

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: P331307-840

Luminaire Tested: **S122DIP-S485D725U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331307-840  
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: S122DIP-S485D725U840-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4604.6 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

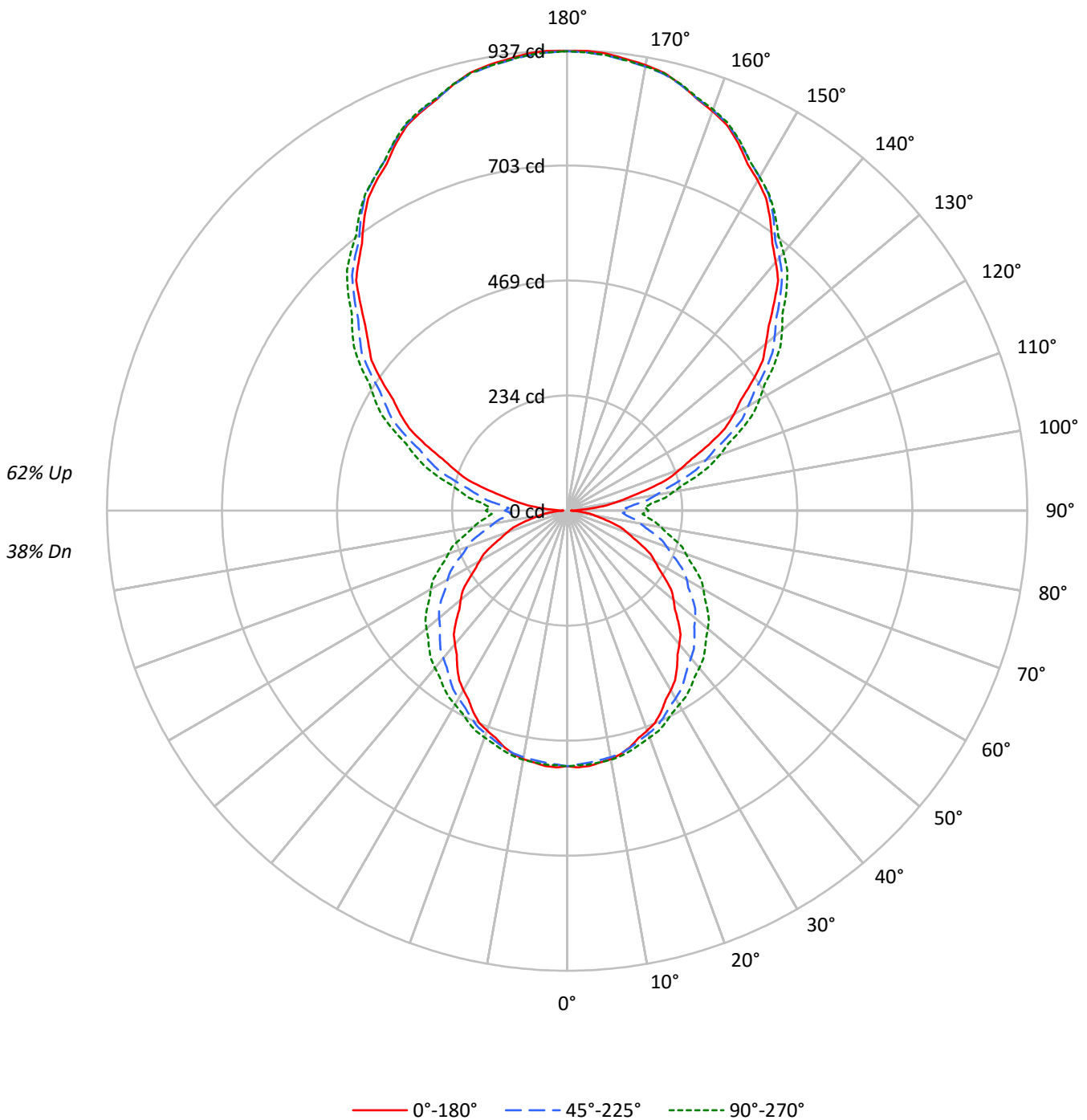
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	45	45	45	38
1	94	89	85	81	85	81	77	74	66	63	61	51	50	48	38	37	36	30
2	85	77	71	65	77	70	65	60	57	53	49	44	42	39	33	31	29	24
3	77	67	60	54	70	61	55	49	50	45	41	39	35	33	29	27	25	20
4	71	59	51	45	64	54	47	41	44	39	34	34	31	28	26	23	21	17
5	65	53	44	38	58	48	41	35	39	34	29	31	27	24	23	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	28	24	20	21	18	16	12
7	55	42	34	29	49	39	32	26	32	26	22	25	21	18	19	16	14	11
8	51	38	30	25	46	35	28	23	29	23	20	23	19	16	17	14	12	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	16	19	15	13	15	12	10	8

