

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: P331960-930

Luminaire Tested: **S123DIP-S775D365U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331960-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U930-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3705.4 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

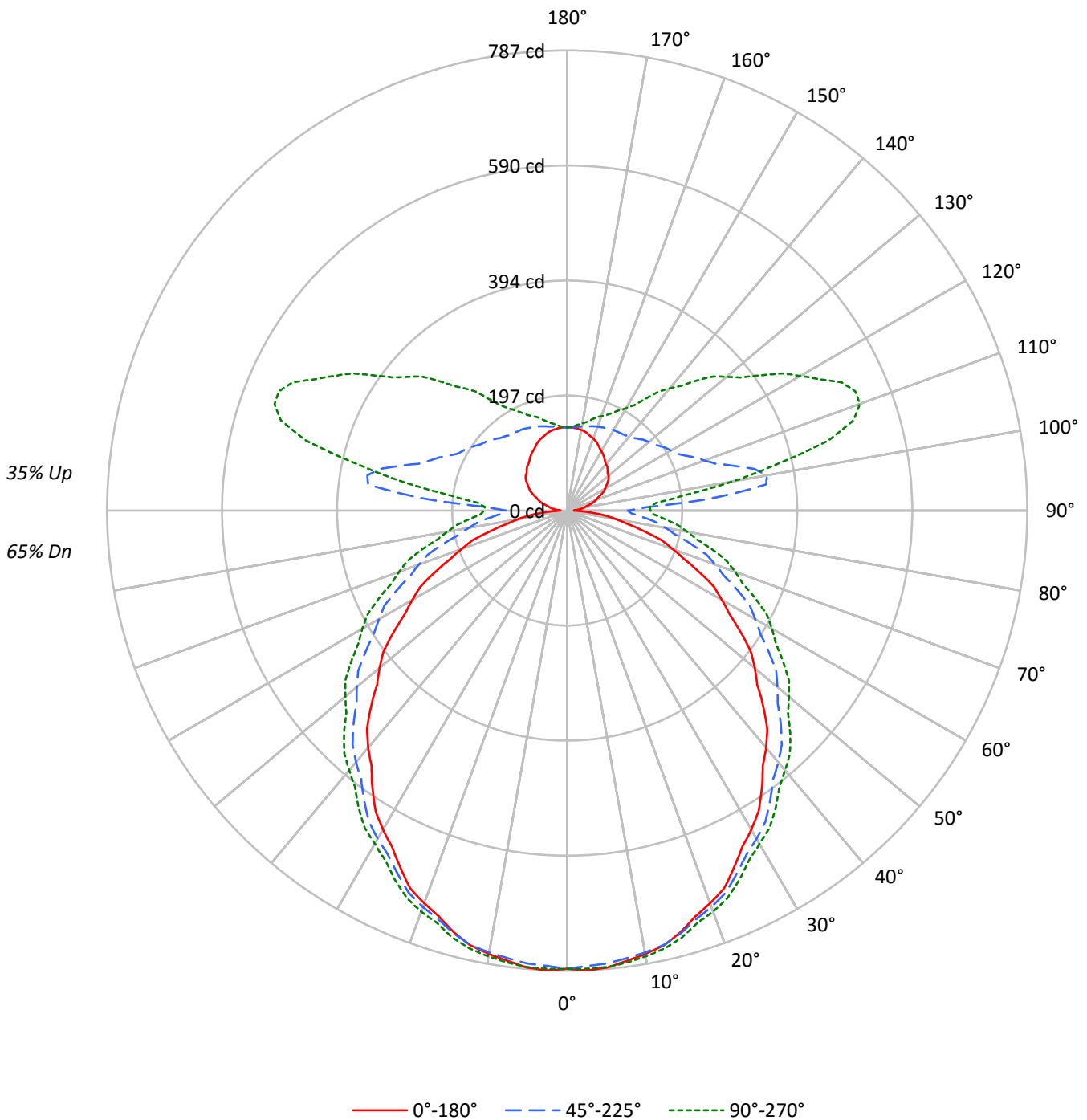
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	100	95	90	86	94	89	85	82	78	75	73	69	66	64	60	58	56	52
2	90	82	75	69	84	77	71	66	68	63	59	60	56	53	52	49	46	43
3	82	72	64	57	77	67	60	54	60	54	49	52	48	44	45	42	39	35
4	75	63	55	48	70	60	52	46	53	46	42	46	41	37	40	36	33	30
5	69	56	48	41	64	53	45	39	47	41	36	41	36	32	36	32	29	26
6	63	50	42	36	59	48	40	34	42	36	31	37	32	28	33	29	25	22
7	59	46	37	31	55	43	35	30	38	32	27	34	29	25	30	26	22	20
8	54	41	33	28	51	39	32	26	35	29	24	31	26	22	27	23	20	18
9	51	38	30	25	47	36	29	24	32	26	22	29	24	20	25	21	18	16
10	47	35	27	22	44	33	26	21	30	24	20	27	21	18	24	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	2.0
10°-20°	211.8	5.7
20°-30°	316.7	8.5
30°-40°	378.3	10.2
40°-50°	395.8	10.7
50°-60°	371.4	10.0
60°-70°	310.2	8.4
70°-80°	221.9	6.0
80°-90°	133.5	3.6
90°-100°	162.2	4.4
100°-110°	285.3	7.7
110°-120°	261.4	7.1
120°-130°	199.3	5.4
130°-140°	149.2	4.0
140°-150°	105.8	2.9
150°-160°	72.2	1.9
160°-170°	42.4	1.1
170°-180°	13.8	0.4
0°-30°	602.8	16.3
0°-40°	981.1	26.5
0°-60°	1748.2	47.2
0°-90°	2413.8	65.1
90°-120°	708.9	19.1
90°-150°	1163.2	31.4
90°-180°	1292.0	34.9
0°-180°	3705.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	56	104	132	142	8
95°	19	75	255	160	153	18
105°	40	78	296	492	462	42
115°	63	89	222	454	518	63
125°	85	101	193	344	403	75
135°	98	116	173	272	315	76
145°	111	126	161	209	233	69
155°	125	135	156	177	185	57
165°	136	140	149	158	161	38
175°	142	142	143	145	145	13
180°	142	142	142	142	142	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.8	32.4	42.0	51.6	61.1	70.8	80.6	90.5	100.4	110.2	116.6
90°	11.7	21.5	31.4	41.6	51.4	61.5	72.1	82.6	93.1	103.7	109.8
92.5°	14.0	24.1	34.9	45.6	56.3	69.5	86.7	108.5	130.2	135.3	130.7
95°	19.2	27.5	38.0	50.3	65.2	84.8	118.5	170.8	227.3	255.4	229.0
97.5°	25.1	32.0	41.2	52.2	66.2	86.1	118.4	175.7	263.3	343.2	367.3
