

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: P331887-935

Luminaire Tested: **S123DIP-S340D805U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331887-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3614.4 lumens
Efficiency: N/A
Efficacy: 115.8 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

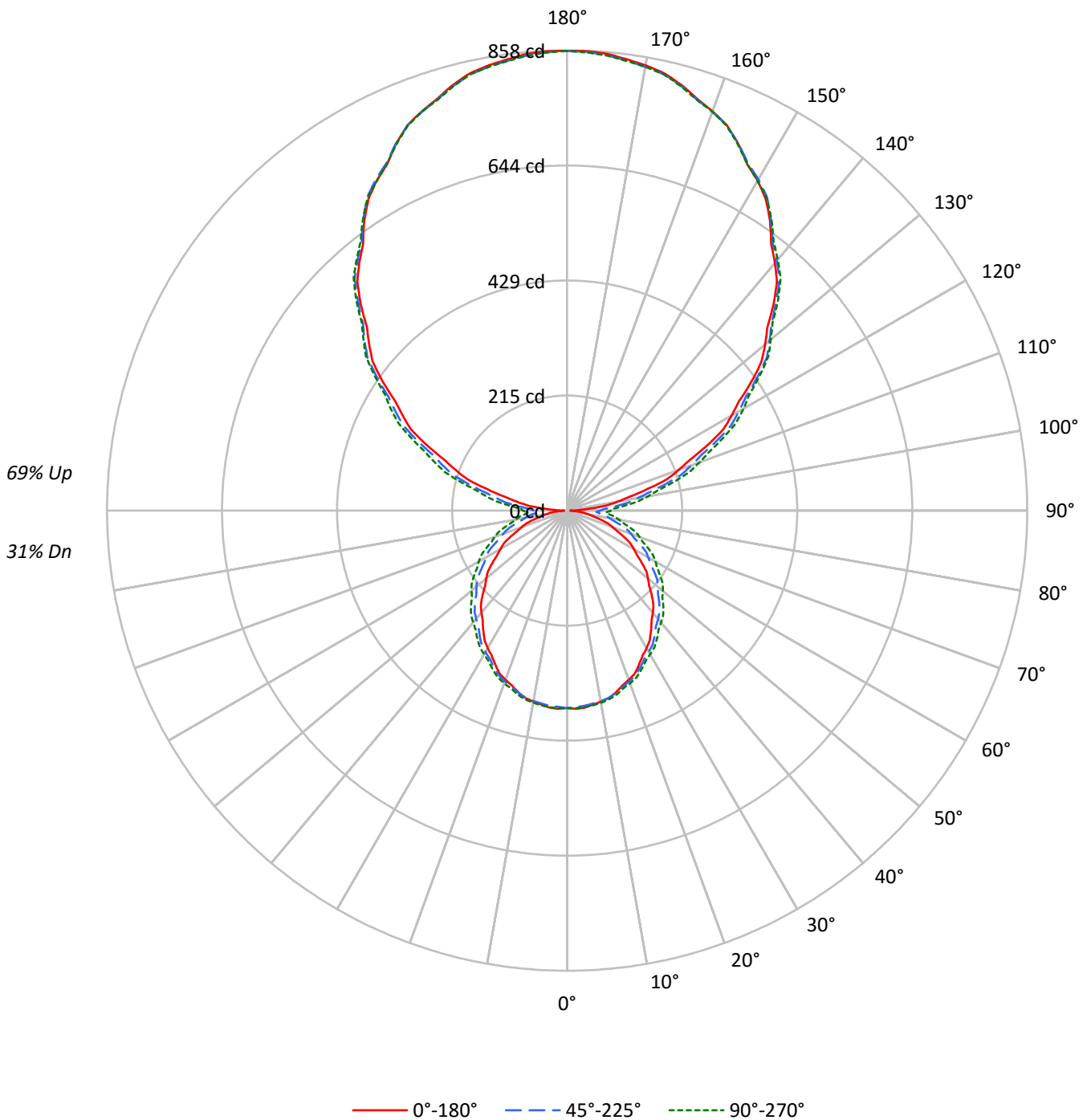
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	61	58	48	46	45	33	32	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	41	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	25	22	23	20	17	17	14	12	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	18	15	18	15	12	13	11	9	7

