

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: P331996-930

Luminaire Tested: **S123DIP-S775D1195U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331996-930
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-S775D1195U930-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6157.7 lumens
Efficiency: N/A
Efficacy: 108.2 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-Indirect

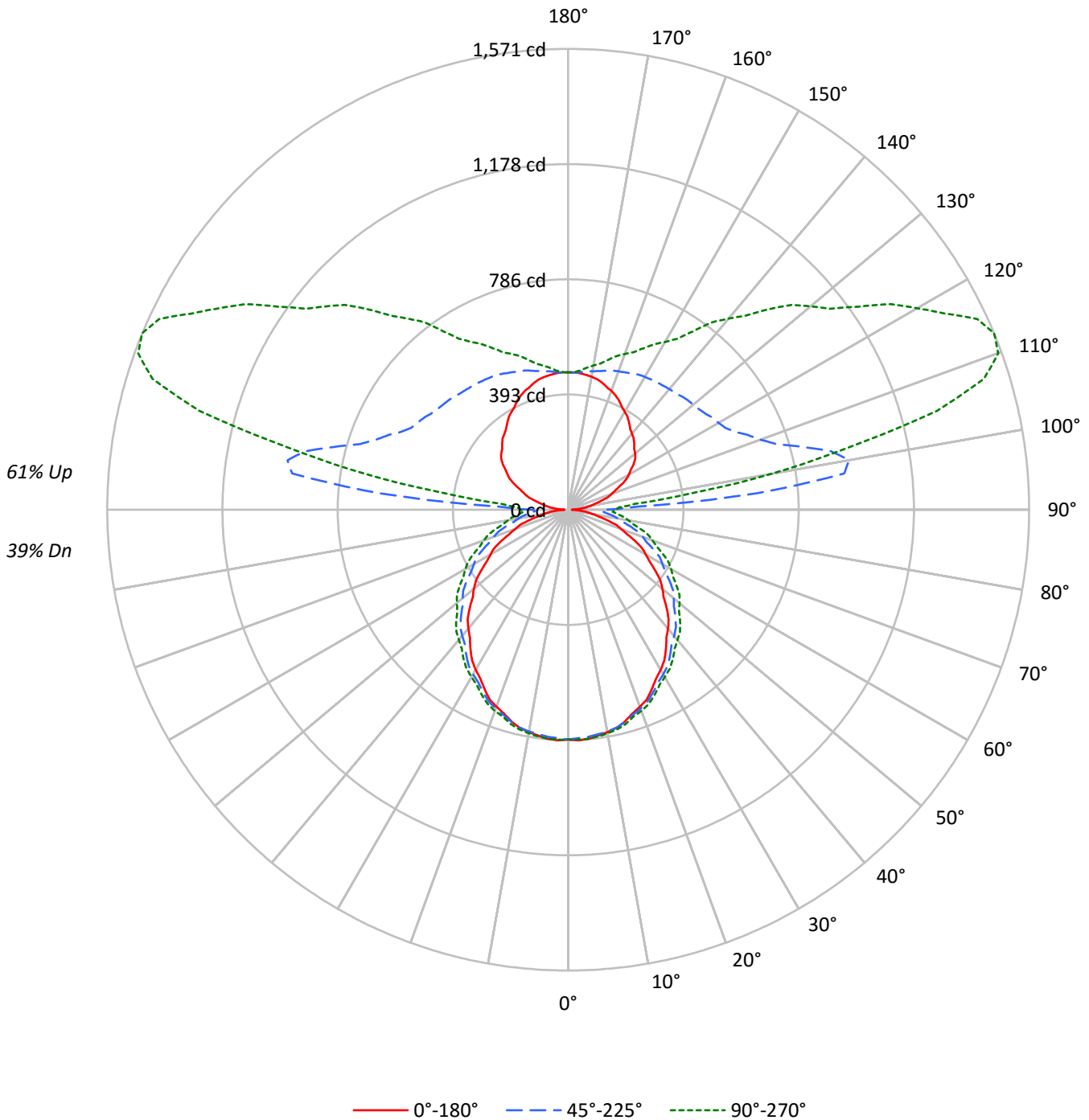
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	40	38	37	31
2	86	78	72	66	78	71	66	61	58	54	50	46	43	40	34	32	31	26
3	78	68	61	55	70	62	56	50	51	46	42	40	37	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	35	30	32	28	25	24	21	19	16
6	60	48	40	34	54	44	36	31	36	30	26	29	25	21	22	19	17	14
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	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	1.2
10°-20°	211.8	3.4
20°-30°	316.7	5.1
30°-40°	378.3	6.1
40°-50°	395.8	6.4
50°-60°	371.4	6.0
60°-70°	310.2	5.0
70°-80°	221.9	3.6
80°-90°	136.0	2.2
90°-100°	343.5	5.6
100°-110°	798.4	13.0
110°-120°	766.1	12.4
120°-130°	601.9	9.8
130°-140°	466.6	7.6
140°-150°	342.7	5.6
150°-160°	237.3	3.9
160°-170°	139.4	2.3
170°-180°	45.4	0.7
0°-30°	602.8	9.8
0°-40°	981.1	15.9
0°-60°	1748.2	28.4
0°-90°	2416.3	39.2
90°-120°	1908.0	31.0
90°-150°	3319.3	53.9
90°-180°	3741.0	60.8
0°-180°	6157.7	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	64	120	151	162	10
95°	42	148	646	274	229	42
105°	117	191	826	1419	1300	124
115°	198	258	628	1342	1538	197
125°	273	323	571	1030	1207	242
135°	318	379	546	836	967	246
145°	362	414	530	672	742	227
155°	410	442	512	583	607	189
165°	448	461	491	520	530	126
175°	467	468	471	477	476	44
180°	468	468	468	468	468	



