

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: P331311-930

Luminaire Tested: **S122DIP-S485D725U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331311-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S485D725U930-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3920.2 lumens  
Efficiency: N/A  
Efficacy: 102.1 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

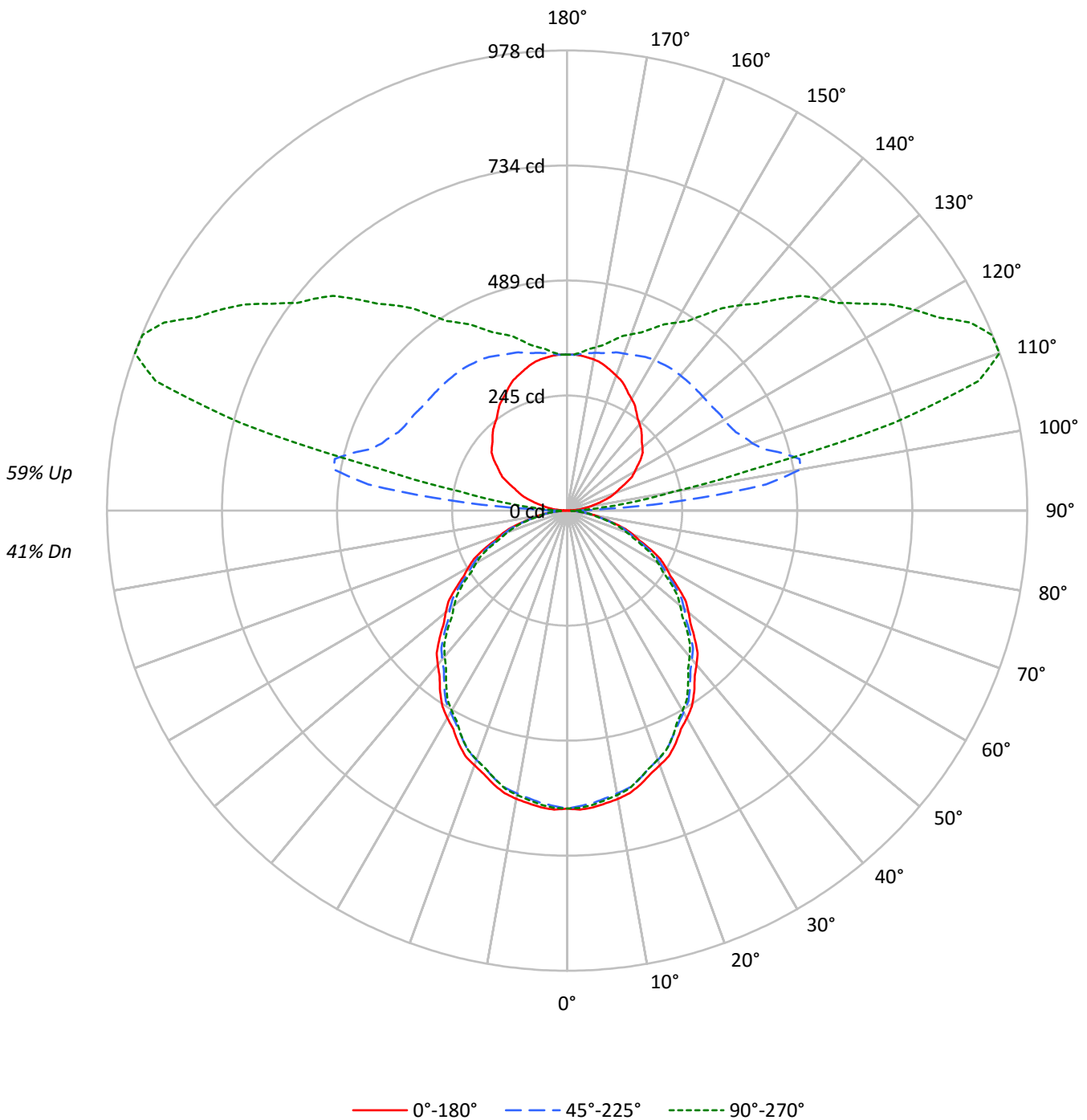
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	78	78	78	63	63	63	48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64	55	53	52	42	41	40	35
2	87	80	74	69	79	73	68	63	60	56	53	48	46	43	37	36	34	29
3	80	70	63	57	72	64	58	53	53	48	45	43	39	37	33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	50	42	36	56	45	38	33	38	33	29	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15	13
9	49	37	30	25	45	34	27	23	29	23	20	23	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	12	10

