

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: P331311-940

Luminaire Tested: **S122DIP-S485D725U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331311-940  
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-S485D725U940-4F0-1E-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**

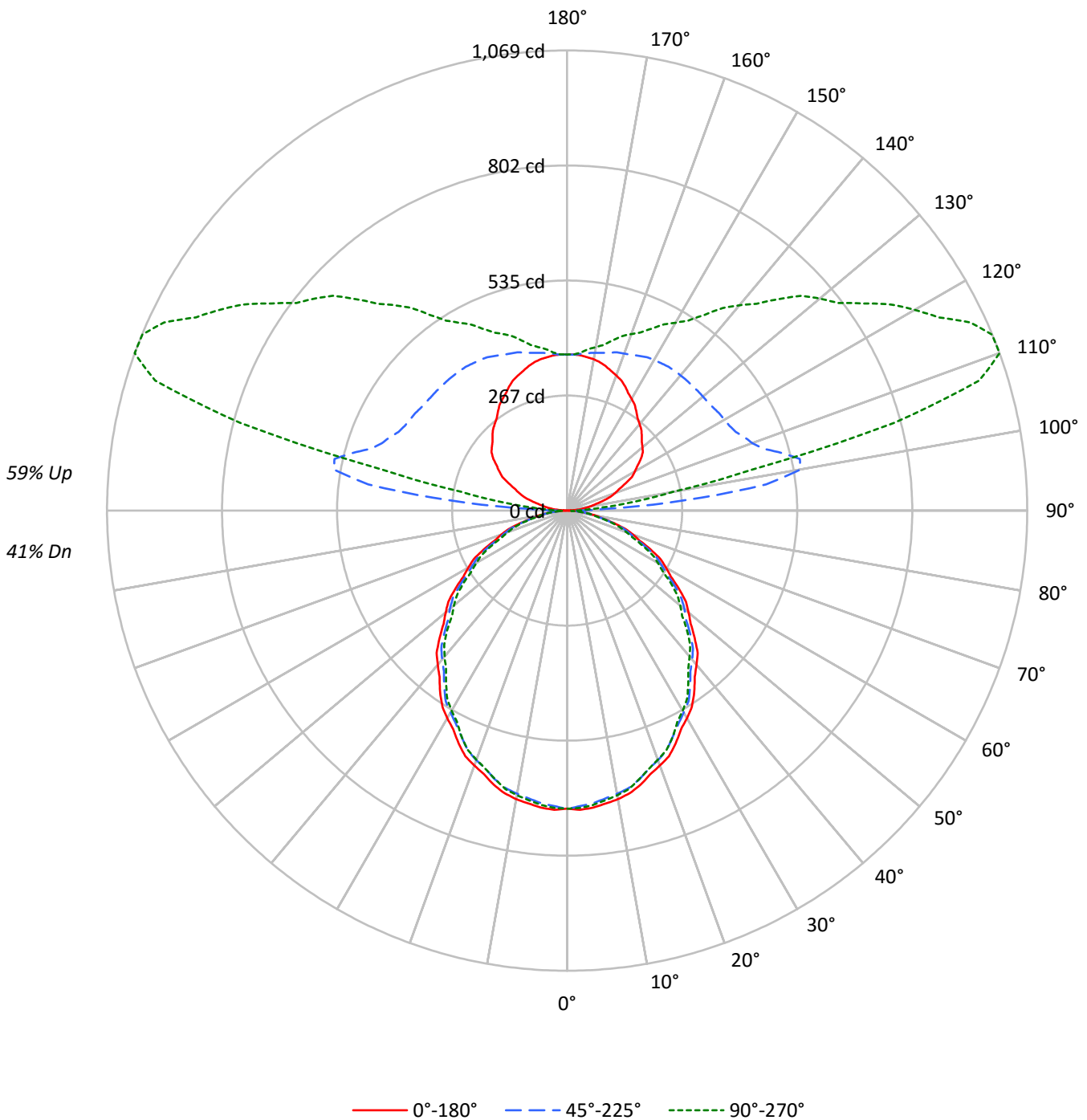
Lumens per Lamp: N/A  
Luminaire Lumens: 4287.6 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.1	1.5
10°-20°	183.3	4.3
20°-30°	269.4	6.3
30°-40°	312.9	7.3
40°-50°	312.5	7.3
50°-60°	272.6	6.4
60°-70°	201.5	4.7
70°-80°	114.1	2.7
80°-90°	34.0	0.8
90°-100°	144.9	3.4
100°-110°	491.8	11.5
110°-120°	522.5	12.2
120°-130°	430.1	10.0
130°-140°	345.4	8.1
140°-150°	261.0	6.1
150°-160°	183.4	4.3
160°-170°	108.0	2.5
170°-180°	35.1	0.8
0°-30°	517.7	12.1
0°-40°	830.6	19.4
0°-60°	1415.7	33.0
0°-90°	1765.3	41.2
90°-120°	1159.2	27.0
90°-150°	2195.7	51.2
90°-180°	2522.0	58.8
0°-180°	4287.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	1	9	24	23	23	3
95°	24	60	273	103	80	26
105°	85	128	516	923	786	90
115°	150	189	432	892	1034	149
125°	209	247	415	722	839	186
135°	245	293	410	607	695	190
145°	280	322	408	507	555	176
155°	318	344	397	449	466	147
165°	347	358	380	403	409	98
175°	362	362	365	370	369	34
180°	362	362	362	362	362	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.7	9.9	10.3	10.3	10.3	10.5	11.0	11.7	12.3	12.2	11.7
90°	0.7	2.8	5.6	7.0	8.4	10.4	13.9	18.8	23.0	23.7	23.0
92.5°	8.5	12.3	17.3	20.3	25.1	31.7	47.4	69.6	89.3	90.6	76.5
95°	24.4	27.2	34.2	40.4	51.5	68.3	100.4	161.0	241.9	273.2	239.1
97.5°	39.8	43.5	50.9	60.4	73.2	92.1	132.4	217.0	351.3	466.5	489.4
100°	53.7	55.7	62.1	73.2	87.1	106.6	143.6	228.6	379.2	550.6	651.0
102.5°	66.5	68.0	74.3	85.4	100.0	119.5	153.6	229.2	368.6	553.5	711.2
105°	85.1	87.8	92.7	103.2	118.5	138.0	170.8	232.8	347.9	516.5	702.0
107.5°	105.1	107.4	112.1	121.7	136.9	156.6	188.3	242.5	337.5	476.9	640.7
110°	118.5	121.3	125.5	134.6	149.2	169.4	200.0	250.2	335.3	458.0	602.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.7	133.6	138.3	146.8	160.9	181.6	211.2	258.6	335.8	445.7	575.5
