

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: P331877-840

Luminaire Tested: **S123DIP-S340D585U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331877-840
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-S340D585U840-4F0-1E-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: 3818.0 lumens
Efficiency: N/A
Efficacy: 149.1 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

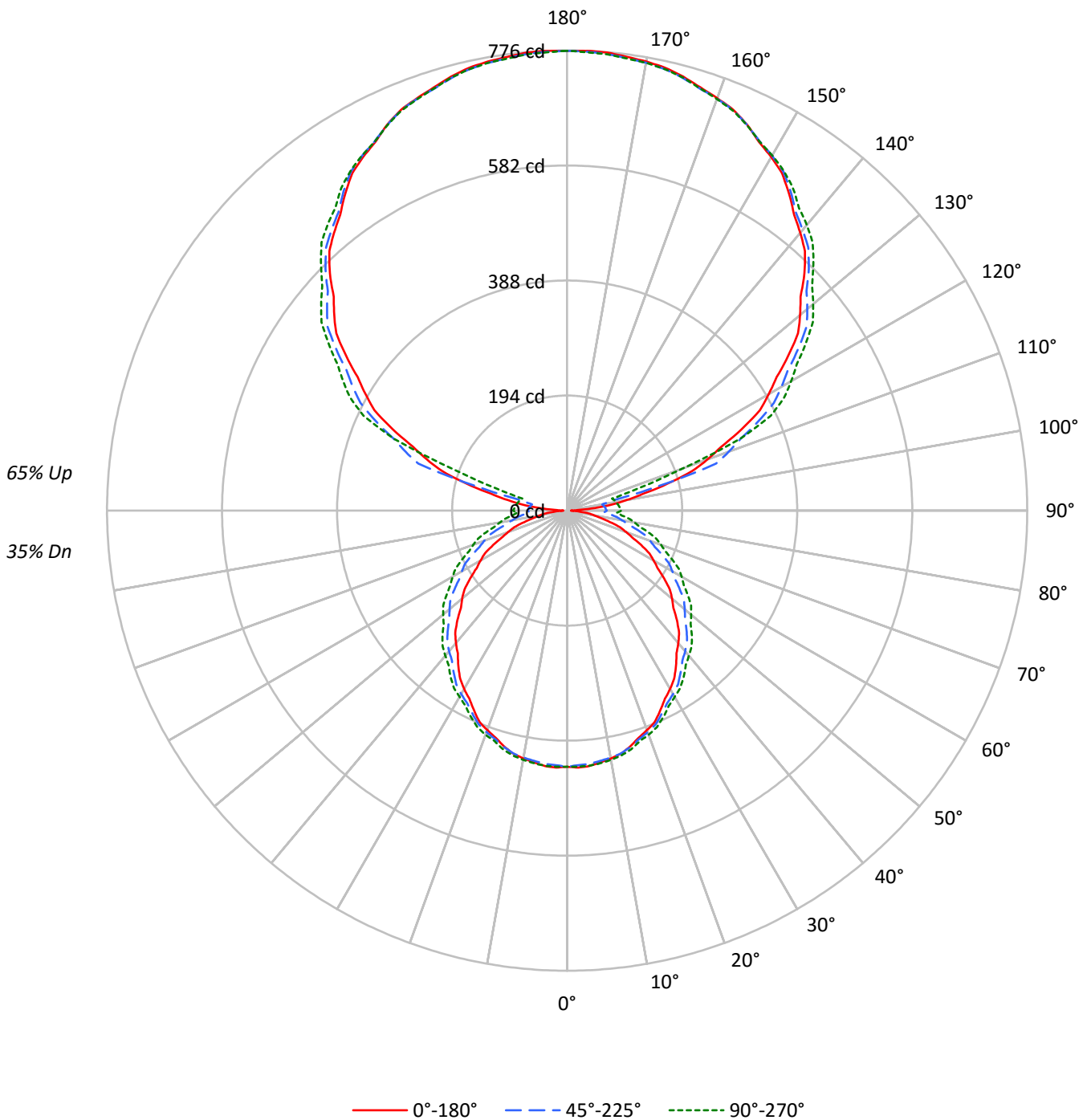
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-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°	4649	4649	4649
5°	4664	4533	4534
10°	4622	4428	4406
15°	4562	4309	4265
20°	4477	4174	4110
25°	4372	4019	3947
30°	4265	3879	3780
35°	4143	3731	3649
40°	4030	3595	3508
45°	3902	3466	3395
50°	3776	3338	3272
55°	3636	3207	3158
60°	3499	3074	3045
65°	3360	2931	2907
70°	3149	2772	2766
75°	2886	2590	2626
80°	2583	2410	2462
85°	2294	2286	2367