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

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.5	1.5
10°-20°	167.6	4.3
20°-30°	246.3	6.3
30°-40°	286.1	7.3
40°-50°	285.8	7.3
50°-60°	249.2	6.4
60°-70°	184.3	4.7
70°-80°	104.4	2.7
80°-90°	31.0	0.8
90°-100°	132.5	3.4
100°-110°	449.7	11.5
110°-120°	477.7	12.2
120°-130°	393.2	10.0
130°-140°	315.8	8.1
140°-150°	238.6	6.1
150°-160°	167.7	4.3
160°-170°	98.7	2.5
170°-180°	32.1	0.8
0°-30°	473.4	12.1
0°-40°	759.4	19.4
0°-60°	1294.4	33.0
0°-90°	1614.1	41.2
90°-120°	1059.9	27.0
90°-150°	2007.6	51.2
90°-180°	2306.0	58.8
0°-180°	3920.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	1	9	22	21	21	2
95°	22	55	250	94	73	24
105°	78	117	472	844	718	83
115°	137	173	395	815	945	136
125°	191	226	380	661	767	170
135°	224	268	375	555	635	173
145°	256	294	374	464	507	161
155°	291	314	363	410	426	134
165°	317	327	347	368	374	89
175°	331	331	334	338	337	31
180°	331	331	331	331	331	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.9	9.0	9.4	9.4	9.5	9.6	10.0	10.7	11.3	11.2	10.7
90°	0.7	2.5	5.1	6.4	7.7	9.5	12.7	17.2	21.0	21.7	21.0
92.5°	7.7	11.3	15.8	18.6	22.9	28.9	43.4	63.6	81.7	82.8	70.0
95°	22.3	24.9	31.2	36.9	47.1	62.5	91.8	147.2	221.2	249.8	218.6
97.5°	36.4	39.8	46.6	55.2	66.9	84.2	121.1	198.4	321.2	426.5	447.4
100°	49.1	51.0	56.7	66.9	79.7	97.5	131.3	209.0	346.7	503.4	595.3
102.5°	60.8	62.2	67.9	78.1	91.4	109.3	140.5	209.5	337.0	506.1	650.3
105°	77.8	80.3	84.8	94.3	108.4	126.2	156.1	212.9	318.0	472.2	641.8
107.5°	96.1	98.2	102.5	111.3	125.1	143.2	172.2	221.7	308.6	436.0	585.8
110°	108.4	110.9	114.7	123.0	136.4	154.9	182.9	228.8	306.6	418.7	550.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	119.5	122.1	126.5	134.2	147.1	166.1	193.1	236.4	307.0	407.5	526.2
115°	137.1	140.2	144.1	151.6	164.4	181.6	209.0	247.9	309.7	395.2	495.9
117.5°	155.2	157.7	161.5	168.3	180.5	198.4	223.7	260.2	314.3	389.1	476.7
120°	166.3	168.9	172.7	178.5	191.2	209.0	233.9	268.3	317.4	385.6	466.5
122.5°	177.1	179.1	182.9	189.1	201.9	220.3	243.6	275.5	321.0	383.5	457.9
125°	191.2	193.1	196.9	204.6	217.4	235.1	258.1	286.8	326.3	379.8	445.5
127.5°	202.4	205.0	210.3	218.7	231.0	249.3	271.7	297.3	331.8	377.6	434.0
130°	209.0	211.6	217.9	226.9	239.6	257.5	279.8	304.0	335.9	376.7	426.4
132.5°	215.2	218.3	225.1	234.6	247.8	265.6	286.9	310.6	340.0	376.2	420.3
135°	224.4	226.9	234.6	244.1	258.8	276.6	297.0	319.3	344.8	375.4	411.7
137.5°	233.0	236.0	243.7	253.9	268.5	285.0	305.2	326.0	349.1	375.3	405.7
140°	239.6	242.1	249.8	260.0	274.0	290.7	309.7	329.5	351.1	374.7	402.2
142.5°	246.2	248.3	255.4	265.6	279.2	294.7	313.3	332.6	352.7	374.7	398.6
145°	256.2	258.8	265.1	274.7	287.4	301.4	318.7	336.5	354.3	373.5	393.9
147.5°	266.9	268.8	274.9	283.7	294.3	306.8	323.0	338.7	354.9	371.2	389.1
150°	274.0	276.0	281.0	289.3	298.9	310.4	325.1	339.7	354.3	369.7	384.9
152.5°	281.2	282.1	287.1	294.4	303.5	314.0	327.1	340.2	353.4	367.1	381.4