115°	149.9	153.4	157.6	165.9	179.9	198.7	228.6	271.2	338.8	432.2	542.3
117.5°	169.7	172.5	176.6	184.0	197.4	217.0	244.7	284.5	343.8	425.6	521.4
120°	181.9	184.8	188.9	195.2	209.1	228.6	255.8	293.5	347.1	421.7	510.2
122.5°	193.7	195.9	200.0	206.9	220.8	240.9	266.4	301.3	351.1	419.5	500.8
125°	209.1	211.2	215.3	223.7	237.7	257.2	282.3	313.7	356.9	415.4	487.2
127.5°	221.4	224.2	230.1	239.2	252.6	272.7	297.1	325.2	362.9	413.0	474.7
130°	228.6	231.4	238.4	248.2	262.1	281.6	306.0	332.5	367.4	412.0	466.4
132.5°	235.3	238.7	246.2	256.5	271.0	290.5	313.8	339.7	371.8	411.4	459.7
135°	245.4	248.2	256.5	267.0	283.0	302.6	324.9	349.2	377.1	410.5	450.3
137.5°	254.9	258.2	266.5	277.7	293.6	311.7	333.8	356.5	381.8	410.5	443.7
140°	262.1	264.8	273.2	284.4	299.7	317.9	338.8	360.3	384.1	409.8	439.9
142.5°	269.3	271.6	279.4	290.5	305.3	322.4	342.7	363.7	385.8	409.8	436.0
145°	280.2	283.0	290.0	300.4	314.3	329.7	348.6	368.0	387.5	408.5	430.8
147.5°	291.9	294.0	300.7	310.3	321.9	335.6	353.3	370.4	388.2	406.0	425.5
150°	299.7	301.8	307.4	316.5	326.9	339.5	355.5	371.5	387.5	404.3	421.0
152.5°	307.6	308.5	314.1	322.0	331.9	343.4	357.8	372.1	386.5	401.5	417.1
155°	318.5	319.2	323.4	331.1	338.8	349.2	361.1	372.9	384.8	396.6	409.8
157.5°	327.8	328.4	331.8	338.5	344.6	353.4	363.5	372.9	381.6	391.6	403.1
160°	333.9	334.6	337.3	343.0	348.6	356.1	364.5	372.9	379.9	388.3	398.1
162.5°	340.0	339.6	342.4	346.9	351.9	357.8	365.2	372.4	378.3	385.5	393.5
165°	347.1	346.4	347.9	352.0	355.5	359.7	366.0	370.9	375.1	379.9	386.2
167.5°	353.0	352.1	353.4	356.1	358.6	361.2	365.8	369.9	371.8	375.1	378.9
170°	356.9	355.5	356.1	358.3	359.7	361.8	365.2	368.7	370.1	372.2	375.1
172.5°	359.1	358.3	357.8	360.0	360.8	362.3	364.7	367.0	367.9	368.9	371.1
175°	361.8	361.1	360.3	361.8	361.8	362.5	363.8	365.2	364.5	365.2	366.0
177.5°	363.0	361.9	361.3	362.5	362.5	362.5	363.0	364.2	363.0	362.5	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	11.2	10.6	10.5	10.4	10.3	10.2	10.1	9.9
90°	22.3	21.0	22.3	23.0	23.0	23.0	23.0	23.0