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	1.1
10°-20°	116.7	3.1
20°-30°	174.6	4.6
30°-40°	208.5	5.5
40°-50°	218.1	5.7
50°-60°	204.7	5.4
60°-70°	171.0	4.5
70°-80°	122.3	3.2
80°-90°	75.1	2.0
90°-100°	74.0	1.9
100°-110°	168.0	4.4
110°-120°	345.1	9.0
120°-130°	423.7	11.1
130°-140°	444.8	11.6
140°-150°	411.8	10.8
150°-160°	331.2	8.7
160°-170°	213.7	5.6
170°-180°	73.7	1.9
0°-30°	332.3	8.7
0°-40°	540.8	14.2
0°-60°	963.6	25.2
0°-90°	1332.0	34.9
90°-120°	587.1	15.4
90°-150°	1867.4	48.9
90°-180°	2486.0	65.1
0°-180°	3818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	431	429	432	432	41
15°	412	413	413	417	417	116
25°	372	376	378	384	384	171
35°	320	327	334	340	342	200
45°	262	273	285	293	297	202
55°	200	215	232	244	248	179
65°	138	156	177	191	196	136
75°	75	97	120	135	142	80
85°	23	47	72	87	92	24
90°	7	36	67	85	91	6
95°	40	37	64	82	88	47
105°	175	190	162	78	78	186
115°	324	334	356	372	379	320
125°	455	461	476	486	491	407
135°	566	569	576	586	587	436
145°	652	656	657	662	664	408
155°	718	717	718	720	717	331
165°	757	756	755	759	756	214
175°	775	773	773	777	772	74
180°	775	775	775	775	775	