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.3	1.1
10°-20°	141.4	3.1
20°-30°	214.3	4.7
30°-40°	261.0	5.7
40°-50°	280.8	6.1
50°-60°	272.7	5.9
60°-70°	238.1	5.2
70°-80°	183.3	4.0
80°-90°	126.7	2.8
90°-100°	144.0	3.1
100°-110°	246.0	5.3
110°-120°	355.5	7.7
120°-130°	436.6	9.5
130°-140°	474.0	10.3
140°-150°	457.1	9.9
150°-160°	382.0	8.3
160°-170°	253.3	5.5
170°-180°	88.5	1.9
0°-30°	405.0	8.8
0°-40°	666.0	14.5
0°-60°	1219.4	26.5
0°-90°	1767.6	38.4
90°-120°	745.5	16.2
90°-150°	2113.2	45.9
90°-180°	2837.0	61.6
0°-180°	4604.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	62	127	155	166	7
95°	47	91	137	165	173	52
105°	174	199	238	265	275	184
115°	319	333	364	385	392	315
125°	461	469	490	507	514	412
135°	595	604	613	627	632	460
145°	721	727	732	737	738	451
155°	825	827	830	833	831	380
165°	898	897	897	902	898	253
175°	934	932	930	935	931	89
180°	935	935	935	935	935	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.9	25.3	35.7	46.2	56.6	67.6	79.1	90.5	102.0	113.5	120.3
90°	8.3	20.2	32.0	43.8	55.6	68.9	83.4	98.1	112.6	127.1	133.5
92.5°	21.0	31.6	42.2	52.8	63.3	74.3	85.5	96.7	108.0	119.3	125.8
95°	47.1	56.8	66.3	75.9	85.6	95.6	106.0	116.4	126.8	137.2	143.6
97.5°	80.3	88.8	97.4	105.9	114.4	123.9	134.2	144.5	154.8	165.2	171.4
100°	105.5	113.1	120.8	128.4	135.9	144.7	154.6	164.5	174.4	184.3	190.6
102.5°	131.5	138.3	145.0	151.8	158.5	166.9	176.6	186.4	196.2	206.0	212.3
105°	173.5	178.8	184.3	189.7	195.0	202.3	211.4	220.4	229.4	238.5	244.7
107.5°	216.6	221.3	225.9	230.6	235.2	241.8	250.0	258.4	266.8	275.1	280.8
110°	243.8	248.1	252.6	257.0	261.4	267.7	275.9	284.1	292.4	300.5	305.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	274.1	277.9	281.9	285.7	289.5	295.3	303.0	310.6	318.3	326.0	330.9
115°	318.7	321.6	324.6	327.4	330.3	335.4	342.5	349.8	357.0	364.2	369.0
117.5°	362.5	365.2	367.8	370.3	372.9	377.3	383.2	389.2	395.3	401.2	405.8
120°	392.2	394.3	396.4	398.4	400.5	404.1	409.5	414.8	420.1	425.4	430.1
122.5°	419.4	421.3	423.2	425.3	427.2	430.8	436.2	441.4	446.8	452.1	456.3
125°	460.9	462.5	464.0	465.6	467.3	470.4	475.2	480.1	484.9	489.8	493.8
127.5°	502.1	503.9	505.7	507.7	509.5	512.2	515.9	519.6	523.3	526.9	530.5
130°	528.0	530.1	532.2	534.3	536.4	539.1	542.3	545.4	548.6	551.8	555.4
132.5°	557.0	558.8	560.5	562.1	563.8	566.0	568.9	571.6	574.4	577.2	580.3
135°	595.1	597.0	599.0	601.0	602.9	604.8	606.8	608.8	610.9	613.0	616.3
137.5°	636.0	637.5	639.1	640.7	642.2	643.6	644.8	646.0	647.1	648.3	651.3
140°	660.7	662.1	663.5	664.9	666.3	667.6	668.8	670.0	671.3	672.5	675.1
142.5°	685.9	687.3	688.7	690.1	691.6	692.6	693.3	693.9	694.6	695.3	697.5
145°	721.4	722.7	724.0	725.2	726.4	727.5	728.6	729.6	730.6	731.7	733.0
147.5°	753.9	755.3	756.8	758.2	759.7	760.8	761.5	762.2	763.0	763.7	764.2
150°	776.0	777.0	778.0	779.1	780.1	781.0	781.7	782.4	783.2	783.9	784.4
152.5°	795.5	796.6	797.6	798.7	799.7	800.6	801.5	802.3	803.1	804.1	804.7
