

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: P331691-940

Luminaire Tested: **SA2XXRDIP-C675D725U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331691-940
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: SA2XXRDIP-C675D725U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

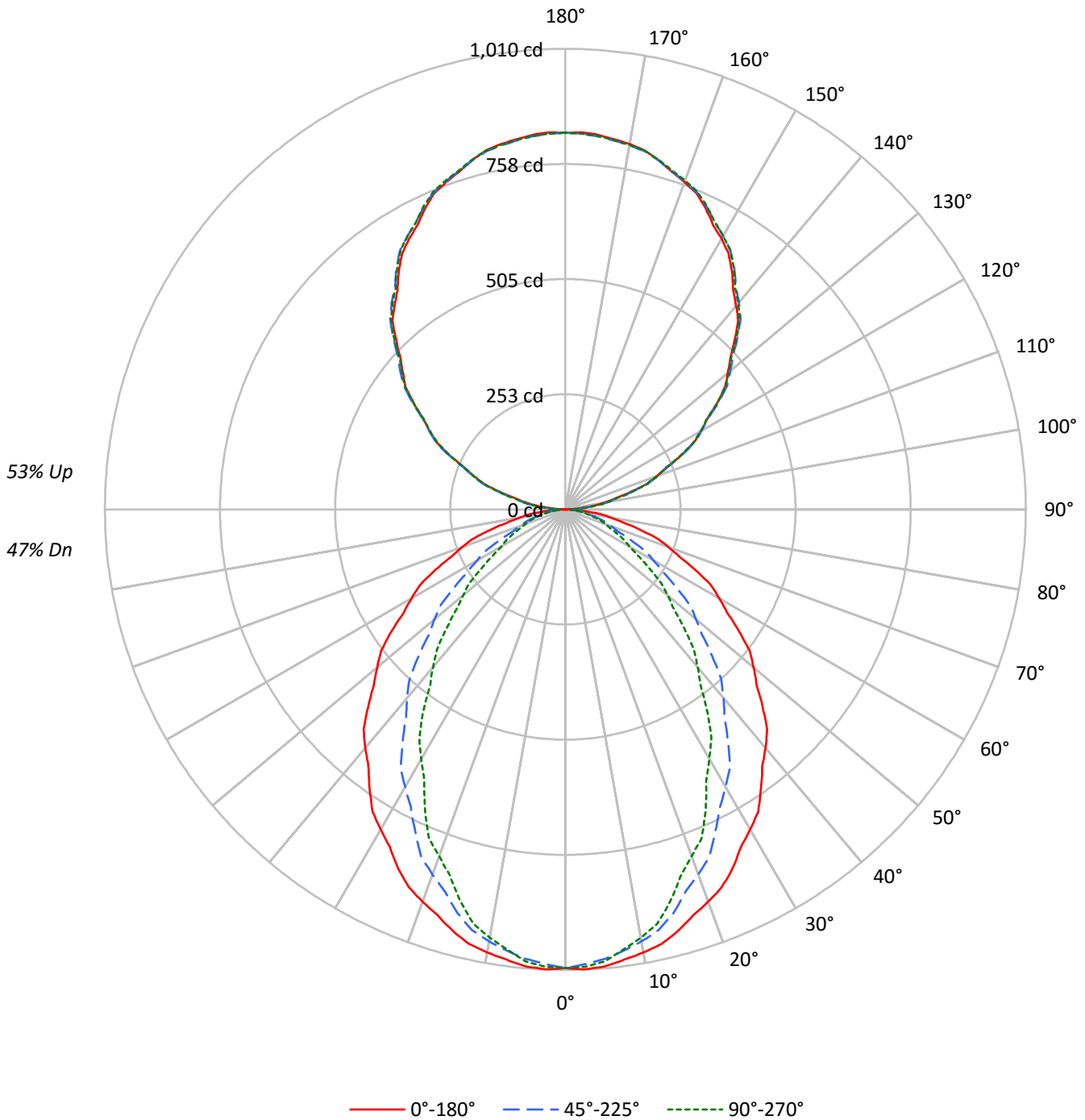
Lumens per Lamp: N/A
Luminaire Lumens: 4381.6 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47				47
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46				41	
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40				35	
3	82	73	66	60	75	67	61	56	57	52	48	47	44	41	38	36	34				30	
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	35	32	30				26	
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	31	29	26				23	
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23				20	
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21				18	
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19				17	
9	51	39	32	27	47	37	30	25	32	26	23	27	23	20	22	19	17				15	
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16				14	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16239	16239	16239
5°	16302	16037	16126
10°	16179	15775	15641
15°	15992	15308	14867
20°	15735	14639	13904
25°	15471	13881	12975
30°	15105	13103	11779
35°	14747	12254	10730
40°	14389	11377	9516
45°	13967	10392	8416
50°	13536	9399	7340
55°	13095	8329	6303
60°	12581	7201	5231
65°	12000	6052	4768
70°	11301	4985	4381
75°	10449	4548	4086
80°	9224	4063	3719
85°	7243	3205	3205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.2	2.1
10°-20°	258.5	5.9
20°-30°	363.0	8.3
30°-40°	395.9	9.0
40°-50°	364.0	8.3
50°-60°	285.9	6.5
60°-70°	186.4	4.3
70°-80°	96.1	2.2
80°-90°	28.2	0.6
90°-100°	52.3	1.2
100°-110°	162.5	3.7
110°-120°	277.9	6.3
120°-130°	365.4	8.3
130°-140°	410.1	9.4
140°-150°	402.1	9.2
150°-160°	337.3	7.7
160°-170°	223.7	5.1
170°-180°	78.2	1.8
0°-30°	715.7	16.3
0°-40°	1111.6	25.4
0°-60°	1761.4	40.2
0°-90°	2072.2	47.3
90°-120°	492.7	11.2
90°-150°	1670.3	38.1
90°-180°	2309.0	52.7
0°-180°	4381.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1006	1001	990	997	995	95
15°	957	946	916	899	889	269
25°	868	838	779	743	728	399
35°	748	700	622	566	544	468
45°	612	549	455	393	369	472
55°	465	393	296	243	224	416
65°	314	240	158	129	125	311
75°	168	106	73	67	66	177
