

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: P331355-935

Luminaire Tested: **SA2XXDIP-C675D725U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331355-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

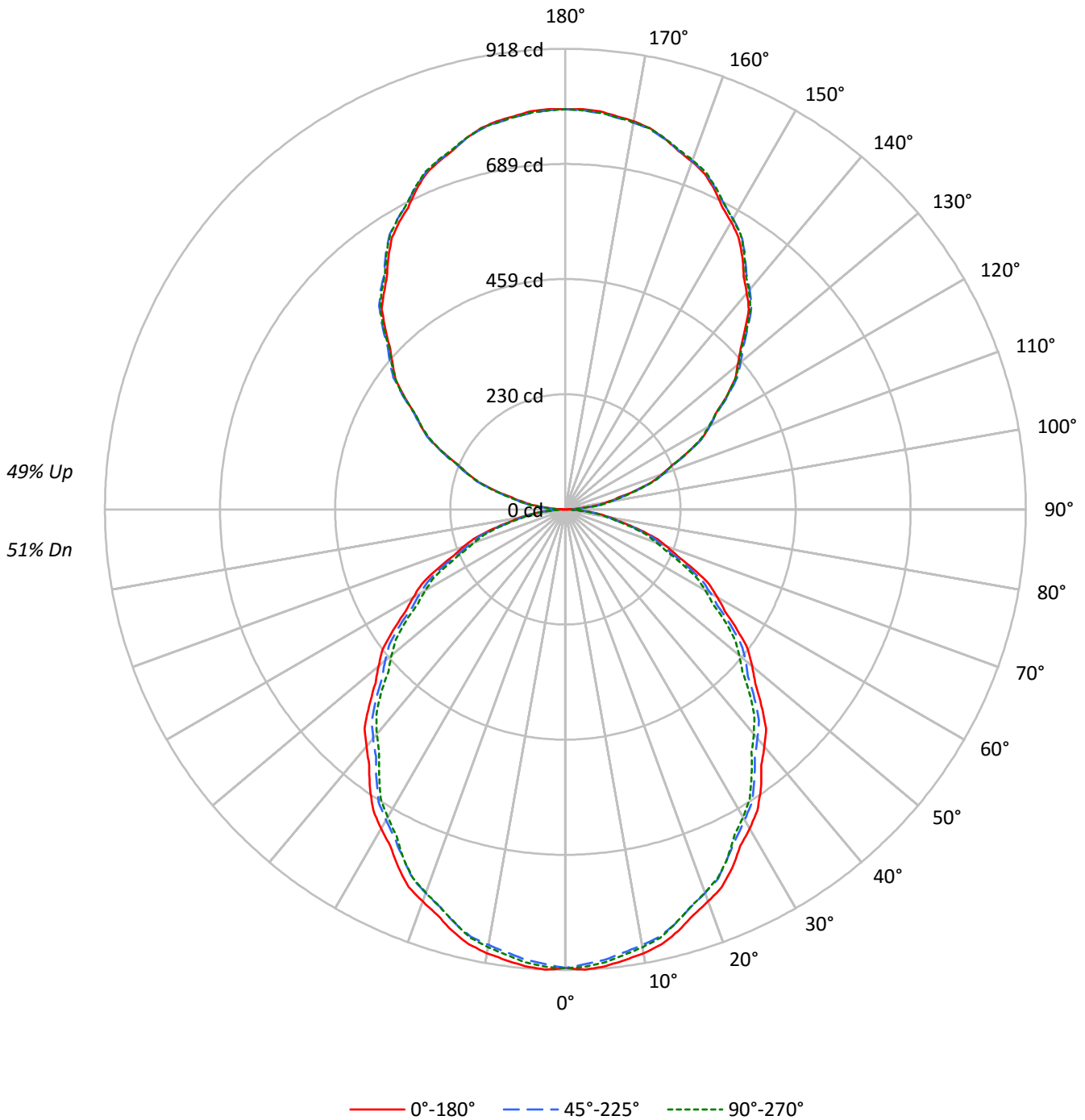
Lumens per Lamp: N/A
Luminaire Lumens: 4558.7 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	99	99	99	99	84	84	84	70	70	70	57	57	57	51				
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	50	49	48	43				
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36				
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31				
4	74	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26				
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23				
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20				
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18				
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16				
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	1.9
10°-20°	241.9	5.3
20°-30°	355.5	7.8
30°-40°	412.9	9.1
40°-50°	412.5	9.0
50°-60°	359.7	7.9
60°-70°	266.0	5.8
70°-80°	150.6	3.3
80°-90°	43.7	1.0
90°-100°	50.5	1.1
100°-110°	157.0	3.4
110°-120°	268.3	5.9
120°-130°	352.8	7.7
130°-140°	396.0	8.7
140°-150°	388.3	8.5
150°-160°	325.7	7.1
160°-170°	216.0	4.7
170°-180°	75.5	1.7
0°-30°	683.3	15.0
0°-40°	1096.3	24.0
0°-60°	1868.5	41.0
0°-90°	2328.8	51.1
90°-120°	475.8	10.4
90°-150°	1612.8	35.4
90°-180°	2230.0	48.9
0°-180°	4558.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	9	24	22	23	4
95°	35	41	43	43	42	40
105°	145	147	148	149	149	153
115°	269	273	272	271	269	266
125°	392	397	396	394	393	350
135°	507	514	516	515	513	391
145°	615	620	624	624	622	384
155°	703	705	707	710	709	324
165°	765	765	764	769	766	216
175°	796	794	793	797	794	76
180°	798	798	798	798	798	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.8	12.8	12.9	12.9	13.0	13.2	13.5	13.9	14.2	14.6	14.0
90°	0.7	2.5	4.3	6.0	7.8	10.4	13.7	17.0	20.2	23.6	23.2
92.5°	12.0	13.3	14.6	15.9	17.2	18.3	19.0	19.8	20.7	21.4	21.4
95°	35.0	36.5	38.0	39.5	41.0	41.8	42.2	42.4	42.8	43.0	43.0
97.5°	64.0	65.3	66.6	67.8	69.2	70.2	70.7	71.3	71.8	72.4	72.4
100°	85.5	86.7	87.8	89.0	90.2	91.1	91.5	92.0	92.4	92.9	92.9
