

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: P331506-830

Luminaire Tested: **S122DIW-S485D710U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331506-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D710U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4183.3 lumens
Efficiency: N/A
Efficacy: 111.3 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

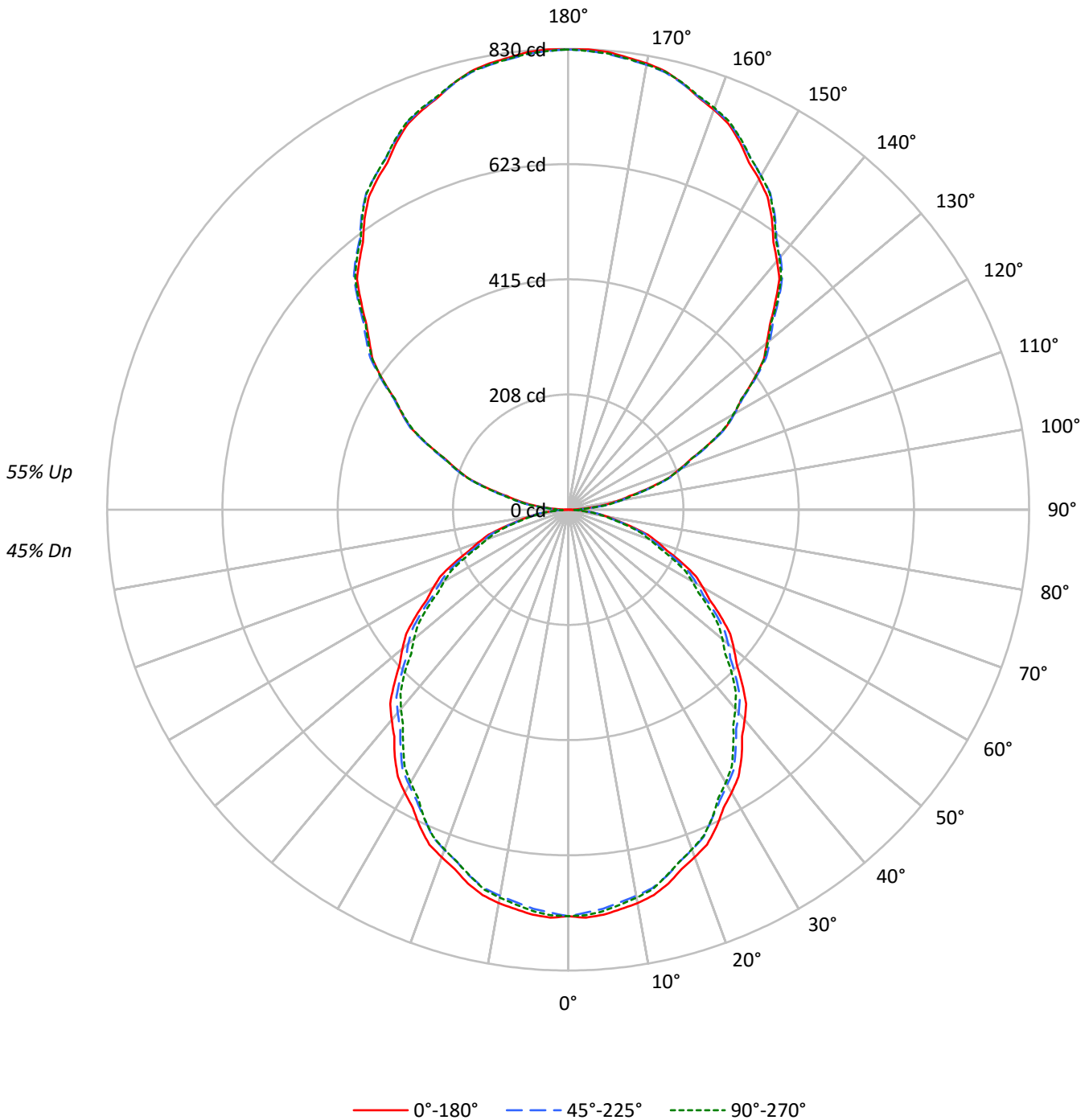
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45					45			
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38					38			
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	31					31			
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27					27			
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27	23					23			
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20					20			
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17					17			
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15					15			
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14					14			
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	12					12			
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11					11			

