

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: P331680-940

Luminaire Tested: **SA2XXRDIP-C675D330U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331680-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D330U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3210.4 lumens
Efficiency: N/A
Efficacy: 91.7 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: Semi-Direct

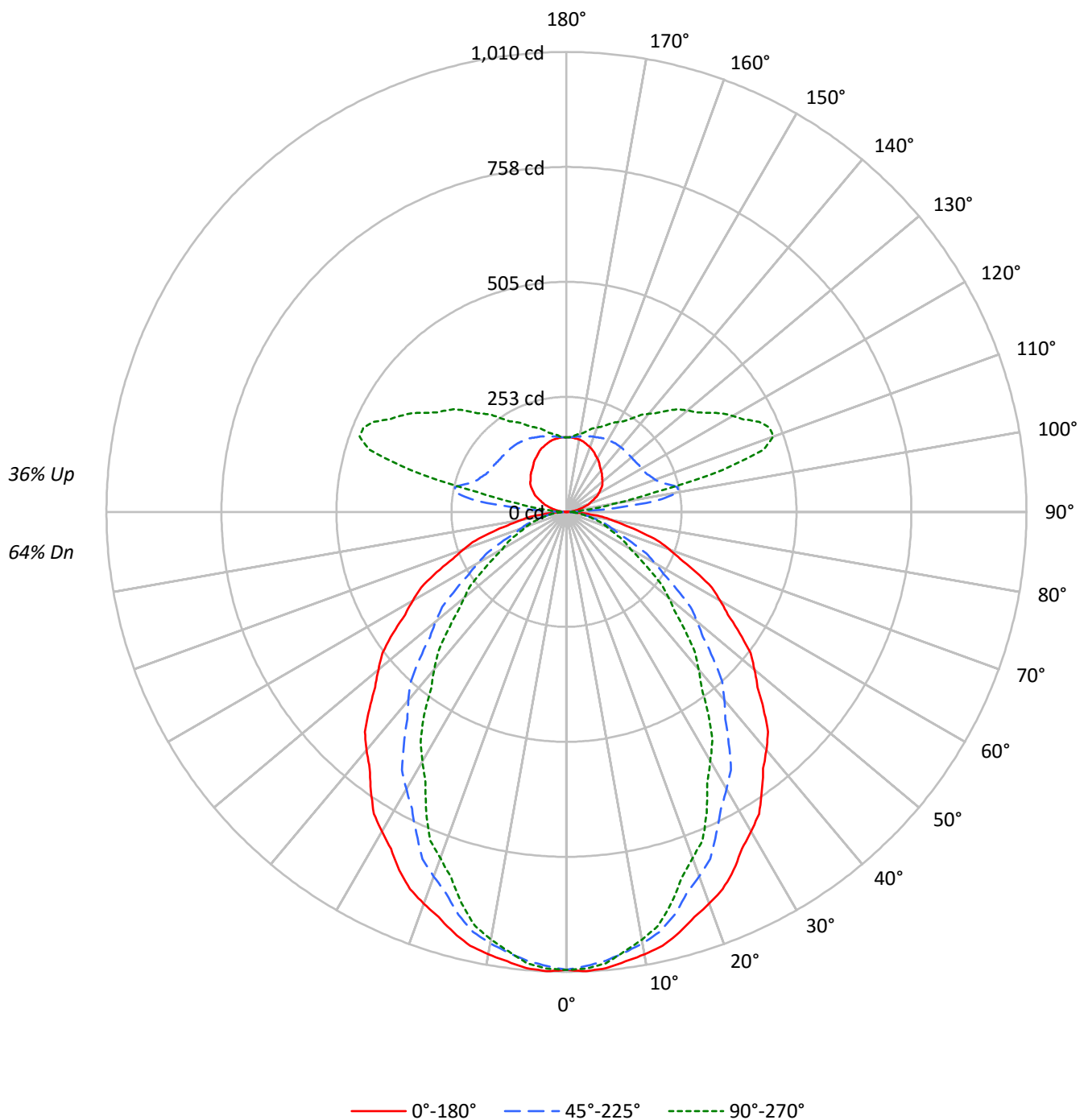
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69
1	102	97	94	90	95	92	88	86	81	79	76	71	70	68	62	61	60
2	93	86	80	75	87	81	76	71	72	68	64	63	60	58	56	53	51
3	85	76	69	63	80	72	65	60	64	59	55	57	53	50	50	47	44
4	78	68	60	54	74	64	57	52	57	52	47	51	47	43	45	42	39
5	72	61	53	47	68	58	50	45	52	46	41	46	41	38	41	37	34
6	67	55	47	41	63	52	45	40	47	41	36	42	37	33	37	33	31
7	62	50	42	36	58	47	40	35	43	37	32	38	34	30	34	30	27
8	58	46	38	33	54	43	36	31	39	33	29	35	30	27	32	28	25
9	54	42	34	29	51	40	33	28	36	30	26	33	28	24	29	25	23
10	51	39	31	26	48	37	30	26	33	28	24	30	26	22	27	23	21

