

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: P331365-935

Luminaire Tested: **SA2XXDIP-C675D925U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331365-935
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: SA2XXDIP-C675D925U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5439.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

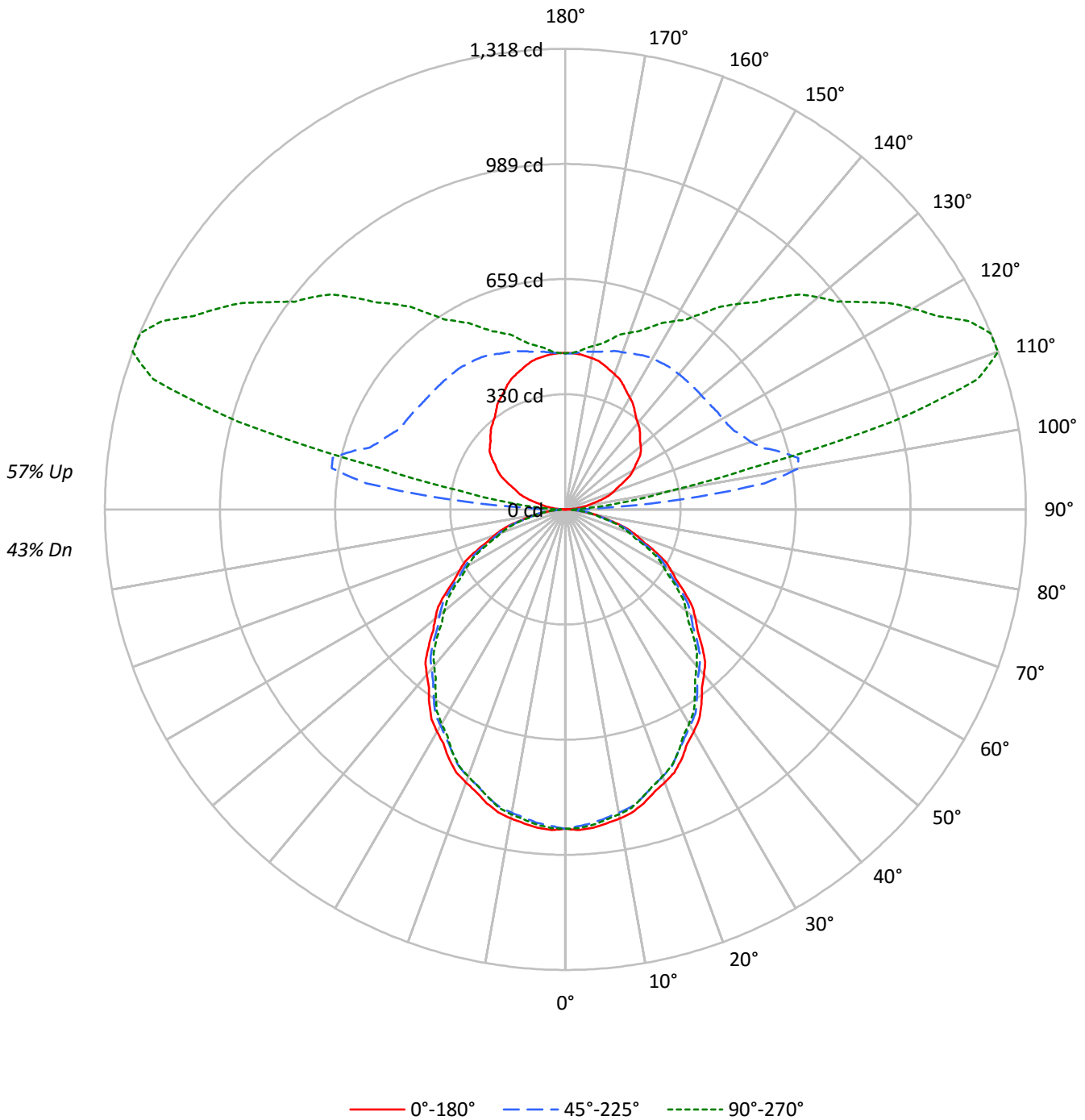
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	50	50	43
1	96	92	88	85	88	84	81	78	69	67	65	56	55	53	44	43	42	36
2	88	80	74	69	80	73	68	64	61	57	54	49	47	44	38	37	35	30
3	80	70	63	57	73	65	58	53	54	49	45	44	40	37	34	32	30	26
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22
5	67	55	47	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	29	24	21	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	1.6
10°-20°	241.9	4.4
20°-30°	355.5	6.5
30°-40°	412.9	7.6
40°-50°	412.5	7.6
50°-60°	359.7	6.6
60°-70°	266.0	4.9
70°-80°	150.6	2.8
80°-90°	44.5	0.8
90°-100°	178.7	3.3
100°-110°	606.3	11.1
110°-120°	644.1	11.8
120°-130°	530.2	9.7
130°-140°	425.8	7.8
140°-150°	321.8	5.9
150°-160°	226.1	4.2
160°-170°	133.1	2.4
170°-180°	43.3	0.8
0°-30°	683.3	12.6
0°-40°	1096.3	20.2
0°-60°	1868.5	34.4
0°-90°	2329.6	42.8
90°-120°	1429.1	26.3
90°-150°	2706.8	49.8
90°-180°	3109.0	57.2
0°-180°	5439.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	12	29	28	28	3
95°	30	74	337	127	98	32
105°	105	158	637	1138	968	111
115°	185	233	533	1100	1274	183
125°	258	305	512	891	1034	229
135°	302	361	506	748	857	234
145°	345	397	504	625	684	217
155°	393	424	489	553	575	181
165°	428	441	468	497	504	121
175°	446	446	450	456	455	42
180°	447	447	447	447	447	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.8	13.0	13.4	13.4	13.4	13.7	14.2	15.1	15.8	15.7	15.1
90°	0.9	3.4	6.9	8.6	10.3	12.9	17.2	23.2	28.3	29.2	28.3
92.5°	10.5	15.2	21.4	25.1	30.9	39.0	58.5	85.8	110.1	111.7	94.4
95°	30.0	33.5	42.1	49.9	63.6	84.2	123.7	198.5	298.2	336.8	294.7
97.5°	49.0	53.6	62.8	74.4	90.2	113.6	163.2	267.4	433.1	575.1	603.2
100°	66.1	68.7	76.5	90.2	107.5	131.5	177.0	281.9	467.4	678.8	802.6
102.5°	82.0	83.9	91.6	105.4	123.2	147.3	189.4	282.6	454.4	682.3	876.8
105°	104.9	108.3	114.3	127.2	146.1	170.1	210.5	287.0	428.8	636.7	865.3
