

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: P331877-930

Luminaire Tested: **S123DIP-S340D585U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331877-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S340D585U930-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3082.4 lumens  
Efficiency: N/A  
Efficacy: 120.4 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: Semi-Indirect

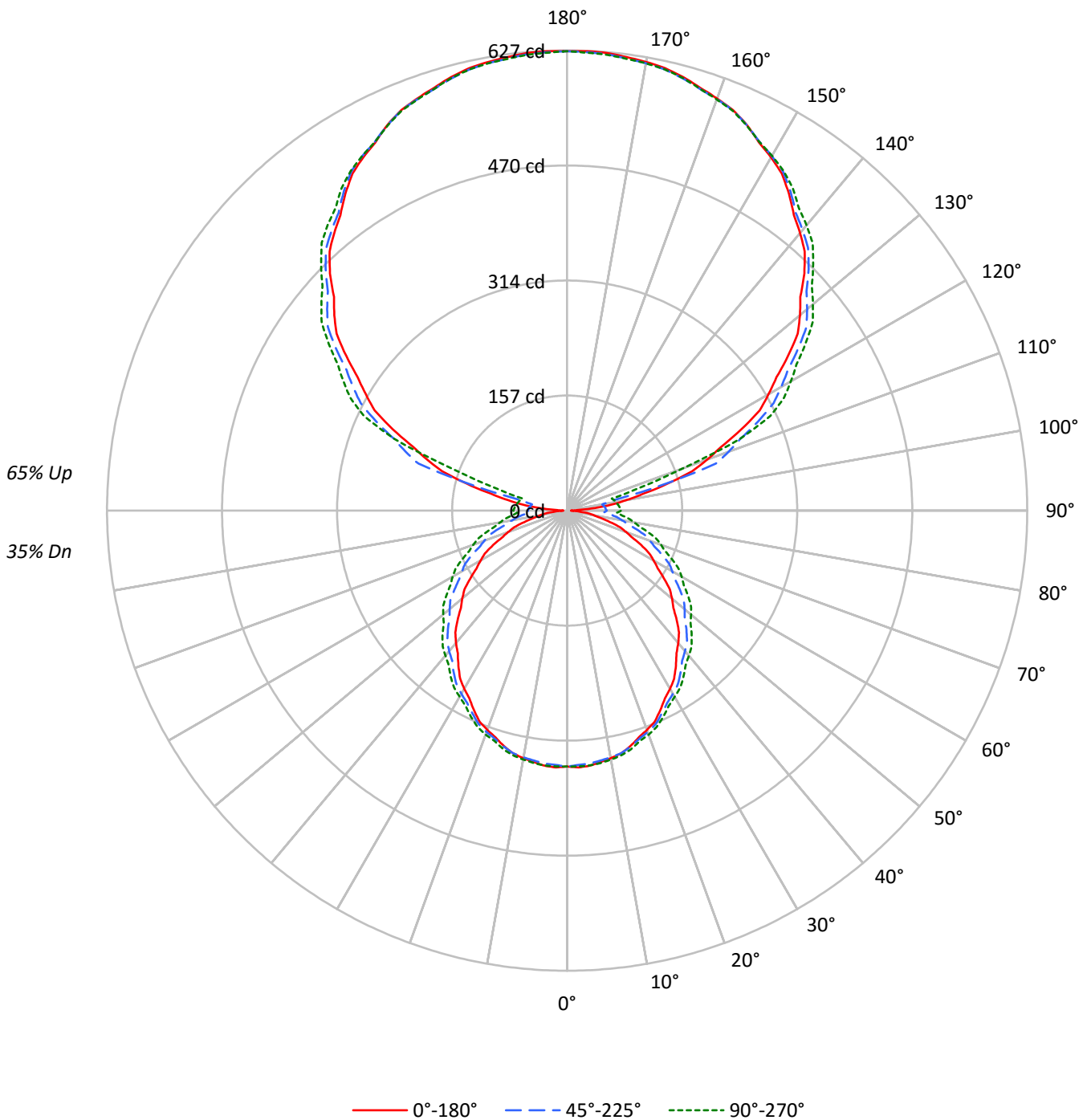
Input Watts (W): 25.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331877-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-D