102.5°	108.1	109.0	110.0	111.0	111.9	112.7	113.2	113.8	114.3	114.9	115.0
105°	144.7	145.2	145.6	146.0	146.5	146.9	147.1	147.5	147.7	148.1	148.4
107.5°	181.6	182.3	182.9	183.6	184.2	184.5	184.5	184.5	184.5	184.5	184.7
110°	205.3	206.1	207.1	207.9	208.9	209.3	209.3	209.3	209.3	209.3	209.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	231.1	232.0	232.9	233.8	234.7	235.1	235.0	234.9	234.7	234.6	234.3
115°	269.2	270.1	271.0	271.9	272.8	273.1	272.8	272.5	272.2	271.9	271.7
117.5°	307.1	308.3	309.5	310.7	311.9	312.1	311.3	310.5	309.6	308.8	308.4
120°	332.4	333.6	334.8	336.0	337.3	337.3	336.0	334.8	333.6	332.4	332.4
122.5°	355.6	357.1	358.5	359.9	361.4	361.6	360.8	360.0	359.1	358.3	357.9
125°	391.7	393.0	394.3	395.7	397.1	397.5	397.1	396.6	396.1	395.7	395.3
127.5°	426.8	428.5	430.2	432.0	433.6	434.2	433.7	433.2	432.6	432.0	431.5
130°	448.9	450.8	452.8	454.7	456.7	457.4	457.2	456.8	456.6	456.3	456.0
132.5°	473.6	475.3	476.8	478.4	480.0	480.8	480.9	481.0	481.0	481.0	480.4
135°	506.8	508.4	510.1	511.7	513.3	514.3	514.6	514.9	515.2	515.5	515.4
137.5°	541.7	542.9	544.3	545.7	547.0	547.9	548.3	548.6	549.1	549.4	549.3
140°	562.7	564.0	565.3	566.6	568.0	569.0	569.8	570.6	571.3	572.0	572.0
142.5°	584.2	585.5	586.9	588.2	589.5	590.5	591.0	591.5	592.0	592.5	592.6
145°	615.1	616.1	617.3	618.3	619.3	620.3	621.2	622.1	622.9	623.9	624.1
147.5°	642.7	643.9	645.2	646.4	647.7	648.7	649.3	649.9	650.5	651.1	651.3
150°	661.6	662.5	663.3	664.3	665.1	665.9	666.5	667.1	667.7	668.3	668.7
152.5°	678.2	679.2	680.0	681.0	681.8	682.6	683.4	684.1	684.8	685.5	686.0
155°	703.3	703.7	704.2	704.6	705.1	705.5	705.9	706.5	706.9	707.3	708.1
157.5°	724.7	725.0	725.3	725.6	725.9	726.2	726.4	726.7	726.9	727.2	728.2
160°	737.6	737.9	738.2	738.5	738.8	739.0	739.2	739.3	739.5	739.6	740.5
162.5°	749.4	749.5	749.6	749.6	749.7	749.8	749.9	750.1	750.3	750.4	751.4
165°	765.2	765.1	764.9	764.7	764.6	764.5	764.5	764.5	764.5	764.5	765.6
167.5°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.3	776.3	776.2	777.3
170°	785.4	785.0	784.5	784.0	783.6	783.3	783.2	783.0	782.8	782.6	783.8
172.5°	790.2	789.8	789.4	788.8	788.4	788.2	788.0	787.8	787.7	787.6	788.6
175°	796.2	795.7	795.2	794.8	794.4	794.0	793.7	793.4	793.1	792.8	793.8