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	433.8	433.6	433.3	433.1	432.8	432.4	431.7	431.0	430.4	429.7	430.4
5°	432.4	432.2	432.0	431.8	431.6	431.2	430.5	429.9	429.3	428.7	429.5
7.5°	428.2	428.3	428.3	428.3	428.4	428.1	427.5	426.9	426.3	425.7	426.7
10°	424.4	424.6	424.9	425.1	425.3	425.2	424.5	424.0	423.5	423.0	424.0
12.5°	419.9	420.2	420.5	420.8	421.1	421.0	420.7	420.3	420.0	419.6	420.6
15°	411.7	412.0	412.3	412.6	412.9	413.1	412.9	412.8	412.7	412.6	413.7
17.5°	401.4	402.0	402.6	403.2	403.8	404.1	404.1	404.0	404.0	404.0	405.0
20°	393.8	394.5	395.1	395.8	396.4	396.8	397.0	397.2	397.4	397.6	398.6
22.5°	386.0	386.6	387.2	387.8	388.5	388.9	389.2	389.5	389.8	390.1	391.3
25°	371.7	372.7	373.9	374.9	375.9	376.6	376.9	377.2	377.5	377.9	379.2
27.5°	357.4	358.6	359.8	361.0	362.2	363.1	363.8	364.5	365.2	365.8	367.0
30°	347.3	348.6	350.0	351.3	352.7	353.8	354.7	355.5	356.3	357.2	358.4
32.5°	336.0	337.5	339.0	340.5	342.0	343.4	344.5	345.6	346.7	347.7	349.1
35°	319.9	321.6	323.4	325.0	326.7	328.2	329.5	330.9	332.2	333.7	335.2
37.5°	303.1	304.9	306.8	308.7	310.5	312.4	314.0	315.7	317.4	319.0	320.8
40°	291.8	293.7	295.5	297.4	299.2	301.2	303.4	305.5	307.5	309.6	311.4
42.5°	279.3	281.7	283.9	286.2	288.5	290.7	293.0	295.1	297.3	299.4	301.4
45°	261.7	264.2	266.6	269.1	271.7	274.2	276.8	279.4	282.1	284.7	286.7
47.5°	243.1	245.9	248.7	251.7	254.5	257.4	260.3	263.4	266.3	269.3	271.6
50°	231.1	234.0	236.9	239.8	242.8	245.8	249.0	252.4	255.6	258.8	261.3
52.5°	218.2	221.4	224.4	227.5	230.7	234.0	237.5	241.2	244.7	248.2	250.7
55°	199.5	203.0	206.4	209.8	213.3	216.9	220.7	224.5	228.2	232.0	234.8
57.5°	181.3	184.8	188.4	192.1	195.6	199.5	203.6	207.7	211.9	216.0	218.8
60°	168.4	172.2	176.0	179.8	183.5	187.5	191.9	196.1	200.4	204.7	207.6
62.5°	156.4	160.3	164.1	167.9	171.8	176.0	180.6	185.1	189.7	194.2	197.0
65°	137.8	142.0	146.0	150.1	154.2	158.5	163.1	167.7	172.3	176.9	180.1
67.5°	119.1	123.4	127.7	132.0	136.3	140.9	145.5	150.3	154.9	159.7	163.0
70°	105.8	110.4	114.8	119.4	123.8	128.7	133.6	138.7	143.7	148.7	152.1
72.5°	93.8	98.4	102.8	107.3	111.8	116.6	121.8	127.0	132.2	137.4	140.9
75°	74.8	79.8	84.6	89.6	94.5	99.6	104.8	110.0	115.2	120.5	123.9
77.5°	58.3	63.2	68.2	73.1	78.1	83.2	88.5	93.7	99.0	104.3	108.0
80°	46.6	51.7	56.9	62.0	67.1	72.4	77.8	83.2	88.7	94.1	97.7
82.5°	36.5	41.6	46.9	52.0	57.3	62.6	68.2	73.6	79.2	84.7	88.3
85°	23.0	28.3	33.5	38.8	43.9	49.4	54.9	60.4	65.9	71.5	75.0
87.5°	12.6	18.1	23.5	29.0	34.4	40.1	45.7	51.4	57.1	62.7	66.3
90°	6.7	13.1	19.5	26.0	32.3	39.0	46.0	53.0	60.0	67.0	71.1
92.5°	16.5	20.7	24.9	29.3	33.5	38.9	45.4	51.9	58.4	64.9	69.2
95°	40.3	39.2	38.0	36.8	35.6	38.3	44.8	51.4	57.9	64.4	68.6
97.5°	75.2	76.5	77.9	79.2	80.5	79.1	74.7	70.4	66.0	61.7	65.8
100°	101.6	107.4	113.4	119.3	125.2	120.6	105.4	90.3	75.1	60.0	64.0
102.5°	131.6	136.4	141.3	146.1	151.1	144.9	127.8	110.8	93.6	76.5	76.3
105°	175.4	179.4	183.3	187.1	191.1	189.6	182.5	175.5	168.4	161.5	141.7
107.5°	221.2	224.4	227.6	231.0	234.2	238.8	245.0	251.1	257.1	263.2	249.3
110°	251.7	254.6	257.4	260.3	263.3	267.5	273.1	278.7	284.3	289.9	288.4