**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	50	30	10	50	30	10	0		
RCR																										
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35					35			
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28					28			
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23					23			
3	77	68	60	54	69	61	55	50	49	45	41	38	35	32	28	25	24	19					19			
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16					16			
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14					14			
6	59	47	39	33	53	43	36	31	35	29	26	27	23	20	20	17	15	12					12			
7	55	43	35	29	49	39	32	27	31	26	22	25	21	18	18	15	13	11					11			
8	51	39	31	26	46	35	28	24	29	23	20	22	19	16	17	14	12	9					9			
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8					8			
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8					8			

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

	0°	45°	90°
0°	3753	3753	3753
5°	3765	3659	3661
10°	3732	3575	3556
15°	3684	3479	3443
20°	3615	3370	3318
25°	3530	3245	3186
30°	3444	3132	3053
35°	3345	3012	2946
40°	3252	2903	2833
45°	3149	2798	2741
50°	3047	2695	2641
55°	2936	2589	2550
60°	2826	2482	2458
65°	2714	2366	2347
70°	2542	2237	2234
75°	2331	2092	2120
80°	2084	1946	1988
85°	1855	1845	1910



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.1	1.1
10°-20°	94.2	3.1
20°-30°	141.0	4.6
30°-40°	168.3	5.5
40°-50°	176.1	5.7
50°-60°	165.3	5.4
60°-70°	138.0	4.5
70°-80°	98.8	3.2
80°-90°	60.6	2.0
90°-100°	59.7	1.9
100°-110°	135.6	4.4
110°-120°	278.6	9.0
120°-130°	342.1	11.1
130°-140°	359.1	11.7
140°-150°	332.4	10.8
150°-160°	267.4	8.7
160°-170°	172.6	5.6
170°-180°	59.5	1.9
0°-30°	268.3	8.7
0°-40°	436.6	14.2
0°-60°	778.0	25.2
0°-90°	1075.4	34.9
90°-120°	474.0	15.4
90°-150°	1507.6	48.9
90°-180°	2007.0	65.1
0°-180°	3082.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	348	346	349	349	33
15°	332	333	333	337	337	94
25°	300	304	305	310	310	138
35°	258	264	269	275	276	162
45°	211	220	230	237	240	163
55°	161	174	187	197	201	144
65°	111	126	143	154	158	110
75°	60	78	97	109	114	64
85°	19	38	58	70	74	20
90°	5	29	54	68	74	5
95°	32	30	52	66	71	38
105°	142	154	130	63	63	150
115°	262	270	287	300	306	258
125°	368	372	384	393	397	328
135°	457	460	465	473	474	352
145°	527	530	531	534	536	330
155°	580	579	579	581	579	267
165°	612	610	610	613	610	173
175°	626	624	624	627	624	60
180°	626	626	626	626	626	