177.5°	798.6	798.2	797.9	797.5	797.1	796.9	796.6	796.3	796.1	795.9	796.6
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	13.5	13.0	12.4	12.1	12.0	11.9	11.7	11.6
90°	23.0	22.6	22.4	22.3	22.5	22.6	22.7	22.9
92.5°	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.8
95°	43.0	43.0	43.0	43.0	42.6	42.4	42.0	41.8
97.5°	72.4	72.4	72.4	72.4	72.4	72.3	72.3	72.2
100°	92.9	92.9	92.9	92.8	92.6	92.5	92.4	92.2
102.5°	115.2	115.3	115.5	115.4	115.3	115.1	114.9	114.8
105°	148.7	149.0	149.3	149.4	149.4	149.4	149.4	149.4
107.5°	184.8	184.9	185.0	184.8	184.1	183.4	182.7	182.0
110°	209.3	209.3	209.3	209.1	208.6	208.2	207.8	207.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.8	233.5	233.2	232.8	232.5	232.1	231.9	231.5
115°	271.6	271.5	271.3	271.0	270.5	270.1	269.7	269.2
117.5°	308.1	307.7	307.3	306.9	306.5	306.0	305.6	305.1
120°	332.4	332.4	332.4	332.3	331.7	331.3	330.9	330.5
122.5°	357.6	357.2	356.9	356.5	356.2	355.9	355.5	355.2
125°	394.9	394.3	393.9	393.6	393.5	393.3	393.2	393.0
127.5°	431.0	430.4	429.9	429.4	429.0	428.4	428.0	427.5
130°	455.7	455.4	455.1	454.6	454.0	453.5	452.9	452.3
132.5°	479.7	479.1	478.5	477.9	477.3	476.9	476.4	476.0
135°	515.2	515.1	514.9	514.6	514.2	513.8	513.2	512.8
137.5°	549.2	549.1	549.0	548.6	548.0	547.4	546.8	546.2
140°	572.0	572.0	572.0	571.7	571.2	570.6	570.0	569.4
142.5°	592.7	592.9	593.0	592.7	592.1	591.5	591.0	590.4
145°	624.1	624.3	624.5	624.2	623.6	623.0	622.4	621.8
147.5°	651.7	652.0	652.4	652.3	651.7	651.1	650.6	650.0
150°	669.2	669.6	670.1	670.1	669.6	669.2	668.7	668.3
152.5°	686.6	687.3	687.8	687.8	687.3	686.6	686.0	685.5
155°	708.8	709.6	710.3	710.5	710.0	709.6	709.1	708.7
157.5°	729.3	730.3	731.3	731.4	730.7	730.0	729.3	728.6
160°	741.4	742.4	743.2	743.4	742.8	742.2	741.6	741.0
162.5°	752.4	753.5	754.5	754.6	753.9	753.2	752.4	751.7
165°	766.6	767.7	768.7	768.9	768.1	767.3	766.6	765.9
167.5°	778.3	779.4	780.4	780.6	779.8	779.0	778.3	777.5
170°	784.8	785.8	786.9	787.0	786.1	785.1	784.3	783.3
172.5°	789.6	790.7	791.7	791.8	790.9	790.0	789.1	788.2
175°	794.9	795.9	796.9	797.0	796.2	795.2	794.4	793.5
177.5°	797.3	798.1	798.7	798.7	798.1	797.3	796.6	795.9
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5

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