

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: P332529-940

Luminaire Tested: **S124DIP-S350D1205U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332529-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5574.0 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

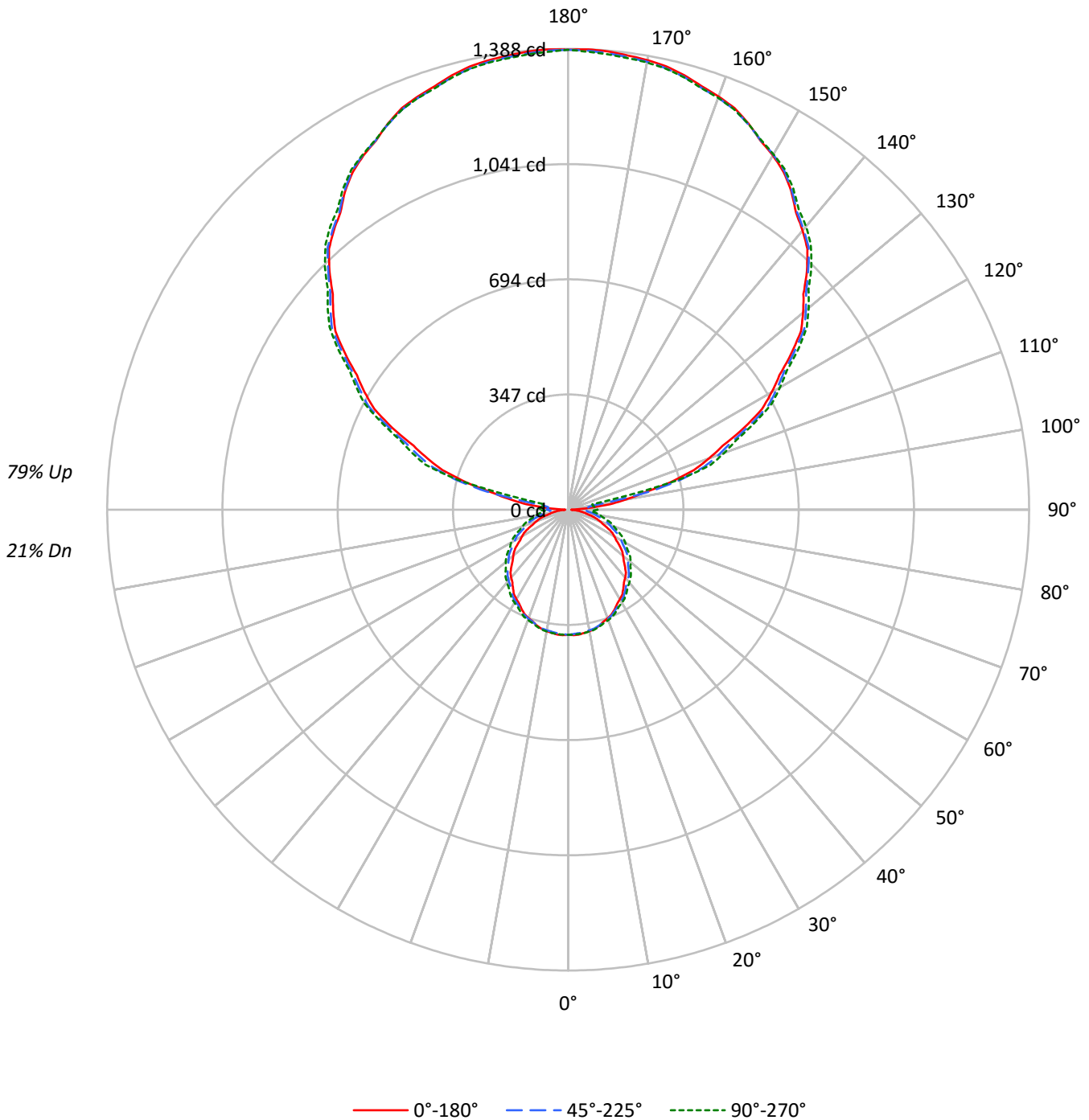
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	79	80	77	73	71	58	56	54	41	40	39	26	25	24	17
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	16	14	12	8
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7
7	53	41	34	28	47	37	30	25	28	24	20	20	17	15	13	11	9	6
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	37	28	22	17	21	17	14	15	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3043	3043	3043
5°	3053	2974	2982
10°	3033	2925	2923
15°	3006	2869	2854
20°	2965	2807	2785
25°	2919	2737	2710
30°	2869	2668	2634
35°	2812	2597	2566
40°	2768	2530	2497
45°	2700	2466	2436
50°	2643	2396	2373
55°	2585	2328	2298
60°	2493	2242	2231
65°	2392	2149	2146
70°	2271	2045	2049
75°	2101	1926	1961
80°	1913	1816	1875
85°	1676	1717	1825



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.7	0.6
10°-20°	102.3	1.8
20°-30°	154.6	2.8
30°-40°	187.1	3.4
40°-50°	197.8	3.5
50°-60°	186.2	3.3
60°-70°	154.4	2.8
70°-80°	108.5	1.9
80°-90°	65.3	1.2
90°-100°	83.8	1.5
100°-110°	329.0	5.9
110°-120°	596.0	10.7
120°-130°	743.8	13.3
130°-140°	789.3	14.2
140°-150°	734.9	13.2
150°-160°	591.9	10.6
160°-170°	381.8	6.8
170°-180°	131.6	2.4
0°-30°	292.6	5.2
0°-40°	479.7	8.6
0°-60°	863.6	15.5
0°-90°	1191.9	21.4
90°-120°	1008.8	18.1
90°-150°	3276.9	58.8
90°-180°	4382.0	78.6
0°-180°	5574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	377	377	377	377	377	
5°	377	376	373	376	376	36
15°	362	362	361	364	364	102
25°	331	333	335	339	340	152
35°	290	295	299	304	306	181
45°	241	249	257	264	267	187
55°	189	198	211	219	222	168
65°	131	144	159	169	173	130
75°	73	88	106	117	122	77
85°	22	40	59	71	76	24
90°	10	38	65	82	88	7
95°	62	43	60	76	82	78
105°	316	331	351	368	337	331
115°	585	592	604	615	618	576
125°	820	824	832	843	847	732
135°	1016	1016	1022	1031	1036	783
145°	1171	1174	1174	1178	1181	732
155°	1284	1285	1282	1285	1283	592
165°	1354	1349	1349	1356	1348	383
175°	1385	1379	1380	1388	1377	132
180°	1385	1385	1385	1385	1385	



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	378.3	378.0	377.8	377.6	377.4	376.9	376.4	375.8	375.1	374.5	375.1
