

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: P333176-840

Luminaire Tested: **S125DIP-S610D590U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333176-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S610D590U840-4F0-1E-UDD-F1  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4591.0 lumens  
Efficiency: N/A  
Efficacy: 140.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse

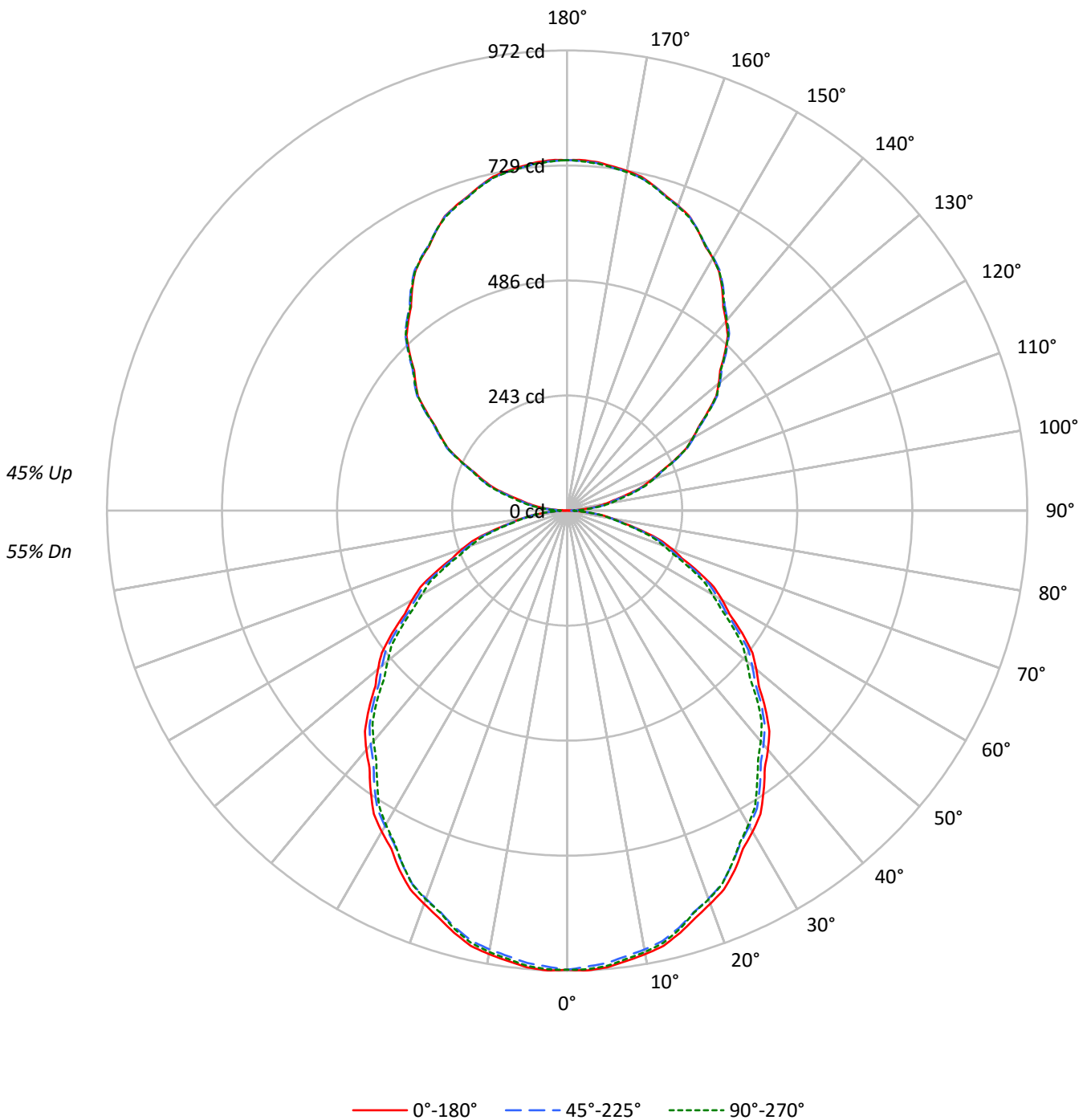
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39
3	82	72	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	27	24
6	64	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19
8	55	42	34	29	51	39	32	27	35	29	25	30	25	22	26	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

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

	0°	45°	90°
0°	6264	6264	6264
5°	6278	6218	6257
10°	6239	6174	6209
15°	6171	6100	6125
20°	6075	5996	6006
25°	5971	5872	5867
30°	5842	5739	5711
35°	5705	5595	5517
40°	5563	5440	5363
45°	5411	5298	5193
50°	5243	5127	4972
55°	5080	4933	4796
60°	4886	4738	4570
65°	4655	4504	4351
70°	4434	4232	4086
75°	4040	3905	3773
80°	3593	3537	3451
85°	3127	3179	3016



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.4	2.0
10°-20°	258.3	5.6
20°-30°	381.4	8.3
30°-40°	445.0	9.7
40°-50°	447.0	9.7
50°-60°	392.4	8.5
60°-70°	292.4	6.4
70°-80°	167.2	3.6
80°-90°	50.2	1.1
90°-100°	49.6	1.1
100°-110°	146.4	3.2
110°-120°	248.0	5.4
120°-130°	326.4	7.1
130°-140°	365.7	8.0
140°-150°	358.4	7.8
150°-160°	301.1	6.6
160°-170°	200.1	4.4
170°-180°	70.0	1.5
0°-30°	731.2	15.9
0°-40°	1176.2	25.6
0°-60°	2015.6	43.9
0°-90°	2525.3	55.0
90°-120°	444.0	9.7
90°-150°	1494.5	32.6
90°-180°	2066.0	45.0
0°-180°	4591.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	968	966	959	966	965	92
15°	923	920	912	916	916	260
25°	838	834	824	825	823	385
35°	724	720	710	706	700	452
45°	592	589	580	571	569	456
55°	451	448	438	431	426	403
65°	305	303	295	288	285	302
75°	162	160	156	154	151	173
85°	42	43	43	42	41	47
90°	1	5	9	12	14	4
95°	38	39	44	48	50	40
105°	131	134	138	141	143	140
115°	248	250	252	251	251	245
125°	362	366	366	365	365	324
135°	471	474	475	475	473	363
145°	571	573	575	575	573	357
155°	653	653	654	656	653	301
165°	710	709	710	712	709	200
175°	738	736	736	739	736	70
