

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: P331691-927

Luminaire Tested: **SA2XXRDIP-C675D725U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331691-927
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-C675D725U927-4F0-1E-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

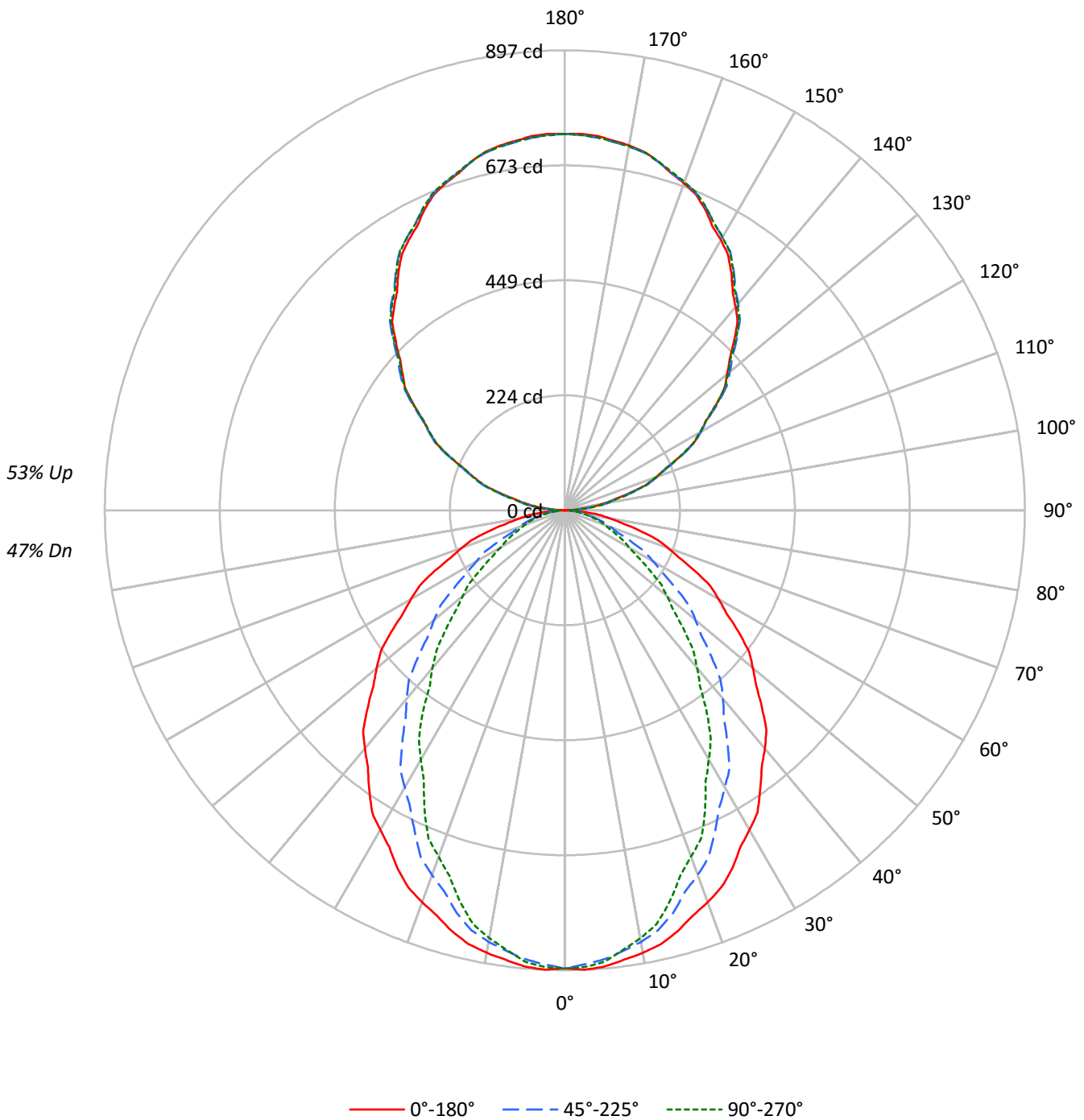
Lumens per Lamp: N/A
Luminaire Lumens: 3892.6 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	0
RCR																		
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	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°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	2.1
10°-20°	229.7	5.9
20°-30°	322.5	8.3
30°-40°	351.7	9.0
40°-50°	323.4	8.3
50°-60°	254.0	6.5
60°-70°	165.6	4.3
70°-80°	85.4	2.2
80°-90°	25.1	0.6
90°-100°	46.5	1.2
100°-110°	144.4	3.7
110°-120°	246.8	6.3
120°-130°	324.6	8.3
130°-140°	364.3	9.4
140°-150°	357.2	9.2
150°-160°	299.6	7.7
160°-170°	198.7	5.1
170°-180°	69.5	1.8
0°-30°	635.8	16.3
0°-40°	987.5	25.4
0°-60°	1564.8	40.2
0°-90°	1840.9	47.3
90°-120°	437.7	11.2
90°-150°	1483.9	38.1
90°-180°	2052.0	52.7
0°-180°	3892.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	8	22	21	21	3
95°	32	38	40	40	38	37
105°	133	135	136	137	137	141
115°	248	251	250	249	248	245
125°	360	366	364	362	362	322
135°	466	473	474	474	472	360
145°	566	570	574	574	572	353
155°	647	649	651	654	652	298
165°	704	703	703	707	705	198
175°	732	731	729	733	730	70
180°	734	734	734	734	734	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.7	8.9	8.0	7.2	7.1	7.7	8.3	8.9	9.5	9.3
90°	0.6	2.3	4.0	5.5	7.2	9.6	12.6	15.6	18.6	21.7	21.4
92.5°	11.0	12.2	13.5	14.7	15.8	16.8	17.5	18.2	19.0	19.7	19.7
95°	32.2	33.6	34.9	36.4	37.7	38.5	38.8	39.1	39.4	39.6	39.6
97.5°	58.9	60.0	61.2	62.4	63.7	64.6	65.0	65.6	66.1	66.6	66.6
100°	78.7	79.8	80.8	81.9	83.0	83.8	84.2	84.6	85.0	85.5	85.5
102.5°	99.4	100.3	101.2	102.1	103.0	103.7	104.2	104.7	105.2	105.8	105.8
105°	133.2	133.6	134.0	134.4	134.8	135.1	135.4	135.7	135.9	136.3	136.5
107.5°	167.1	167.7	168.3	168.9	169.4	169.8	169.8	169.8	169.8	169.8	169.9