5°	377.4	377.0	376.7	376.5	376.2	375.8	375.1	374.4	373.8	373.1	373.9
7.5°	374.2	374.0	373.8	373.6	373.4	373.1	372.6	372.0	371.5	371.0	371.8
10°	371.4	371.3	371.2	371.1	371.0	370.8	370.3	369.8	369.3	368.9	369.7
12.5°	367.7	367.7	367.7	367.7	367.7	367.5	367.1	366.8	366.5	366.2	366.9
15°	361.7	361.9	361.9	362.0	362.1	362.0	361.7	361.4	361.1	360.9	361.7
17.5°	353.6	353.8	354.1	354.4	354.6	354.8	354.7	354.6	354.6	354.5	355.4
20°	347.8	348.0	348.4	348.7	348.9	349.1	349.2	349.3	349.4	349.5	350.4
22.5°	341.3	341.7	342.1	342.4	342.8	343.0	343.2	343.4	343.6	343.8	344.6
25°	330.9	331.4	332.1	332.6	333.1	333.6	333.9	334.1	334.4	334.7	335.7
27.5°	319.2	320.1	320.9	321.7	322.5	323.2	323.6	324.0	324.5	324.9	325.8
30°	311.5	312.3	313.0	313.7	314.5	315.2	315.8	316.5	317.2	317.8	318.9
32.5°	303.1	304.0	304.9	305.8	306.7	307.5	308.2	308.9	309.7	310.4	311.6
35°	289.5	290.7	291.8	292.9	294.1	295.1	296.0	296.9	297.9	298.8	300.1
37.5°	276.0	277.2	278.6	279.8	281.2	282.3	283.6	284.7	285.9	287.0	288.4
40°	267.2	268.4	269.7	270.8	272.1	273.3	274.6	276.0	277.2	278.6	280.0
42.5°	257.1	258.4	259.8	261.2	262.5	263.9	265.6	267.1	268.6	270.1	271.7
45°	241.4	243.2	245.0	246.7	248.5	250.3	252.1	253.9	255.7	257.4	259.0
47.5°	226.5	228.4	230.2	232.0	233.8	235.8	237.8	240.0	242.0	244.1	245.7
50°	215.7	217.8	219.8	221.9	223.9	226.0	228.1	230.2	232.2	234.3	236.1
52.5°	204.9	207.0	209.0	211.1	213.1	215.3	217.7	220.1	222.4	224.8	226.7
55°	189.1	191.1	193.1	195.0	197.0	199.4	202.2	205.0	207.8	210.6	212.5
57.5°	171.5	173.9	176.3	178.8	181.2	183.8	186.6	189.4	192.2	195.0	197.2
60°	160.0	162.4	164.9	167.3	169.7	172.5	175.6	178.7	181.7	184.9	187.0
62.5°	148.8	151.5	154.2	156.9	159.4	162.4	165.4	168.5	171.7	174.8	176.9
65°	130.8	133.8	136.9	139.8	142.9	146.0	149.1	152.3	155.5	158.7	161.0
67.5°	113.5	116.7	119.9	123.1	126.3	129.6	133.0	136.4	139.8	143.2	145.6
70°	101.7	104.9	108.1	111.3	114.5	117.9	121.5	125.0	128.6	132.2	134.6
72.5°	90.2	93.5	96.8	100.0	103.3	106.8	110.6	114.4	118.2	122.0	124.4
75°	72.6	76.1	79.5	83.0	86.5	90.2	94.2	98.1	102.0	105.9	108.6
77.5°	56.2	59.8	63.5	67.1	70.8	74.7	78.8	83.0	87.1	91.2	93.9
80°	46.0	49.8	53.5	57.2	61.0	64.9	69.1	73.2	77.3	81.5	84.3
82.5°	35.8	39.8	43.7	47.6	51.5	55.5	59.7	63.8	67.9	72.1	74.9
