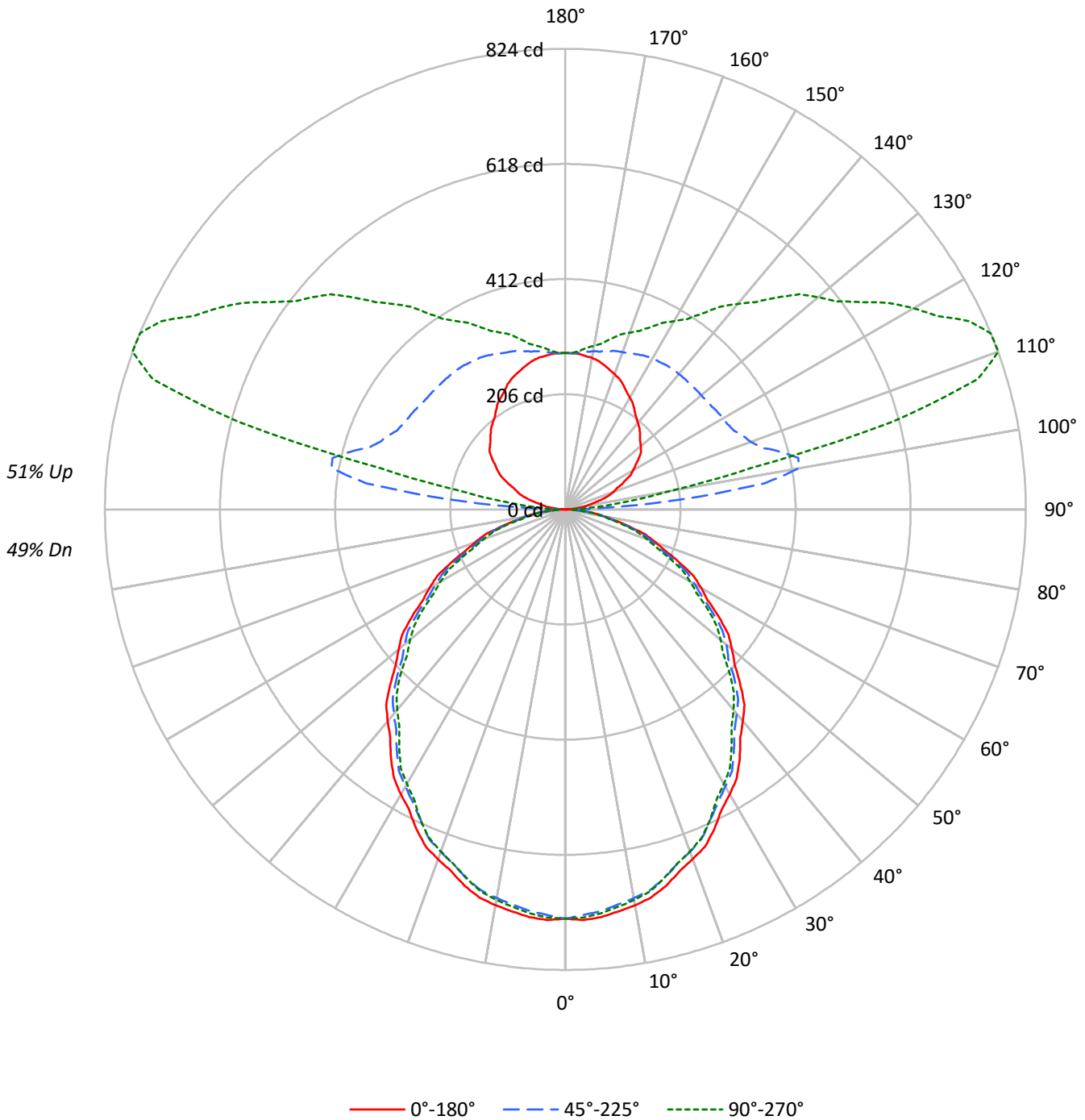
Lumens per Lamp: N/A
Luminaire Lumens: 3810.0 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49				
1	98	93	89	86	90	86	83	80	73	70	68	60	58	57	49	48	47	41				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35				
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	33	29				
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25				
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22				
6	63	51	42	37	58	47	40	35	40	35	30	34	29	26	28	25	22	19				
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17				
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15				
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12				

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	1.8
10°-20°	193.7	5.1
20°-30°	284.7	7.5
30°-40°	330.7	8.7
40°-50°	330.4	8.7
50°-60°	288.1	7.6
60°-70°	213.0	5.6
70°-80°	120.7	3.2
80°-90°	34.9	0.9
90°-100°	111.8	2.9
100°-110°	379.3	10.0
110°-120°	402.9	10.6
120°-130°	331.7	8.7
130°-140°	266.3	7.0
140°-150°	201.3	5.3
150°-160°	141.4	3.7
160°-170°	83.3	2.2
170°-180°	27.1	0.7
0°-30°	547.2	14.4
0°-40°	878.0	23.0
0°-60°	1496.4	39.3
0°-90°	1865.0	49.0
90°-120°	893.9	23.5
90°-150°	1693.2	44.4
90°-180°	1945.0	51.0
0°-180°	3810.0	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	7	18	17	18	2
95°	19	46	211	80	61	20
105°	66	99	398	712	606	70
115°	116	146	333	688	797	115
125°	161	191	320	557	647	143
135°	189	226	317	468	536	146
145°	216	248	315	391	428	136
155°	246	265	306	346	360	113
165°	268	276	293	311	316	75
175°	279	279	282	285	284	26
180°	280	280	280	280	280	



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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	10.3	10.5	10.5	10.5	10.5	10.7	11.3	11.7	11.5	11.0
90°	0.6	2.2	4.3	5.4	6.4	8.1	10.7	14.5	17.7	18.3	17.7
92.5°	6.6	9.4	13.3	15.7	19.3	24.4	36.6	53.6	68.9	69.8	59.0
95°	18.9	20.9	26.3	31.2	39.8	52.7	77.4	124.1	186.5	210.8	184.4
97.5°	30.6	33.6	39.2	46.6	56.5	71.1	102.2	167.3	270.9	359.7	377.3
100°	41.4	43.0	47.9	56.5	67.2	82.3	110.7	176.3	292.4	424.6	502.0
102.5°	51.3	52.5	57.3	65.9	77.1	92.1	118.5	176.7	284.3	426.8	548.5
105°	65.6	67.8	71.4	79.6	91.3	106.4	131.7	179.6	268.2	398.3	541.3