100°	29.0	35.4	43.5	53.6	66.5	85.2	114.1	165.4	250.0	347.1	409.4
102.5°	33.2	39.1	46.4	55.7	67.3	84.7	111.4	156.1	232.2	328.0	407.4
105°	40.3	45.7	51.9	59.9	70.0	85.3	109.0	146.8	209.5	295.6	383.7
107.5°	47.0	51.7	57.2	64.5	73.5	87.6	109.0	141.4	193.1	266.5	346.7
110°	51.8	56.1	60.9	67.5	75.8	89.4	110.0	139.4	185.6	250.0	323.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.8	60.6	64.8	70.8	78.4	91.3	110.7	138.3	179.5	237.1	302.7
115°	63.3	66.8	70.8	75.9	83.1	95.4	113.2	137.6	173.8	222.4	276.8
117.5°	70.4	73.2	76.1	80.1	87.0	98.1	115.4	137.5	168.8	210.9	258.5
120°	74.8	76.7	79.1	82.9	89.4	100.1	116.8	138.0	166.5	205.0	248.5
122.5°	79.2	80.6	82.5	86.2	91.9	102.7	118.9	138.7	164.9	199.9	239.6
125°	84.7	85.3	87.0	90.2	95.6	106.2	121.7	139.9	162.7	192.7	227.5
127.5°	89.4	90.1	92.0	95.1	100.9	111.0	125.2	141.2	161.3	186.5	216.1
130°	92.5	93.1	95.6	98.8	104.7	114.2	127.5	142.3	160.5	182.5	209.4
132.5°	94.1	95.1	97.9	102.0	108.0	117.1	129.4	143.2	159.2	178.8	202.8
135°	97.9	98.9	101.9	106.0	111.9	120.6	131.6	143.5	157.1	173.3	193.7
137.5°	101.6	102.6	105.6	110.1	115.9	123.6	133.4	143.9	155.3	168.6	185.8
140°	103.5	104.8	107.8	112.3	118.1	125.6	134.5	143.7	154.1	165.6	180.8
142.5°	106.2	107.2	110.2	114.2	119.8	126.5	134.8	143.3	152.5	162.4	175.9
145°	110.6	111.3	113.7	117.8	122.5	129.1	136.6	144.3	152.4	161.0	171.8
147.5°	114.3	114.8	117.3	121.1	125.8	131.4	138.3	145.3	152.4	160.0	168.3
150°	117.2	117.6	119.8	123.6	127.6	132.8	139.4	145.5	152.4	159.1	166.2
152.5°	120.3	120.3	122.6	125.9	129.5	134.4	140.1	145.9	151.7	157.9	164.4
155°	124.7	124.7	126.5	129.4	132.6	136.6	141.5	146.1	151.0	155.9	161.6
157.5°	128.3	128.6	130.0	132.5	135.2	138.3	142.2	146.3	150.0	154.1	158.5
160°	131.1	131.1	132.2	134.5	136.6	139.4	142.9	146.3	149.5	152.7	156.5
162.5°	133.1	133.1	134.1	135.9	137.7	140.1	143.2	146.1	148.6	151.3	154.3
165°	136.2	136.0	136.6	138.0	139.2	141.2	143.5	145.5	147.2	149.3	151.6
167.5°	138.6	138.3	138.6	139.7	140.5	141.8	143.4	145.0	145.9	147.2	148.9
170°	140.0	139.4	139.7	140.6	141.2	141.8	143.2	144.3	145.0	145.8	147.2
172.5°	141.0	140.6	140.6	141.3	141.6	141.9	143.2	144.1	144.2	144.6	145.6
175°	142.0	141.8	141.5	142.0	142.0	142.4	142.9	143.5	143.2	143.2	143.7
177.5°	142.6	142.4	142.1	142.4	142.4	142.4	142.6	143.0	142.6	142.4	142.6