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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	32.9	42.7	52.7	62.6	72.6	82.8	93.0	103.2	113.5	119.8
90°	13.0	24.2	35.4	47.5	58.7	70.1	82.6	95.1	107.6	120.2	125.6
92.5°	22.2	36.2	52.6	68.3	84.7	107.7	142.0	192.2	241.7	236.7	207.2
95°	41.6	51.9	69.6	93.2	125.1	170.5	260.3	410.7	575.4	646.2	546.0
97.5°	63.3	70.9	85.8	106.5	137.4	185.2	270.9	439.0	706.8	948.9	1015.4
100°	77.8	84.8	97.5	116.8	145.6	190.0	265.0	413.9	671.8	971.3	1163.4
102.5°	93.0	100.2	111.5	129.5	155.4	196.3	264.4	391.9	622.4	917.9	1166.8
105°	116.8	124.1	134.4	150.3	172.8	208.6	267.8	373.6	560.8	825.7	1102.8
107.5°	141.0	147.8	157.1	172.2	192.9	226.0	278.7	367.5	519.6	743.5	995.4
110°	158.6	164.9	173.0	186.8	206.4	238.4	288.6	368.2	502.7	696.8	928.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.3	180.9	188.4	201.7	220.6	251.4	298.2	372.3	491.3	664.0	868.6
115°	198.4	204.6	212.5	224.2	242.6	272.7	315.6	380.2	483.6	627.8	796.2
117.5°	222.3	228.1	234.2	244.3	263.7	291.4	333.4	391.3	479.8	603.6	749.8
120°	238.3	242.1	247.8	258.2	277.2	304.4	344.8	400.3	479.6	591.9	725.0
122.5°	252.7	256.1	261.3	272.0	289.8	318.2	357.5	408.9	481.8	583.2	704.1
125°	272.6	274.4	280.1	290.5	308.5	336.9	375.5	422.7	485.0	571.0	676.4
127.5°	288.3	290.9	297.7	308.2	327.8	355.6	392.2	434.2	489.9	562.5	651.3
130°	298.1	300.8	309.1	320.2	340.0	367.4	402.4	442.2	493.3	556.8	637.2
132.5°	305.0	308.6	317.8	331.4	351.2	377.6	411.2	449.4	495.2	552.6	623.7
135°	318.1	321.7	331.9	345.9	365.7	392.2	423.6	457.9	497.9	546.4	605.7
137.5°	330.4	334.3	344.3	359.3	378.9	403.1	432.5	464.3	499.2	540.2	590.0
140°	338.1	342.8	352.3	367.5	386.4	410.3	438.4	467.4	500.2	536.7	580.3
142.5°	347.2	351.0	361.1	374.5	393.4	415.5	442.3	470.1	500.2	532.5	571.2
145°	361.7	364.4	372.8	386.8	402.7	424.4	449.0	474.6	501.1	529.5	561.3
147.5°	375.7	377.4	385.7	398.0	413.6	432.1	454.7	477.6	501.1	525.9	552.4
150°	385.6	386.5	394.0	406.3	419.6	436.7	458.4	478.3	501.1	522.9	546.6
152.5°	395.4	395.6	403.2	413.9	425.7	442.0	460.7	479.9	498.8	519.1	540.5
155°	410.2	410.2	415.9	425.3	435.7	449.0	465.1	480.3	496.4	512.5	531.4
157.5°	421.9	422.7	427.2	435.5	444.4	454.7	467.6	481.2	493.2	506.6	521.1
160°	431.0	431.0	434.8	442.4	449.0	458.4	469.9	481.2	491.6	502.1	514.4
162.5°	437.8	437.8	440.8	446.9	452.8	460.7	470.6	480.5	488.6	497.5	507.5
165°	448.1	447.1	449.0	453.7	457.5	464.1	471.7	478.3	484.0	490.6	498.2
167.5°	455.8	454.7	455.6	459.3	461.9	466.0	471.6	476.9	479.5	483.9	489.3
170°	460.4	458.4	459.4	462.3	464.1	466.0	470.8	474.6	476.5	479.3	484.0
172.5°	463.4	462.3	462.4	464.6	465.7	466.8	470.8	473.9	474.2	475.5	478.7
175°	467.0	466.0	465.1	467.0	467.0	468.0	469.9	471.7	470.8	470.8	472.7
177.5°	468.7	468.0	467.2	468.0	468.0	468.0	468.7	470.2	468.7	468.0	468.7
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0