85°	39	21	17	17	17	46
90°	1	9	24	23	24	4
95°	36	43	45	45	43	42
105°	150	152	153	155	155	158
115°	279	283	282	281	279	276
125°	406	412	410	408	407	362
135°	525	532	534	533	531	405
145°	637	642	646	647	644	398
155°	728	730	732	736	734	335
165°	792	792	792	796	793	223
175°	825	822	821	825	822	78
180°	826	826	826	826	826	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8
2.5°	1009.5	1008.7	1007.9	1007.1	1006.3	1005.0	1003.2	1001.4	999.7	997.9	999.5
5°	1005.8	1004.9	1003.9	1002.8	1001.8	1000.1	997.4	994.8	992.1	989.5	991.3
7.5°	995.5	994.3	993.0	991.8	990.5	988.3	985.3	982.2	979.1	976.1	976.5
10°	986.8	985.3	983.9	982.5	981.1	978.4	974.3	970.3	966.3	962.2	961.6
12.5°	975.8	974.1	972.3	970.6	968.8	965.5	960.3	955.1	949.9	944.7	943.6
15°	956.7	954.5	952.3	950.0	947.8	943.3	936.4	929.5	922.7	915.8	912.0
17.5°	933.3	929.9	926.5	923.0	919.6	913.6	904.7	895.9	887.1	878.2	873.7
20°	915.8	911.7	907.7	903.7	899.6	892.5	882.3	872.3	862.2	852.0	846.9
22.5°	896.8	892.3	887.8	883.2	878.7	870.8	859.3	847.9	836.5	825.1	818.6
25°	868.4	861.9	855.5	849.0	842.6	832.6	819.3	805.9	792.6	779.2	770.9
27.5°	834.2	827.2	820.1	813.1	806.0	795.0	780.0	764.9	749.8	734.8	725.1
30°	810.2	802.5	794.8	787.1	779.4	767.5	751.3	735.1	718.9	702.8	692.4
32.5°	786.8	777.8	768.9	759.9	750.9	738.2	721.7	705.2	688.7	672.2	660.4
35°	748.2	738.0	727.6	717.3	707.0	692.9	675.1	657.4	639.5	621.7	608.9
37.5°	709.7	698.3	687.0	675.6	664.3	649.2	630.3	611.3	592.3	573.3	559.3
40°	682.7	670.6	658.4	646.3	634.2	618.3	598.7	579.1	559.5	539.8	525.5
42.5°	655.1	642.3	629.5	616.7	604.0	587.4	567.1	546.9	526.6	506.3	491.4
45°	611.7	598.2	584.6	571.1	557.5	540.1	518.9	497.7	476.4	455.1	440.8
47.5°	569.4	555.1	540.7	526.4	512.0	493.9	472.0	450.0	428.1	406.2	391.9
50°	538.9	524.5	510.1	495.8	481.4	463.2	440.9	418.7	396.4	374.2	360.2
52.5°	509.1	494.0	479.0	464.0	449.0	430.6	408.8	387.1	365.3	343.6	330.1
55°	465.2	449.4	433.6	417.9	402.1	383.3	361.4	339.6	317.7	295.9	283.7
57.5°	420.2	404.0	387.8	371.7	355.4	336.9	315.8	294.9	273.8	252.9	241.7
60°	389.6	373.4	357.2	341.1	324.9	306.4	285.5	264.7	243.9	223.0	212.7
62.5°	359.7	343.6	327.3	311.2	295.0	277.0	257.2	237.3	217.4	197.5	187.7
65°	314.1	297.7	281.2	264.9	248.5	231.2	213.0	194.8	176.6	158.4	151.5
67.5°	270.0	253.7	237.5	221.2	204.9	188.6	172.2	155.9	139.5	123.1	119.9