180°	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	123.1	129.6	136.2	140.4	142.3	144.2	146.2	148.0
90°	116.6	123.3	130.0	134.8	136.4	138.6	140.8	142.4
92.5°	127.8	129.1	133.2	135.7	137.0	137.8	139.8	141.0
95°	200.0	172.4	163.1	156.6	153.0	152.3	152.2	153.0
97.5°	348.2	302.4	270.9	240.2	220.9	209.8	203.9	203.3
100°	424.9	407.2	379.0	341.7	314.5	295.4	286.0	288.2
102.5°	447.5	452.1	437.8	415.5	394.8	380.0	372.5	367.8
105°	449.2	483.3	494.1	490.2	478.6	469.4	461.8	462.1
107.5°	420.0	471.9	502.2	515.9	517.8	515.8	514.3	513.3
110°	394.7	452.7	493.8	517.2	526.8	530.7	531.6	532.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	368.8	427.8	473.3	502.4	518.9	527.7	531.5	533.3
115°	334.7	389.4	436.3	470.7	493.8	508.0	515.4	518.3
117.5°	308.0	355.9	398.4	433.3	457.3	473.3	483.1	486.5
120°	293.5	336.8	375.7	407.6	431.7	449.2	457.5	460.5
122.5°	281.3	320.7	356.9	386.7	408.3	424.1	433.1	436.6
125°	264.3	299.7	331.3	357.1	376.8	390.9	399.3	402.7
127.5°	248.8	280.6	309.3	332.8	350.5	362.6	370.5	373.6
130°	238.9	268.5	295.4	317.3	333.8	345.3	352.5	355.9
132.5°	229.4	256.7	281.9	303.0	318.6	330.3	336.9	339.8
135°	216.5	240.4	262.4	281.0	296.1	305.7	311.9	314.8
137.5°	204.4	224.2	243.3	259.5	272.3	282.1	287.4	289.7
140°	197.2	214.7	231.5	245.7	257.6	266.7	272.2	272.9
142.5°	190.0	205.1	219.6	232.2	242.5	250.5	255.7	256.3
145°	182.5	193.6	204.3	213.8	221.8	228.5	231.6	232.9
147.5°	176.5	184.6	192.4	198.9	205.1	209.9	212.7	213.7
150°	172.8	179.5	185.6	191.2	195.9	199.4	201.5	201.9
152.5°	170.3	176.0	181.4	186.0	189.5	192.5	193.6	193.6
155°	166.6	171.1	175.5	178.9	181.5	183.8	184.4	184.7
157.5°	162.5	166.3	169.7	172.4	174.6	176.3	176.8	176.8
160°	160.2	163.4	166.2	168.3	170.2	172.0	172.0	171.7
162.5°	157.4	160.1	162.8	164.6	165.9	167.4	167.4	167.1
165°	153.8	155.6	157.6	159.1	160.2	161.3	161.0	161.0
167.5°	150.7	152.1	153.2	154.3	154.7	155.6	155.3	155.3
170°	148.6	149.5	150.7	151.2	151.6	152.1	151.8	151.8
172.5°	146.8	147.5	148.4	148.7	148.8	149.4	148.9	148.6
175°	144.3	144.6	145.2	145.2	145.2	145.5	145.2	145.0
177.5°	142.8	143.0	143.2	143.2	143.0	143.2	142.8	142.8
180°	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4

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