

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: P331397-930

Luminaire Tested: **S122DIP-S865D725U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331397-930  
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-S865D725U930-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 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: 4962.5 lumens  
Efficiency: N/A  
Efficacy: 91.2 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: General Diffuse

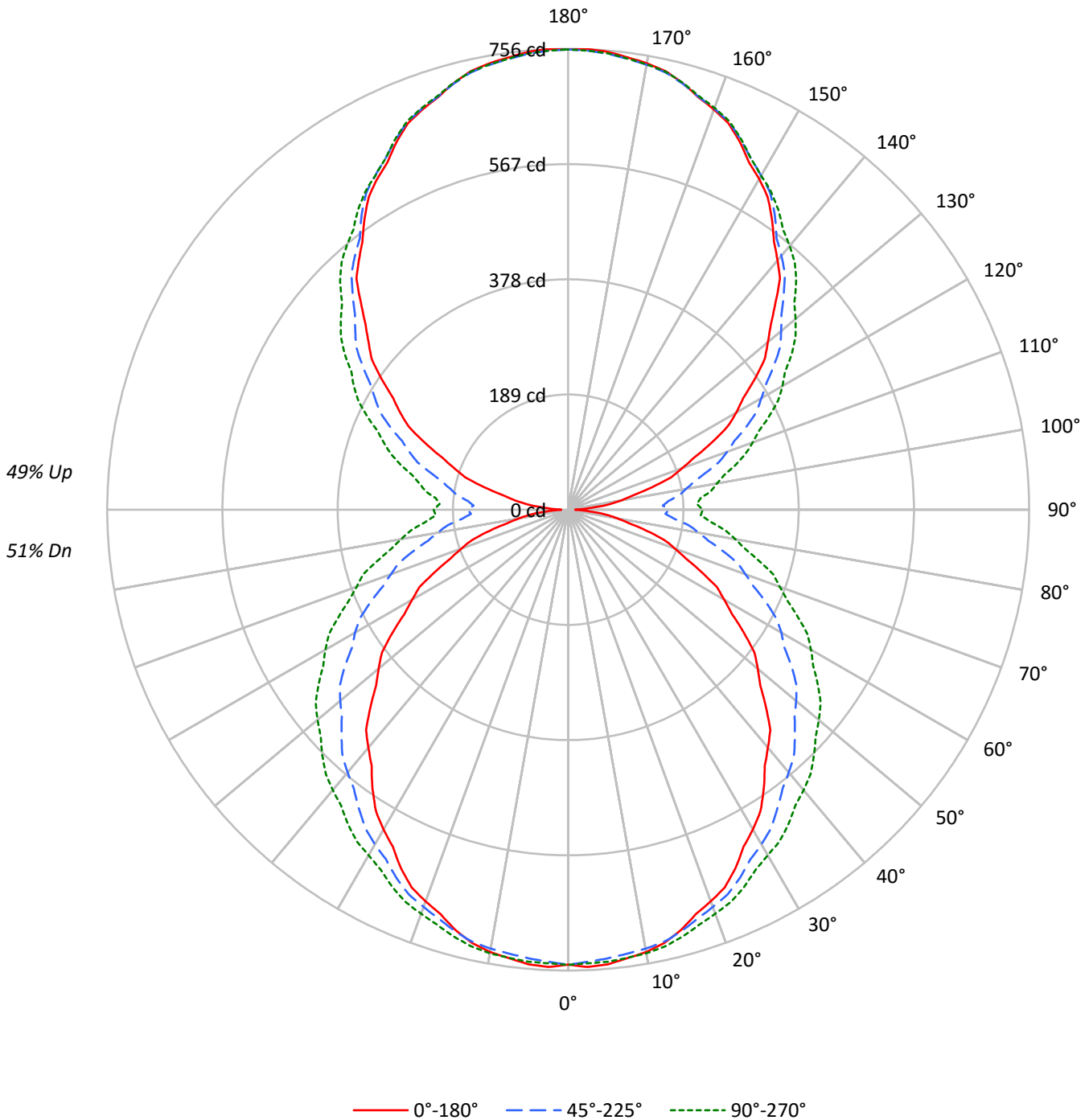
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	96	91	87	83	89	84	81	77	71	68	66	59	57	55	48	47	45	40
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	41	39	37	32
3	79	69	61	55	73	64	57	51	54	48	44	45	41	37	36	33	31	27
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	29	26	22
5	66	54	45	39	61	50	42	36	42	36	32	35	31	27	29	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	20	17
7	56	43	35	29	52	40	33	27	34	28	24	29	24	21	24	20	17	15
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	13
9	48	36	28	23	45	33	26	22	29	23	19	24	20	16	20	16	14	12
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	18	15	12	10