70°	239.4	223.6	207.9	192.1	176.3	161.4	147.5	133.5	119.6	105.6	103.5
72.5°	210.3	195.1	180.0	164.9	149.7	136.6	125.4	114.1	103.0	91.8	90.1
75°	167.5	153.4	139.2	125.0	110.8	100.3	93.5	86.6	79.7	72.9	71.4
77.5°	125.5	113.0	100.6	88.2	75.8	67.9	64.6	61.3	58.0	54.7	53.8
80°	99.2	88.9	78.6	68.3	58.0	51.8	49.8	47.7	45.7	43.7	42.9
82.5°	75.2	67.1	59.1	51.0	43.0	38.3	36.9	35.5	34.2	32.8	32.3
85°	39.1	34.9	30.7	26.4	22.1	19.7	19.1	18.5	17.9	17.3	17.3
87.5°	11.8	10.9	10.0	9.0	8.1	7.9	8.6	9.4	10.0	10.7	10.5
90°	0.7	2.6	4.5	6.2	8.1	10.8	14.2	17.6	21.0	24.4	24.1
92.5°	12.4	13.7	15.2	16.5	17.8	18.9	19.7	20.5	21.4	22.2	22.2
95°	36.2	37.8	39.3	40.9	42.4	43.3	43.7	44.0	44.3	44.6	44.6
97.5°	66.3	67.6	68.9	70.3	71.7	72.7	73.2	73.8	74.4	75.0	75.0
100°	88.5	89.8	91.0	92.2	93.5	94.3	94.8	95.2	95.7	96.2	96.2
102.5°	111.9	112.9	114.0	114.9	115.9	116.7	117.3	117.9	118.4	119.0	119.1
105°	149.9	150.3	150.8	151.2	151.7	152.1	152.4	152.8	153.0	153.4	153.6
107.5°	188.1	188.8	189.4	190.1	190.7	191.1	191.1	191.1	191.1	191.1	191.3
110°	212.6	213.5	214.5	215.3	216.3	216.8	216.8	216.8	216.8	216.8	216.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	239.3	240.3	241.2	242.1	243.1	243.4	243.3	243.3	243.1	243.0	242.6
115°	278.8	279.7	280.6	281.6	282.5	282.9	282.5	282.2	281.9	281.6	281.4
117.5°	318.1	319.3	320.6	321.8	323.1	323.2	322.4	321.6	320.7	319.8	319.4
120°	344.3	345.5	346.8	348.0	349.3	349.3	348.0	346.8	345.5	344.3	344.3
122.5°	368.3	369.8	371.3	372.7	374.3	374.5	373.7	372.8	371.9	371.0	370.7
125°	405.6	407.1	408.4	409.8	411.3	411.7	411.3	410.7	410.3	409.8	409.4
127.5°	442.0	443.8	445.6	447.4	449.1	449.7	449.2	448.6	448.0	447.5	446.9
130°	464.9	466.9	469.0	470.9	473.0	473.8	473.5	473.1	472.9	472.6	472.3
132.5°	490.5	492.2	493.8	495.4	497.1	497.9	498.0	498.1	498.1	498.2	497.6
135°	524.9	526.6	528.2	529.9	531.6	532.6	533.0	533.2	533.6	533.9	533.8
137.5°	561.0	562.3	563.7	565.2	566.5	567.4	567.8	568.2	568.6	569.0	568.9
140°	582.7	584.1	585.5	586.8	588.3	589.3	590.1	590.9	591.7	592.5	592.5
142.5°	605.0	606.4	607.8	609.2	610.6	611.5	612.1	612.6	613.1	613.7	613.8
145°	637.0	638.1	639.3	640.3	641.4	642.4	643.4	644.3	645.2	646.1	646.3
147.5°	665.7	666.9	668.2	669.5	670.8	671.8	672.4	673.1	673.7	674.3	674.6
150°	685.2	686.1	687.0	688.0	688.8	689.6	690.3	690.9	691.5	692.1	692.6
152.5°	702.4	703.4	704.3	705.3	706.1	706.9	707.8	708.5	709.2	710.0	710.5
