

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: P332570-940

Luminaire Tested: **S124DIP-S575D1035U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332570-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D1035U940-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5520.2 lumens  
Efficiency: N/A  
Efficacy: 124.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

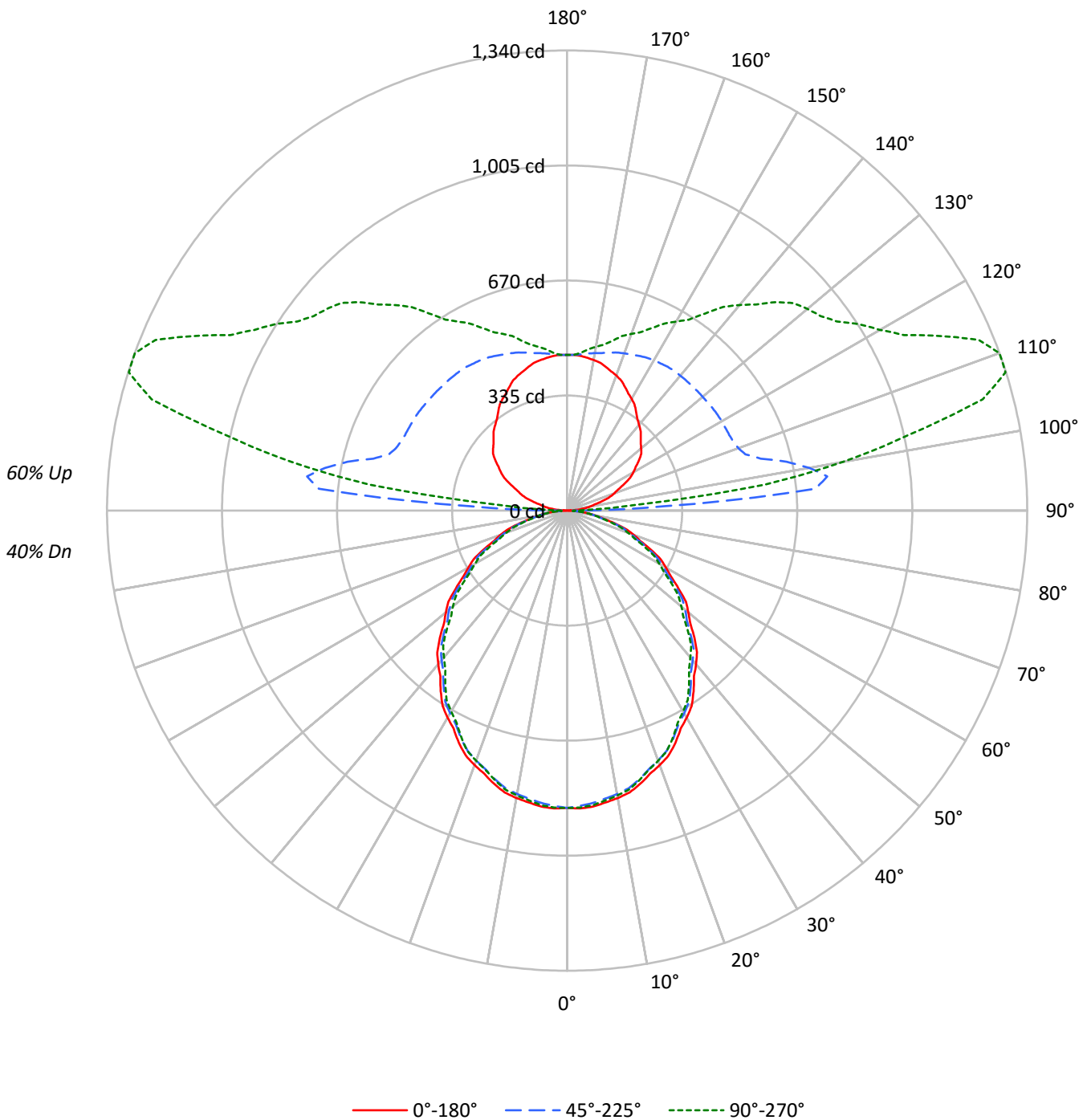
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	96	91	87	84	87	83	80	77	68	66	64	54	53	51	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	33	28
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	32	30	28	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	50	43	38	42	37	32	34	30	27	26	23	21	18
6	61	49	41	36	56	45	38	33	38	32	28	30	26	23	24	21	19	16
7	57	44	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	13	11
10	46	34	27	22	41	31	25	20	26	21	18	21	18	15	17	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	1.5
10°-20°	229.8	4.2
20°-30°	338.2	6.1
30°-40°	393.2	7.1
40°-50°	393.2	7.1
50°-60°	343.9	6.2
60°-70°	255.4	4.6
70°-80°	145.1	2.6
80°-90°	44.4	0.8
90°-100°	327.3	5.9
100°-110°	681.1	12.3
110°-120°	610.1	11.1
120°-130°	513.2	9.3
130°-140°	427.9	7.8
140°-150°	326.9	5.9
150°-160°	229.8	4.2
160°-170°	135.2	2.4
170°-180°	44.0	0.8
0°-30°	649.5	11.8
0°-40°	1042.7	18.9
0°-60°	1779.8	32.2
0°-90°	2224.7	40.3
90°-120°	1618.5	29.3
90°-150°	2886.5	52.3
90°-180°	3295.0	59.7
0°-180°	5520.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	1	7	16	18	19	4
95°	29	93	726	359	217	33
105°	104	151	584	1257	1252	111
115°	183	230	521	1001	1203	182
125°	256	304	518	851	960	227
135°	304	361	514	756	858	235
145°	350	401	511	637	701	220
155°	398	430	497	563	587	183
165°	434	447	476	504	512	122
175°	452	453	457	463	461	43
180°	453	453	453	453	453	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.6	14.8	15.2	15.3	15.3	15.2	16.2	16.1	16.3	16.5	16.3
90°	0.9	2.7	5.4	6.2	7.1	7.1	12.5	12.5	14.3	16.1	15.2
92.5°	10.2	14.8	23.2	34.0	47.0	65.5	110.8	179.9	247.1	282.4	235.2
95°	29.3	32.0	40.9	52.5	73.9	111.3	188.7	334.7	547.5	725.5	746.0
97.5°	52.7	52.7	60.4	71.1	89.3	120.7	180.4	300.9	512.4	764.1	937.2
100°	67.7	67.7	73.9	84.5	101.5	130.0	182.5	283.1	464.7	715.7	943.6