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	2.9
10°-20°	258.5	8.1
20°-30°	363.0	11.3
30°-40°	395.9	12.3
40°-50°	364.0	11.3
50°-60°	285.9	8.9
60°-70°	186.4	5.8
70°-80°	96.1	3.0
80°-90°	26.4	0.8
90°-100°	65.5	2.0
100°-110°	222.3	6.9
110°-120°	236.2	7.4
120°-130°	194.4	6.1
130°-140°	156.1	4.9
140°-150°	118.0	3.7
150°-160°	82.9	2.6
160°-170°	48.8	1.5
170°-180°	15.9	0.5
0°-30°	715.7	22.3
0°-40°	1111.6	34.6
0°-60°	1761.4	54.9
0°-90°	2070.3	64.5
90°-120°	524.0	16.3
90°-150°	992.5	30.9
90°-180°	1140.0	35.5
0°-180°	3210.4	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°	0	4	11	10	10	2
95°	11	27	124	47	36	12
105°	38	58	233	417	355	41
115°	68	86	195	403	467	67
125°	94	112	188	327	379	84
135°	111	132	186	274	314	86
145°	127	146	185	229	251	79
155°	144	155	179	203	211	66
165°	157	162	172	182	185	44
175°	164	164	165	167	167	16
180°	164	164	164	164	164	

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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°	11.7	10.6	9.5	8.4	7.2	6.8	7.0	7.5	7.9	7.9	7.8
90°	0.4	1.2	2.5	3.1	3.7	4.7	6.3	8.5	10.4	10.7	10.4
92.5°	3.8	5.5	7.8	9.2	11.3	14.3	21.4	31.5	40.4	40.9	34.6
95°	11.1	12.3	15.4	18.3	23.3	30.9	45.4	72.8	109.3	123.5	108.1
97.5°	17.9	19.6	23.0	27.3	33.1	41.6	59.8	98.1	158.8	210.8	221.1
100°	24.3	25.2	28.0	33.1	39.4	48.2	64.9	103.3	171.4	248.9	294.3
102.5°	30.1	30.8	33.6	38.6	45.2	54.0	69.5	103.6	166.6	250.1	321.5
105°	38.4	39.7	41.9	46.6	53.6	62.4	77.2	105.2	157.2	233.4	317.3
107.5°	47.5	48.5	50.6	55.0	61.9	70.8	85.2	109.6	152.6	215.5	289.6
110°	53.6	54.8	56.7	60.8	67.4	76.6	90.4	113.1	151.6	207.0	272.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.1	60.4	62.5	66.3	72.7	82.1	95.5	116.9	151.8	201.4	260.1
115°	67.8	69.3	71.2	75.0	81.3	89.8	103.3	122.5	153.1	195.4	245.1
117.5°	76.7	77.9	79.8	83.2	89.3	98.1	110.6	128.6	155.4	192.3	235.7
120°	82.2	83.5	85.4	88.2	94.5	103.3	115.7	132.7	156.9	190.6	230.6
122.5°	87.6	88.5	90.4	93.5	99.8	108.9	120.4	136.2	158.6	189.6	226.3
125°	94.5	95.5	97.4	101.1	107.5	116.3	127.6	141.8	161.3	187.8	220.3
127.5°	100.0	101.3	104.0	108.2	114.1	123.2	134.3	147.0	164.0	186.7	214.5
130°	103.3	104.6	107.7	112.2	118.5	127.2	138.3	150.3	166.0	186.2	210.8
132.5°	106.4	107.9	111.3	115.9	122.5	131.3	141.9	153.6	168.1	185.9	207.8
135°	110.9	112.2	115.9	120.6	128.0	136.7	146.9	157.8	170.5	185.6	203.5
137.5°	115.2	116.7	120.5	125.6	132.7	140.9	150.9	161.1	172.6	185.5	200.5
140°	118.5	119.8	123.5	128.6	135.5	143.7	153.1	162.9	173.6	185.3	198.8
142.5°	121.7	122.8	126.3	131.3	138.0	145.7	154.9	164.4	174.3	185.3	197.1
145°	126.6	128.0	131.1	135.8	142.1	149.0	157.6	166.4	175.1	184.6	194.7
147.5°	132.0	132.9	135.9	140.3	145.5	151.7	159.7	167.5	175.4	183.5	192.3
150°	135.5	136.4	138.9	143.0	147.8	153.5	160.7	167.9	175.1	182.7	190.3
152.5°	139.0	139.5	142.0	145.5	150.1	155.2	161.7	168.2	174.7	181.5	188.5
155°	144.0	144.3	146.2	149.6	153.1	157.8	163.2	168.5	173.9	179.2	185.3
157.5°	148.1	148.5	150.0	153.0	155.8	159.7	164.3	168.5	172.5	177.0	182.2
160°	150.9	151.2	152.5	155.0	157.6	161.0	164.8	168.5	171.7	175.5	179.9
162.5°	153.7	153.5	154.8	156.8	159.1	161.8	165.1	168.3	170.9	174.2	177.9
165°	156.9	156.6	157.2	159.1	160.7	162.6	165.4	167.6	169.5	171.7	174.5
167.5°	159.5	159.2	159.7	161.0	162.1	163.3	165.3	167.2	168.1	169.5	171.3
170°	161.3	160.7	161.0	161.9	162.6	163.5	165.1	166.7	167.3	168.3	169.5
172.5°	162.3	161.9	161.8	162.7	163.1	163.8	164.9	165.9	166.3	166.7	167.7
175°	163.5	163.2	162.9	163.5	163.5	163.8	164.4	165.1	164.8	165.1	165.4
177.5°	164.1	163.5	163.4	163.8	163.8	163.8	164.1	164.6	164.1	163.8	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8