110°	188.9	189.6	190.5	191.3	192.2	192.6	192.6	192.6	192.6	192.6	192.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.6	213.5	214.3	215.1	215.9	216.3	216.2	216.1	215.9	215.9	215.6
115°	247.7	248.5	249.3	250.2	251.0	251.3	251.0	250.7	250.4	250.2	250.0
117.5°	282.6	283.7	284.8	285.9	287.0	287.2	286.4	285.7	284.9	284.1	283.8
120°	305.9	307.0	308.1	309.2	310.3	310.3	309.2	308.1	307.0	305.9	305.9
122.5°	327.2	328.5	329.9	331.1	332.5	332.7	332.0	331.2	330.4	329.6	329.3
125°	360.4	361.6	362.8	364.1	365.4	365.8	365.4	364.9	364.5	364.1	363.7
127.5°	392.7	394.3	395.9	397.4	398.9	399.5	399.0	398.5	398.0	397.5	397.0
130°	413.0	414.8	416.6	418.4	420.2	420.9	420.6	420.3	420.1	419.9	419.5
132.5°	435.8	437.3	438.7	440.1	441.6	442.4	442.4	442.5	442.5	442.6	442.0
135°	466.3	467.8	469.3	470.8	472.3	473.2	473.5	473.7	474.0	474.3	474.2
137.5°	498.4	499.6	500.8	502.1	503.3	504.1	504.5	504.8	505.2	505.5	505.4
140°	517.7	518.9	520.1	521.3	522.6	523.6	524.3	525.0	525.6	526.3	526.3
142.5°	537.5	538.7	540.0	541.2	542.4	543.3	543.8	544.2	544.7	545.2	545.3
145°	565.9	566.9	567.9	568.9	569.8	570.7	571.6	572.4	573.1	574.0	574.2
147.5°	591.4	592.5	593.7	594.8	596.0	596.8	597.4	597.9	598.5	599.0	599.3
150°	608.7	609.5	610.3	611.2	612.0	612.7	613.2	613.8	614.3	614.9	615.3
152.5°	624.0	624.9	625.7	626.5	627.3	628.0	628.8	629.4	630.0	630.7	631.2
155°	647.1	647.5	647.9	648.3	648.7	649.1	649.5	650.0	650.4	650.8	651.5
157.5°	666.8	667.0	667.3	667.6	667.9	668.1	668.4	668.6	668.8	669.1	670.0
160°	678.7	678.9	679.2	679.5	679.8	679.9	680.1	680.2	680.4	680.5	681.4
162.5°	689.5	689.6	689.7	689.7	689.8	689.8	690.0	690.1	690.3	690.4	691.3
165°	704.0	703.9	703.8	703.6	703.5	703.4	703.4	703.4	703.4	703.4	704.4
167.5°	716.1	715.7	715.3	714.9	714.5	714.3	714.3	714.2	714.2	714.2	715.2
170°	722.6	722.2	721.8	721.4	721.0	720.6	720.6	720.4	720.3	720.1	721.1
172.5°	727.1	726.7	726.3	725.8	725.4	725.2	725.0	724.8	724.8	724.6	725.6
175°	732.5	732.1	731.7	731.3	730.9	730.6	730.2	730.0	729.7	729.4	730.4
177.5°	734.7	734.4	734.1	733.7	733.4	733.2	732.9	732.7	732.5	732.3	732.9
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	9.1	9.0	8.7	8.6	8.6	8.7	8.7	8.7