TEST NUMBER: P331877-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	350.3	350.1	349.8	349.7	349.4	349.1	348.5	348.0	347.5	346.9	347.5
5°	349.1	348.9	348.8	348.6	348.5	348.1	347.6	347.1	346.6	346.1	346.7
7.5°	345.7	345.8	345.8	345.8	345.8	345.6	345.1	344.6	344.1	343.6	344.5
10°	342.7	342.8	343.0	343.2	343.3	343.2	342.8	342.3	341.9	341.5	342.3
12.5°	339.0	339.2	339.5	339.7	340.0	339.9	339.7	339.3	339.1	338.8	339.6
15°	332.4	332.6	332.9	333.1	333.4	333.5	333.4	333.3	333.2	333.1	334.0
17.5°	324.1	324.6	325.1	325.5	326.0	326.3	326.3	326.2	326.2	326.2	326.9
20°	318.0	318.5	318.9	319.5	320.0	320.3	320.5	320.7	320.8	321.0	321.8
22.5°	311.6	312.1	312.6	313.1	313.6	314.0	314.2	314.5	314.7	315.0	315.9
25°	300.1	300.9	301.8	302.6	303.5	304.0	304.3	304.5	304.8	305.1	306.1
27.5°	288.5	289.5	290.5	291.5	292.4	293.2	293.7	294.2	294.8	295.3	296.3
30°	280.4	281.4	282.6	283.6	284.8	285.6	286.3	287.0	287.6	288.4	289.3
32.5°	271.3	272.5	273.7	274.9	276.1	277.2	278.1	279.0	279.9	280.7	281.8
35°	258.3	259.7	261.1	262.4	263.7	265.0	266.0	267.2	268.2	269.4	270.6
37.5°	244.7	246.1	247.7	249.2	250.7	252.2	253.5	254.9	256.2	257.6	259.0
40°	235.5	237.1	238.6	240.1	241.6	243.2	244.9	246.6	248.3	250.0	251.4
42.5°	225.5	227.4	229.2	231.1	232.9	234.7	236.5	238.2	240.0	241.7	243.4
45°	211.2	213.3	215.2	217.3	219.3	221.4	223.5	225.6	227.7	229.8	231.5
47.5°	196.2	198.5	200.8	203.2	205.5	207.8	210.2	212.6	215.0	217.4	219.2
50°	186.5	188.9	191.3	193.6	196.0	198.4	201.1	203.7	206.4	209.0	210.9
52.5°	176.2	178.7	181.2	183.7	186.2	188.9	191.8	194.7	197.5	200.4	202.4
55°	161.1	163.9	166.6	169.4	172.2	175.1	178.1	181.2	184.3	187.3	189.6
57.5°	146.3	149.2	152.1	155.1	157.9	161.1	164.4	167.7	171.0	174.4	176.7
60°	136.0	139.0	142.1	145.1	148.1	151.4	154.9	158.3	161.8	165.3	167.6
62.5°	126.3	129.4	132.5	135.6	138.7	142.1	145.8	149.4	153.1	156.8	159.1
65°	111.3	114.6	117.9	121.2	124.5	128.0	131.7	135.4	139.1	142.8	145.4
67.5°	96.1	99.6	103.1	106.6	110.1	113.7	117.5	121.3	125.1	128.9	131.6
70°	85.4	89.1	92.7	96.4	100.0	103.9	107.9	111.9	116.0	120.0	122.8
72.5°	75.7	79.4	83.0	86.7	90.3	94.2	98.3	102.6	106.7	111.0	113.7
75°	60.4	64.4	68.3	72.3	76.3	80.4	84.6	88.8	93.0	97.3	100.0
77.5°	47.0	51.0	55.0	59.0	63.0	67.2	71.4	75.7	79.9	84.2	87.2
80°	37.6	41.7	45.9	50.1	54.1	58.5	62.8	67.2	71.6	76.0	78.8
82.5°	29.4	33.6	37.8	42.0	46.2	50.5	55.0	59.4	63.9	68.4	71.3
85°	18.6	22.8	27.1	31.3	35.5	39.9	44.4	48.8	53.2	57.7	60.6
87.5°	10.2	14.6	19.0	23.4	27.8	32.4	36.9	41.5	46.1	50.6	53.6
90°	5.4	10.6	15.7	21.0	26.1	31.5	37.2	42.8	48.4	54.1	57.4
92.5°	13.3	16.7	20.1	23.6	27.1	31.4	36.7	41.9	47.1	52.4	55.8
95°	32.5	31.6	30.7	29.7	28.8	30.9	36.2	41.5	46.7	52.0	55.4
97.5°	60.7	61.8	62.9	63.9	65.0	63.8	60.3	56.8	53.3	49.8	53.2
100°	82.0	86.7	91.6	96.3	101.1	97.3	85.1	72.9	60.7	48.4	51.7
102.5°	106.2	110.1	114.1	118.0	122.0	117.0	103.2	89.4	75.6	61.8	61.6
105°	141.6	144.8	148.0	151.1	154.3	153.0	147.3	141.7	136.0	130.4	114.4
107.5°	178.6	181.2	183.8	186.5	189.1	192.8	197.8	202.7	207.6	212.5	201.3
110°	203.2	205.5	207.8	210.2	212.5	216.0	220.5	225.0	229.5	234.1	232.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	227.0	228.9	231.0	232.9	235.0	238.1	242.5	246.9	251.3	255.7	257.8
115°	261.9	263.5	265.1	266.8	268.4	271.2	275.2	279.1	283.1	287.1	290.1
117.5°	295.9	297.3	298.6	300.0	301.4	303.8	307.1	310.5	313.8	317.2	319.9
120°	316.8	318.1	319.5	320.8	322.2	324.4	327.5	330.6	333.7	336.8	339.6
122.5°	338.3	339.3	340.3	341.4	342.3	344.3	347.4	350.4	353.4	356.5	359.0
125°	367.5	368.4	369.2	370.1	370.9	372.8	375.6	378.5	381.3	384.2	386.1
127.5°	396.2	397.0	397.7	398.4	399.2	400.8	403.3	405.9	408.4	410.9	412.9
130°	414.1	414.8	415.6	416.3	417.0	418.5	420.5	422.7	424.8	426.9	428.8