180°	740	740	740	740	740	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	969.9	969.9	969.9	969.9	969.9	969.9	969.9	969.9	969.9	969.9	969.9
2.5°	972.3	971.9	971.5	971.1	970.7	969.8	968.5	967.0	965.7	964.3	965.7
5°	968.4	968.0	967.7	967.2	966.9	965.9	964.2	962.5	960.8	959.1	960.7
7.5°	959.4	959.1	958.8	958.4	958.1	956.9	955.0	953.2	951.3	949.5	950.9
10°	951.4	951.1	950.8	950.4	950.1	949.0	947.1	945.2	943.3	941.5	942.8
12.5°	941.6	941.0	940.4	939.8	939.2	938.0	936.2	934.5	932.7	931.0	932.1
15°	923.0	922.5	922.0	921.5	921.0	919.8	918.0	916.0	914.1	912.3	913.1
17.5°	901.7	901.0	900.2	899.5	898.7	897.4	895.4	893.4	891.5	889.6	890.6
20°	883.9	883.5	883.2	882.9	882.5	881.3	879.1	876.9	874.6	872.4	873.6
22.5°	866.1	865.5	864.8	864.2	863.6	862.3	860.2	858.2	856.1	853.9	854.7
25°	837.9	837.0	836.2	835.4	834.5	832.9	830.7	828.5	826.3	824.0	824.5
27.5°	804.9	804.4	803.9	803.3	802.8	801.4	799.1	796.9	794.6	792.3	792.3
30°	783.4	782.8	782.3	781.8	781.3	779.8	777.3	774.7	772.1	769.6	769.2
32.5°	760.0	759.3	758.5	757.7	756.9	755.4	753.2	750.8	748.5	746.3	745.7
35°	723.6	722.9	722.2	721.5	720.8	719.3	716.9	714.5	712.2	709.7	708.9
37.5°	685.6	684.8	684.0	683.1	682.3	680.6	678.4	676.2	673.9	671.7	670.4
40°	659.8	659.0	658.1	657.3	656.4	654.8	652.5	650.1	647.6	645.3	643.8
42.5°	632.3	631.6	630.8	630.1	629.3	627.8	625.4	623.1	620.7	618.2	616.9
45°	592.4	591.7	591.0	590.3	589.7	588.2	586.2	584.2	582.1	580.1	578.0
47.5°	549.4	549.4	549.5	549.5	549.5	548.3	545.8	543.4	541.0	538.5	536.4
50°	521.8	521.2	520.7	520.2	519.7	518.5	516.3	514.3	512.3	510.3	508.1
52.5°	493.5	493.1	492.8	492.4	492.0	490.7	488.6	486.4	484.2	482.0	480.1
55°	451.2	450.6	450.1	449.6	449.1	447.7	445.2	442.9	440.5	438.1	436.6
57.5°	406.5	406.3	406.0	405.7	405.5	404.2	402.2	400.2	398.2	396.3	394.3
60°	378.3	377.6	376.9	376.2	375.6	374.3	372.4	370.5	368.6	366.8	365.1
62.5°	348.8	348.3	347.7	347.2	346.6	345.6	344.0	342.3	340.7	339.1	337.3
65°	304.6	304.3	304.0	303.6	303.3	302.2	300.2	298.4	296.5	294.7	293.1
67.5°	261.8	261.1	260.3	259.6	258.9	257.9	256.5	255.1	253.7	252.3	251.0
70°	234.8	234.0	233.1	232.3	231.4	230.1	228.6	227.1	225.6	224.1	223.0
72.5°	205.3	204.7	204.2	203.6	203.0	202.2	201.3	200.3	199.2	198.2	197.1
75°	161.9	161.6	161.2	160.9	160.6	160.0	159.1	158.2	157.3	156.5	156.0
77.5°	121.9	121.7	121.6	121.4	121.3	121.0	120.5	120.1	119.6	119.1	118.8