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	1.6
10°-20°	193.7	4.6
20°-30°	284.7	6.8
30°-40°	330.7	7.9
40°-50°	330.4	7.9
50°-60°	288.1	6.9
60°-70°	213.0	5.1
70°-80°	120.7	2.9
80°-90°	35.7	0.9
90°-100°	52.5	1.3
100°-110°	163.1	3.9
110°-120°	278.8	6.7
120°-130°	366.6	8.8
130°-140°	411.5	9.8
140°-150°	403.5	9.6
150°-160°	338.4	8.1
160°-170°	224.5	5.4
170°-180°	78.5	1.9
0°-30°	547.2	13.1
0°-40°	878.0	21.0
0°-60°	1496.4	35.8
0°-90°	1865.8	44.6
90°-120°	494.4	11.8
90°-150°	1676.1	40.1
90°-180°	2317.0	55.4
0°-180°	4183.3	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	10	24	23	24	3
95°	36	43	45	45	43	42
105°	150	152	154	155	155	159
115°	280	284	283	282	280	277
125°	407	413	411	409	408	364
135°	527	534	536	535	533	407
145°	639	644	648	649	646	399
155°	731	733	735	738	736	336
165°	795	795	795	799	796	224
175°	827	825	824	828	825	79
180°	829	829	829	829	829	



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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	10.6	10.7	10.7	11.0	11.5	11.9	12.3	12.8	12.3
90°	0.7	2.5	4.4	6.3	8.2	10.8	14.2	17.6	21.0	24.5	24.1
92.5°	12.4	13.9	15.2	16.6	17.9	19.0	19.8	20.6	21.4	22.2	22.3
95°	36.4	37.9	39.5	41.0	42.6	43.5	43.8	44.1	44.5	44.8	44.8
97.5°	66.4	67.8	69.2	70.5	71.9	72.9	73.5	74.1	74.6	75.2	75.2
100°	88.8	90.1	91.3	92.6	93.8	94.6	95.1	95.6	96.0	96.5	96.5
102.5°	112.4	113.3	114.3	115.3	116.3	117.1	117.7	118.3	118.9	119.4	119.6
105°	150.3	150.8	151.3	151.7	152.2	152.6	153.0	153.3	153.5	153.9	154.2
107.5°	188.7	189.4	190.1	190.8	191.4	191.8	191.8	191.8	191.8	191.8	191.9
110°	213.3	214.2	215.2	216.1	217.1	217.5	217.5	217.5	217.5	217.5	217.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	240.2	241.1	242.0	243.0	243.9	244.3	244.2	244.0	243.9	243.8	243.5
115°	279.7	280.7	281.6	282.6	283.5	283.8	283.5	283.1	282.9	282.6	282.4
117.5°	319.2	320.5	321.7	322.9	324.1	324.3	323.5	322.6	321.8	320.9	320.6
120°	345.5	346.8	348.0	349.2	350.4	350.4	349.2	348.0	346.8	345.5	345.5
122.5°	369.6	371.1	372.6	374.0	375.5	375.9	374.9	374.1	373.2	372.4	372.0
125°	407.1	408.5	409.8	411.2	412.6	413.1	412.6	412.2	411.7	411.2	410.8
127.5°	443.6	445.4	447.1	448.8	450.6	451.3	450.7	450.2	449.6	449.0	448.5
130°	466.5	468.5	470.5	472.6	474.6	475.4	475.1	474.9	474.5	474.2	473.9
132.5°	492.3	493.9	495.6	497.2	498.8	499.7	499.7	499.8	499.9	499.9	499.3
135°	526.7	528.4	530.1	531.8	533.5	534.5	534.8	535.2	535.5	535.7	535.6
137.5°	562.9	564.3	565.7	567.1	568.4	569.4	569.8	570.2	570.6	571.0	570.9
140°	584.8	586.1	587.5	588.9	590.3	591.4	592.2	593.0	593.7	594.5	594.5
142.5°	607.1	608.5	609.9	611.3	612.7	613.7	614.2	614.7	615.2	615.8	615.9
145°	639.2	640.4	641.4	642.5	643.7	644.6	645.5	646.5	647.4	648.4	648.5
147.5°	668.0	669.2	670.5	671.8	673.2	674.1	674.8	675.3	676.0	676.7	676.9
150°	687.5	688.4	689.4	690.3	691.3	692.0	692.7	693.2	693.9	694.6	695.0
152.5°	704.8	705.8	706.7	707.7	708.6	709.5	710.2	711.0	711.7	712.5	713.0
155°	730.8	731.3	731.8	732.3	732.7	733.2	733.7	734.1	734.6	735.1	735.8
157.5°	753.1	753.5	753.8	754.0	754.4	754.7	755.0	755.3	755.5	755.8	756.9
160°	766.6	766.9	767.1	767.5	767.8	768.1	768.2	768.4	768.5	768.6	769.6
162.5°	778.8	778.9	779.0	779.0	779.1	779.2	779.4	779.6	779.7	779.9	780.9
165°	795.2	795.0	794.9	794.8	794.7	794.6	794.6	794.6	794.6	794.6	795.6
167.5°	809.0	808.5	808.0	807.6	807.1	806.8	806.8	806.7	806.7	806.7	807.8
170°	816.2	815.8	815.3	814.8	814.4	814.1	813.9	813.7	813.6	813.4	814.5
172.5°	821.2	820.8	820.3	819.8	819.4	819.1	818.9	818.8	818.6	818.4	819.5
175°	827.4	827.0	826.5	826.0	825.6	825.2	824.8	824.5	824.3	823.9	825.0
177.5°	829.9	829.5	829.2	828.8	828.4	828.1	827.8	827.6	827.4	827.1	827.8
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8