132.5°	430.9	431.7	432.5	433.3	434.1	435.4	437.1	438.7	440.4	442.1	444.0
135°	457.0	457.5	458.0	458.5	459.1	460.0	461.4	462.7	464.1	465.4	467.2
137.5°	479.2	479.9	480.6	481.4	482.1	482.8	483.6	484.3	485.0	485.8	487.6
140°	493.7	494.4	495.0	495.6	496.3	496.8	497.4	498.0	498.6	499.0	500.8
142.5°	507.5	508.1	508.7	509.2	509.7	510.2	510.5	510.9	511.3	511.6	513.1
145°	526.8	527.4	528.1	528.7	529.3	529.8	529.9	530.2	530.4	530.6	531.5
147.5°	544.5	545.0	545.5	545.9	546.4	546.7	547.0	547.1	547.4	547.6	548.0
150°	555.7	556.0	556.3	556.6	556.9	557.2	557.4	557.6	557.8	558.0	558.2
152.5°	565.7	565.9	566.0	566.1	566.3	566.5	566.6	566.7	566.8	567.0	567.3
155°	579.8	579.7	579.4	579.3	579.0	579.0	579.1	579.2	579.3	579.4	579.9
157.5°	590.8	590.8	590.8	590.8	590.8	590.7	590.6	590.5	590.4	590.3	590.9
160°	597.5	597.5	597.4	597.2	597.1	597.0	596.9	596.8	596.7	596.6	597.2
162.5°	603.9	603.6	603.3	603.1	602.8	602.6	602.5	602.4	602.3	602.2	602.9
165°	611.5	611.1	610.9	610.6	610.3	610.0	609.9	609.8	609.8	609.6	610.5
167.5°	617.4	617.0	616.6	616.2	615.8	615.6	615.6	615.6	615.6	615.6	616.4
170°	620.8	620.4	620.0	619.5	619.1	618.9	618.9	618.9	618.9	618.9	619.8
172.5°	623.1	622.6	622.0	621.5	621.0	620.9	620.9	621.0	621.1	621.2	622.0
175°	625.9	625.4	624.8	624.4	623.9	623.6	623.7	623.9	623.9	624.0	624.8
177.5°	626.6	626.2	625.8	625.4	625.0	624.8	624.9	625.0	625.1	625.2	625.8
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	348.0	348.5	349.1	349.3	349.3	349.2	349.1	349.0
5°	347.4	348.1	348.8	349.1	349.0	348.9	348.8	348.7
7.5°	345.4	346.2	347.0	347.4	347.3	347.2	347.1	347.0
10°	343.2	344.1	344.9	345.2	345.0	344.9	344.7	344.5
12.5°	340.3	341.1	341.9	342.2	342.0	341.9	341.7	341.5
15°	334.8	335.7	336.6	336.9	336.8	336.7	336.6	336.6
17.5°	327.7	328.5	329.2	329.5	329.4	329.3	329.2	329.1
20°	322.5	323.3	324.1	324.5	324.6	324.7	324.7	324.8
22.5°	316.8	317.8	318.8	319.3	319.2	319.1	319.1	319.0
25°	307.2	308.3	309.4	310.0	310.0	310.0	310.0	310.0
27.5°	297.2	298.2	299.1	299.6	299.7	299.8	299.8	299.9
30°	290.3	291.4	292.4	292.9	292.9	292.9	292.9	292.9
32.5°	282.9	284.0	285.0	285.7	285.9	286.1	286.3	286.5
35°	271.9	273.1	274.4	275.2	275.6	275.9	276.2	276.5
37.5°	260.4	261.9	263.3	264.2	264.4	264.7	265.0	265.2
40°	252.8	254.3	255.7	256.6	256.9	257.3	257.6	258.0
42.5°	244.9	246.5	248.0	249.1	249.6	250.0	250.5	250.9
45°	233.0	234.6	236.3	237.4	238.1	238.7	239.5	240.1
47.5°	221.0	222.9	224.7	225.8	226.3	226.9	227.4	228.0
50°	212.8	214.7	216.7	218.0	218.6	219.2	219.7	220.4
52.5°	204.5	206.4	208.5	209.9	210.6	211.3	212.0	212.7
55°	191.8	194.1	196.4	197.9	198.5	199.3	199.9	200.6
57.5°	179.0	181.2	183.5	185.1	185.9	186.7	187.5	188.3
60°	170.0	172.4	174.7	176.3	177.2	178.2	179.1	180.1
62.5°	161.4	163.8	166.2	167.8	168.7	169.5	170.4	171.3
65°	147.9	150.4	153.0	154.7	155.5	156.4	157.2	158.0
67.5°	134.4	137.1	139.9	141.7	142.4	143.1	143.8	144.5
70°	125.5	128.2	130.9	132.6	133.5	134.3	135.2	136.0
72.5°	116.4	119.2	122.0	123.8	124.7	125.5	126.4	127.2
75°	102.8	105.6	108.4	110.3	111.3	112.3	113.3	114.4
77.5°	90.1	93.0	96.0	97.8	98.6	99.4	100.1	100.9
80°	81.7	84.6	87.5	89.3	90.2	91.0	91.9	92.7
82.5°	74.1	77.0	79.9	81.7	82.6	83.4	84.2	85.1
85°	63.5	66.4	69.2	71.1	71.9	72.8	73.6	74.4
87.5°	56.5	59.5	62.5	64.3	65.2	66.1	67.0	67.9
90°	60.7	63.9	67.3	69.4	70.4	71.5	72.6	73.6
92.5°	59.4	62.8	66.3	68.4	69.3	70.3	71.2	72.1
95°	58.7	62.0	65.4	67.5	68.3	69.1	70.0	70.8
97.5°	56.5	59.8	63.2	65.4	66.3	67.3	68.2	69.1
100°	55.0	58.2	61.5	63.6	64.6	65.5	66.4	67.4
102.5°	61.5	61.3	61.1	61.6	62.5	63.6	64.6	65.6
105°	98.5	82.5	66.6	59.1	60.1	61.1	62.0	63.0
107.5°	190.2	179.0	167.9	155.8	142.8	129.7	116.7	103.6
110°	231.6	230.4	229.2	221.5	207.4	193.3	179.2	165.1





