

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: P331877-935

Luminaire Tested: **S123DIP-S340D585U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331877-935
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-S340D585U935-4F0-1E-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: 3255.2 lumens
Efficiency: N/A
Efficacy: 127.2 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

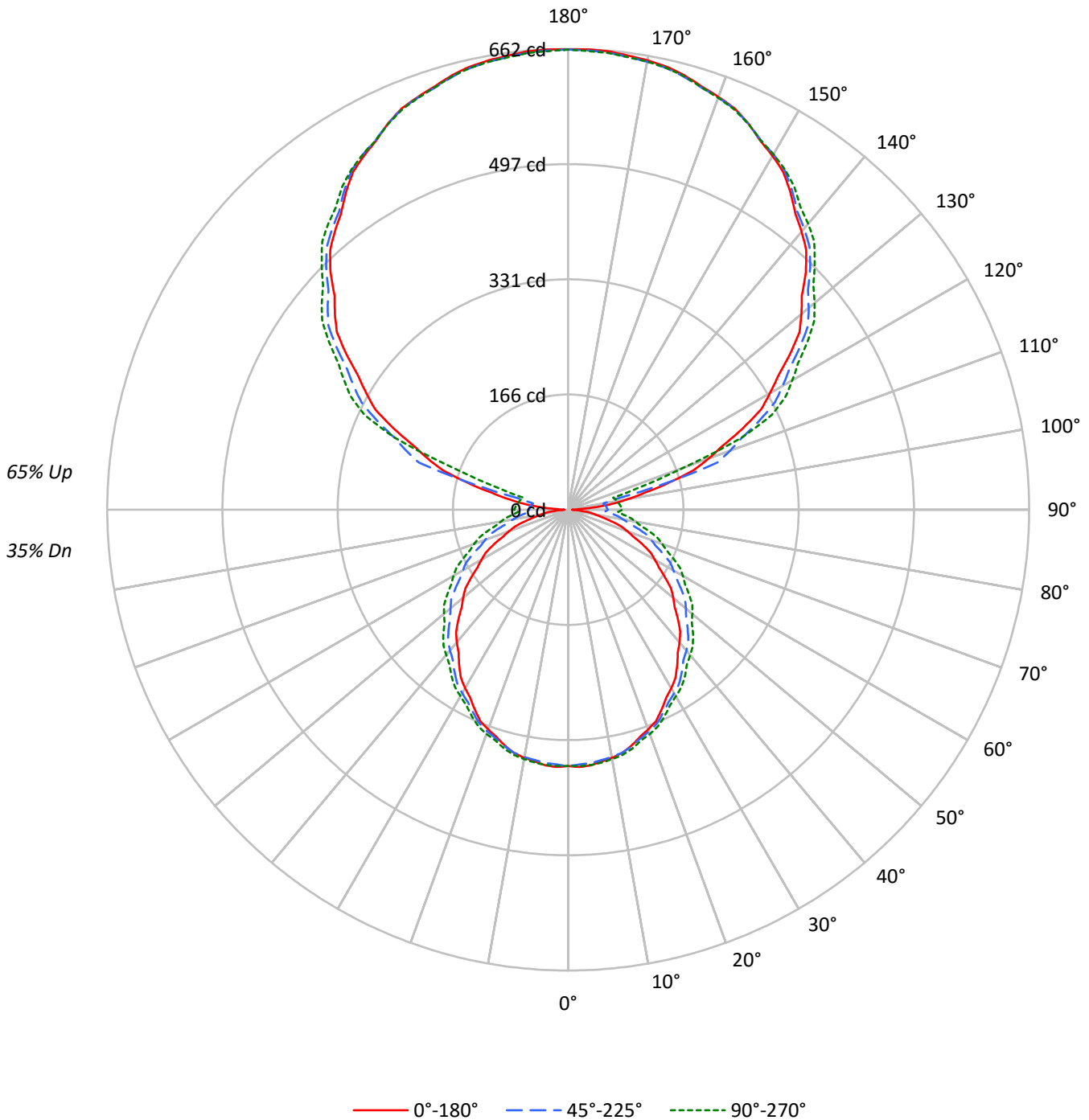
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331877-935

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-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	0
RCR																		
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	45	41	38	35	32	28	25	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	26	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	25	21	18	18	15	13	11
8	51	39	31	26	46	35	28	24	29	23	20	22	19	16	17	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.1
10°-20°	99.5	3.1
20°-30°	148.9	4.6
30°-40°	177.8	5.5
40°-50°	186.0	5.7
50°-60°	174.5	5.4
60°-70°	145.8	4.5
70°-80°	104.3	3.2
80°-90°	64.1	2.0
90°-100°	63.1	1.9
100°-110°	143.2	4.4
110°-120°	294.3	9.0
120°-130°	361.3	11.1
130°-140°	379.2	11.6
140°-150°	351.1	10.8
150°-160°	282.4	8.7
160°-170°	182.2	5.6
170°-180°	62.8	1.9
0°-30°	283.3	8.7
0°-40°	461.0	14.2
0°-60°	821.6	25.2
0°-90°	1135.7	34.9
90°-120°	500.5	15.4
90°-150°	1592.1	48.9
90°-180°	2119.0	65.1
0°-180°	3255.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	30	57	72	78	5
95°	34	32	55	70	75	40
105°	150	162	138	66	67	158
115°	277	285	303	317	323	273
125°	388	393	406	415	419	347
135°	483	485	492	500	501	371
145°	556	559	560	564	566	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