107.5°	81.1	82.8	86.4	93.9	105.6	120.7	145.2	186.9	260.2	367.8	494.1
110°	91.3	93.5	96.8	103.8	115.0	130.6	154.3	192.9	258.5	353.2	464.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	100.9	103.0	106.6	113.2	124.0	140.1	162.9	199.4	259.0	343.7	443.7
115°	115.6	118.3	121.5	127.9	138.6	153.2	176.3	209.1	261.3	333.3	418.2
117.5°	130.8	133.0	136.2	141.9	152.2	167.3	188.7	219.4	265.1	328.2	402.1
120°	140.3	142.4	145.6	150.5	161.3	176.3	197.3	226.3	267.7	325.2	393.5
122.5°	149.3	151.1	154.3	159.6	170.3	185.8	205.5	232.3	270.7	323.5	386.2
125°	161.3	162.9	166.1	172.6	183.3	198.3	217.7	241.9	275.2	320.4	375.7
127.5°	170.7	172.9	177.4	184.5	194.8	210.3	229.1	250.8	279.8	318.6	366.1
130°	176.3	178.4	183.8	191.3	202.1	217.2	236.0	256.4	283.2	317.6	359.6
132.5°	181.4	184.1	189.8	197.8	209.0	224.0	242.0	262.0	286.7	317.3	354.4
135°	189.2	191.3	197.8	205.9	218.2	233.3	250.5	269.3	290.8	316.6	347.2
137.5°	196.5	199.1	205.6	214.1	226.4	240.3	257.4	274.8	294.5	316.5	342.1
140°	202.1	204.2	210.8	219.3	231.1	245.2	261.3	277.9	296.1	316.0	339.2
142.5°	207.7	209.4	215.5	224.0	235.4	248.5	264.3	280.5	297.5	316.0	336.2
145°	216.1	218.2	223.6	231.7	242.4	254.2	268.7	283.8	298.9	315.0	332.2
147.5°	225.1	226.7	231.9	239.3	248.3	258.7	272.4	285.7	299.3	313.0	328.1
150°	231.1	232.7	237.0	244.0	252.1	261.7	274.1	286.5	298.9	311.8	324.7
152.5°	237.1	237.9	242.2	248.4	256.0	264.8	275.9	286.9	298.0	309.6	321.7
155°	245.6	246.2	249.4	255.3	261.3	269.3	278.4	287.6	296.7	305.9	316.0
157.5°	252.7	253.3	255.9	261.0	265.8	272.5	280.2	287.6	294.3	302.0	310.8
160°	257.5	258.0	260.1	264.5	268.7	274.7	281.2	287.6	292.9	299.4	306.9
162.5°	262.2	261.8	264.0	267.5	271.4	276.0	281.5	287.1	291.6	297.3	303.5
165°	267.7	267.1	268.2	271.5	274.1	277.4	282.2	286.0	289.2	292.9	297.7
167.5°	272.2	271.5	272.5	274.6	276.5	278.5	282.1	285.2	286.7	289.2	292.2
170°	275.2	274.1	274.7	276.3	277.4	279.0	281.6	284.4	285.4	287.0	289.2
172.5°	276.9	276.3	276.0	277.6	278.2	279.4	281.3	283.0	283.7	284.5	286.2
175°	279.0	278.4	277.9	279.0	279.0	279.5	280.6	281.6	281.2	281.6	282.2
177.5°	279.9	279.1	278.6	279.5	279.5	279.5	279.9	280.8	279.9	279.5	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5