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

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	1.4
10°-20°	202.8	4.1
20°-30°	307.4	6.2
30°-40°	374.4	7.5
40°-50°	402.8	8.1
50°-60°	391.1	7.9
60°-70°	341.5	6.9
70°-80°	262.9	5.3
80°-90°	179.5	3.6
90°-100°	169.4	3.4
100°-110°	237.4	4.8
110°-120°	312.7	6.3
120°-130°	366.8	7.4
130°-140°	388.7	7.8
140°-150°	370.0	7.5
150°-160°	308.4	6.2
160°-170°	204.5	4.1
170°-180°	71.5	1.4
0°-30°	580.9	11.7
0°-40°	955.3	19.3
0°-60°	1749.2	35.2
0°-90°	2533.1	51.0
90°-120°	719.5	14.5
90°-150°	1845.0	37.2
90°-180°	2429.0	48.9
0°-180°	4962.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	12	83	165	206	221	9
95°	42	100	165	205	218	45
105°	142	177	233	271	284	151
115°	259	277	322	353	364	256
125°	373	380	412	438	448	334
135°	481	488	500	521	529	372
145°	582	587	591	598	601	364
155°	666	668	670	673	671	306
165°	725	724	724	728	725	204
175°	754	752	751	755	751	72
180°	755	755	755	755	755	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.4	36.0	50.6	65.3	80.0	95.3	111.4	127.3	143.4	159.4	169.2
90°	11.5	27.1	42.7	58.4	74.0	91.1	109.6	128.1	146.6	165.1	174.5
92.5°	21.3	35.5	49.7	64.0	78.2	93.1	108.7	124.2	139.7	155.3	164.8
95°	41.8	54.5	67.3	79.9	92.6	106.4	121.1	135.7	150.5	165.2	174.3
97.5°	68.1	79.4	90.7	102.0	113.3	126.1	140.6	154.9	169.3	183.7	192.6
100°	88.5	98.6	108.6	118.6	128.7	140.6	154.5	168.4	182.2	196.2	205.0
102.5°	109.1	118.1	127.1	136.2	145.2	156.5	170.2	183.8	197.4	211.0	219.8
105°	142.4	149.9	157.2	164.6	172.0	182.1	194.9	207.7	220.5	233.3	241.9
107.5°	177.2	183.4	189.6	195.8	201.9	211.0	223.0	235.0	247.0	258.9	267.1
110°	198.7	204.3	210.0	215.6	221.4	230.1	241.8	253.6	265.4	277.2	284.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	223.1	228.0	232.9	237.8	242.7	250.7	261.8	272.9	284.0	295.1	302.4
115°	259.3	262.8	266.2	269.7	273.2	280.2	290.7	301.3	311.9	322.4	329.5
117.5°	294.1	296.9	299.8	302.7	305.6	311.6	320.8	330.0	339.2	348.5	355.2
120°	318.0	320.2	322.3	324.3	326.4	331.7	340.2	348.7	357.2	365.7	372.4
122.5°	340.0	341.7	343.5	345.2	347.0	352.0	360.2	368.4	376.7	384.9	391.1
125°	373.1	374.3	375.6	376.9	378.1	382.5	389.7	397.0	404.2	411.5	417.6
127.5°	406.3	407.7	409.0	410.4	411.8	415.3	421.0	426.7	432.4	438.1	443.6
130°	427.2	428.8	430.4	432.0	433.7	436.8	441.6	446.4	451.1	455.8	461.4
132.5°	450.7	451.9	453.2	454.4	455.8	458.4	462.3	466.2	470.2	474.1	479.1
135°	480.9	482.5	484.0	485.6	487.1	489.3	492.0	494.6	497.3	500.0	505.0
137.5°	514.0	515.2	516.4	517.6	518.9	520.2	521.6	523.0	524.5	525.9	530.2
140°	533.9	534.8	535.9	537.0	538.0	539.1	540.3	541.4	542.7	543.8	547.7
142.5°	554.2	555.3	556.3	557.3	558.4	559.2	559.8	560.4	560.9	561.5	564.7
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	592.3
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	617.0
150°	626.5	627.3	628.1	629.0	629.8	630.6	631.1	631.7	632.3	632.8	633.2
152.5°	642.2	643.1	643.9	644.8	645.6	646.4	647.1	647.8	648.4	649.1	649.6
