

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: P331987-930

Luminaire Tested: **S123DIP-S775D1025U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331987-930
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-S775D1025U930-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5661.2 lumens
Efficiency: N/A
Efficacy: 108.9 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: General Diffuse

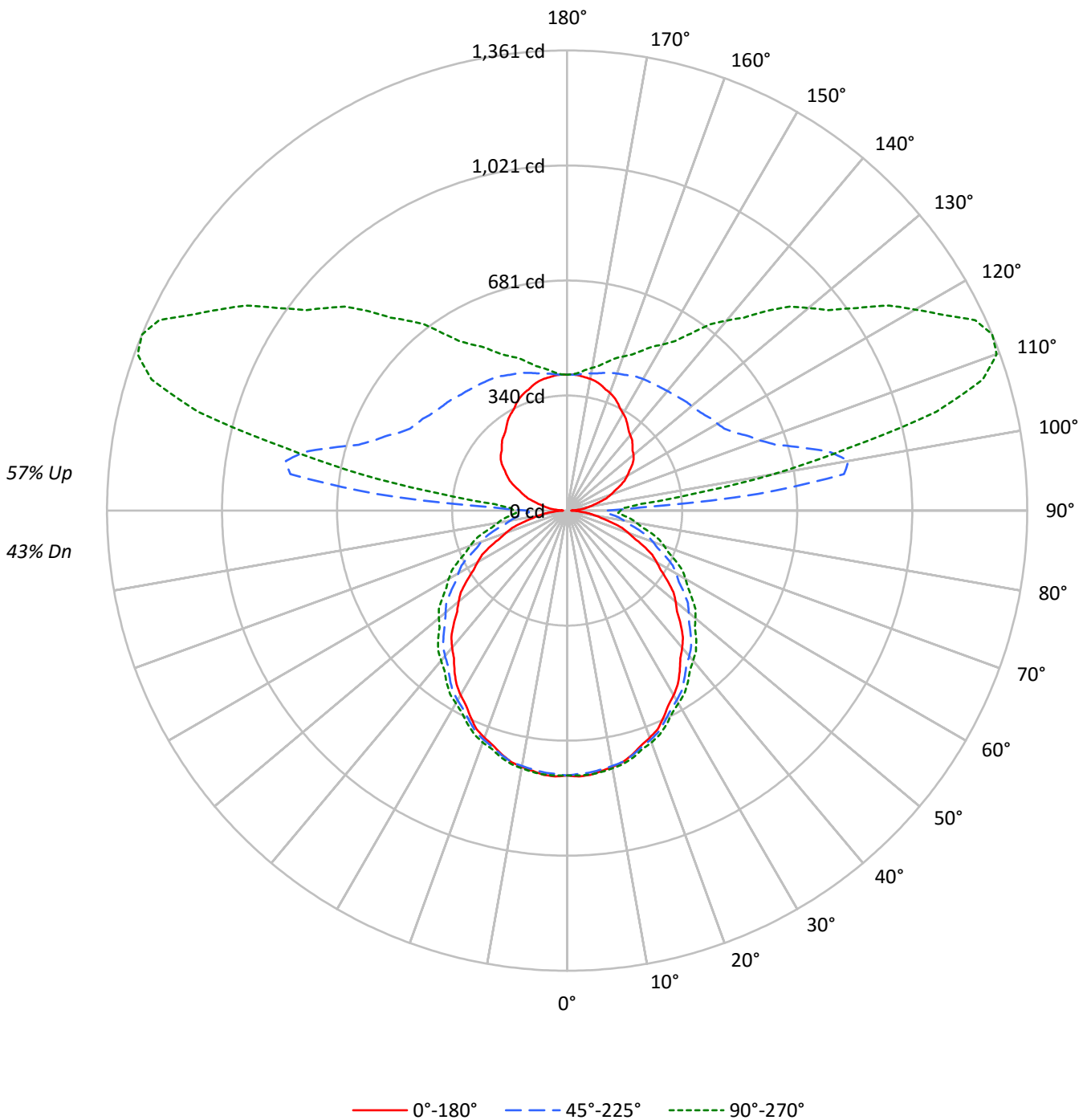
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79		64	64	64		49	49	49	43
1	95	91	86	83	87	83	79	76	68	65	63		55	53	51		42	41	40	34
2	86	79	72	67	78	72	66	62	59	55	52		47	45	42		37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43		42	38	35		32	30	28	23
4	72	61	52	46	65	55	48	43	46	41	36		37	33	30		29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31		33	29	26		26	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27		30	26	22		23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24		27	23	20		21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21		25	20	17		19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19		23	19	16		18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17		21	17	14		17	14	11	9