80°	96.6	96.6	96.6	96.6	96.6	96.5	96.1	95.8	95.5	95.1	94.9
82.5°	74.6	74.3	74.0	73.7	73.5	73.3	73.2	73.2	73.1	73.0	72.7
85°	42.2	42.4	42.5	42.7	42.9	42.9	42.9	42.9	42.9	42.9	42.8
87.5°	16.7	16.9	17.1	17.3	17.5	17.7	17.7	17.7	17.8	17.8	18.0
90°	0.6	1.6	2.6	3.6	4.6	5.7	6.6	7.5	8.3	9.2	9.9
92.5°	13.9	14.6	15.3	16.1	16.8	17.7	18.8	19.9	21.0	22.1	22.9
95°	37.5	37.7	38.0	38.2	38.5	39.3	40.5	41.8	43.1	44.3	45.2
97.5°	62.2	62.3	62.4	62.5	62.6	63.5	65.3	67.1	68.9	70.6	71.5
100°	80.7	80.7	80.7	80.7	80.7	81.5	83.1	84.8	86.4	88.2	89.3
102.5°	100.5	101.0	101.5	102.0	102.5	103.2	104.0	104.9	105.7	106.5	107.9
105°	131.4	132.0	132.6	133.3	133.9	134.6	135.4	136.1	136.9	137.6	138.5
107.5°	165.4	166.1	166.7	167.3	168.0	168.6	169.3	169.8	170.4	171.0	171.4
110°	188.9	189.6	190.3	190.9	191.6	192.1	192.4	192.8	193.2	193.6	194.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.9	213.3	213.6	213.9	214.3	214.7	215.2	215.6	216.1	216.6	216.8
115°	248.3	248.8	249.3	249.8	250.3	250.7	251.0	251.3	251.5	251.8	251.7
117.5°	283.8	284.0	284.3	284.5	284.7	285.0	285.2	285.4	285.6	285.9	286.0
120°	305.9	306.6	307.2	307.8	308.5	308.8	309.0	309.1	309.2	309.3	309.3
122.5°	329.9	330.1	330.3	330.5	330.8	331.0	331.4	331.7	332.0	332.4	332.3
125°	362.3	363.1	363.9	364.7	365.5	365.9	366.0	366.2	366.3	366.4	366.2
127.5°	397.0	397.4	397.8	398.2	398.7	399.0	399.1	399.3	399.4	399.6	399.5
130°	417.7	418.3	419.0	419.6	420.2	420.7	420.9	421.2	421.4	421.7	421.6
132.5°	438.4	439.5	440.5	441.5	442.6	443.1	443.0	443.0	442.9	442.9	442.8
135°	471.2	472.0	472.8	473.5	474.3	474.7	474.9	475.0	475.1	475.2	475.2
137.5°	502.1	502.9	503.6	504.3	505.1	505.6	505.9	506.1	506.4	506.8	506.9
140°	521.9	522.6	523.2	523.8	524.5	525.0	525.4	525.8	526.1	526.5	526.8
142.5°	541.8	542.3	542.8	543.4	543.9	544.4	544.9	545.4	545.9	546.3	546.5
145°	570.9	571.4	572.0	572.5	573.0	573.4	573.8	574.2	574.6	574.9	574.9
147.5°	597.8	598.1	598.4	598.7	599.1	599.3	599.6	600.0	600.3	600.6	600.9
150°	615.8	615.7	615.6	615.5	615.3	615.5	616.0	616.5	617.0	617.5	617.5
152.5°	630.6	630.8	631.0	631.2	631.3	631.5	631.7	631.9	632.1	632.4	632.7
155°	653.3	653.3	653.3	653.3	653.3	653.4	653.5	653.6	653.8	653.9	654.4
157.5°	673.6	673.3	673.0	672.8	672.5	672.4	672.5	672.7	672.8	672.9	673.4