85°	22.4	26.3	30.2	34.2	38.2	42.2	46.5	50.6	54.8	59.1	61.9
87.5°	13.1	17.5	21.8	26.1	30.4	34.9	39.3	43.8	48.2	52.8	55.7
90°	9.9	16.1	22.5	28.7	35.0	41.1	47.0	52.8	58.7	64.6	68.7
92.5°	19.4	23.0	26.5	30.1	33.5	38.3	44.1	49.9	55.8	61.7	65.7
95°	62.5	57.8	53.0	48.2	43.5	43.2	47.3	51.4	55.5	59.5	63.4
97.5°	126.0	133.6	141.1	148.6	156.1	149.0	127.2	105.2	83.4	61.4	64.0
100°	174.6	181.1	187.7	194.3	200.9	190.1	162.0	133.9	105.8	77.7	76.2
102.5°	229.3	234.4	239.6	244.8	249.9	252.3	251.7	251.2	250.6	250.0	210.3
105°	315.7	319.0	322.2	325.5	328.7	332.6	337.2	341.9	346.5	351.2	355.5
107.5°	396.6	398.9	401.1	403.3	405.6	409.0	413.9	418.7	423.7	428.5	431.8
110°	451.0	453.0	455.0	457.0	459.0	462.4	467.0	471.6	476.4	481.0	483.6



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	503.7	506.1	508.5	511.0	513.4	516.4	520.2	524.0	527.7	531.5	533.5
115°	584.9	586.4	587.9	589.4	590.9	593.2	595.9	598.7	601.5	604.2	606.7
117.5°	658.4	659.8	661.2	662.6	664.1	666.4	669.7	673.0	676.3	679.6	681.4
120°	707.8	708.9	710.2	711.3	712.6	714.3	716.8	719.3	721.8	724.3	726.7
122.5°	754.1	754.7	755.4	756.0	756.5	758.3	761.3	764.1	767.0	769.9	772.0
125°	820.2	821.1	821.9	822.7	823.5	824.9	826.8	828.7	830.5	832.4	834.9
127.5°	883.2	883.2	883.4	883.5	883.7	885.2	888.1	890.9	893.8	896.6	898.1
130°	923.5	923.5	923.7	923.8	924.0	925.1	927.3	929.5	931.7	933.9	935.9
132.5°	960.7	961.0	961.4	961.7	962.0	963.2	965.3	967.3	969.5	971.5	973.3
135°	1016.3	1016.0	1015.7	1015.6	1015.3	1016.0	1017.6	1019.1	1020.7	1022.3	1024.3
137.5°	1065.8	1065.8	1065.8	1065.8	1065.8	1066.4	1067.7	1069.1	1070.4	1071.7	1073.6
140°	1098.1	1098.5	1098.9	1099.2	1099.6	1100.0	1100.5	1101.2	1101.7	1102.2	1104.1
142.5°	1126.8	1127.6	1128.4	1129.2	1130.0	1130.5	1130.8	1131.0	1131.2	1131.4	1133.0
145°	1171.3	1171.8	1172.4	1173.0	1173.7	1173.9	1173.9	1173.9	1173.9	1173.9	1174.7
147.5°	1206.7	1207.9	1209.1	1210.2	1211.5	1211.9	1211.7	1211.5	1211.2	1211.0	1211.3
150°	1232.3	1233.2	1234.0	1234.8	1235.6	1236.0	1235.7	1235.6	1235.3	1235.0	1235.0
152.5°	1253.6	1254.3	1255.0	1255.7	1256.4	1256.6	1256.2	1255.8	1255.4	1255.0	1255.4
155°	1283.8	1284.0	1284.2	1284.4	1284.7	1284.4	1283.8	1283.1	1282.4	1281.7	1282.6
157.5°	1309.2	1309.1	1308.9	1308.9	1308.7	1308.2	1307.4	1306.7	1305.9	1305.1	1306.3
160°	1324.2	1323.5	1322.8	1322.1	1321.4	1321.0	1320.7	1320.4	1320.3	1320.0	1321.4