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	1.3
10°-20°	211.8	3.7
20°-30°	316.7	5.6
30°-40°	378.3	6.7
40°-50°	395.8	7.0
50°-60°	371.4	6.6
60°-70°	310.2	5.5
70°-80°	221.9	3.9
80°-90°	135.5	2.4
90°-100°	306.8	5.4
100°-110°	694.5	12.3
110°-120°	664.0	11.7
120°-130°	520.4	9.2
130°-140°	402.4	7.1
140°-150°	294.8	5.2
150°-160°	203.9	3.6
160°-170°	119.8	2.1
170°-180°	39.0	0.7
0°-30°	602.8	10.6
0°-40°	981.1	17.3
0°-60°	1748.2	30.9
0°-90°	2415.8	42.7
90°-120°	1665.3	29.4
90°-150°	2882.8	50.9
90°-180°	3245.0	57.3
0°-180°	5661.2	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°	13	63	117	147	158	9
95°	37	133	567	251	214	37
105°	101	168	718	1231	1131	107
115°	171	224	546	1162	1332	170
125°	234	278	494	891	1044	208
135°	274	326	471	722	835	211
145°	311	355	455	578	639	195
155°	352	380	440	500	522	162
165°	385	396	422	447	455	108
175°	401	402	404	410	409	38
180°	402	402	402	402	402	



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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°	23.1	32.8	42.6	52.5	62.3	72.2	82.3	92.5	102.6	112.8	119.1
90°	12.7	23.6	34.6	46.3	57.2	68.3	80.5	92.6	104.7	116.8	122.5
92.5°	20.5	33.8	49.0	63.8	78.9	100.0	130.8	175.3	219.2	216.1	191.7
95°	37.1	46.9	63.3	84.5	113.1	153.1	231.6	362.2	504.9	567.1	481.8
97.5°	55.6	63.0	76.7	95.5	122.9	165.1	240.0	385.6	617.0	826.2	884.2
100°	67.9	74.8	86.6	104.0	129.6	168.8	234.5	363.6	586.4	845.0	1010.8
102.5°	80.9	87.8	98.3	114.5	137.5	173.7	233.4	344.2	543.4	798.5	1013.0
105°	101.3	108.2	117.6	132.0	152.0	183.6	235.7	327.7	489.7	718.4	957.2
107.5°	122.1	128.3	136.9	150.4	168.8	198.0	244.3	321.7	453.5	646.9	864.1
110°	137.0	142.8	150.3	162.7	179.9	208.2	252.4	321.9	438.5	606.4	805.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	151.3	156.5	163.4	175.2	191.8	219.0	260.3	324.9	428.2	577.6	754.1
115°	171.1	176.6	183.8	194.2	210.3	236.8	274.6	331.1	420.9	545.8	691.0
117.5°	191.6	196.7	202.2	211.1	228.0	252.3	289.3	339.9	416.8	524.2	650.4
120°	205.2	208.6	213.6	222.7	239.1	263.1	298.6	347.2	416.1	513.6	628.6
122.5°	217.6	220.5	225.1	234.4	249.7	274.6	309.2	354.2	417.6	505.6	610.1
125°	234.5	236.1	241.0	250.0	265.5	290.2	324.2	365.4	419.8	494.5	585.5
127.5°	248.0	250.3	256.1	265.1	281.9	306.1	338.1	374.9	423.4	486.4	563.2
130°	256.5	258.7	265.9	275.4	292.4	316.1	346.7	381.5	426.0	481.0	550.6
132.5°	262.3	265.4	273.3	284.9	302.0	324.8	354.1	387.4	427.2	477.0	538.5
135°	273.5	276.5	285.4	297.3	314.3	337.2	364.5	394.3	428.9	470.8	522.3
137.5°	284.1	287.4	296.0	308.8	325.6	346.5	371.9	399.5	429.6	465.0	508.2
140°	290.6	294.6	302.8	315.8	332.1	352.7	376.9	401.9	430.1	461.6	499.5
142.5°	298.4	301.7	310.3	321.9	337.9	357.0	380.1	404.0	429.7	457.5	491.2
145°	311.0	313.2	320.3	332.3	345.9	364.6	385.7	407.7	430.5	454.9	482.5
147.5°	322.8	324.2	331.4	341.9	355.3	371.3	390.6	410.3	430.5	451.8	474.6
150°	331.3	332.1	338.5	349.1	360.5	375.2	393.9	411.0	430.5	449.2	469.5
152.5°	339.7	339.8	346.3	355.6	365.7	379.8	395.8	412.3	428.5	446.0	464.4
155°	352.4	352.4	357.3	365.4	374.4	385.7	399.6	412.6	426.4	440.3	456.6
157.5°	362.5	363.1	367.0	374.2	381.8	390.6	401.7	413.4	423.7	435.2	447.8
160°	370.3	370.3	373.6	380.0	385.7	393.9	403.7	413.4	422.4	431.3	441.9
162.5°	376.2	376.2	378.8	383.9	389.0	395.8	404.3	412.8	419.8	427.4	436.0
165°	384.9	384.1	385.7	389.8	393.1	398.8	405.3	411.0	415.9	421.6	428.0
167.5°	391.6	390.6	391.4	394.5	396.8	400.4	405.1	409.7	412.0	415.7	420.4
170°	395.5	393.9	394.7	397.1	398.8	400.4	404.5	407.7	409.4	411.8	415.9
172.5°	398.1	397.1	397.3	399.1	400.1	401.0	404.5	407.1	407.4	408.5	411.3
175°	401.2	400.4	399.6	401.2	401.2	402.0	403.7	405.3	404.5	404.5	406.1
177.5°	402.7	402.0	401.4	402.0	402.0	402.0	402.7	404.0	402.7	402.0	402.7
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0



