

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: P331355-930

Luminaire Tested: **SA2XXDIP-C675D725U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331355-930
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-C675D725U930-4F0-1E-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

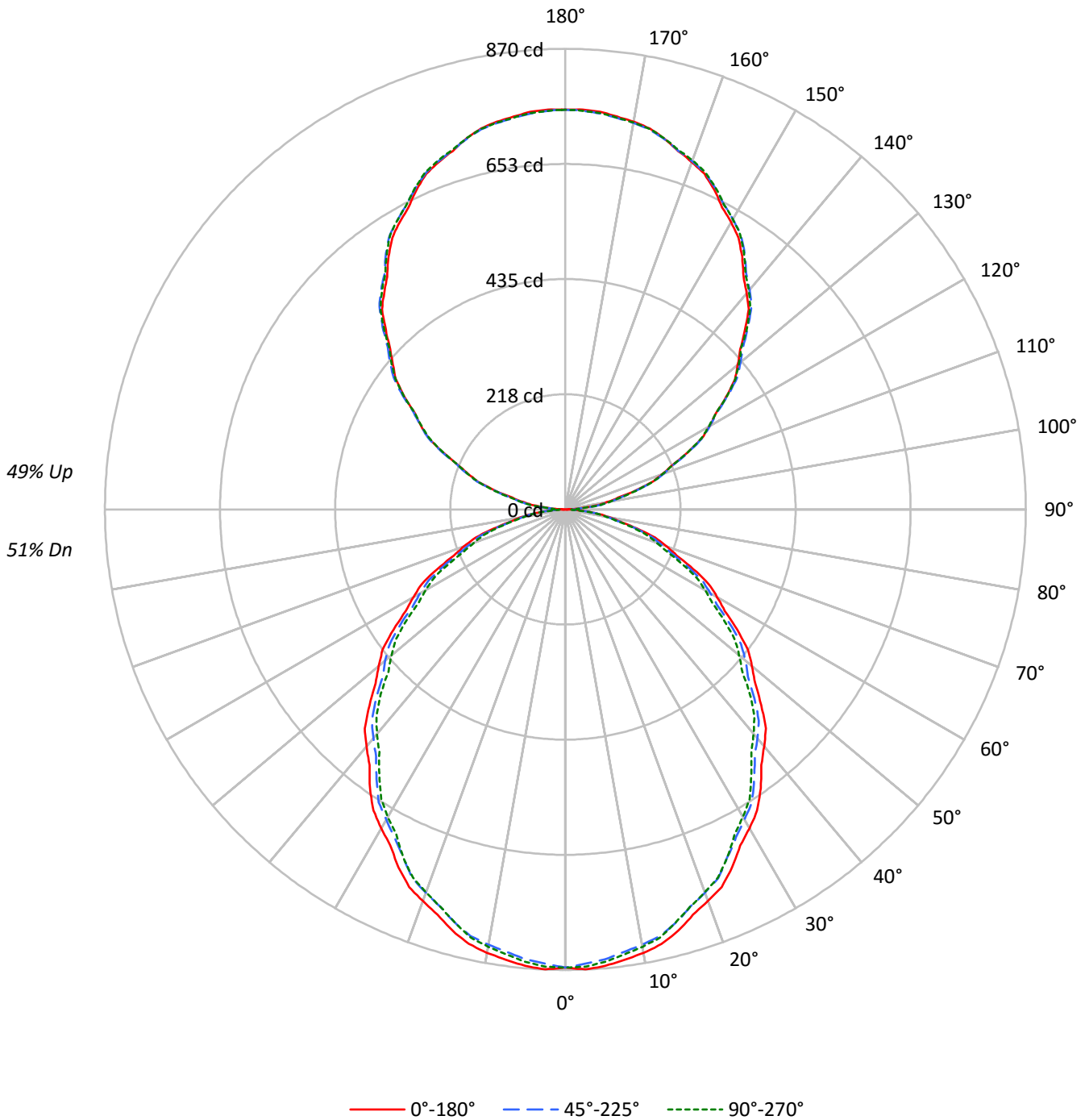
Lumens per Lamp: N/A
Luminaire Lumens: 4316.8 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	1.9
10°-20°	229.0	5.3
20°-30°	336.6	7.8
30°-40°	391.0	9.1
40°-50°	390.6	9.0
50°-60°	340.6	7.9
60°-70°	251.9	5.8
70°-80°	142.7	3.3
80°-90°	41.4	1.0
90°-100°	47.9	1.1
100°-110°	148.6	3.4
110°-120°	254.0	5.9
120°-130°	334.1	7.7
130°-140°	375.0	8.7
140°-150°	367.7	8.5
150°-160°	308.4	7.1
160°-170°	204.5	4.7
170°-180°	71.5	1.7
0°-30°	647.0	15.0
0°-40°	1038.1	24.0
0°-60°	1769.3	41.0
0°-90°	2205.2	51.1
90°-120°	450.5	10.4
90°-150°	1527.2	35.4
90°-180°	2112.0	48.9
0°-180°	4316.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	1	9	22	21	22	3
95°	33	39	41	41	40	38
105°	137	139	140	141	142	145
115°	255	258	258	257	255	252
125°	371	376	375	373	372	331
135°	480	487	488	487	486	371
145°	582	587	591	591	589	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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	12.1	12.2	12.2	12.3	12.5	12.8	13.1	13.5	13.8	13.3
90°	0.7	2.4	4.1	5.7	7.4	9.9	13.0	16.1	19.2	22.3	22.0
92.5°	11.3	12.6	13.9	15.1	16.3	17.3	18.0	18.8	19.6	20.3	20.3
95°	33.1	34.6	36.0	37.4	38.8	39.6	39.9	40.2	40.5	40.8	40.8
97.5°	60.6	61.8	63.0	64.2	65.6	66.4	66.9	67.5	68.0	68.6	68.6
100°	81.0	82.1	83.2	84.3	85.4	86.3	86.7	87.1	87.5	88.0	88.0
102.5°	102.3	103.2	104.2	105.1	106.0	106.7	107.2	107.8	108.3	108.8	108.9
105°	137.1	137.5	137.9	138.3	138.7	139.1	139.3	139.7	139.9	140.2	140.5
107.5°	171.9	172.6	173.2	173.8	174.4	174.7	174.7	174.7	174.7	174.7	174.9
110°	194.4	195.2	196.1	196.9	197.8	198.2	198.2	198.2	198.2	198.2	198.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.8	219.7	220.5	221.4	222.3	222.6	222.5	222.4	222.3	222.2	221.8
115°	254.9	255.8	256.6	257.5	258.3	258.6	258.3	258.0	257.7	257.5	257.3
117.5°	290.8	292.0	293.1	294.2	295.4	295.5	294.7	294.0	293.2	292.4	292.0
120°	314.8	315.9	317.1	318.2	319.4	319.4	318.2	317.1	315.9	314.8	314.8
122.5°	336.7	338.1	339.5	340.8	342.2	342.4	341.7	340.9	340.1	339.2	338.9