162.5°	1337.4	1336.6	1335.7	1334.8	1333.9	1333.4	1333.1	1332.9	1332.7	1332.5	1333.8
165°	1354.2	1353.1	1351.9	1350.8	1349.6	1349.1	1349.1	1349.1	1349.1	1349.1	1350.9
167.5°	1367.4	1366.3	1365.1	1363.9	1362.7	1362.0	1361.9	1361.7	1361.6	1361.5	1363.5
170°	1374.9	1373.6	1372.2	1370.8	1369.4	1368.9	1369.0	1369.3	1369.5	1369.8	1371.6
172.5°	1379.9	1378.5	1377.2	1375.7	1374.4	1373.8	1374.0	1374.3	1374.5	1374.8	1376.5
175°	1385.3	1383.9	1382.5	1381.2	1379.7	1379.2	1379.4	1379.7	1379.9	1380.1	1382.2
177.5°	1387.8	1386.5	1385.2	1383.9	1382.6	1382.2	1382.5	1382.9	1383.3	1383.7	1385.1
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	375.6	376.1	376.7	376.8	376.8	376.7	376.7	376.6
5°	374.6	375.3	376.1	376.5	376.4	376.2	376.1	376.0
7.5°	372.6	373.4	374.3	374.7	374.6	374.5	374.4	374.3
10°	370.6	371.4	372.3	372.6	372.6	372.5	372.4	372.3
12.5°	367.7	368.5	369.3	369.6	369.6	369.6	369.6	369.5
15°	362.6	363.4	364.3	364.6	364.5	364.4	364.4	364.3
17.5°	356.2	357.1	358.0	358.4	358.3	358.2	358.2	358.1
20°	351.3	352.3	353.2	353.7	353.7	353.7	353.7	353.7
22.5°	345.6	346.5	347.5	348.0	348.2	348.3	348.5	348.7
25°	336.8	337.8	338.9	339.4	339.5	339.6	339.7	339.7
27.5°	326.8	327.8	328.8	329.3	329.4	329.5	329.6	329.8
30°	319.9	320.9	321.9	322.5	322.7	323.0	323.2	323.3
32.5°	312.7	314.0	315.1	315.8	316.0	316.2	316.4	316.6
35°	301.5	302.7	304.1	304.9	305.1	305.4	305.8	306.0
37.5°	289.7	291.0	292.3	293.2	293.5	293.7	294.1	294.4
40°	281.4	282.8	284.2	285.1	285.4	285.9	286.2	286.6
42.5°	273.2	274.8	276.3	277.3	277.6	277.9	278.2	278.5
45°	260.6	262.3	263.9	264.8	265.4	265.8	266.3	266.7
47.5°	247.4	249.0	250.7	251.7	252.4	252.9	253.4	254.0
50°	238.0	239.9	241.7	243.0	243.5	244.1	244.7	245.2
52.5°	228.5	230.4	232.3	233.5	234.1	234.6	235.2	235.8
55°	214.4	216.2	218.1	219.4	219.9	220.4	221.1	221.6
57.5°	199.5	201.7	203.9	205.3	205.8	206.3	206.9	207.4
60°	189.2	191.4	193.5	194.9	195.7	196.4	197.2	198.0
62.5°	179.1	181.2	183.3	184.9	185.6	186.3	187.1	187.8
65°	163.4	165.8	168.1	169.6	170.4	171.1	171.9	172.6
67.5°	148.0	150.4	152.8	154.4	155.1	155.8	156.5	157.3
70°	137.1	139.7	142.2	143.8	144.5	145.2	145.8	146.4
72.5°	126.9	129.4	131.8	133.4	134.1	134.8	135.6	136.3
75°	111.2	113.8	116.5	118.2	119.0	119.8	120.7	121.5
77.5°	96.6	99.2	101.9	103.7	104.6	105.5	106.4	107.3
80°	87.1	89.9	92.7	94.5	95.2	96.0	96.8	97.5
