

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: P331987-940

Luminaire Tested: **S123DIP-S775D1025U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331987-940
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-S775D1025U940-4F0-1E-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: 6191.8 lumens
Efficiency: N/A
Efficacy: 119.1 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

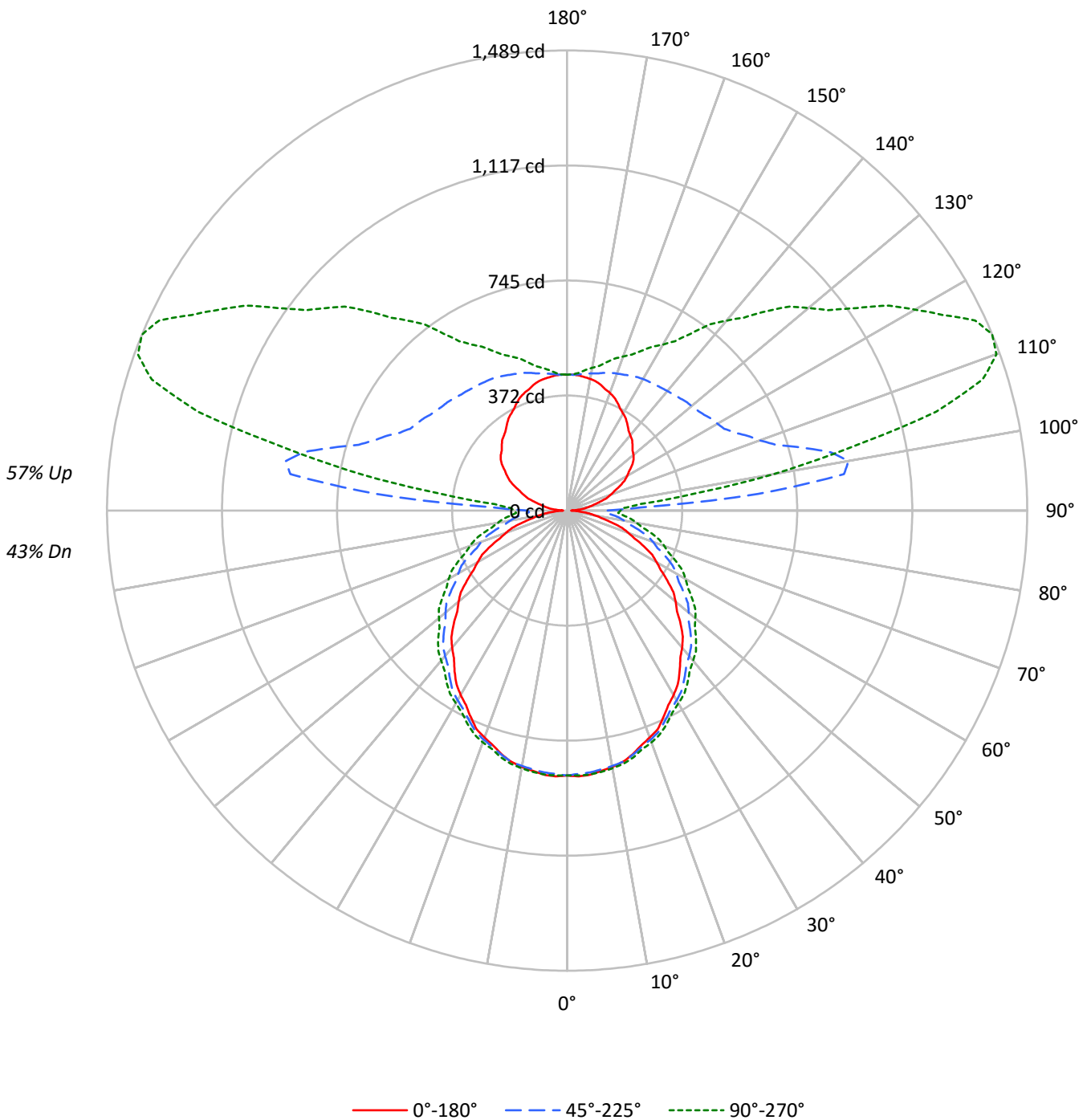
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9226	9226	9226
5°	9255	8994	8999
10°	9172	8787	8743
15°	9054	8552	8462
20°	8884	8283	8155
25°	8676	7974	7832
30°	8462	7695	7504
35°	8223	7401	7242
40°	7995	7134	6961
45°	7742	6877	6737
50°	7490	6622	6490
55°	7215	6363	6268
60°	6946	6099	6041
65°	6670	5818	5769
70°	6254	5502	5492
75°	5730	5140	5210
80°	5128	4782	4885
85°	4559	4540	4699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	1.3
10°-20°	231.6	3.7
20°-30°	346.4	5.6
30°-40°	413.7	6.7
40°-50°	432.9	7.0
50°-60°	406.2	6.6
60°-70°	339.3	5.5
70°-80°	242.7	3.9
80°-90°	148.1	2.4
90°-100°	335.5	5.4
100°-110°	759.6	12.3
110°-120°	726.2	11.7
120°-130°	569.1	9.2
130°-140°	440.1	7.1
140°-150°	322.4	5.2
150°-160°	223.0	3.6
160°-170°	131.0	2.1
170°-180°	42.6	0.7
0°-30°	659.3	10.6
0°-40°	1073.0	17.3
0°-60°	1912.1	30.9
0°-90°	2642.2	42.7
90°-120°	1821.3	29.4
90°-150°	3153.0	50.9
90°-180°	3550.0	57.3
0°-180°	6191.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	858	856	851	858	857	81
15°	817	820	819	828	827	230
25°	738	747	750	761	762	340
35°	635	650	662	675	680	397
45°	519	542	565	582	590	400
55°	396	427	460	484	493	354
65°	274	310	351	378	388	270
75°	148	192	239	269	281	159
85°	46	93	142	172	183	48
90°	14	69	128	161	172	10
95°	41	146	620	274	234	41
105°	111	184	786	1347	1237	117
115°	187	245	597	1271	1456	185
125°	256	304	541	974	1142	228
135°	299	356	515	790	913	231
145°	340	389	498	632	699	213
155°	385	416	482	547	570	177
165°	421	433	461	489	498	119
175°	439	439	442	449	448	42
180°	440	440	440	440	440	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	860.9	860.3	859.9	859.3	858.9	857.9	856.7	855.3	854.0	852.7	854.0
5°	858.1	857.6	857.2	856.8	856.4	855.6	854.3	853.1	851.9	850.6	852.3
7.5°	849.6	849.7	849.8	849.9	850.0	849.4	848.2	847.0	845.8	844.6	846.7