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.1	283.6	286.1	288.5	291.0	295.0	300.3	305.8	311.2	316.7	319.3
115°	324.4	326.4	328.4	330.4	332.4	335.9	340.8	345.7	350.6	355.6	359.3
117.5°	366.5	368.2	369.9	371.6	373.3	376.3	380.4	384.6	388.7	392.8	396.3
120°	392.4	394.0	395.8	397.4	399.1	401.8	405.7	409.5	413.3	417.2	420.6
122.5°	419.1	420.3	421.5	422.8	424.0	426.5	430.3	434.0	437.8	441.6	444.6
125°	455.2	456.4	457.4	458.4	459.4	461.7	465.2	468.8	472.3	475.8	478.3
127.5°	490.8	491.7	492.6	493.5	494.4	496.4	499.6	502.7	505.8	509.0	511.4
130°	512.9	513.8	514.7	515.6	516.5	518.4	520.9	523.5	526.1	528.8	531.2
132.5°	533.7	534.7	535.7	536.7	537.8	539.3	541.4	543.4	545.5	547.5	550.0
135°	566.0	566.6	567.3	567.9	568.7	569.8	571.5	573.1	574.8	576.4	578.8
137.5°	593.5	594.4	595.3	596.2	597.1	598.0	599.0	599.9	600.8	601.7	604.0
140°	611.6	612.4	613.1	613.9	614.7	615.4	616.1	616.8	617.5	618.1	620.3
142.5°	628.6	629.3	630.1	630.7	631.4	632.0	632.4	632.9	633.3	633.7	635.5
145°	652.5	653.3	654.1	654.9	655.6	656.2	656.4	656.7	656.9	657.2	658.3
147.5°	674.5	675.1	675.7	676.2	676.8	677.2	677.5	677.7	678.0	678.3	678.8
150°	688.3	688.7	689.0	689.4	689.8	690.1	690.4	690.6	690.9	691.2	691.5
152.5°	700.7	700.9	701.0	701.3	701.5	701.7	701.8	702.0	702.1	702.3	702.7
155°	718.2	718.0	717.7	717.5	717.2	717.2	717.3	717.4	717.5	717.7	718.3
157.5°	731.8	731.8	731.7	731.7	731.7	731.6	731.5	731.4	731.2	731.1	732.0
160°	740.1	740.0	739.9	739.7	739.6	739.5	739.3	739.2	739.1	739.0	739.7
162.5°	748.0	747.6	747.3	747.0	746.6	746.4	746.3	746.2	746.0	745.9	746.8
165°	757.4	757.0	756.7	756.3	755.9	755.6	755.5	755.4	755.3	755.1	756.2
167.5°	764.8	764.3	763.8	763.3	762.8	762.4	762.4	762.4	762.4	762.4	763.6
170°	768.9	768.4	767.9	767.4	766.9	766.6	766.6	766.6	766.6	766.6	767.7
172.5°	771.7	771.1	770.4	769.8	769.2	769.0	769.1	769.2	769.3	769.4	770.4
175°	775.3	774.7	774.0	773.4	772.7	772.4	772.5	772.7	772.8	773.0	773.9
177.5°	776.2	775.7	775.2	774.7	774.2	774.0	774.1	774.2	774.3	774.4	775.2
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	431.0	431.7	432.4	432.6	432.6	432.5	432.4	432.3
5°	430.3	431.2	432.0	432.4	432.3	432.1	432.0	431.9
7.5°	427.8	428.8	429.8	430.3	430.2	430.0	429.9	429.8
10°	425.2	426.2	427.2	427.6	427.4	427.2	427.0	426.8
12.5°	421.5	422.5	423.4	423.8	423.6	423.4	423.2	423.0
15°	414.8	415.8	416.9	417.3	417.2	417.1	417.0	416.9
17.5°	405.9	406.9	407.8	408.2	408.0	407.9	407.8	407.6
20°	399.5	400.4	401.4	401.9	402.0	402.1	402.2	402.3
22.5°	392.4	393.6	394.9	395.5	395.4	395.3	395.3	395.2
25°	380.5	381.9	383.2	384.0	384.0	384.0	384.0	384.0
27.5°	368.1	369.3	370.5	371.1	371.2	371.3	371.3	371.4
30°	359.6	360.9	362.1	362.7	362.7	362.7	362.7	362.7
32.5°	350.4	351.7	353.0	353.9	354.2	354.4	354.7	354.9
35°	336.8	338.3	339.9	340.9	341.3	341.7	342.1	342.5
37.5°	322.6	324.4	326.2	327.2	327.5	327.9	328.2	328.5
40°	313.2	315.0	316.7	317.8	318.2	318.7	319.1	319.5
42.5°	303.4	305.3	307.2	308.5	309.1	309.6	310.2	310.8
45°	288.6	290.6	292.7	294.1	294.9	295.7	296.6	297.4
47.5°	273.8	276.1	278.3	279.7	280.3	281.0	281.7	282.4
50°	263.6	266.0	268.4	270.0	270.7	271.5	272.2	273.0
52.5°	253.3	255.7	258.2	259.9	260.8	261.8	262.6	263.5
55°	237.6	240.4	243.3	245.1	245.9	246.8	247.6	248.4
57.5°	221.7	224.5	227.3	229.2	230.2	231.3	232.3	233.2
60°	210.6	213.5	216.4	218.4	219.5	220.8	221.9	223.1
62.5°	200.0	202.9	205.8	207.8	208.9	210.0	211.1	212.2
65°	183.2	186.3	189.5	191.6	192.6	193.7	194.7	195.7
67.5°	166.4	169.9	173.3	175.5	176.3	177.2	178.1	178.9
70°	155.4	158.8	162.1	164.3	165.3	166.3	167.4	168.4
72.5°	144.2	147.6	151.1	153.4	154.4	155.4	156.5	157.5
75°	127.3	130.8	134.3	136.6	137.8	139.2	140.4	141.7
77.5°	111.6	115.2	118.9	121.1	122.1	123.1	124.0	125.0
80°	101.2	104.8	108.4	110.6	111.7	112.7	113.8	114.8
82.5°	91.8	95.3	99.0	101.2	102.3	103.3	104.3	105.4
85°	78.7	82.2	85.7	88.1	89.1	90.2	91.2	92.2
87.5°	70.0	73.7	77.4	79.7	80.8	81.9	83.0	84.1
90°	75.1	79.2	83.3	85.9	87.3	88.6	89.9	91.2
92.5°	73.5	77.8	82.1	84.7	85.8	87.1	88.2	89.3
95°	72.7	76.9	81.0	83.6	84.6	85.6	86.7	87.8
97.5°	70.0	74.1	78.3	81.0	82.1	83.3	84.5	85.6
100°	68.1	72.1	76.1	78.8	80.0	81.1	82.3	83.5
102.5°	76.1	75.9	75.6	76.2	77.5	78.8	80.0	81.3
105°	122.0	102.2	82.5	73.2	74.4	75.6	76.9	78.1
107.5°	235.6	221.8	207.9	193.0	176.8	160.7	144.5	128.4
110°	286.9	285.4	283.9	274.4	256.9	239.4	222.0	204.5