82.5°	77.8	80.7	83.6	85.4	86.2	87.0	87.9	88.7
85°	64.7	67.5	70.4	72.2	73.1	74.1	75.0	76.0
87.5°	58.8	61.7	64.7	66.7	67.6	68.6	69.5	70.4
90°	72.8	76.9	81.0	83.6	84.9	86.1	87.3	88.5
92.5°	69.8	73.8	77.8	80.3	81.1	81.9	82.8	83.6
95°	67.3	71.2	75.2	77.7	78.7	79.8	80.9	81.9
97.5°	66.6	69.3	71.9	73.7	74.7	75.7	76.8	77.8
100°	74.9	73.6	72.1	71.9	72.8	73.7	74.5	75.4
102.5°	170.5	130.7	91.0	71.4	72.2	73.0	73.8	74.5
105°	360.0	364.4	368.8	367.2	359.7	352.1	344.6	337.1
107.5°	435.1	438.5	441.8	444.2	445.8	447.3	448.8	450.4
110°	486.2	488.8	491.4	493.5	494.9	496.4	497.8	499.3



TEST NUMBER: P332529-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	535.5	537.5	539.5	541.3	542.9	544.6	546.2	547.8
115°	609.2	611.8	614.3	615.9	616.5	617.2	617.9	618.5
117.5°	683.3	685.2	687.1	688.3	688.9	689.6	690.3	690.9
120°	729.0	731.3	733.7	734.9	735.3	735.6	735.8	736.1
122.5°	774.2	776.3	778.5	779.7	779.9	780.1	780.3	780.5
125°	837.4	839.8	842.3	843.9	844.7	845.5	846.3	847.1
127.5°	899.7	901.3	902.9	903.8	904.3	904.7	905.2	905.6
130°	937.7	939.7	941.6	942.8	943.3	944.0	944.5	945.0
132.5°	975.2	977.0	978.9	980.0	980.3	980.7	981.1	981.5
135°	1026.3	1028.2	1030.2	1031.6	1032.7	1033.7	1034.7	1035.7
137.5°	1075.5	1077.4	1079.2	1080.4	1080.7	1081.0	1081.4	1081.7
140°	1106.1	1108.0	1109.9	1111.2	1111.9	1112.6	1113.3	1114.0
142.5°	1134.5	1136.1	1137.7	1138.7	1139.2	1139.6	1140.1	1140.5
145°	1175.5	1176.3	1177.1	1177.9	1178.8	1179.6	1180.4	1181.2
147.5°	1211.6	1211.8	1212.1	1212.5	1213.0	1213.5	1214.1	1214.6
150°	1235.0	1235.0	1235.0	1235.2	1235.4	1235.6	1235.9	1236.1
152.5°	1255.7	1256.1	1256.4	1256.5	1256.4	1256.2	1256.2	1256.0
155°	1283.5	1284.4	1285.4	1285.5	1284.8	1284.1	1283.4	1282.7
157.5°	1307.5	1308.7	1309.9	1309.9	1308.7	1307.5	1306.3	1305.1
160°	1322.8	1324.2	1325.5	1325.5	1324.2	1322.8	1321.4	1320.0
162.5°	1335.2	1336.6	1338.0	1337.9	1336.3	1334.8	1333.2	1331.6
165°	1352.7	1354.6	1356.4	1356.3	1354.2	1352.1	1350.1	1348.0
167.5°	1365.6	1367.5	1369.6	1369.4	1367.2	1364.9	1362.5	1360.2
170°	1373.4	1375.3	1377.2	1376.9	1374.6	1372.3	1370.0	1367.7
172.5°	1378.4	1380.3	1382.1	1381.8	1379.3	1376.8	1374.3	1371.8
175°	1384.3	1386.3	1388.4	1388.0	1385.3	1382.5	1379.7	1377.0
177.5°	1386.6	1388.0	1389.6	1389.2	1387.0	1384.7	1382.5	1380.4
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3

(END OF REPORT)