155°	665.9	666.3	666.8	667.2	667.6	668.1	668.5	669.0	669.4	669.8	670.5
157.5°	686.2	686.5	686.8	687.1	687.4	687.6	687.9	688.1	688.4	688.6	689.6
160°	698.5	698.7	699.0	699.3	699.6	699.8	699.9	700.1	700.3	700.3	701.2
162.5°	709.6	709.7	709.8	709.8	709.9	710.0	710.1	710.3	710.5	710.5	711.5
165°	724.6	724.5	724.3	724.1	724.0	723.9	723.9	723.9	723.9	723.9	725.0
167.5°	737.0	736.6	736.2	735.8	735.4	735.2	735.2	735.1	735.1	735.0	736.1
170°	743.7	743.3	742.8	742.4	742.0	741.7	741.6	741.4	741.3	741.1	742.2
172.5°	748.3	747.9	747.5	747.0	746.6	746.3	746.2	746.0	745.9	745.8	746.7
175°	753.9	753.5	753.0	752.6	752.2	751.9	751.5	751.3	751.0	750.7	751.7
177.5°	756.2	755.9	755.5	755.1	754.8	754.6	754.3	754.1	753.8	753.7	754.3
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	178.9	188.7	198.4	204.8	207.9	211.0	214.1	217.3
90°	183.8	193.1	202.4	208.6	211.7	214.7	217.7	220.7
92.5°	174.2	183.7	193.2	199.4	202.3	205.2	208.1	211.1
95°	183.4	192.6	201.7	207.6	210.2	212.8	215.4	218.0
97.5°	201.5	210.3	219.2	225.1	228.0	230.7	233.5	236.4
100°	213.9	222.8	231.7	237.4	239.9	242.4	244.9	247.4
102.5°	228.6	237.4	246.2	251.9	254.4	256.9	259.4	261.9
105°	250.6	259.3	268.1	273.7	276.4	279.0	281.6	284.3
107.5°	275.3	283.5	291.7	296.8	298.7	300.8	302.7	304.8
110°	292.5	300.3	307.9	312.9	315.1	317.3	319.5	321.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	309.8	317.2	324.5	329.3	331.7	334.0	336.3	338.7
115°	336.5	343.6	350.7	355.3	357.5	359.7	362.0	364.2
117.5°	362.0	368.8	375.5	379.9	382.0	384.0	386.0	388.0
120°	379.1	385.9	392.6	397.1	399.3	401.5	403.7	405.9
122.5°	397.4	403.6	409.8	413.8	415.7	417.7	419.6	421.6
125°	423.6	429.7	435.8	439.8	441.8	443.8	445.9	447.9
127.5°	449.1	454.4	459.9	463.5	465.1	466.8	468.5	470.1
130°	466.8	472.3	477.8	481.3	482.6	484.0	485.3	486.7
132.5°	484.0	489.0	493.9	497.2	498.6	500.1	501.6	503.0
135°	509.9	514.8	519.7	522.9	524.4	525.9	527.4	528.9
137.5°	534.5	538.8	543.2	545.8	546.9	548.0	549.0	550.1
140°	551.5	555.4	559.2	561.6	562.5	563.4	564.2	565.1
142.5°	567.9	571.0	574.2	576.2	576.9	577.6	578.2	578.9
145°	593.9	595.5	597.1	598.2	598.8	599.5	600.1	600.7
147.5°	617.5	618.0	618.5	618.8	618.8	618.9	618.9	619.0
150°	633.7	634.1	634.5	634.5	634.1	633.7	633.2	632.8
152.5°	650.2	650.8	651.3	651.3	650.8	650.2	649.6	649.1
155°	671.2	671.9	672.6	672.8	672.3	671.9	671.5	671.1
157.5°	690.6	691.5	692.5	692.6	691.9	691.3	690.6	689.9
160°	702.1	703.0	703.8	703.9	703.4	702.8	702.2	701.6
162.5°	712.5	713.5	714.4	714.5	713.9	713.2	712.5	711.8
165°	725.9	726.9	727.9	728.1	727.3	726.6	725.9	725.2
167.5°	737.0	738.0	739.0	739.2	738.4	737.7	736.9	736.2
170°	743.1	744.1	745.1	745.2	744.4	743.5	742.7	741.8
172.5°	747.7	748.7	749.7	749.7	748.9	748.0	747.2	746.4
175°	752.7	753.7	754.6	754.7	753.9	753.0	752.2	751.4
177.5°	755.0	755.7	756.4	756.4	755.7	755.0	754.3	753.7
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1

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