10°	842.2	842.6	843.0	843.5	843.8	843.6	842.5	841.5	840.4	839.4	841.5
12.5°	833.2	833.8	834.4	835.0	835.5	835.5	834.8	834.1	833.4	832.7	834.6
15°	817.0	817.6	818.2	818.9	819.5	819.7	819.5	819.3	819.0	818.9	820.9
17.5°	796.5	797.7	799.0	800.1	801.4	802.0	801.9	801.8	801.7	801.6	803.5
20°	781.5	782.7	784.0	785.2	786.5	787.3	787.7	788.2	788.5	789.0	790.9
22.5°	765.8	767.0	768.3	769.5	770.8	771.7	772.3	772.8	773.5	774.0	776.4
25°	737.6	739.7	741.7	743.9	745.9	747.3	747.9	748.5	749.1	749.8	752.4
27.5°	709.3	711.6	714.0	716.3	718.7	720.5	721.8	723.2	724.5	725.9	728.2
30°	689.0	691.8	694.5	697.1	699.8	702.0	703.6	705.3	707.0	708.6	711.1
32.5°	666.6	669.7	672.7	675.7	678.8	681.4	683.5	685.7	687.9	690.0	692.7
35°	634.9	638.2	641.6	644.9	648.2	651.2	653.9	656.6	659.3	662.0	665.1
37.5°	601.3	605.0	608.8	612.5	616.3	619.7	623.1	626.4	629.7	633.0	636.6
40°	578.9	582.6	586.4	590.1	593.8	597.8	601.9	606.1	610.2	614.4	617.9
42.5°	554.2	558.8	563.4	567.9	572.5	576.9	581.2	585.6	589.9	594.2	598.1
45°	519.2	524.1	529.1	534.0	539.0	544.1	549.3	554.5	559.7	564.9	568.8
47.5°	482.3	488.0	493.7	499.3	504.9	510.7	516.7	522.5	528.5	534.4	538.9
50°	458.4	464.2	470.0	475.9	481.7	487.8	494.3	500.7	507.1	513.5	518.3
52.5°	433.0	439.2	445.3	451.5	457.6	464.2	471.4	478.4	485.5	492.6	497.6
55°	395.9	402.7	409.6	416.4	423.3	430.4	437.9	445.4	452.8	460.3	465.9
57.5°	359.6	366.8	373.9	381.0	388.3	395.8	404.0	412.2	420.4	428.6	434.2
60°	334.3	341.7	349.2	356.7	364.2	372.1	380.7	389.1	397.6	406.2	412.0
62.5°	310.3	318.0	325.7	333.2	340.9	349.2	358.2	367.2	376.2	385.2	391.0
65°	273.6	281.7	289.7	297.8	305.9	314.5	323.7	332.8	342.0	351.1	357.3
67.5°	236.2	244.8	253.4	262.0	270.5	279.6	288.8	298.1	307.4	316.7	323.5
70°	210.1	219.0	227.9	236.8	245.8	255.2	265.2	275.1	285.1	295.1	301.7
72.5°	186.2	195.1	204.0	212.9	221.9	231.5	241.7	252.1	262.3	272.6	279.5
75°	148.5	158.2	168.0	177.7	187.4	197.5	207.9	218.3	228.6	239.1	245.8
77.5°	115.6	125.5	135.3	145.1	154.9	165.1	175.6	186.0	196.4	206.9	214.1
80°	92.5	102.6	112.8	123.0	133.1	143.6	154.4	165.1	175.9	186.7	193.8
82.5°	72.2	82.6	92.9	103.3	113.6	124.2	135.2	146.2	157.1	168.1	175.1
85°	45.7	56.1	66.5	76.9	87.2	97.9	109.0	119.9	130.9	142.0	149.0
87.5°	25.2	35.8	46.5	57.4	68.1	78.9	90.1	101.2	112.3	123.4	130.3