155°	291.2	291.9	295.7	302.7	309.7	319.3	330.1	341.0	351.8	362.6	374.7
157.5°	299.7	300.3	303.4	309.5	315.1	323.1	332.3	341.0	348.9	358.1	368.5
160°	305.2	305.9	308.4	313.6	318.7	325.6	333.3	341.0	347.3	355.0	363.9
162.5°	310.9	310.5	313.1	317.2	321.7	327.2	333.9	340.5	345.8	352.5	359.8
165°	317.4	316.7	318.0	321.9	325.1	328.9	334.6	339.1	342.9	347.3	353.1
167.5°	322.8	322.0	323.1	325.5	327.8	330.3	334.4	338.2	340.0	342.9	346.4
170°	326.3	325.1	325.6	327.6	328.9	330.8	333.9	337.1	338.4	340.3	342.9
172.5°	328.3	327.6	327.2	329.1	329.9	331.3	333.5	335.6	336.4	337.3	339.3
175°	330.8	330.1	329.5	330.8	330.8	331.4	332.6	333.9	333.3	333.9	334.6
177.5°	331.9	330.9	330.4	331.4	331.4	331.4	331.9	333.0	331.9	331.4	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	10.3	9.7	9.6	9.5	9.4	9.3	9.2	9.0
90°	20.4	19.2	20.4	21.0	21.0	21.0	21.0	21.0
92.5°	55.6	47.7	42.3	38.4	37.8	35.8	36.4	35.3
95°	167.0	128.1	101.3	87.3	79.0	73.9	72.0	72.6
97.5°	389.6	318.8	249.8	203.8	173.3	157.7	148.4	143.0
100°	581.9	502.9	415.6	338.4	285.5	258.1	239.6	228.1
102.5°	707.8	690.0	626.1	544.4	486.9	440.1	417.0	401.5
105°	774.4	846.4	854.7	833.6	794.1	754.6	727.2	718.3
107.5°	726.4	834.9	901.2	932.1	937.0	934.8	929.4	917.5
110°	685.1	799.2	880.8	933.0	960.4	972.6	978.3	977.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	647.4	756.8	844.1	904.0	942.1	962.4	973.2	976.6
115°	601.0	699.1	782.6	848.2	893.5	922.8	939.4	945.2
117.5°	566.1	652.2	728.0	789.5	835.7	866.7	884.1	888.9
120°	548.7	627.8	695.3	753.3	797.9	827.9	846.4	852.7
122.5°	535.0	607.4	671.3	723.7	763.8	793.2	809.7	815.0
125°	514.9	580.6	636.7	684.4	721.5	745.7	761.6	766.7
127.5°	495.2	554.6	607.5	651.6	683.9	706.5	720.3	724.4
130°	482.4	537.3	587.6	629.7	660.9	682.6	695.3	700.4
132.5°	470.2	521.0	567.2	606.7	637.5	659.1	670.8	675.4
135°	453.1	495.2	537.3	572.9	600.4	621.4	632.8	635.4
137.5°	439.5	474.7	508.1	539.2	564.2	582.3	592.3	596.1
140°	430.8	461.5	490.7	518.8	539.2	555.7	565.3	569.2
142.5°	423.7	449.7	474.9	498.4	517.8	532.8	541.4	542.1
145°	413.6	434.6	454.4	472.9	488.2	499.0	505.4	507.3
147.5°	405.9	422.4	437.8	451.3	464.0	472.6	477.0	478.1
150°	400.2	414.3	427.6	439.1	448.7	456.3	460.2	460.8
152.5°	394.6	407.6	419.0	428.9	436.4	443.0	445.9	446.0
155°	386.9	397.1	406.6	413.6	420.6	425.1	427.6	426.4
157.5°	377.8	386.4	394.4	399.8	404.8	408.5	409.7	409.7
160°	372.2	379.2	386.2	390.7	395.2	398.4	398.9	398.9
162.5°	366.6	372.6	378.5	382.0	386.5	388.7	389.3	388.7
165°	358.2	362.6	367.1	369.7	372.2	374.7	374.7	374.1
167.5°	350.2	353.6	356.6	359.0	360.1	361.5	361.3	360.6
170°	346.1	348.0	350.5	351.8	352.5	354.3	353.7	352.5
172.5°	341.4	342.9	345.0	345.7	346.3	347.2	346.6	345.8
175°	336.5	337.1	337.8	338.4	338.4	339.1	338.4	337.1
177.5°	333.0	333.0	333.5	333.5	333.5	333.5	333.0	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4

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