

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: P331940-935

Luminaire Tested: **S123DIP-S560D1025U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331940-935
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-S560D1025U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5565.4 lumens
Efficiency: N/A
Efficacy: 125.1 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

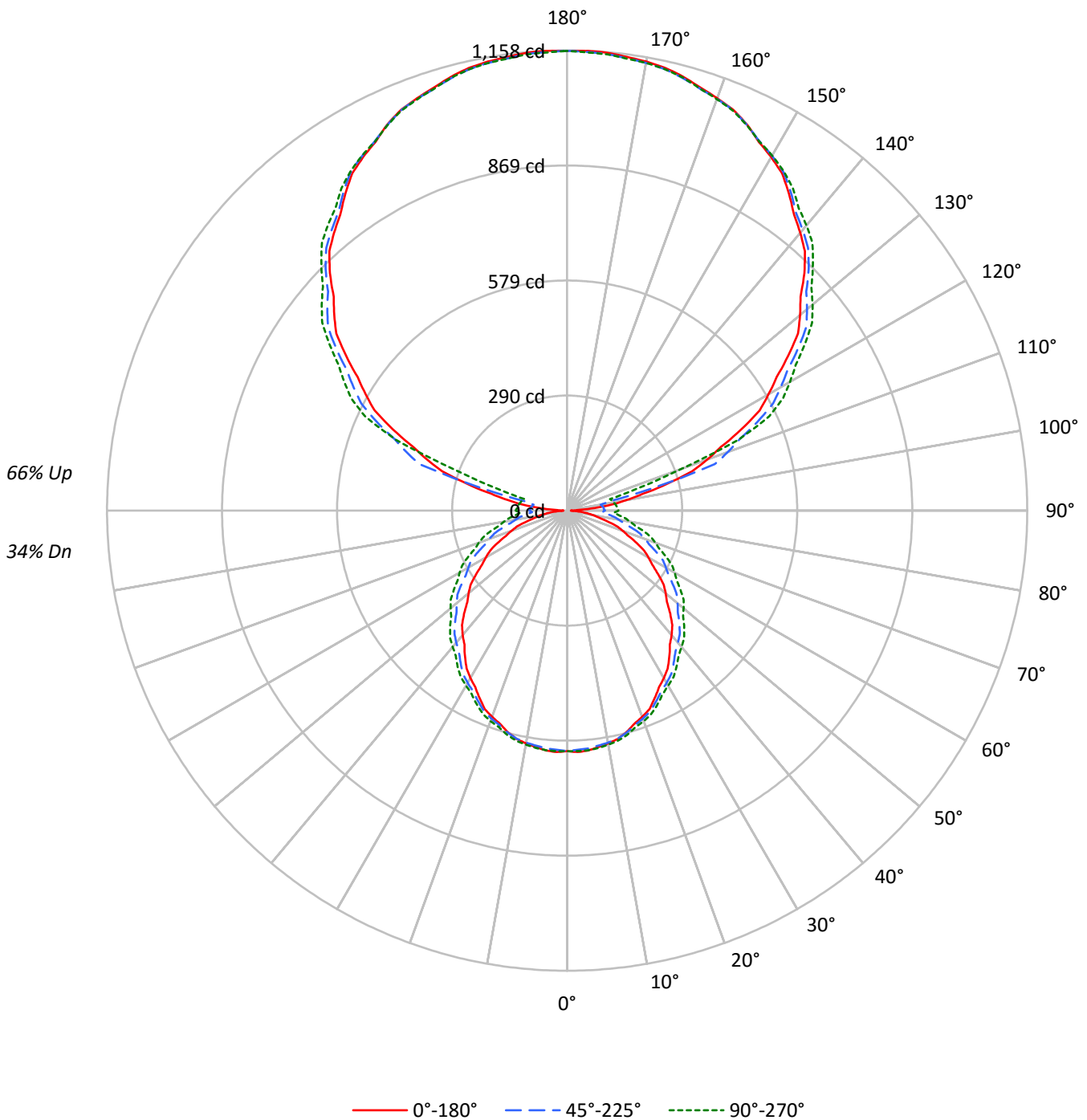
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-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	103	103	103	103	93	93	93	93	74	74	74		57	57	57		41	41	41	34
1	93	89	85	81	84	80	77	74	64	61	59		49	47	46		35	34	33	27
2	85	77	71	66	76	70	64	60	56	52	48		42	40	38		30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40		37	34	32		27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34		33	30	27		24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29		30	26	23		21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25		27	23	20		19	17	15	12
7	55	42	35	29	49	39	32	27	31	26	22		24	20	18		18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19		22	18	16		16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17		20	16	14		15	12	10	8
10	44	32	25	20	39	29	23	19	24	19	15		19	15	12		14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.0
10°-20°	163.6	2.9
20°-30°	244.7	4.4
30°-40°	292.2	5.3
40°-50°	305.8	5.5
50°-60°	286.9	5.2
60°-70°	239.6	4.3
70°-80°	171.5	3.1
80°-90°	105.5	1.9
90°-100°	106.2	1.9
100°-110°	247.6	4.4
110°-120°	512.9	9.2
120°-130°	631.1	11.3
130°-140°	663.1	11.9
140°-150°	614.3	11.0
150°-160°	494.1	8.9
160°-170°	318.9	5.7
170°-180°	109.9	2.0
0°-30°	465.7	8.4
0°-40°	758.0	13.6
0°-60°	1350.7	24.3
0°-90°	1867.2	33.6
90°-120°	866.7	15.6
90°-150°	2775.2	49.9
90°-180°	3698.0	66.4
0°-180°	5565.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	10	51	95	120	129	8
95°	60	53	92	117	125	70
105°	261	283	238	112	112	277
115°	484	498	528	552	561	477
125°	679	687	709	724	731	607
135°	844	849	860	873	875	650
145°	974	979	981	987	990	609
155°	1072	1070	1071	1075	1070	494
165°	1130	1128	1127	1133	1128	319
175°	1157	1153	1153	1159	1152	110
180°	1157	1157	1157	1157	1157	