155°	824.9	825.4	826.0	826.5	827.0	827.5	828.0	828.6	829.1	829.6	830.5
157.5°	850.0	850.3	850.7	851.0	851.4	851.7	852.0	852.3	852.6	852.9	854.1
160°	865.2	865.5	865.9	866.2	866.6	866.8	867.0	867.2	867.4	867.5	868.6
162.5°	879.0	879.1	879.2	879.2	879.3	879.4	879.6	879.8	880.0	880.1	881.3
165°	897.5	897.4	897.2	897.0	896.8	896.7	896.7	896.7	896.7	896.7	898.0
167.5°	912.9	912.4	911.9	911.4	910.9	910.6	910.6	910.5	910.5	910.4	911.7
170°	921.2	920.7	920.1	919.6	919.1	918.7	918.6	918.4	918.2	918.0	919.3
172.5°	926.9	926.3	925.8	925.2	924.7	924.4	924.2	924.0	923.9	923.7	924.9
175°	933.8	933.3	932.7	932.2	931.7	931.3	930.9	930.6	930.2	929.9	931.1
177.5°	936.6	936.2	935.8	935.3	934.9	934.6	934.3	934.0	933.7	933.5	934.3
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	127.0	133.8	140.6	145.1	147.2	149.5	151.6	153.8
90°	139.9	146.2	152.6	156.8	159.1	161.3	163.4	165.6
92.5°	132.5	139.2	145.8	150.2	152.2	154.2	156.2	158.3
95°	150.0	156.3	162.7	166.7	168.4	170.1	171.7	173.4
97.5°	177.5	183.8	190.0	194.1	196.0	197.9	199.9	201.9
100°	196.7	203.0	209.1	213.1	214.8	216.4	218.1	219.7
102.5°	218.4	224.6	230.9	234.8	236.4	238.1	239.7	241.5
105°	251.0	257.2	263.4	267.4	269.2	271.1	273.0	274.8
107.5°	286.7	292.5	298.2	301.6	302.7	303.7	304.7	305.8
110°	311.2	316.6	322.0	325.4	326.7	328.0	329.3	330.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	335.9	340.8	345.8	349.0	350.4	351.8	353.4	354.8
115°	373.9	378.7	383.5	386.7	388.0	389.3	390.6	391.9
117.5°	410.3	414.9	419.4	422.2	423.4	424.6	425.8	427.0
120°	434.7	439.5	444.1	447.2	448.5	449.8	451.1	452.4
122.5°	460.4	464.5	468.7	471.3	472.5	473.6	474.8	476.1
125°	497.8	501.8	505.7	508.5	509.8	511.1	512.4	513.8
127.5°	534.0	537.6	541.1	543.3	544.2	545.1	546.0	546.9
130°	559.2	562.8	566.4	568.7	569.3	569.9	570.6	571.2
132.5°	583.4	586.5	589.7	591.6	592.4	593.2	594.0	594.7
135°	619.7	623.0	626.3	628.4	629.2	630.1	630.9	631.7
137.5°	654.2	657.2	660.1	661.8	662.3	662.7	663.2	663.6
140°	677.8	680.5	683.2	684.7	685.0	685.3	685.6	685.9
142.5°	699.8	702.1	704.4	705.6	705.8	706.0	706.1	706.3
145°	734.1	735.3	736.5	737.1	737.2	737.4	737.5	737.7
147.5°	764.7	765.2	765.7	765.8	765.6	765.3	765.1	764.8
150°	784.9	785.4	786.0	786.0	785.4	784.9	784.4	783.9
152.5°	805.4	806.1	806.7	806.7	806.1	805.4	804.7	804.1
155°	831.3	832.2	833.1	833.3	832.7	832.2	831.7	831.2
157.5°	855.4	856.6	857.8	857.9	857.1	856.3	855.4	854.5
160°	869.6	870.7	871.7	871.9	871.2	870.5	869.8	869.1
162.5°	882.5	883.7	884.9	885.0	884.2	883.4	882.5	881.7
165°	899.2	900.4	901.6	901.8	900.9	900.0	899.2	898.3
167.5°	912.9	914.1	915.3	915.5	914.6	913.7	912.8	911.9
170°	920.5	921.7	922.9	923.0	922.0	920.9	919.9	918.8
172.5°	926.1	927.4	928.6	928.7	927.7	926.6	925.5	924.5
175°	932.3	933.5	934.7	934.8	933.8	932.7	931.7	930.7
177.5°	935.1	936.0	936.9	936.9	936.0	935.1	934.3	933.5
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3

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