TEST NUMBER: P331877-935

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.4	20.1	24.7	29.4	34.2	39.0	43.8	48.6	53.5	56.6
90°	5.7	11.2	16.6	22.1	27.6	33.2	39.3	45.2	51.1	57.1	60.6
92.5°	14.0	17.7	21.3	25.0	28.6	33.1	38.7	44.3	49.8	55.4	59.0
95°	34.4	33.4	32.4	31.3	30.4	32.6	38.2	43.8	49.3	54.9	58.5
97.5°	64.1	65.3	66.4	67.5	68.6	67.4	63.7	60.0	56.3	52.6	56.1
100°	86.6	91.6	96.7	101.7	106.8	102.8	89.9	77.0	64.1	51.1	54.6
102.5°	112.2	116.3	120.5	124.6	128.8	123.6	109.0	94.5	79.8	65.3	65.1
105°	149.6	152.9	156.3	159.5	162.9	161.6	155.6	149.6	143.6	137.7	120.8
107.5°	188.6	191.3	194.1	196.9	199.7	203.6	208.9	214.0	219.2	224.4	212.6
110°	214.6	217.1	219.5	222.0	224.5	228.1	232.8	237.6	242.4	247.2	245.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	239.7	241.8	243.9	246.0	248.1	251.5	256.1	260.7	265.4	270.0	272.2
115°	276.6	278.3	280.0	281.7	283.4	286.4	290.6	294.7	298.9	303.2	306.3
117.5°	312.5	313.9	315.4	316.8	318.3	320.8	324.3	327.9	331.4	334.9	337.9
120°	334.6	336.0	337.4	338.8	340.3	342.6	345.9	349.1	352.4	355.7	358.6
122.5°	357.3	358.3	359.4	360.5	361.5	363.6	366.9	370.1	373.2	376.5	379.1
125°	388.1	389.1	389.9	390.8	391.7	393.6	396.7	399.7	402.7	405.7	407.8
127.5°	418.4	419.2	420.0	420.8	421.5	423.3	425.9	428.6	431.3	433.9	436.0
130°	437.3	438.1	438.9	439.6	440.4	442.0	444.1	446.3	448.6	450.8	452.9
132.5°	455.0	455.9	456.8	457.6	458.5	459.8	461.6	463.3	465.1	466.8	468.9
135°	482.6	483.1	483.7	484.2	484.8	485.8	487.2	488.6	490.1	491.5	493.4
137.5°	506.0	506.8	507.6	508.3	509.1	509.9	510.7	511.4	512.2	513.0	515.0
140°	521.4	522.1	522.7	523.4	524.1	524.7	525.3	525.9	526.5	527.0	528.8
142.5°	536.0	536.6	537.2	537.7	538.3	538.8	539.2	539.6	539.9	540.3	541.8
145°	556.3	557.0	557.7	558.4	559.0	559.5	559.6	559.9	560.1	560.3	561.3
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	578.8
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	59.7	62.9	66.0	67.9	68.9	69.8	70.8	71.7
90°	64.1	67.5	71.0	73.3	74.4	75.5	76.6	77.7
92.5°	62.7	66.3	70.0	72.2	73.2	74.2	75.2	76.1
95°	62.0	65.5	69.1	71.3	72.2	73.0	74.0	74.8
97.5°	59.7	63.2	66.7	69.1	70.0	71.0	72.1	73.0
100°	58.0	61.5	64.9	67.2	68.2	69.1	70.2	71.2
102.5°	64.9	64.7	64.5	65.0	66.0	67.2	68.2	69.3
105°	104.0	87.1	70.3	62.4	63.5	64.5	65.5	66.6
107.5°	200.9	189.1	177.3	164.5	150.8	137.0	123.2	109.4
110°	244.6	243.3	242.0	233.9	219.0	204.1	189.2	174.4



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CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.6	276.9	279.2	279.1	276.6	274.1	271.6	269.1
115°	309.6	312.8	316.1	318.2	319.4	320.6	321.7	322.9
117.5°	340.9	343.9	346.9	348.8	349.6	350.3	351.1	351.9
120°	361.5	364.5	367.4	369.2	369.8	370.4	371.0	371.7
122.5°	381.7	384.3	386.8	388.5	389.2	389.9	390.6	391.3
125°	409.9	412.0	414.1	415.5	416.4	417.2	418.0	418.9
127.5°	438.2	440.3	442.4	443.7	444.0	444.4	444.8	445.2
130°	455.0	457.2	459.3	460.5	460.9	461.2	461.5	461.8
132.5°	471.0	473.0	475.1	476.3	476.6	476.9	477.2	477.5
135°	495.3	497.2	499.2	500.2	500.3	500.5	500.6	500.7
137.5°	516.9	518.8	520.7	521.9	522.0	522.3	522.5	522.7
140°	530.6	532.4	534.2	535.1	535.4	535.6	535.8	536.1
142.5°	543.4	544.9	546.5	547.3	547.4	547.6	547.8	547.9
145°	562.1	563.1	564.0	564.7	565.1	565.4	565.8	566.1
147.5°	579.2	579.6	580.1	580.1	580.0	579.8	579.6	579.5
150°	589.7	590.0	590.1	590.2	590.0	589.9	589.8	589.6
152.5°	599.5	599.9	600.3	600.3	599.8	599.3	598.8	598.4
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)