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.4	33.1	40.7	48.5	56.2	64.2	72.2	80.2	88.2	93.2
90°	9.5	18.5	27.6	36.7	45.8	55.4	65.3	75.3	85.2	95.1	100.9
92.5°	24.0	30.0	35.9	41.8	47.8	55.4	64.7	73.9	83.1	92.3	98.4
95°	59.7	57.6	55.4	53.3	51.2	54.8	64.1	73.4	82.7	92.0	97.8
97.5°	111.8	113.5	115.1	116.8	118.4	115.8	108.9	102.0	95.1	88.3	94.1
100°	151.2	159.7	168.2	176.7	185.2	178.0	154.9	131.8	108.8	85.8	91.5
102.5°	196.0	203.0	210.0	217.0	223.9	214.5	188.6	162.6	136.6	110.7	110.1
105°	261.4	267.0	272.6	278.3	283.9	281.2	270.4	259.4	248.6	237.6	208.0
107.5°	329.7	334.3	339.1	343.7	348.4	355.1	363.8	372.5	381.2	389.8	368.9
110°	375.2	379.4	383.6	387.7	391.8	398.0	405.9	413.9	421.8	429.8	427.3



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	419.2	422.8	426.3	429.8	433.4	439.0	446.8	454.5	462.2	469.9	473.7
115°	483.7	486.6	489.5	492.4	495.3	500.2	507.3	514.3	521.2	528.2	533.6
117.5°	546.6	549.1	551.6	554.1	556.6	560.8	566.6	572.5	578.3	584.1	589.2
120°	585.3	587.8	590.2	592.6	595.1	599.1	604.4	609.8	615.3	620.7	625.6
122.5°	625.2	627.0	628.8	630.6	632.4	635.9	641.3	646.6	651.9	657.2	661.6
125°	679.2	680.7	682.3	683.8	685.3	688.5	693.6	698.6	703.6	708.6	712.0
127.5°	732.1	733.5	734.9	736.2	737.6	740.5	745.0	749.4	753.9	758.3	761.8
130°	765.2	766.5	767.9	769.3	770.7	773.2	776.9	780.6	784.3	788.0	791.5
132.5°	796.3	797.7	799.3	800.7	802.2	804.4	807.4	810.4	813.3	816.3	819.7
135°	844.4	845.4	846.4	847.4	848.4	850.1	852.5	854.8	857.2	859.6	862.8
137.5°	885.5	886.8	888.2	889.5	890.9	892.2	893.5	894.8	896.1	897.5	900.7
140°	912.5	913.6	914.8	915.9	917.1	918.2	919.2	920.2	921.2	922.2	925.1
142.5°	937.9	938.9	940.0	941.0	942.0	942.9	943.6	944.2	944.9	945.6	948.1
145°	973.5	974.7	975.9	977.1	978.3	979.0	979.5	979.8	980.2	980.6	982.1
147.5°	1006.3	1007.3	1008.1	1009.0	1009.9	1010.5	1010.9	1011.2	1011.7	1012.0	1012.8
150°	1027.0	1027.6	1028.1	1028.7	1029.2	1029.8	1030.1	1030.5	1030.9	1031.3	1031.7
152.5°	1045.5	1045.9	1046.1	1046.4	1046.6	1046.9	1047.1	1047.3	1047.6	1047.8	1048.4
155°	1071.7	1071.3	1070.9	1070.6	1070.1	1070.1	1070.2	1070.4	1070.7	1070.8	1071.8
157.5°	1091.9	1091.9	1091.9	1091.8	1091.8	1091.7	1091.5	1091.3	1091.1	1090.9	1092.1
160°	1104.3	1104.1	1104.0	1103.8	1103.5	1103.4	1103.2	1103.0	1102.8	1102.6	1103.8
162.5°	1116.0	1115.5	1115.0	1114.6	1114.0	1113.7	1113.5	1113.3	1113.1	1112.9	1114.2
165°	1130.1	1129.5	1128.9	1128.4	1127.8	1127.5	1127.2	1127.0	1126.9	1126.7	1128.2
167.5°	1141.1	1140.4	1139.6	1138.8	1138.1	1137.6	1137.6	1137.6	1137.6	1137.6	1139.2
170°	1147.3	1146.5	1145.8	1145.0	1144.3	1143.8	1143.8	1143.8	1143.8	1143.8	1145.4
172.5°	1151.4	1150.6	1149.6	1148.7	1147.8	1147.4	1147.5	1147.7	1147.8	1148.0	1149.5
175°	1156.8	1155.8	1154.9	1153.9	1153.0	1152.5	1152.7	1153.0	1153.1	1153.3	1154.7
177.5°	1158.1	1157.4	1156.6	1155.8	1155.1	1154.8	1154.9	1155.1	1155.2	1155.4	1156.6
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	98.4	103.6	108.7	112.0	113.6	115.1	116.7	118.2
90°	106.7	112.4	118.1	121.9	123.8	125.6	127.5	129.3
92.5°	104.5	110.6	116.7	120.5	122.1	123.6	125.2	126.8
95°	103.7	109.6	115.5	119.2	120.6	122.1	123.6	125.0
97.5°	100.0	105.9	111.8	115.5	117.3	118.9	120.5	122.2
100°	97.3	103.1	108.8	112.5	114.3	115.9	117.5	119.2
102.5°	109.5	108.9	108.3	108.9	110.7	112.5	114.3	116.1
105°	178.3	148.6	118.9	104.9	106.6	108.3	109.9	111.7
107.5°	348.1	327.3	306.3	283.9	259.7	235.5	211.3	187.1
110°	424.8	422.3	419.8	405.5	379.4	353.3	327.1	301.0