90°	21.2	20.8	20.6	20.5	20.7	20.8	20.9	21.1
92.5°	19.8	19.9	19.9	20.0	20.0	20.0	20.0	20.0
95°	39.6	39.6	39.6	39.5	39.2	39.0	38.7	38.4
97.5°	66.6	66.6	66.6	66.6	66.6	66.5	66.5	66.5
100°	85.5	85.5	85.5	85.4	85.2	85.1	85.0	84.8
102.5°	106.0	106.1	106.2	106.2	106.1	105.9	105.8	105.6
105°	136.8	137.0	137.4	137.4	137.4	137.4	137.4	137.4
107.5°	170.0	170.1	170.2	170.0	169.4	168.7	168.1	167.5
110°	192.6	192.6	192.6	192.3	191.9	191.5	191.2	190.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.2	214.8	214.5	214.2	213.9	213.6	213.3	213.0
115°	249.9	249.8	249.6	249.3	248.9	248.5	248.1	247.7
117.5°	283.4	283.1	282.7	282.4	282.0	281.5	281.1	280.7
120°	305.9	305.9	305.9	305.7	305.2	304.8	304.4	304.0
122.5°	329.0	328.7	328.4	328.0	327.7	327.4	327.1	326.9
125°	363.3	362.8	362.4	362.2	362.0	361.9	361.8	361.6
127.5°	396.6	396.0	395.5	395.1	394.7	394.2	393.8	393.3
130°	419.3	419.0	418.7	418.3	417.7	417.2	416.7	416.1
132.5°	441.4	440.8	440.2	439.7	439.2	438.8	438.3	437.9
135°	474.0	473.9	473.7	473.5	473.1	472.7	472.2	471.8
137.5°	505.3	505.2	505.1	504.8	504.2	503.7	503.1	502.6
140°	526.3	526.3	526.3	526.0	525.5	525.0	524.4	523.9
142.5°	545.3	545.5	545.6	545.3	544.8	544.2	543.8	543.2
145°	574.3	574.4	574.6	574.3	573.8	573.2	572.7	572.1
147.5°	599.6	599.9	600.2	600.2	599.6	599.0	598.6	598.0
150°	615.7	616.1	616.6	616.6	616.1	615.7	615.3	614.9
152.5°	631.8	632.3	632.8	632.8	632.3	631.8	631.2	630.7
155°	652.1	652.8	653.6	653.7	653.2	652.8	652.4	652.0
157.5°	671.0	671.9	672.9	673.0	672.3	671.7	671.0	670.3
160°	682.1	683.0	683.8	684.0	683.4	682.9	682.3	681.8
162.5°	692.3	693.2	694.2	694.3	693.6	693.0	692.3	691.7
165°	705.4	706.3	707.3	707.4	706.7	706.0	705.4	704.6
167.5°	716.1	717.1	718.0	718.2	717.5	716.8	716.1	715.3
170°	722.1	723.0	724.0	724.1	723.3	722.4	721.6	720.7
172.5°	726.5	727.5	728.4	728.5	727.7	726.8	726.0	725.2
175°	731.3	732.3	733.2	733.3	732.5	731.7	730.9	730.1
177.5°	733.6	734.3	734.9	734.9	734.3	733.6	732.9	732.3
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7

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