102.5°	81.9	83.3	88.8	98.8	115.0	142.0	189.6	278.1	432.7	655.2	890.2
105°	104.2	106.8	111.3	122.0	137.9	163.8	206.5	280.4	405.0	584.0	793.2
107.5°	128.8	130.5	134.9	146.3	161.7	187.1	226.3	293.6	400.0	544.1	714.8
110°	145.1	146.9	151.3	162.0	178.1	202.1	241.2	303.5	401.4	530.6	675.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	160.8	162.6	167.7	177.7	193.7	217.8	255.5	314.2	405.7	524.1	653.6
115°	183.4	186.0	192.3	201.2	218.1	242.1	277.8	331.2	413.9	520.8	632.9
117.5°	206.9	209.4	214.9	224.7	240.5	265.5	299.3	348.4	422.7	519.9	623.7
120°	222.6	224.4	230.6	240.3	255.5	280.4	314.2	360.5	429.1	519.9	618.7
122.5°	236.8	238.5	244.8	253.9	270.5	294.6	328.5	371.9	435.5	519.2	613.0
125°	255.5	259.0	264.4	274.2	291.1	316.0	348.0	389.1	445.1	518.1	603.6
127.5°	272.1	274.9	281.3	292.5	310.1	335.3	366.2	403.8	452.7	516.1	590.9
130°	281.3	284.9	291.9	305.3	322.3	348.0	378.4	413.0	458.4	515.4	583.1
132.5°	290.5	293.4	302.6	315.3	333.7	358.0	388.3	422.3	463.4	514.7	576.0
135°	303.5	307.1	316.0	331.2	349.8	373.0	402.3	434.4	470.9	513.6	565.3
137.5°	316.6	319.9	329.8	344.1	363.6	385.7	413.0	443.0	475.4	513.4	556.0
140°	325.8	328.5	338.3	353.4	372.1	393.5	420.2	448.6	478.9	512.7	551.1
142.5°	335.8	338.5	347.5	361.9	380.0	400.6	426.6	452.9	481.8	512.7	546.8
145°	349.8	352.5	361.4	373.9	390.8	410.4	433.5	457.5	483.4	511.0	539.5
147.5°	365.7	366.6	374.4	387.3	401.3	418.9	440.7	461.6	484.3	507.7	532.9
150°	375.7	376.6	383.7	394.4	407.7	424.6	444.3	463.8	484.3	505.6	527.9
152.5°	385.0	385.1	392.3	402.2	414.1	429.6	447.1	465.2	482.9	502.0	522.2
155°	397.9	398.8	404.1	413.0	422.8	436.2	451.3	466.5	480.7	496.8	513.6
157.5°	410.5	410.5	415.5	422.5	431.1	441.6	454.3	466.5	478.4	491.2	504.9
160°	418.4	418.4	422.0	428.2	435.3	445.1	455.8	466.5	476.3	487.0	498.6
162.5°	425.5	424.8	427.7	433.2	439.6	447.3	457.2	466.5	474.1	482.7	492.8
165°	433.5	433.5	435.3	439.8	444.3	449.5	457.5	464.7	470.0	476.3	483.4
167.5°	441.6	440.7	441.6	445.0	447.5	451.5	457.4	462.5	465.7	469.8	474.8
170°	445.1	444.3	445.1	447.8	449.5	452.2	456.6	461.1	462.9	465.6	469.1
172.5°	448.6	447.8	447.9	449.9	450.9	452.9	455.9	459.7	460.0	461.3	464.1
175°	452.2	451.3	451.3	452.2	453.1	453.1	454.9	457.5	456.6	456.6	458.4
177.5°	453.8	453.1	452.4	453.1	453.1	453.1	453.8	455.2	453.8	453.8	454.5