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



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.0
10°-20°	99.5	2.8
20°-30°	148.9	4.1
30°-40°	177.8	4.9
40°-50°	186.0	5.1
50°-60°	174.5	4.8
60°-70°	145.8	4.0
70°-80°	104.3	2.9
80°-90°	64.7	1.8
90°-100°	94.9	2.6
100°-110°	195.8	5.4
110°-120°	303.3	8.4
120°-130°	384.8	10.6
130°-140°	425.1	11.8
140°-150°	414.1	11.5
150°-160°	347.7	9.6
160°-170°	231.4	6.4
170°-180°	81.0	2.2
0°-30°	283.3	7.8
0°-40°	461.0	12.8
0°-60°	821.6	22.7
0°-90°	1136.4	31.4
90°-120°	594.0	16.4
90°-150°	1817.9	50.3
90°-180°	2478.0	68.6
0°-180°	3614.4	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	32	62	77	83	6
95°	44	65	90	104	109	48
105°	155	166	189	200	205	165
115°	288	295	308	318	321	285
125°	420	422	432	438	438	374
135°	544	548	551	556	557	419
145°	659	660	662	665	664	412
155°	755	755	755	758	753	347
165°	822	820	820	824	819	232
175°	855	852	852	856	852	81
180°	857	857	857	857	857	



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

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	15.6	20.3	25.1	29.8	34.6	39.5	44.4	49.4	54.3	57.5
90°	5.9	11.8	17.7	23.5	29.4	35.6	42.0	48.5	55.0	61.5	65.1
92.5°	21.2	26.2	31.1	36.1	41.0	46.3	51.8	57.4	63.0	68.6	72.1
95°	44.2	48.6	53.2	57.7	62.3	67.2	72.8	78.4	83.9	89.5	92.9
97.5°	74.5	78.4	82.3	86.2	90.1	94.6	99.7	104.7	109.8	114.8	118.1
100°	95.1	98.9	102.6	106.4	110.1	114.4	119.3	124.2	129.0	133.9	136.9
102.5°	119.1	122.2	125.3	128.4	131.5	135.5	140.6	145.6	150.6	155.7	158.6
105°	154.6	157.1	159.5	162.0	164.5	168.2	173.4	178.6	183.7	189.0	191.5
107.5°	195.6	197.7	199.7	201.6	203.6	206.7	210.9	215.1	219.3	223.4	226.3
110°	221.2	223.1	225.0	226.9	228.8	231.7	235.6	239.4	243.3	247.1	250.0



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	248.1	249.6	251.2	252.6	254.1	256.6	260.1	263.6	267.1	270.5	273.5
115°	288.1	289.6	291.1	292.7	294.2	296.4	299.3	302.2	305.1	308.1	310.3
117.5°	328.6	329.7	330.6	331.6	332.5	334.3	336.9	339.6	342.2	344.8	346.9
120°	353.7	355.0	356.4	357.7	359.0	360.8	363.0	365.2	367.4	369.6	371.5
122.5°	380.0	380.9	381.9	382.7	383.7	385.3	387.7	390.1	392.5	394.9	396.5
125°	419.9	420.3	420.8	421.3	421.7	423.1	425.3	427.7	429.9	432.2	433.5
127.5°	457.1	458.0	458.8	459.7	460.5	461.9	463.7	465.5	467.4	469.2	470.0
130°	481.8	482.9	484.1	485.2	486.3	487.5	488.8	490.2	491.5	492.8	494.0
132.5°	506.3	507.5	508.7	509.8	511.0	512.1	513.2	514.4	515.5	516.5	517.5
135°	544.1	544.8	545.7	546.5	547.3	548.1	549.0	549.7	550.6	551.4	552.4
137.5°	578.9	579.6	580.3	581.0	581.7	582.5	583.4	584.4	585.3	586.3	587.0
140°	602.9	603.6	604.4	605.1	605.9	606.5	606.9	607.3	607.7	608.1	609.3
142.5°	625.0	625.6	626.3	627.0	627.7	628.2	628.5	628.8	629.1	629.5	630.5
145°	659.4	659.6	659.9	660.0	660.3	660.6	661.1	661.5	661.9	662.4	663.0
147.5°	689.2	689.7	690.3	690.8	691.4	691.8	692.2	692.7	693.1	693.5	693.7
150°	710.2	710.5	710.8	711.1	711.4	711.7	712.0	712.3	712.6	712.9	712.9
152.5°	727.5	727.8	728.2	728.7	729.1	729.4	729.6	729.8	730.0	730.1	730.4
155°	754.6	754.6	754.6	754.6	754.6	754.7	754.8	755.0	755.2	755.3	755.9
157.5°	777.7	777.6	777.4	777.2	777.1	777.1	777.1	777.3	777.4	777.5	778.2
160°	792.3	792.0	791.7	791.4	791.1	791.0	791.0	791.0	791.0	791.0	791.7
162.5°	805.2	804.9	804.4	804.0	803.6	803.4	803.6	803.7	803.7	803.9	804.6
165°	821.9	821.5	821.0	820.6	820.1	819.9	819.9	819.9	819.9	819.9	820.8
167.5°	835.3	834.7	834.1	833.4	832.8	832.7	832.8	832.8	833.0	833.1	834.1
170°	842.8	842.2	841.6	841.0	840.4	840.1	840.1	840.1	840.1	840.1	841.2
172.5°	848.7	848.2	847.6	847.0	846.4	846.0	846.0	846.0	846.0	846.0	847.0
175°	854.9	854.3	853.8	853.2	852.6	852.2	852.2	852.2	852.2	852.2	853.2
177.5°	857.5	857.0	856.5	856.0	855.6	855.3	855.3	855.3	855.3	855.3	856.0
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