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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°	125.7	132.3	138.9	143.5	145.2	147.2	149.3	151.1
90°	129.7	137.0	144.2	150.0	151.2	153.8	156.5	157.6
92.5°	172.1	164.3	164.2	164.0	164.3	163.5	166.2	166.4
95°	389.2	300.8	263.5	238.1	224.5	219.1	215.2	213.9
97.5°	820.0	680.3	581.0	487.4	429.3	394.5	374.5	369.3
100°	1044.7	984.3	894.6	782.8	702.5	645.0	615.1	617.8
102.5°	1116.6	1119.7	1069.6	1000.0	937.9	892.8	868.1	851.3
105°	1132.6	1219.3	1240.1	1222.5	1186.7	1157.5	1133.2	1130.8
107.5°	1062.0	1199.3	1275.7	1308.0	1310.3	1301.6	1294.5	1288.7
110°	997.1	1151.8	1259.3	1319.5	1343.8	1351.8	1351.7	1351.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	932.2	1090.0	1209.7	1286.1	1329.4	1351.3	1359.2	1361.1
115°	846.2	992.4	1116.6	1208.3	1270.8	1308.1	1325.9	1331.5
117.5°	782.0	908.8	1020.8	1113.7	1178.8	1221.3	1246.3	1253.3
120°	747.7	861.9	963.9	1049.0	1114.6	1161.6	1182.3	1188.6
122.5°	719.9	823.5	918.3	997.4	1055.8	1098.2	1121.0	1128.5
125°	682.2	774.9	857.0	924.8	978.3	1015.4	1037.1	1044.1
127.5°	648.7	731.6	805.8	867.6	915.3	947.1	966.8	973.3
130°	627.4	704.3	773.8	831.4	875.7	906.2	924.4	932.1
132.5°	607.4	678.2	743.1	798.2	840.0	870.6	887.0	892.8
135°	580.2	641.4	697.7	746.3	787.2	812.5	828.1	834.7
137.5°	555.3	605.6	654.2	696.4	730.8	756.5	769.9	774.5
140°	540.5	584.9	626.8	663.7	695.5	719.3	733.3	733.4
142.5°	526.1	564.3	600.7	632.9	660.2	681.3	694.0	694.1
145°	510.1	538.4	566.0	590.7	611.8	629.7	636.9	639.4
147.5°	497.0	518.8	540.2	557.6	573.7	586.0	592.8	594.2
150°	488.3	507.0	524.1	539.7	552.4	561.7	567.0	567.3
152.5°	481.1	497.3	512.4	525.3	534.9	543.3	546.3	546.4
155°	470.3	483.4	495.6	505.4	512.7	519.2	520.8	521.6
157.5°	459.0	469.9	479.3	487.0	493.3	498.2	499.5	499.4
160°	452.5	461.5	469.5	475.2	480.9	485.8	485.8	485.0
162.5°	444.7	452.3	459.8	464.9	468.6	472.8	472.8	472.0
165°	434.6	439.4	445.2	449.2	452.5	455.8	454.9	454.9
167.5°	425.7	429.5	432.8	435.7	437.2	439.4	438.6	438.6
170°	420.0	422.4	425.6	427.2	428.0	429.7	428.8	428.8
172.5°	414.7	416.5	419.1	420.1	420.3	421.9	420.4	419.8
175°	407.7	408.5	410.2	410.2	410.2	411.0	410.2	409.4
177.5°	403.3	404.0	404.6	404.6	404.0	404.6	403.3	403.3
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0

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