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CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.0	262.2	264.4	264.3	262.0	259.6	257.1	254.8
115°	293.2	296.2	299.3	301.3	302.5	303.5	304.6	305.7
117.5°	322.8	325.6	328.5	330.3	331.0	331.7	332.5	333.2
120°	342.3	345.1	347.9	349.6	350.2	350.7	351.3	352.0
122.5°	361.4	363.9	366.3	367.9	368.5	369.2	369.9	370.6
125°	388.2	390.1	392.1	393.5	394.3	395.1	395.8	396.6
127.5°	414.9	416.9	418.9	420.1	420.4	420.9	421.2	421.6
130°	430.9	432.9	435.0	436.1	436.4	436.7	437.0	437.3
132.5°	446.0	447.9	449.9	451.0	451.3	451.6	451.8	452.2
135°	469.0	470.8	472.7	473.7	473.8	473.9	474.0	474.1
137.5°	489.4	491.3	493.1	494.2	494.3	494.6	494.8	495.0
140°	502.5	504.1	505.8	506.7	507.0	507.2	507.4	507.6
142.5°	514.5	516.0	517.5	518.3	518.4	518.5	518.7	518.8
145°	532.3	533.2	534.1	534.8	535.1	535.4	535.7	536.1
147.5°	548.5	548.9	549.3	549.3	549.2	549.0	548.9	548.7
150°	558.4	558.6	558.8	558.9	558.7	558.6	558.5	558.3
152.5°	567.7	568.0	568.4	568.4	567.9	567.5	567.0	566.6
155°	580.4	581.0	581.5	581.4	580.8	580.2	579.6	578.9
157.5°	591.5	592.2	592.8	592.6	591.8	591.1	590.3	589.5
160°	597.9	598.4	599.1	599.0	598.3	597.6	596.9	596.1
162.5°	603.6	604.3	605.0	605.0	604.4	603.7	603.1	602.5
165°	611.3	612.1	612.9	613.0	612.3	611.6	610.8	610.1
167.5°	617.3	618.1	618.9	618.9	618.1	617.3	616.4	615.6
170°	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9
172.5°	622.8	623.6	624.4	624.4	623.5	622.6	621.7	620.8
175°	625.5	626.2	627.0	626.9	626.1	625.3	624.4	623.5
177.5°	626.5	627.1	627.8	627.7	626.9	626.1	625.3	624.4
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9

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