107.5°	129.6	132.3	138.2	150.1	168.8	193.0	232.2	298.9	416.0	588.0	789.9
110°	146.1	149.6	154.6	165.8	183.9	208.8	246.6	308.5	413.4	564.6	742.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.2	164.6	170.5	181.0	198.3	223.9	260.4	318.8	414.0	549.4	709.5
115°	184.8	189.1	194.2	204.5	221.7	244.9	281.9	334.2	417.6	532.8	668.6
117.5°	209.1	212.6	217.7	226.9	243.3	267.4	301.6	350.8	423.8	524.7	642.7
120°	224.3	227.7	232.9	240.6	257.8	281.9	315.4	361.8	427.9	519.9	629.0
122.5°	238.8	241.4	246.6	255.0	272.2	297.0	328.4	371.3	432.7	517.1	617.3
125°	257.8	260.4	265.5	275.9	293.0	317.1	348.0	386.7	440.0	512.1	600.6
127.5°	272.9	276.4	283.5	294.9	311.4	336.1	366.3	401.0	447.4	509.2	585.2
130°	281.9	285.2	293.9	305.9	323.1	347.2	377.2	409.9	452.9	507.8	574.9
132.5°	290.1	294.2	303.5	316.2	334.1	358.2	386.8	418.8	458.3	507.1	566.6
135°	302.5	305.9	316.2	329.1	348.9	372.9	400.5	430.5	464.9	506.1	555.1
137.5°	314.2	318.3	328.6	342.3	362.0	384.3	411.5	439.5	470.7	505.9	547.0
140°	323.1	326.6	336.8	350.6	369.5	391.8	417.6	444.3	473.5	505.2	542.3
142.5°	332.0	334.8	344.4	358.2	376.3	397.4	422.4	448.4	475.5	505.2	537.4
145°	345.4	348.9	357.5	370.4	387.5	406.5	429.6	453.7	477.8	503.5	531.1
147.5°	359.9	362.5	370.7	382.5	396.8	413.7	435.5	456.7	478.5	500.5	524.5
150°	369.5	372.0	378.9	390.1	403.0	418.4	438.2	458.0	477.8	498.4	519.0
152.5°	379.1	380.3	387.2	397.0	409.2	423.3	441.0	458.7	476.4	495.0	514.2
155°	392.7	393.6	398.7	408.2	417.6	430.5	445.1	459.7	474.3	489.0	505.2
157.5°	404.1	404.9	409.1	417.2	424.8	435.7	448.1	459.7	470.4	482.8	496.9
160°	411.6	412.5	415.9	422.8	429.6	439.1	449.4	459.7	468.3	478.6	490.7
162.5°	419.1	418.6	422.1	427.6	433.8	441.2	450.1	459.0	466.2	475.2	485.2
165°	427.9	427.1	428.8	433.9	438.2	443.4	451.2	457.2	462.3	468.3	476.0
167.5°	435.1	434.1	435.7	438.9	442.0	445.3	451.0	456.0	458.3	462.3	467.1
170°	440.0	438.2	439.1	441.7	443.4	446.0	450.3	454.6	456.3	458.8	462.3
172.5°	442.7	441.7	441.2	443.8	444.8	446.7	449.6	452.5	453.6	454.8	457.5
175°	446.0	445.1	444.3	446.0	446.0	446.9	448.6	450.3	449.4	450.3	451.2
177.5°	447.5	446.2	445.5	446.9	446.9	446.9	447.5	448.9	447.5	446.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	14.4	13.6	13.4	13.3	13.2	13.0	12.8	12.7