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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°	126.4	133.1	139.7	144.2	145.9	148.1	150.1	151.8
90°	133.1	140.5	147.8	153.9	154.8	157.7	160.5	161.5
92.5°	183.4	173.2	172.1	171.2	171.2	170.2	172.8	172.8
95°	437.3	333.3	288.9	258.8	242.6	236.0	231.3	229.4
97.5°	939.7	776.2	659.7	550.2	482.2	441.4	417.8	411.5
100°	1202.1	1130.8	1025.6	894.7	801.0	733.7	698.6	701.5
102.5°	1286.4	1289.2	1230.0	1148.3	1075.8	1023.0	993.9	974.0
105°	1306.1	1406.1	1429.5	1408.3	1366.4	1332.1	1303.6	1300.5
107.5°	1225.0	1383.9	1472.0	1509.1	1511.5	1501.0	1492.5	1485.5
110°	1150.1	1329.3	1453.6	1523.1	1551.1	1560.2	1559.8	1559.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1075.2	1258.0	1396.6	1485.1	1535.2	1560.4	1569.3	1571.3
115°	976.0	1145.4	1289.2	1395.5	1468.0	1511.2	1531.7	1538.0
117.5°	902.4	1049.1	1178.7	1286.5	1362.0	1411.2	1440.0	1447.9
120°	863.0	995.2	1113.3	1211.8	1287.9	1342.3	1366.4	1373.4
122.5°	831.3	951.2	1060.8	1152.4	1220.2	1269.3	1295.6	1304.2
125°	788.3	895.6	990.5	1068.9	1130.9	1173.9	1198.9	1206.9
127.5°	750.2	846.0	931.8	1003.3	1058.6	1095.5	1118.2	1125.5
130°	726.0	814.9	895.2	962.0	1013.3	1048.6	1069.6	1078.3
132.5°	703.4	785.2	860.1	923.9	972.3	1007.7	1026.6	1033.2
135°	672.5	743.2	808.2	864.4	911.7	941.1	959.1	966.7
137.5°	644.3	702.5	758.5	807.3	847.3	877.0	892.3	897.6
140°	627.7	678.8	727.2	769.7	806.7	834.2	850.3	850.3
142.5°	611.5	655.5	697.4	734.6	766.2	790.7	805.3	805.3
145°	593.2	626.0	657.8	686.4	710.9	731.5	739.8	742.5
147.5°	578.4	603.6	628.5	648.6	667.3	681.4	689.3	690.7
150°	568.3	590.1	610.0	628.2	642.8	653.6	659.7	660.1
152.5°	560.0	578.8	596.4	611.4	622.6	632.3	635.9	635.9
155°	547.5	562.6	576.9	588.2	596.8	604.4	606.3	607.2
157.5°	534.3	547.0	557.9	566.8	574.2	579.9	581.4	581.2
160°	526.7	537.1	546.6	553.2	559.9	565.5	565.5	564.6
162.5°	517.6	526.5	535.2	541.0	545.4	550.3	550.3	549.4
165°	505.8	511.5	518.1	522.9	526.7	530.4	529.5	529.5
167.5°	495.6	499.9	503.8	507.2	508.8	511.5	510.5	510.5
170°	488.8	491.6	495.4	497.3	498.2	500.2	499.2	499.2
172.5°	482.7	484.8	487.9	488.9	489.2	491.1	489.3	488.6
175°	474.6	475.5	477.4	477.4	477.4	478.3	477.4	476.5
177.5°	469.4	470.2	471.0	471.0	470.2	471.0	469.4	469.4
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0

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