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°	60.6	63.8	67.0	69.0	69.9	70.9	71.8	72.8
90°	68.7	72.4	76.0	78.4	79.6	80.8	82.0	83.2
92.5°	75.5	79.0	82.4	84.4	85.1	85.7	86.4	87.0
95°	96.3	99.6	103.0	105.1	106.0	106.9	107.8	108.7
97.5°	121.5	124.8	128.2	130.3	131.0	131.9	132.8	133.5
100°	139.9	142.9	146.0	148.1	149.3	150.5	151.7	152.8
102.5°	161.5	164.5	167.5	169.4	170.2	171.1	171.9	172.7
105°	194.0	196.5	199.0	200.7	201.8	202.9	204.1	205.2
107.5°	229.2	232.0	234.9	236.7	237.3	237.9	238.5	239.1
110°	253.0	255.9	258.8	260.5	260.9	261.3	261.7	262.2



TEST NUMBER: P331887-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	276.5	279.4	282.4	284.2	285.0	285.7	286.4	287.1
115°	312.6	314.9	317.2	318.7	319.2	319.8	320.3	320.9
117.5°	349.0	351.1	353.2	354.4	354.6	354.9	355.2	355.4
120°	373.4	375.3	377.2	378.3	378.7	378.9	379.3	379.6
122.5°	398.1	399.7	401.3	402.2	402.3	402.6	402.8	402.9
125°	434.8	436.0	437.3	438.0	438.0	438.0	438.1	438.1
127.5°	471.0	471.9	472.9	473.3	473.2	473.1	473.0	472.9
130°	495.0	496.1	497.2	497.5	497.0	496.5	495.9	495.4
132.5°	518.3	519.3	520.1	520.5	520.3	520.1	519.9	519.7
135°	553.5	554.5	555.4	556.0	556.2	556.3	556.5	556.6
137.5°	587.8	588.6	589.4	589.7	589.6	589.4	589.4	589.2
140°	610.5	611.7	612.9	613.2	612.6	612.0	611.4	610.8
142.5°	631.5	632.6	633.6	634.0	633.6	633.3	632.9	632.6
145°	663.5	664.1	664.7	664.8	664.6	664.3	664.1	663.8
147.5°	694.0	694.1	694.3	694.1	693.6	693.0	692.4	691.9
150°	712.9	712.9	712.9	712.6	711.8	711.1	710.3	709.6
152.5°	730.6	730.8	731.1	730.8	730.0	729.4	728.6	727.9
155°	756.5	757.1	757.7	757.4	756.4	755.4	754.3	753.3
157.5°	778.8	779.4	780.0	779.9	779.1	778.3	777.4	776.5
160°	792.5	793.2	793.9	794.0	793.4	792.8	792.2	791.6
162.5°	805.4	806.2	806.9	806.8	805.8	804.9	803.9	803.0
165°	821.7	822.6	823.5	823.5	822.4	821.3	820.3	819.2
167.5°	835.0	835.9	836.8	836.8	835.9	835.0	834.1	833.1
170°	842.2	843.3	844.3	844.3	843.3	842.2	841.2	840.1
172.5°	847.9	848.9	849.7	849.7	848.6	847.6	846.5	845.5
175°	854.0	854.9	855.8	855.7	854.7	853.7	852.6	851.5
177.5°	856.8	857.5	858.2	858.2	857.3	856.4	855.7	854.8
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0

(END OF REPORT)