TEST NUMBER: P331877-840

CATALOG NUMBER: S123DIP-S340D585U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	322.0	324.8	327.5	327.4	324.5	321.5	318.5	315.6
115°	363.1	366.9	370.7	373.2	374.7	376.0	377.3	378.7
117.5°	399.8	403.3	406.9	409.1	410.0	410.9	411.8	412.7
120°	424.0	427.5	430.9	433.0	433.7	434.4	435.2	436.0
122.5°	447.7	450.7	453.7	455.7	456.5	457.4	458.2	459.0
125°	480.8	483.2	485.6	487.4	488.4	489.4	490.3	491.3
127.5°	513.9	516.4	518.9	520.4	520.8	521.3	521.7	522.2
130°	533.7	536.2	538.8	540.2	540.6	540.9	541.3	541.7
132.5°	552.4	554.8	557.2	558.7	559.0	559.4	559.7	560.1
135°	581.0	583.2	585.5	586.7	586.8	587.0	587.1	587.2
137.5°	606.2	608.5	610.8	612.1	612.3	612.6	612.9	613.1
140°	622.4	624.4	626.5	627.6	627.9	628.2	628.4	628.7
142.5°	637.3	639.1	641.0	642.0	642.1	642.3	642.5	642.6
145°	659.3	660.5	661.6	662.4	662.8	663.2	663.6	664.0
147.5°	679.3	679.8	680.3	680.4	680.2	680.0	679.8	679.6
150°	691.7	692.0	692.2	692.3	692.1	691.9	691.8	691.6
152.5°	703.2	703.6	704.1	704.1	703.5	703.0	702.4	701.9
155°	718.9	719.6	720.2	720.1	719.4	718.6	717.9	717.1
157.5°	732.7	733.5	734.3	734.1	733.1	732.2	731.1	730.1
160°	740.5	741.2	742.0	741.9	741.1	740.2	739.3	738.4
162.5°	747.6	748.5	749.4	749.4	748.6	747.8	747.0	746.3
165°	757.2	758.2	759.2	759.3	758.4	757.5	756.6	755.7
167.5°	764.6	765.6	766.6	766.6	765.6	764.6	763.6	762.4
170°	768.7	769.7	770.7	770.7	769.7	768.7	767.7	766.6
172.5°	771.4	772.4	773.5	773.5	772.3	771.2	770.0	768.9
175°	774.8	775.7	776.6	776.5	775.5	774.5	773.5	772.3
177.5°	776.0	776.8	777.6	777.5	776.5	775.5	774.5	773.5
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3

(END OF REPORT)