90°	13.9	25.9	37.8	50.6	62.6	74.7	88.0	101.3	114.5	127.8	133.9
92.5°	22.5	36.9	53.6	69.7	86.3	109.3	143.0	191.7	239.7	236.4	209.6
95°	40.6	51.3	69.2	92.4	123.7	167.5	253.3	396.1	552.2	620.3	527.0
97.5°	60.8	68.9	83.9	104.4	134.5	180.6	262.5	421.8	674.8	903.7	967.1
100°	74.3	81.8	94.7	113.8	141.8	184.6	256.5	397.7	641.3	924.2	1105.5
102.5°	88.5	96.0	107.5	125.3	150.4	190.0	255.3	376.5	594.3	873.3	1108.0
105°	110.8	118.3	128.7	144.4	166.2	200.8	257.8	358.4	535.6	785.7	1047.0
107.5°	133.5	140.4	149.7	164.5	184.6	216.5	267.2	351.9	496.0	707.6	945.0
110°	149.8	156.2	164.3	177.9	196.8	227.7	276.1	352.0	479.6	663.3	881.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	165.5	171.2	178.7	191.6	209.8	239.5	284.7	355.3	468.3	631.7	824.7
115°	187.2	193.1	201.0	212.4	230.1	259.0	300.3	362.1	460.4	596.9	755.8
117.5°	209.6	215.2	221.1	230.9	249.3	275.9	316.4	371.8	455.8	573.3	711.3
120°	224.4	228.2	233.6	243.6	261.5	287.8	326.6	379.8	455.1	561.7	687.5
122.5°	238.0	241.2	246.2	256.4	273.1	300.3	338.1	387.4	456.7	552.9	667.3
125°	256.5	258.2	263.6	273.4	290.3	317.4	354.5	399.7	459.1	540.8	640.4
127.5°	271.3	273.8	280.1	289.9	308.4	334.7	369.8	410.0	463.1	532.0	616.0
130°	280.5	282.9	290.8	301.2	319.8	345.7	379.2	417.2	465.9	526.1	602.2
132.5°	286.9	290.3	298.9	311.7	330.3	355.3	387.3	423.7	467.3	521.7	589.0
135°	299.2	302.5	312.1	325.2	343.8	368.8	398.7	431.2	469.1	515.0	571.2
137.5°	310.8	314.3	323.8	337.8	356.1	379.0	406.8	436.9	469.8	508.5	555.8
140°	317.8	322.3	331.2	345.4	363.2	385.8	412.2	439.5	470.4	504.9	546.3
142.5°	326.4	329.9	339.4	352.0	369.6	390.5	415.7	441.8	470.0	500.4	537.3
145°	340.1	342.5	350.4	363.5	378.4	398.8	421.9	445.9	470.8	497.6	527.7
147.5°	353.0	354.6	362.5	374.0	388.6	406.1	427.2	448.8	470.8	494.2	519.1
150°	362.3	363.2	370.2	381.8	394.3	410.4	430.8	449.5	470.8	491.3	513.5
152.5°	371.5	371.7	378.8	389.0	400.0	415.4	432.9	450.9	468.7	487.8	507.9
155°	385.4	385.4	390.7	399.7	409.5	421.9	437.0	451.3	466.4	481.5	499.4
157.5°	396.5	397.2	401.4	409.3	417.6	427.2	439.3	452.2	463.4	476.0	489.7
160°	405.0	405.0	408.6	415.6	421.9	430.8	441.5	452.2	462.0	471.7	483.3
162.5°	411.4	411.4	414.3	419.9	425.4	432.9	442.2	451.5	459.1	467.4	476.9