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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°	7.5	7.2	7.2	7.1	7.1	7.1	7.1	7.1
90°	10.1	9.5	10.1	10.4	10.4	10.4	10.4	10.4
92.5°	27.5	23.5	21.0	19.0	18.7	17.7	17.9	17.5
95°	82.6	63.3	50.1	43.2	39.1	36.6	35.6	35.9
97.5°	192.6	157.6	123.5	100.8	85.7	77.9	73.4	70.7
100°	287.7	248.6	205.5	167.3	141.2	127.6	118.5	112.8
102.5°	349.9	341.1	309.5	269.1	240.7	217.6	206.2	198.5
105°	382.8	418.4	422.5	412.1	392.5	373.0	359.4	355.1
107.5°	359.1	412.8	445.5	460.7	463.2	462.2	459.4	453.6
110°	338.7	395.1	435.4	461.3	474.8	480.8	483.7	483.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	320.0	374.2	417.2	446.9	465.7	475.7	481.1	482.8
115°	297.1	345.6	386.9	419.4	441.8	456.2	464.4	467.3
117.5°	279.8	322.4	359.9	390.3	413.1	428.5	437.0	439.4
120°	271.3	310.3	343.8	372.4	394.5	409.3	418.4	421.6
122.5°	264.5	300.2	331.9	357.8	377.6	392.2	400.3	402.9
125°	254.6	287.0	314.8	338.4	356.7	368.6	376.5	379.1
127.5°	244.8	274.2	300.3	322.1	338.0	349.3	356.1	358.1
130°	238.5	265.6	290.5	311.3	326.7	337.4	343.8	346.3
132.5°	232.5	257.5	280.4	300.0	315.1	325.8	331.6	333.9
135°	224.0	244.8	265.6	283.2	296.8	307.2	312.9	314.1
137.5°	217.3	234.7	251.2	266.5	278.9	287.8	292.8	294.7
140°	212.9	228.1	242.6	256.5	266.5	274.7	279.5	281.3
142.5°	209.5	222.3	234.8	246.4	255.9	263.4	267.6	268.0
145°	204.5	214.9	224.6	233.8	241.3	246.7	249.9	250.7
147.5°	200.6	208.8	216.4	223.1	229.3	233.6	235.8	236.4
150°	197.9	204.8	211.4	217.0	221.8	225.6	227.5	227.8
152.5°	195.1	201.5	207.1	212.0	215.8	219.0	220.4	220.5
155°	191.3	196.3	201.0	204.5	207.9	210.2	211.4	210.8
157.5°	186.8	191.0	194.9	197.7	200.1	202.0	202.5	202.5
160°	184.0	187.4	190.9	193.1	195.4	196.9	197.2	197.2
162.5°	181.2	184.2	187.2	188.9	191.1	192.2	192.4	192.2
165°	177.1	179.2	181.5	182.7	184.0	185.3	185.3	184.9
167.5°	173.1	174.8	176.3	177.5	178.0	178.7	178.6	178.3
170°	171.1	172.0	173.3	173.9	174.2	175.1	174.9	174.2
172.5°	168.8	169.5	170.5	170.9	171.2	171.7	171.3	170.9
175°	166.4	166.7	167.0	167.3	167.3	167.6	167.3	166.7
177.5°	164.6	164.6	164.9	164.9	164.9	164.9	164.6	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8

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