155°	728.3	728.8	729.3	729.8	730.2	730.7	731.1	731.6	732.1	732.5	733.3
157.5°	750.6	750.8	751.2	751.4	751.8	752.1	752.3	752.6	752.9	753.1	754.2
160°	763.9	764.2	764.6	764.8	765.2	765.4	765.5	765.7	765.9	766.0	767.0
162.5°	776.1	776.2	776.3	776.3	776.4	776.5	776.7	776.9	777.0	777.1	778.2
165°	792.5	792.4	792.2	792.0	791.8	791.8	791.8	791.8	791.8	791.8	792.9
167.5°	806.1	805.7	805.2	804.8	804.3	804.1	804.1	804.0	804.0	803.9	805.0
170°	813.4	813.0	812.4	812.0	811.5	811.2	811.1	810.9	810.7	810.6	811.7
172.5°	818.4	818.0	817.5	817.0	816.5	816.3	816.1	815.9	815.8	815.6	816.7
175°	824.6	824.1	823.6	823.1	822.7	822.3	822.0	821.7	821.4	821.1	822.2
177.5°	827.1	826.7	826.3	825.9	825.5	825.3	825.0	824.7	824.5	824.3	825.0
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8
2.5°	1001.1	1002.7	1004.3	1005.0	1004.7	1004.3	1004.1	1003.7
5°	993.1	995.0	996.8	997.4	996.8	996.1	995.6	995.0
7.5°	977.0	977.6	978.1	977.9	976.8	975.8	974.7	973.7
10°	961.0	960.4	959.7	958.9	957.6	956.4	955.2	954.0
12.5°	942.5	941.5	940.3	938.8	936.7	934.8	932.7	930.7
15°	908.1	904.2	900.4	897.4	895.5	893.4	891.4	889.4
17.5°	869.2	864.5	860.0	856.0	852.5	849.0	845.5	842.0
20°	842.0	836.9	831.8	827.1	822.6	818.1	813.7	809.2
22.5°	812.1	805.6	799.1	794.2	790.8	787.5	784.2	780.9
25°	762.6	754.3	746.0	740.4	737.4	734.3	731.3	728.3
27.5°	715.4	705.8	696.2	688.8	684.0	679.2	674.4	669.6
30°	682.2	671.8	661.5	653.6	648.1	642.7	637.2	631.8
32.5°	648.6	636.9	625.1	616.6	611.4	606.4	601.2	596.1
35°	596.3	583.5	570.8	562.1	557.7	553.2	548.8	544.4
37.5°	545.2	531.2	517.2	507.6	502.5	497.4	492.3	487.2
40°	511.0	496.7	482.3	472.5	467.3	462.0	456.7	451.5
42.5°	476.6	461.7	446.9	436.9	431.9	426.8	421.7	416.5
45°	426.4	412.1	397.7	388.1	383.3	378.4	373.5	368.6
47.5°	377.6	363.4	349.0	339.7	335.3	330.9	326.5	322.1
50°	346.3	332.3	318.3	309.2	305.0	300.7	296.5	292.2
52.5°	316.6	303.1	289.6	281.0	277.1	273.1	269.2	265.3
55°	271.6	259.4	247.3	239.3	235.5	231.6	227.7	223.9
57.5°	230.6	219.5	208.4	201.2	198.0	194.7	191.5	188.2
60°	202.4	192.1	181.7	175.0	171.7	168.5	165.2	162.0
62.5°	177.9	168.0	158.2	152.3	150.3	148.5	146.5	144.5
65°	144.6	137.8	130.9	127.2	126.5	125.9	125.3	124.8
67.5°	116.7	113.6	110.5	108.5	107.9	107.3	106.6	105.9
70°	101.6	99.5	97.5	96.1	95.2	94.4	93.6	92.8
72.5°	88.4	86.7	85.0	83.9	83.4	82.9	82.4	81.9