165°	421.0	420.1	421.9	426.3	429.9	436.1	443.3	449.5	454.9	461.1	468.1
167.5°	428.3	427.2	428.1	431.5	434.0	437.9	443.1	448.1	450.6	454.7	459.9
170°	432.6	430.8	431.7	434.4	436.1	437.9	442.4	445.9	447.7	450.4	454.9
172.5°	435.4	434.4	434.5	436.5	437.6	438.6	442.4	445.2	445.6	446.8	449.9
175°	438.8	437.9	437.0	438.8	438.8	439.7	441.5	443.3	442.4	442.4	444.2
177.5°	440.4	439.7	439.0	439.7	439.7	439.7	440.4	441.8	440.4	439.7	440.4
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.3	856.7	857.9	858.5	858.4	858.2	858.0	857.9
5°	853.9	855.6	857.2	857.9	857.7	857.6	857.4	857.1
7.5°	848.7	850.9	852.9	853.8	853.5	853.4	853.1	852.8
10°	843.6	845.6	847.7	848.6	848.1	847.7	847.3	846.9
12.5°	836.5	838.4	840.3	841.1	840.6	840.3	839.8	839.4
15°	823.0	825.1	827.2	828.0	827.9	827.7	827.4	827.2
17.5°	805.4	807.3	809.1	809.9	809.7	809.3	809.0	808.8
20°	792.7	794.6	796.5	797.5	797.7	797.9	798.1	798.3
22.5°	778.7	781.1	783.5	784.6	784.5	784.3	784.3	784.1
25°	755.2	757.9	760.5	761.9	761.9	761.9	761.9	761.9
27.5°	730.5	732.8	735.1	736.4	736.6	736.7	736.9	737.1
30°	713.6	716.1	718.6	719.9	719.9	719.9	719.9	719.9
32.5°	695.3	697.9	700.6	702.2	702.7	703.2	703.6	704.2
35°	668.2	671.4	674.4	676.5	677.3	678.1	678.9	679.8
37.5°	640.1	643.6	647.1	649.3	649.9	650.6	651.2	651.9
40°	621.4	624.9	628.5	630.6	631.5	632.3	633.1	634.0
42.5°	601.9	605.7	609.7	612.2	613.3	614.5	615.6	616.8
45°	572.7	576.7	580.7	583.4	585.1	586.7	588.4	590.1
47.5°	543.3	547.8	552.2	555.1	556.3	557.7	558.9	560.2
50°	523.1	527.8	532.6	535.7	537.2	538.6	540.1	541.5
52.5°	502.5	507.5	512.4	515.8	517.5	519.3	521.1	522.9
55°	471.5	477.2	482.7	486.3	488.0	489.6	491.3	493.0
57.5°	439.9	445.5	451.1	455.0	456.9	458.9	460.7	462.7
60°	417.8	423.6	429.4	433.5	435.7	438.0	440.3	442.6
62.5°	396.9	402.7	408.5	412.4	414.6	416.7	418.8	420.9
65°	363.6	369.7	375.9	380.1	382.2	384.2	386.4	388.4
67.5°	330.3	337.2	343.9	348.2	349.9	351.7	353.5	355.2
70°	308.4	315.0	321.6	325.9	328.1	330.1	332.2	334.3
72.5°	286.2	293.0	299.9	304.3	306.4	308.4	310.5	312.6
75°	252.7	259.6	266.4	271.1	273.6	276.1	278.6	281.1
77.5°	221.3	228.5	235.8	240.3	242.3	244.2	246.1	248.0
80°	200.8	207.9	215.0	219.5	221.6	223.6	225.8	227.8
82.5°	182.2	189.2	196.3	200.8	203.0	205.0	207.1	209.1
85°	156.0	163.1	170.1	174.7	176.7	178.9	180.9	183.0