160°	685.6	685.2	684.8	684.4	684.0	683.9	684.0	684.2	684.3	684.4	684.9
162.5°	696.2	695.9	695.6	695.3	695.0	694.9	694.9	695.0	695.0	695.0	695.6
165°	710.3	710.0	709.8	709.5	709.3	709.2	709.3	709.5	709.6	709.7	710.2
167.5°	722.4	721.9	721.2	720.7	720.2	720.0	720.0	720.0	720.0	720.0	720.7
170°	728.7	728.2	727.7	727.2	726.7	726.5	726.5	726.5	726.5	726.5	727.2
172.5°	733.4	732.9	732.4	731.8	731.3	731.0	731.0	731.0	731.0	731.0	731.8
175°	738.5	738.0	737.5	737.0	736.5	736.3	736.3	736.3	736.3	736.3	737.0
177.5°	741.2	740.8	740.4	740.0	739.5	739.3	739.2	739.1	739.0	738.9	739.5
180°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	969.9	969.9	969.9	969.9	969.9	969.9	969.9	969.9
2.5°	967.0	968.5	969.8	970.4	970.3	970.1	970.0	969.9
5°	962.2	963.7	965.2	965.9	965.7	965.6	965.4	965.2
7.5°	952.4	953.9	955.4	956.1	955.9	955.7	955.6	955.4
10°	944.2	945.5	947.0	947.6	947.4	947.2	947.0	946.8
12.5°	933.2	934.3	935.3	935.9	935.8	935.8	935.8	935.7
15°	914.0	914.8	915.7	916.1	916.1	916.1	916.1	916.1
17.5°	891.7	892.7	893.8	893.9	893.0	892.2	891.4	890.5
20°	874.7	876.0	877.2	877.4	876.5	875.7	874.7	873.9
22.5°	855.6	856.4	857.2	857.3	856.7	856.1	855.5	855.0
25°	824.8	825.1	825.5	825.4	824.9	824.4	823.8	823.3
27.5°	792.4	792.5	792.5	792.3	791.8	791.3	790.8	790.3
30°	768.9	768.6	768.2	767.8	767.3	766.8	766.3	765.8
32.5°	745.1	744.4	743.8	743.1	742.1	741.2	740.2	739.3
35°	708.0	707.2	706.3	705.2	703.9	702.5	701.1	699.7
37.5°	669.1	667.9	666.6	665.6	664.8	664.1	663.3	662.5
40°	642.2	640.7	639.1	638.1	637.6	637.1	636.6	636.1
42.5°	615.5	614.1	612.7	611.6	610.8	610.1	609.3	608.4
45°	575.9	573.9	571.9	570.6	570.1	569.6	569.1	568.6
47.5°	534.3	532.2	530.2	528.6	527.4	526.1	524.9	523.7
50°	505.8	503.6	501.4	499.7	498.5	497.3	496.0	494.9
52.5°	478.1	476.2	474.2	472.6	471.3	469.9	468.6	467.3
55°	435.0	433.5	432.0	430.6	429.4	428.2	427.1	425.9
57.5°	392.2	390.3	388.3	387.0	386.4	385.7	385.1	384.5
60°	363.3	361.6	359.9	358.5	357.3	356.1	354.9	353.8
62.5°	335.5	333.7	331.7	330.4	329.5	328.5	327.6	326.7
65°	291.5	290.0	288.5	287.4	286.7	286.0	285.4	284.7
67.5°	249.7	248.4	247.1	246.2	245.8	245.4	245.0	244.6
70°	222.0	221.0	219.9	219.1	218.4	217.7	217.0	216.4
72.5°	195.9	194.8	193.6	192.7	192.0	191.4	190.7	190.0
75°	155.5	155.0	154.5	153.9	153.2	152.5	151.9	151.2