75°	70.0	68.6	67.1	66.3	66.2	66.0	65.7	65.5
77.5°	53.0	52.2	51.4	50.8	50.5	50.2	49.8	49.5
80°	42.1	41.3	40.5	40.0	40.0	40.0	40.0	40.0
82.5°	31.8	31.3	30.9	30.6	30.6	30.6	30.6	30.6
85°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
87.5°	10.3	10.1	9.8	9.7	9.7	9.8	9.8	9.8
90°	23.8	23.5	23.2	23.1	23.3	23.4	23.5	23.7
92.5°	22.3	22.4	22.4	22.5	22.5	22.6	22.6	22.6
95°	44.6	44.6	44.6	44.5	44.1	43.9	43.5	43.2
97.5°	75.0	75.0	75.0	75.0	75.0	74.9	74.9	74.8
100°	96.2	96.2	96.2	96.1	95.9	95.8	95.7	95.5
102.5°	119.3	119.4	119.6	119.5	119.4	119.2	119.0	118.9
105°	154.0	154.3	154.6	154.7	154.7	154.7	154.7	154.7
107.5°	191.4	191.5	191.6	191.4	190.6	189.9	189.2	188.5
110°	216.8	216.8	216.8	216.5	216.1	215.6	215.2	214.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	242.2	241.8	241.5	241.1	240.8	240.4	240.1	239.8
115°	281.2	281.2	281.0	280.6	280.2	279.7	279.3	278.8
117.5°	319.1	318.7	318.3	317.9	317.4	316.9	316.5	316.0
120°	344.3	344.3	344.3	344.1	343.6	343.1	342.7	342.2
122.5°	370.3	370.0	369.6	369.3	368.9	368.5	368.2	367.9
125°	408.9	408.4	408.0	407.7	407.5	407.3	407.2	407.1
127.5°	446.4	445.8	445.2	444.7	444.3	443.7	443.3	442.7
130°	472.0	471.6	471.4	470.8	470.2	469.7	469.0	468.4
132.5°	496.9	496.1	495.5	494.9	494.4	493.9	493.4	492.9
135°	533.6	533.4	533.2	533.0	532.5	532.1	531.5	531.1
137.5°	568.8	568.6	568.6	568.2	567.6	566.9	566.3	565.7
140°	592.5	592.5	592.5	592.1	591.6	590.9	590.3	589.7
142.5°	613.9	614.0	614.1	613.9	613.2	612.6	612.1	611.4
145°	646.4	646.6	646.8	646.5	645.9	645.2	644.6	644.0
147.5°	674.9	675.3	675.6	675.6	674.9	674.3	673.8	673.2
150°	693.0	693.5	694.0	694.0	693.5	693.0	692.6	692.1
152.5°	711.1	711.8	712.3	712.3	711.8	711.1	710.5	710.0
155°	734.1	734.9	735.7	735.8	735.3	734.9	734.4	734.0
157.5°	755.3	756.3	757.4	757.5	756.8	756.1	755.3	754.6
160°	767.9	768.8	769.7	769.9	769.3	768.7	768.0	767.4
162.5°	779.3	780.3	781.4	781.5	780.8	780.1	779.3	778.6
165°	794.0	795.0	796.1	796.3	795.5	794.7	794.0	793.2
167.5°	806.1	807.2	808.2	808.4	807.6	806.8	806.0	805.2
170°	812.8	813.9	814.9	815.0	814.1	813.2	812.3	811.3
172.5°	817.8	818.9	819.9	820.0	819.1	818.1	817.3	816.4
175°	823.2	824.3	825.4	825.5	824.6	823.6	822.7	821.8
177.5°	825.7	826.5	827.2	827.2	826.5	825.7	825.0	824.3
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9

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