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	16.5	16.7	16.9	16.9	17.0	17.2	17.0	17.0
90°	16.1	16.9	17.8	17.8	18.7	19.6	18.7	18.7
92.5°	174.9	131.6	104.7	86.9	76.4	71.6	68.6	68.6
95°	659.6	521.7	402.3	316.0	272.4	244.8	228.8	217.2
97.5°	974.6	923.3	836.2	743.3	679.4	625.8	599.1	580.6
100°	1073.6	1091.4	1047.8	981.9	904.5	850.2	823.4	816.4
102.5°	1068.6	1156.9	1169.6	1142.1	1094.6	1055.3	1027.2	1021.5
105°	997.0	1151.0	1239.1	1275.7	1277.5	1270.3	1257.8	1252.5
107.5°	895.4	1059.4	1183.5	1262.8	1306.8	1327.1	1336.1	1338.4
110°	834.1	988.1	1117.2	1215.1	1278.4	1315.7	1331.8	1339.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	789.3	925.4	1047.4	1145.3	1217.1	1262.3	1284.8	1297.7
115°	744.2	853.7	957.9	1043.3	1113.7	1167.1	1195.5	1202.7
117.5°	722.1	812.8	894.7	967.1	1027.2	1072.0	1100.8	1106.3
120°	712.1	795.0	866.2	929.3	980.1	1019.3	1042.4	1052.2
122.5°	703.6	783.5	848.4	903.7	946.6	980.1	999.7	1009.5
125°	689.0	765.5	827.0	875.9	911.6	937.4	954.3	959.7
127.5°	671.2	744.4	805.7	852.1	887.9	910.9	925.1	930.4
130°	657.0	727.3	787.8	835.0	871.5	893.8	908.0	913.4
132.5°	642.0	708.1	767.1	814.4	850.2	875.2	888.8	894.1
135°	621.3	679.2	733.5	778.0	813.7	838.6	852.8	858.2
137.5°	602.7	651.7	697.4	737.6	770.9	795.5	807.3	813.7
140°	592.0	633.8	673.9	711.2	742.4	762.1	774.5	781.6
142.5°	582.0	618.8	653.3	685.6	713.2	731.4	742.4	747.4
145°	567.9	598.2	624.9	649.9	672.1	687.2	696.2	700.6
147.5°	556.3	580.4	601.8	621.3	637.8	650.8	657.5	659.1
150°	549.3	569.7	587.5	603.6	617.8	629.4	634.7	635.6
152.5°	541.4	559.0	575.4	588.6	600.7	610.1	613.3	614.2
155°	529.7	543.9	557.2	567.9	576.8	584.0	586.7	586.7
157.5°	517.0	529.0	540.2	548.8	555.4	560.8	562.4	562.4
160°	509.2	519.0	528.8	535.9	541.3	546.6	547.5	547.5
162.5°	501.3	509.7	517.4	523.8	527.7	533.1	534.0	533.2
165°	490.5	495.9	502.0	506.5	510.1	513.6	512.7	511.8
167.5°	480.0	484.1	489.1	491.8	493.6	495.9	495.7	495.0
170°	473.6	476.3	479.8	482.5	484.3	485.2	484.3	484.3
172.5°	467.9	469.8	472.0	473.9	475.0	475.9	475.0	473.6
175°	460.2	461.1	462.9	462.9	462.9	464.7	462.9	461.1
177.5°	455.2	455.9	455.9	456.6	455.9	456.6	455.2	453.8
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1

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