

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: P331887-840

Luminaire Tested: **S123DIP-S340D805U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331887-840
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-S340D805U840-4F0-1E-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: 4239.4 lumens
Efficiency: N/A
Efficacy: 135.9 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

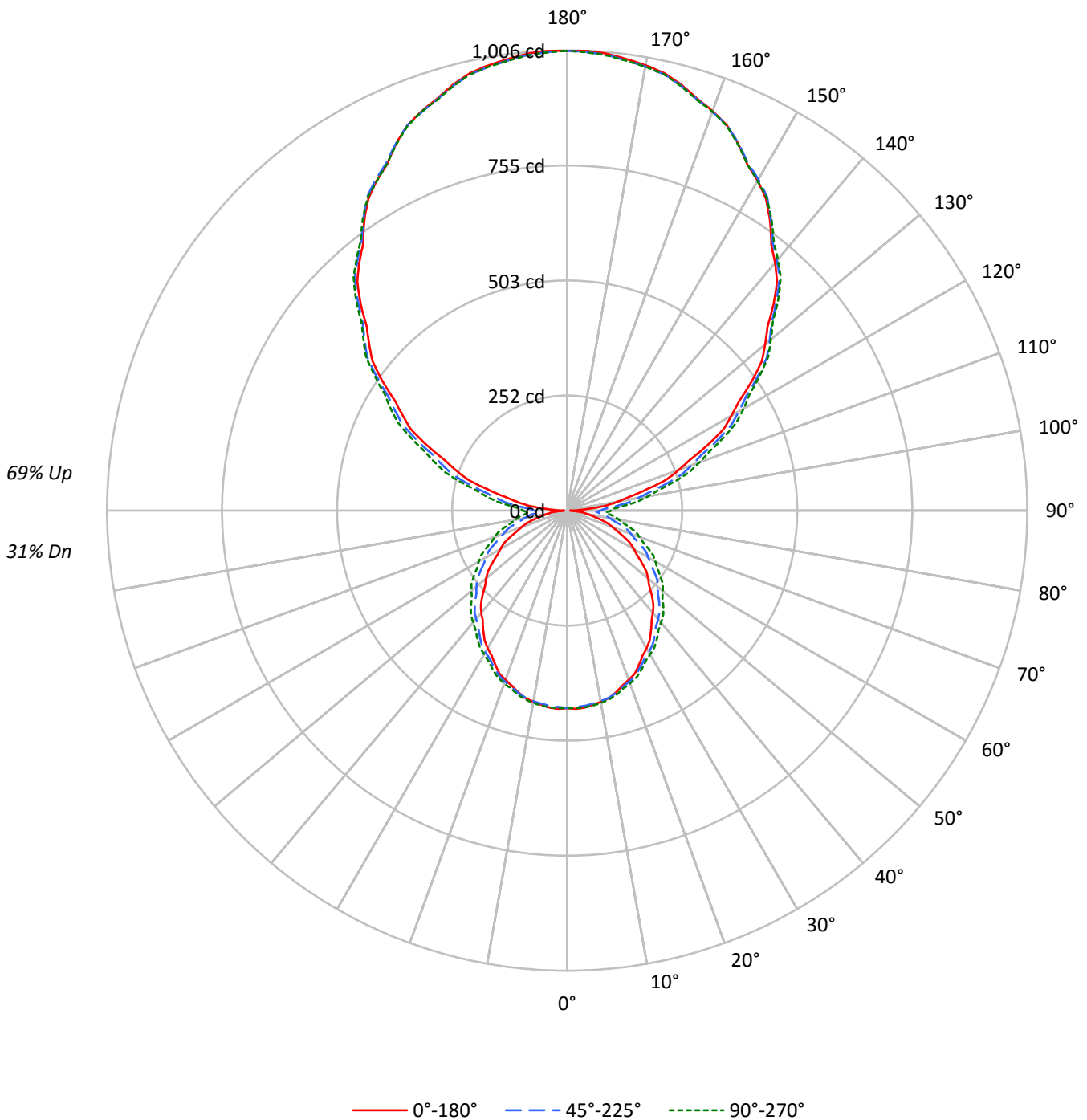
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-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°	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: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	1.0
10°-20°	116.7	2.8
20°-30°	174.6	4.1
30°-40°	208.5	4.9
40°-50°	218.1	5.1
50°-60°	204.7	4.8
60°-70°	171.0	4.0
70°-80°	122.3	2.9
80°-90°	75.9	1.8
90°-100°	111.3	2.6
100°-110°	229.6	5.4
110°-120°	355.8	8.4
120°-130°	451.3	10.6
130°-140°	498.6	11.8
140°-150°	485.6	11.5
150°-160°	407.8	9.6
160°-170°	271.5	6.4
170°-180°	95.1	2.2
0°-30°	332.3	7.8
0°-40°	540.8	12.8
0°-60°	963.6	22.7
0°-90°	1332.8	31.4
90°-120°	696.7	16.4
90°-150°	2132.2	50.3
90°-180°	2907.0	68.6
0°-180°	4239.4	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	38	72	91	98	7
95°	52	76	105	122	127	56
105°	181	195	222	234	241	194
115°	338	346	361	373	376	334
125°	492	495	507	513	514	439
135°	638	642	647	652	653	492
145°	774	775	777	780	779	483
155°	885	885	886	889	884	407
165°	964	962	962	966	961	272
175°	1003	1000	1000	1004	999	95
180°	1005	1005	1005	1005	1005	



TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

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°	12.7	18.3	23.8	29.4	34.9	40.6	46.4	52.1	58.0	63.7	67.5
90°	6.9	13.8	20.7	27.6	34.4	41.7	49.3	56.9	64.5	72.1	76.3
92.5°	24.8	30.7	36.5	42.3	48.1	54.3	60.8	67.4	73.9	80.5	84.5
95°	51.8	57.1	62.4	67.7	73.0	78.9	85.4	92.0	98.5	105.0	109.0
97.5°	87.4	92.0	96.5	101.1	105.7	111.0	116.9	122.8	128.8	134.6	138.6
100°	111.6	116.0	120.4	124.8	129.2	134.2	140.0	145.6	151.3	157.0	160.6
102.5°	139.7	143.3	146.9	150.6	154.2	159.0	164.9	170.8	176.6	182.6	186.0
105°	181.4	184.3	187.1	190.0	192.9	197.3	203.4	209.4	215.5	221.7	224.6
107.5°	229.4	231.9	234.2	236.5	238.8	242.5	247.4	252.3	257.2	262.1	265.4
110°	259.4	261.7	263.9	266.1	268.3	271.8	276.3	280.8	285.4	289.8	293.3



TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	291.0	292.8	294.6	296.3	298.0	300.9	305.1	309.1	313.3	317.3	320.8
115°	337.9	339.7	341.4	343.3	345.1	347.6	351.0	354.5	357.9	361.3	364.0
117.5°	385.5	386.7	387.8	388.9	390.0	392.1	395.2	398.3	401.3	404.5	406.9
120°	414.9	416.4	418.0	419.5	421.1	423.2	425.8	428.4	430.9	433.5	435.8
122.5°	445.8	446.8	447.9	448.9	450.0	451.9	454.7	457.6	460.4	463.2	465.0
125°	492.5	493.0	493.5	494.1	494.6	496.2	498.9	501.6	504.2	507.0	508.5
127.5°	536.1	537.1	538.2	539.2	540.2	541.8	543.9	546.0	548.2	550.3	551.3
130°	565.1	566.4	567.7	569.1	570.4	571.8	573.3	574.9	576.4	578.0	579.4
132.5°	593.8	595.2	596.6	597.9	599.4	600.7	602.0	603.3	604.6	605.8	606.9
135°	638.1	639.0	640.1	641.0	641.9	642.9	643.9	644.8	645.8	646.7	647.9
137.5°	679.0	679.8	680.6	681.5	682.3	683.2	684.3	685.4	686.5	687.6	688.5
140°	707.1	708.0	708.9	709.7	710.6	711.3	711.9	712.3	712.8	713.3	714.7
142.5°	733.1	733.8	734.6	735.4	736.2	736.8	737.2	737.5	737.9	738.3	739.5
145°	773.5	773.7	774.0	774.2	774.5	774.8	775.4	775.9	776.4	776.9	777.6
147.5°	808.4	809.0	809.6	810.2	810.9	811.4	811.9	812.4	812.9	813.4	813.6
150°	832.9	833.3	833.6	834.0	834.4	834.8	835.1	835.5	835.8	836.2	836.2
152.5°	853.2	853.6	854.1	854.6	855.2	855.6	855.8	856.0	856.2	856.4	856.7
155°	885.0	885.0	885.0	885.0	885.0	885.1	885.3	885.6	885.8	885.9	886.6
157.5°	912.2	912.0	911.8	911.6	911.4	911.4	911.5	911.7	911.8	911.9	912.7
160°	929.3	929.0	928.6	928.3	927.9	927.8	927.8	927.8	927.8	927.8	928.6
162.5°	944.4	944.0	943.5	943.0	942.5	942.3	942.5	942.6	942.7	942.9	943.7
165°	964.0	963.5	963.0	962.5	961.9	961.7	961.7	961.7	961.7	961.7	962.7
167.5°	979.7	979.0	978.3	977.5	976.8	976.6	976.7	976.8	977.0	977.1	978.3
170°	988.6	987.8	987.1	986.4	985.7	985.3	985.3	985.3	985.3	985.3	986.6
172.5°	995.4	994.8	994.1	993.4	992.7	992.3	992.3	992.3	992.3	992.3	993.4
175°	1002.7	1002.0	1001.4	1000.7	1000.0	999.6	999.6	999.6	999.6	999.6	1000.7
177.5°	1005.7	1005.2	1004.6	1004.0	1003.5	1003.2	1003.2	1003.2	1003.2	1003.2	1004.0
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1



TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

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°	71.1	74.8	78.6	80.9	82.0	83.1	84.2	85.4
90°	80.6	84.9	89.2	92.0	93.4	94.7	96.1	97.6
92.5°	88.6	92.6	96.6	99.0	99.8	100.5	101.3	102.0
95°	112.9	116.8	120.8	123.3	124.3	125.3	126.4	127.4
97.5°	142.5	146.4	150.4	152.8	153.7	154.7	155.7	156.6
100°	164.1	167.6	171.3	173.7	175.1	176.5	177.9	179.3
102.5°	189.5	193.0	196.4	198.6	199.7	200.7	201.6	202.6
105°	227.5	230.5	233.4	235.4	236.7	238.0	239.3	240.7
107.5°	268.8	272.2	275.5	277.6	278.3	279.0	279.7	280.4
110°	296.7	300.1	303.6	305.5	306.0	306.5	307.0	307.5



TEST NUMBER: P331887-840

CATALOG NUMBER: S123DIP-S340D805U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	324.3	327.7	331.2	333.4	334.3	335.1	335.9	336.8
115°	366.7	369.3	372.0	373.8	374.4	375.1	375.7	376.4
117.5°	409.3	411.8	414.2	415.7	416.0	416.3	416.6	416.9
120°	438.0	440.2	442.4	443.7	444.1	444.4	444.8	445.2
122.5°	467.0	468.8	470.7	471.7	471.9	472.2	472.4	472.6
125°	510.0	511.4	512.9	513.7	513.7	513.7	513.8	513.8
127.5°	552.4	553.5	554.6	555.1	555.0	554.9	554.8	554.7
130°	580.6	581.9	583.2	583.5	582.9	582.3	581.7	581.1
132.5°	607.9	609.0	610.1	610.5	610.3	610.1	609.8	609.6
135°	649.1	650.4	651.5	652.2	652.4	652.5	652.7	652.9
137.5°	689.4	690.3	691.3	691.7	691.6	691.4	691.3	691.1
140°	716.1	717.4	718.8	719.2	718.5	717.8	717.1	716.4
142.5°	740.7	741.9	743.2	743.6	743.2	742.8	742.4	741.9
145°	778.2	778.9	779.6	779.7	779.5	779.2	778.9	778.6
147.5°	814.0	814.2	814.4	814.2	813.5	812.8	812.1	811.5
150°	836.2	836.2	836.2	835.8	834.9	834.0	833.1	832.3
152.5°	856.9	857.2	857.5	857.2	856.3	855.5	854.5	853.7
155°	887.3	888.0	888.7	888.4	887.2	886.0	884.7	883.5
157.5°	913.4	914.1	914.8	914.7	913.8	912.8	911.8	910.8
160°	929.5	930.4	931.2	931.3	930.6	929.9	929.2	928.5
162.5°	944.6	945.5	946.4	946.2	945.1	944.0	942.9	941.8
165°	963.8	964.8	965.9	965.8	964.6	963.3	962.1	960.9
167.5°	979.4	980.4	981.5	981.5	980.4	979.4	978.3	977.1
170°	987.8	989.1	990.3	990.3	989.1	987.8	986.6	985.3
172.5°	994.5	995.6	996.6	996.6	995.3	994.1	992.9	991.7
175°	1001.7	1002.7	1003.8	1003.7	1002.5	1001.3	1000.0	998.8
177.5°	1004.9	1005.7	1006.5	1006.5	1005.5	1004.5	1003.6	1002.6
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1

(END OF REPORT)