TEST NUMBER: P331940-935

CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	477.6	481.4	485.2	484.8	480.4	475.9	471.4	466.9
115°	539.1	544.5	549.9	553.6	555.6	557.5	559.5	561.4
117.5°	594.2	599.2	604.2	607.3	608.6	609.9	611.2	612.5
120°	630.5	635.4	640.3	643.3	644.3	645.3	646.4	647.4
122.5°	665.9	670.2	674.5	677.3	678.5	679.7	680.8	682.0
125°	715.6	719.0	722.5	724.9	726.3	727.7	729.1	730.6
127.5°	765.3	768.9	772.3	774.4	775.1	775.7	776.3	776.9
130°	795.0	798.6	802.2	804.2	804.7	805.2	805.7	806.2
132.5°	823.1	826.6	830.0	832.0	832.4	832.8	833.4	833.8
135°	866.0	869.2	872.5	874.1	874.3	874.4	874.6	874.8
137.5°	904.0	907.2	910.4	912.2	912.6	912.9	913.3	913.6
140°	928.2	931.1	934.0	935.7	936.1	936.4	936.8	937.1
142.5°	950.7	953.2	955.8	957.2	957.4	957.6	957.8	958.0
145°	983.7	985.2	986.8	987.9	988.4	989.0	989.6	990.2
147.5°	1013.5	1014.3	1014.9	1015.1	1014.8	1014.4	1014.1	1013.7
150°	1032.1	1032.4	1032.9	1032.9	1032.6	1032.3	1032.0	1031.7
152.5°	1049.1	1049.8	1050.5	1050.5	1049.6	1048.9	1048.0	1047.1
155°	1072.7	1073.7	1074.6	1074.5	1073.4	1072.3	1071.1	1070.0
157.5°	1093.2	1094.3	1095.5	1095.4	1093.8	1092.4	1090.9	1089.4
160°	1104.9	1106.0	1107.2	1107.1	1105.8	1104.4	1103.1	1101.7
162.5°	1115.5	1116.8	1118.1	1118.2	1117.0	1115.8	1114.7	1113.4
165°	1129.7	1131.3	1132.8	1132.9	1131.5	1130.2	1128.9	1127.6
167.5°	1140.7	1142.3	1143.8	1143.8	1142.3	1140.7	1139.2	1137.6
170°	1146.9	1148.5	1150.0	1150.0	1148.5	1146.9	1145.4	1143.8
172.5°	1151.1	1152.5	1154.1	1154.0	1152.4	1150.6	1149.0	1147.3
175°	1156.0	1157.4	1158.6	1158.6	1157.0	1155.5	1154.0	1152.4
177.5°	1157.8	1159.1	1160.3	1160.1	1158.6	1157.1	1155.5	1154.0
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8

(END OF REPORT)