87.5°	137.5	144.7	151.9	156.9	158.8	161.0	163.3	165.2
90°	141.9	149.8	157.7	164.1	165.3	168.3	171.2	172.4
92.5°	188.2	179.7	179.6	179.4	179.7	178.9	181.7	182.0
95°	425.7	329.0	288.2	260.4	245.6	239.6	235.4	234.0
97.5°	896.9	744.0	635.4	533.1	469.5	431.5	409.6	403.9
100°	1142.6	1076.6	978.5	856.1	768.3	705.4	672.8	675.7
102.5°	1221.2	1224.7	1169.8	1093.7	1025.8	976.4	949.5	931.1
105°	1238.8	1333.6	1356.3	1337.0	1297.9	1266.0	1239.4	1236.8
107.5°	1161.5	1311.7	1395.3	1430.6	1433.2	1423.6	1415.8	1409.4
110°	1090.6	1259.7	1377.3	1443.1	1469.7	1478.5	1478.4	1478.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1019.6	1192.1	1323.0	1406.7	1454.0	1477.9	1486.6	1488.7
115°	925.5	1085.4	1221.2	1321.5	1389.9	1430.7	1450.2	1456.3
117.5°	855.3	994.0	1116.4	1218.1	1289.3	1335.8	1363.1	1370.7
120°	817.8	942.7	1054.3	1147.4	1219.1	1270.4	1293.2	1300.0
122.5°	787.4	900.7	1004.3	1090.8	1154.8	1201.1	1226.1	1234.3
125°	746.2	847.6	937.4	1011.5	1070.0	1110.5	1134.3	1141.9
127.5°	709.5	800.1	881.3	948.9	1001.0	1035.9	1057.4	1064.5
130°	686.2	770.3	846.3	909.4	957.8	991.1	1011.0	1019.4
132.5°	664.3	741.8	812.7	873.0	918.7	952.2	970.1	976.5
135°	634.6	701.5	763.1	816.3	860.9	888.7	905.7	912.9
137.5°	607.3	662.4	715.5	761.7	799.3	827.4	842.0	847.1
140°	591.2	639.7	685.5	725.9	760.7	786.7	802.0	802.1
142.5°	575.4	617.2	657.0	692.2	722.1	745.2	759.0	759.2
145°	557.9	588.9	619.0	646.0	669.1	688.7	696.6	699.3
147.5°	543.6	567.4	590.8	609.8	627.5	640.9	648.4	649.9
150°	534.0	554.6	573.2	590.3	604.1	614.3	620.1	620.5
152.5°	526.2	543.9	560.4	574.5	585.1	594.2	597.5	597.6
155°	514.4	528.7	542.1	552.8	560.8	567.8	569.6	570.5
157.5°	502.0	513.9	524.2	532.6	539.6	544.9	546.4	546.2
160°	494.9	504.7	513.5	519.8	526.0	531.4	531.4	530.5
162.5°	486.3	494.7	502.9	508.5	512.6	517.1	517.1	516.2
165°	475.3	480.6	486.9	491.3	494.9	498.5	497.6	497.6
167.5°	465.7	469.8	473.3	476.5	478.1	480.6	479.7	479.7
170°	459.3	462.0	465.5	467.3	468.1	469.9	469.0	469.0
172.5°	453.6	455.6	458.4	459.5	459.7	461.5	459.9	459.1
175°	445.9	446.8	448.6	448.6	448.6	449.5	448.6	447.7
177.5°	441.1	441.8	442.6	442.6	441.8	442.6	441.1	441.1
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7

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