92.5°	60.8	52.2	46.3	42.0	41.4	39.1	39.8	38.6
95°	182.6	140.1	110.8	95.5	86.4	80.9	78.7	79.5
97.5°	426.1	348.7	273.2	222.9	189.6	172.5	162.3	156.4
100°	636.4	550.0	454.5	370.1	312.3	282.3	262.1	249.5
102.5°	774.2	754.7	684.7	595.4	532.5	481.3	456.1	439.2
105°	846.9	925.7	934.8	911.8	868.5	825.3	795.3	785.6
107.5°	794.5	913.1	985.6	1019.4	1024.8	1022.4	1016.5	1003.4
110°	749.3	874.1	963.3	1020.5	1050.4	1063.7	1070.0	1069.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	708.1	827.8	923.2	988.7	1030.4	1052.6	1064.4	1068.2
115°	657.3	764.6	856.0	927.7	977.2	1009.3	1027.4	1033.8
117.5°	619.1	713.4	796.2	863.5	914.0	947.9	967.0	972.2
120°	600.1	686.6	760.5	823.9	872.7	905.4	925.7	932.6
122.5°	585.1	664.3	734.2	791.6	835.4	867.5	885.6	891.4
125°	563.2	635.0	696.3	748.6	789.1	815.6	832.9	838.6
127.5°	541.6	606.5	664.4	712.7	748.0	772.8	787.8	792.3
130°	527.6	587.6	642.7	688.7	722.8	746.5	760.5	766.1
132.5°	514.2	569.8	620.4	663.6	697.2	720.9	733.7	738.7
135°	495.6	541.6	587.6	626.6	656.7	679.7	692.1	695.0
137.5°	480.7	519.2	555.7	589.7	617.1	636.9	647.8	652.0
140°	471.2	504.7	536.7	567.4	589.7	607.8	618.3	622.5
142.5°	463.4	491.9	519.4	545.1	566.3	582.7	592.1	592.9
145°	452.4	475.4	497.0	517.2	534.0	545.8	552.8	554.8
147.5°	443.9	462.0	478.8	493.7	507.5	516.9	521.7	522.9
150°	437.7	453.1	467.7	480.3	490.7	499.1	503.3	504.0
152.5°	431.6	445.9	458.3	469.1	477.3	484.6	487.7	487.8
155°	423.1	434.3	444.7	452.4	460.0	464.9	467.7	466.4
157.5°	413.2	422.6	431.3	437.3	442.7	446.8	448.1	448.1
160°	407.1	414.7	422.4	427.3	432.2	435.7	436.3	436.3
162.5°	400.9	407.5	414.0	417.9	422.7	425.1	425.8	425.2
165°	391.7	396.6	401.5	404.3	407.1	409.8	409.8	409.2
167.5°	383.0	386.7	390.0	392.6	393.9	395.4	395.2	394.4
170°	378.5	380.6	383.3	384.8	385.5	387.5	386.8	385.5
172.5°	373.4	375.1	377.3	378.1	378.8	379.8	379.1	378.3
175°	368.0	368.7	369.4	370.1	370.1	370.9	370.1	368.7
177.5°	364.2	364.2	364.7	364.7	364.7	364.7	364.2	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5

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