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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°	10.6	10.0	9.8	9.7	9.5	9.4	9.3	9.1
90°	17.2	16.1	17.2	17.7	17.7	17.7	17.7	17.7
92.5°	46.8	40.2	35.7	32.3	32.0	30.3	30.6	29.8
95°	140.8	108.0	85.5	73.6	66.6	62.4	60.7	61.3
97.5°	328.7	268.9	210.8	171.9	146.2	133.0	125.2	120.6
100°	490.8	424.1	350.4	285.4	240.8	217.7	202.1	192.5
102.5°	597.0	581.9	528.1	459.1	410.7	371.2	351.8	338.7
105°	653.1	713.8	720.9	703.0	669.8	636.4	613.3	605.8
107.5°	612.7	704.2	760.1	786.1	790.2	788.4	783.8	773.8
110°	577.9	674.0	742.8	786.9	810.0	820.3	825.1	824.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	546.0	638.4	711.9	762.4	794.6	811.6	820.8	823.7
115°	506.9	589.7	660.1	715.5	753.6	778.4	792.3	797.1
117.5°	477.4	550.1	614.0	665.9	704.8	730.9	745.6	749.7
120°	462.8	529.4	586.4	635.4	673.0	698.2	713.8	719.2
122.5°	451.2	512.3	566.2	610.4	644.1	669.0	682.9	687.4
125°	434.3	489.7	537.0	577.3	608.5	628.9	642.3	646.7
127.5°	417.6	467.8	512.4	549.6	576.7	595.9	607.5	611.0
130°	406.9	453.2	495.6	531.0	557.4	575.7	586.4	590.7
132.5°	396.6	439.4	478.4	511.7	537.6	555.9	565.8	569.7
135°	382.2	417.6	453.2	483.2	506.3	524.1	533.8	535.9
137.5°	370.7	400.4	428.5	454.8	475.8	491.1	499.5	502.8
140°	363.4	389.2	413.9	437.5	454.8	468.7	476.7	480.0
142.5°	357.3	379.3	400.6	420.4	436.7	449.4	456.6	457.2
145°	348.8	366.6	383.2	398.9	411.7	420.8	426.2	427.8
147.5°	342.3	356.3	369.3	380.7	391.3	398.6	402.3	403.2
150°	337.5	349.4	360.7	370.3	378.4	384.8	388.0	388.6
152.5°	332.8	343.8	353.4	361.7	368.1	373.7	376.1	376.2
155°	326.3	334.9	342.9	348.8	354.8	358.5	360.7	359.6
157.5°	318.7	325.8	332.6	337.2	341.4	344.6	345.5	345.5
160°	313.9	319.8	325.7	329.5	333.3	335.9	336.5	336.5
162.5°	309.2	314.2	319.3	322.2	325.9	327.8	328.3	327.9
165°	302.1	305.9	309.6	311.8	313.9	316.0	316.0	315.6
167.5°	295.3	298.2	300.8	302.7	303.7	304.9	304.8	304.2
170°	291.9	293.5	295.7	296.7	297.3	298.9	298.3	297.3
172.5°	288.0	289.2	290.9	291.5	292.1	292.8	292.3	291.6
175°	283.8	284.4	284.9	285.4	285.4	286.0	285.4	284.4
177.5°	280.8	280.8	281.3	281.3	281.3	281.3	280.8	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5

(END OF REPORT)