77.5°	118.5	118.2	117.9	117.4	116.9	116.5	116.0	115.5
80°	94.8	94.6	94.4	94.2	93.8	93.5	93.2	92.8
82.5°	72.4	72.1	71.8	71.6	71.6	71.5	71.4	71.4
85°	42.6	42.4	42.3	42.0	41.7	41.3	41.0	40.7
87.5°	18.1	18.2	18.3	18.3	18.1	17.9	17.7	17.5
90°	10.5	11.1	11.8	12.3	12.7	13.0	13.4	13.8
92.5°	23.8	24.6	25.5	26.1	26.4	26.7	26.9	27.2
95°	46.2	47.1	48.0	48.5	48.8	49.1	49.3	49.6
97.5°	72.3	73.2	74.0	74.5	74.6	74.8	74.9	75.1
100°	90.5	91.6	92.7	93.4	93.7	94.0	94.2	94.5
102.5°	109.1	110.4	111.6	112.4	112.8	113.1	113.5	113.8
105°	139.3	140.0	140.8	141.4	141.7	142.1	142.5	142.9
107.5°	171.8	172.2	172.5	172.7	172.7	172.7	172.6	172.6
110°	194.3	194.7	195.1	195.2	195.1	195.0	194.8	194.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	217.0	217.1	217.3	217.3	217.1	216.8	216.6	216.4
115°	251.5	251.4	251.3	251.2	251.0	250.9	250.7	250.6
117.5°	286.1	286.2	286.3	286.1	285.6	285.1	284.6	284.0
120°	309.3	309.3	309.3	309.1	308.6	308.1	307.6	307.1
122.5°	332.2	332.1	332.0	331.7	331.3	330.9	330.5	330.1
125°	365.9	365.7	365.4	365.2	365.1	365.0	364.8	364.7
127.5°	399.3	399.2	399.1	398.9	398.6	398.4	398.1	397.9
130°	421.4	421.3	421.2	421.0	420.7	420.5	420.2	420.0
132.5°	442.6	442.5	442.4	442.1	441.8	441.4	441.1	440.7
135°	475.2	475.2	475.2	475.0	474.5	474.0	473.5	473.0
137.5°	507.1	507.2	507.4	507.2	506.4	505.8	505.2	504.5
140°	527.0	527.4	527.6	527.4	526.7	526.1	525.4	524.8
142.5°	546.6	546.8	546.9	546.7	546.1	545.4	544.8	544.2
145°	574.9	574.9	574.9	574.7	574.4	574.0	573.6	573.2
147.5°	601.2	601.5	601.8	601.5	600.6	599.8	598.8	598.0
150°	617.5	617.5	617.5	617.4	617.2	616.9	616.7	616.4
152.5°	633.0	633.3	633.6	633.5	633.0	632.6	632.1	631.7
155°	654.9	655.4	655.9	655.9	655.2	654.6	653.9	653.3
157.5°	673.9	674.4	674.9	674.8	673.9	673.1	672.3	671.4
160°	685.4	685.9	686.4	686.4	685.8	685.1	684.5	683.9
162.5°	696.2	696.8	697.5	697.4	696.7	695.9	695.2	694.4
165°	710.7	711.2	711.9	711.7	710.9	710.1	709.3	708.6
167.5°	721.5	722.4	723.1	723.1	722.3	721.4	720.6	719.9
170°	728.0	728.7	729.5	729.4	728.6	727.7	726.8	725.9
172.5°	732.7	733.4	734.2	734.2	733.4	732.6	731.7	730.9
175°	737.8	738.5	739.3	739.2	738.4	737.5	736.6	735.7
177.5°	740.1	740.7	741.3	741.3	740.6	739.9	739.1	738.4
180°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3

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