90°	27.5	25.7	27.5	28.3	28.3	28.3	28.3	28.3
92.5°	74.9	64.3	57.1	51.7	51.1	48.3	49.0	47.6
95°	225.2	172.7	136.6	117.7	106.6	99.7	97.1	98.0
97.5°	525.4	429.8	336.8	274.8	233.8	212.6	200.0	192.9
100°	784.5	678.0	560.3	456.3	385.0	348.0	323.1	307.6
102.5°	954.3	930.3	844.2	734.0	656.5	593.4	562.3	541.4
105°	1044.0	1141.2	1152.4	1123.9	1070.7	1017.4	980.4	968.5
107.5°	979.5	1125.7	1215.0	1256.6	1263.3	1260.4	1253.0	1237.1
110°	923.8	1077.5	1187.6	1258.0	1294.9	1311.3	1319.1	1318.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.9	1020.5	1138.1	1218.8	1270.2	1297.5	1312.2	1316.8
115°	810.3	942.6	1055.2	1143.8	1204.7	1244.2	1266.6	1274.4
117.5°	763.2	879.4	981.5	1064.5	1126.7	1168.5	1192.1	1198.5
120°	739.9	846.4	937.5	1015.7	1075.8	1116.2	1141.2	1149.8
122.5°	721.3	818.9	905.2	975.9	1029.8	1069.4	1091.7	1098.9
125°	694.3	782.8	858.4	922.9	972.8	1005.4	1026.8	1033.7
127.5°	667.7	747.8	819.1	878.6	922.0	952.6	971.2	976.7
130°	650.5	724.4	792.3	849.0	891.1	920.3	937.5	944.3
132.5°	634.0	702.4	764.7	818.0	859.5	888.7	904.5	910.7
135°	611.0	667.7	724.4	772.5	809.4	837.8	853.3	856.7
137.5°	592.5	640.0	685.0	726.9	760.7	785.1	798.7	803.8
140°	580.9	622.2	661.7	699.5	726.9	749.3	762.2	767.3
142.5°	571.3	606.3	640.3	672.0	698.1	718.4	729.9	730.9
145°	557.7	586.1	612.7	637.6	658.2	672.9	681.4	684.0
147.5°	547.2	569.6	590.3	608.6	625.6	637.2	643.1	644.6
150°	539.7	558.5	576.6	592.0	604.9	615.3	620.4	621.3
152.5°	532.1	549.6	564.9	578.3	588.4	597.4	601.2	601.3
155°	521.6	535.4	548.2	557.7	567.1	573.2	576.6	574.9
157.5°	509.4	520.9	531.8	539.2	545.8	550.8	552.3	552.3
160°	501.8	511.3	520.7	526.8	532.8	537.1	538.0	538.0
162.5°	494.3	502.3	510.4	515.1	521.1	524.0	524.9	524.2
165°	482.9	489.0	495.0	498.4	501.8	505.2	505.2	504.4
167.5°	472.1	476.7	480.9	484.0	485.5	487.4	487.2	486.2
170°	466.6	469.2	472.6	474.3	475.2	477.8	476.9	475.2
172.5°	460.4	462.3	465.0	466.1	466.9	468.1	467.3	466.2
175°	453.7	454.6	455.5	456.3	456.3	457.2	456.3	454.6
177.5°	448.9	448.9	449.6	449.6	449.6	449.6	448.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9

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