125°	370.9	372.2	373.4	374.7	376.0	376.4	376.0	375.5	375.1	374.7	374.3
127.5°	404.1	405.8	407.4	409.0	410.6	411.2	410.7	410.2	409.6	409.1	408.6
130°	425.1	426.9	428.8	430.6	432.4	433.2	432.9	432.6	432.4	432.1	431.8
132.5°	448.5	450.0	451.5	453.0	454.5	455.3	455.3	455.4	455.4	455.5	454.9
135°	479.9	481.4	483.0	484.5	486.1	487.0	487.3	487.5	487.9	488.1	488.0
137.5°	512.9	514.1	515.4	516.7	518.0	518.8	519.2	519.5	519.9	520.2	520.2
140°	532.8	534.0	535.3	536.5	537.9	538.8	539.6	540.3	541.0	541.7	541.7
142.5°	553.2	554.4	555.7	557.0	558.2	559.1	559.6	560.1	560.6	561.1	561.2
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	590.9
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	616.8
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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	12.8	12.3	11.7	11.5	11.3	11.3	11.1	11.0
90°	21.8	21.4	21.2	21.1	21.3	21.4	21.5	21.7
92.5°	20.4	20.5	20.5	20.5	20.5	20.6	20.6	20.6
95°	40.8	40.8	40.8	40.7	40.4	40.1	39.8	39.5
97.5°	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.4
100°	88.0	88.0	88.0	87.9	87.7	87.6	87.5	87.3
102.5°	109.1	109.2	109.3	109.3	109.2	109.0	108.8	108.7
105°	140.8	141.0	141.4	141.5	141.5	141.5	141.5	141.5
107.5°	175.0	175.0	175.2	175.0	174.3	173.7	173.0	172.4
110°	198.2	198.2	198.2	198.0	197.5	197.1	196.7	196.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.4	221.1	220.8	220.5	220.1	219.8	219.6	219.2
115°	257.1	257.1	256.9	256.6	256.2	255.8	255.4	254.9
117.5°	291.7	291.4	291.0	290.7	290.2	289.8	289.3	288.9
120°	314.8	314.8	314.8	314.6	314.1	313.7	313.3	312.9
122.5°	338.6	338.3	337.9	337.6	337.3	337.0	336.6	336.4
125°	373.9	373.4	373.0	372.8	372.6	372.4	372.3	372.2
127.5°	408.1	407.6	407.1	406.6	406.2	405.7	405.3	404.8
130°	431.5	431.2	431.0	430.5	429.9	429.4	428.8	428.3
132.5°	454.3	453.6	453.1	452.5	452.0	451.6	451.1	450.7
135°	487.9	487.7	487.5	487.3	486.9	486.5	486.0	485.6
137.5°	520.1	519.9	519.8	519.5	518.9	518.4	517.8	517.2
140°	541.7	541.7	541.7	541.4	540.9	540.3	539.7	539.2
142.5°	561.3	561.4	561.5	561.3	560.7	560.1	559.6	559.1
145°	591.0	591.2	591.3	591.1	590.5	590.0	589.4	588.8
147.5°	617.1	617.4	617.8	617.7	617.1	616.5	616.0	615.5
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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