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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°	11.9	11.5	11.0	10.7	10.7	10.6	10.5	10.4
90°	23.8	23.6	23.3	23.2	23.3	23.5	23.7	23.8
92.5°	22.3	22.4	22.5	22.5	22.5	22.6	22.6	22.6
95°	44.8	44.8	44.8	44.6	44.3	44.0	43.6	43.4
97.5°	75.2	75.2	75.2	75.2	75.2	75.2	75.1	75.1
100°	96.5	96.5	96.5	96.4	96.3	96.1	96.0	95.9
102.5°	119.7	119.8	120.0	120.0	119.8	119.6	119.5	119.3
105°	154.5	154.8	155.1	155.2	155.2	155.2	155.2	155.2
107.5°	192.0	192.2	192.3	192.0	191.2	190.6	189.8	189.2
110°	217.5	217.5	217.5	217.3	216.8	216.3	215.8	215.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	243.1	242.7	242.3	242.0	241.7	241.3	240.9	240.6
115°	282.3	282.1	281.9	281.6	281.2	280.7	280.2	279.7
117.5°	320.2	319.8	319.4	319.0	318.5	318.0	317.5	317.1
120°	345.5	345.5	345.5	345.3	344.8	344.3	343.8	343.4
122.5°	371.6	371.3	370.9	370.5	370.1	369.9	369.5	369.2
125°	410.3	409.8	409.3	409.1	409.0	408.8	408.6	408.5
127.5°	447.9	447.3	446.8	446.3	445.7	445.3	444.8	444.3
130°	473.6	473.3	473.0	472.5	471.8	471.3	470.6	470.0
132.5°	498.6	497.9	497.2	496.6	496.2	495.6	495.1	494.6
135°	535.5	535.3	535.2	534.8	534.3	533.9	533.4	532.9
137.5°	570.7	570.6	570.5	570.1	569.5	568.9	568.3	567.6
140°	594.5	594.5	594.5	594.2	593.6	593.0	592.3	591.7
142.5°	616.0	616.1	616.2	616.0	615.4	614.7	614.2	613.5
145°	648.7	648.8	648.9	648.8	648.1	647.5	646.9	646.3
147.5°	677.3	677.6	678.0	677.9	677.3	676.7	676.1	675.5
150°	695.4	695.9	696.4	696.4	695.9	695.4	695.0	694.6
152.5°	713.6	714.2	714.8	714.8	714.2	713.6	713.0	712.5
155°	736.6	737.4	738.2	738.4	737.9	737.4	737.0	736.5
157.5°	757.9	758.9	760.0	760.2	759.4	758.7	757.9	757.1
160°	770.5	771.5	772.4	772.5	771.9	771.3	770.7	770.1
162.5°	781.9	783.1	784.1	784.2	783.4	782.8	782.0	781.3
165°	796.7	797.8	798.9	799.1	798.2	797.5	796.7	796.0
167.5°	808.9	809.9	811.1	811.2	810.4	809.5	808.8	807.9
170°	815.6	816.7	817.7	817.8	816.9	816.0	815.0	814.1
172.5°	820.7	821.7	822.8	822.8	822.0	821.0	820.1	819.2
175°	826.0	827.2	828.3	828.3	827.4	826.5	825.6	824.6
177.5°	828.6	829.3	830.1	830.1	829.3	828.6	827.8	827.1
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8

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