

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: P332892-935

Luminaire Tested: **S124RDIP-S350D1205U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

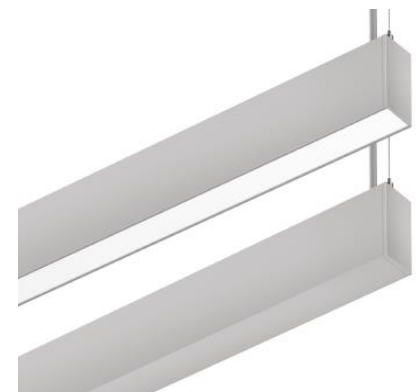
**Test Information**

Test Method: LM-79-08  
Report Number: P332892-935  
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: S124RDIP-S350D1205U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5371.1 lumens  
Efficiency: N/A  
Efficacy: 127.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

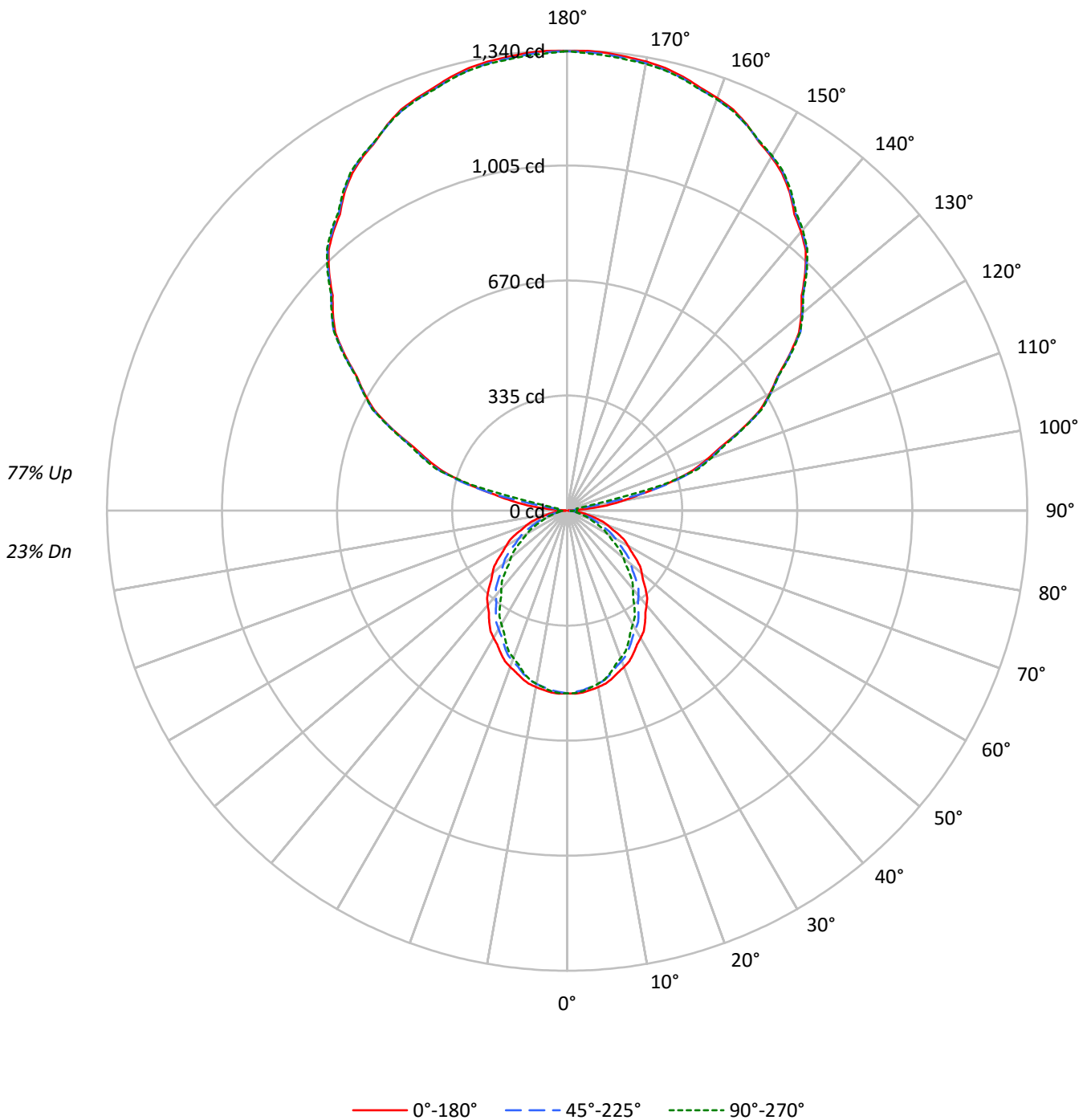
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20
2	84	77	71	66	74	68	63	59	53	49	47	38	36	34	25	23	23	17
3	76	67	61	55	68	60	54	50	46	42	39	34	31	29	22	20	19	14
4	70	60	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12
5	64	53	45	40	57	47	41	36	37	32	29	27	24	22	18	16	15	11
6	59	47	40	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	11	8
8	50	39	31	26	44	35	28	24	27	22	19	20	17	15	13	12	10	8
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	12	11	9	7
10	43	32	25	21	39	29	23	19	23	18	15	17	14	12	11	10	8	6

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4297	4297	4297
5°	4306	4254	4280
10°	4279	4203	4203
15°	4231	4115	4084
20°	4163	3998	3924
25°	4077	3862	3764
30°	3993	3719	3564
35°	3900	3571	3362
40°	3789	3402	3144
45°	3685	3234	2923
50°	3567	3041	2688
55°	3441	2839	2432
60°	3303	2619	2172
65°	3177	2344	1914
70°	2991	2039	1626
75°	2757	1691	1323
80°	2404	1288	1213
85°	2038	1176	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.0	0.9
10°-20°	139.4	2.6
20°-30°	201.3	3.7
30°-40°	228.2	4.2
40°-50°	220.4	4.1
50°-60°	183.2	3.4
60°-70°	126.5	2.4
70°-80°	64.1	1.2
80°-90°	20.3	0.4
90°-100°	45.8	0.9
100°-110°	291.7	5.4
110°-120°	558.0	10.4
120°-130°	708.4	13.2
130°-140°	757.9	14.1
140°-150°	708.7	13.2
150°-160°	571.5	10.6
160°-170°	368.6	6.9
170°-180°	127.0	2.4
0°-30°	390.7	7.3
0°-40°	619.0	11.5
0°-60°	1022.6	19.0
0°-90°	1233.6	23.0
90°-120°	895.4	16.7
90°-150°	3070.4	57.2
90°-180°	4138.0	77.0
0°-180°	5371.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	531	530	525	529	528	50
15°	506	502	492	491	489	143
25°	458	450	434	427	423	211
35°	396	382	362	349	341	247
45°	323	307	283	264	256	249
55°	244	228	202	181	173	219
65°	166	148	123	106	100	164
75°	88	73	54	45	42	93
85°	22	14	13	12	12	25
90°	3	14	22	28	30	4
95°	55	23	22	28	29	71
105°	301	307	312	319	285	315
115°	562	565	564	566	566	553
125°	790	794	792	795	796	705
135°	980	980	983	985	987	755
145°	1130	1133	1134	1135	1136	706
155°	1240	1240	1238	1241	1238	571
165°	1308	1303	1303	1310	1302	369
175°	1338	1332	1333	1340	1330	127
180°	1338	1338	1338	1338	1338	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	533.6	533.2	533.0	532.7	532.4	531.8	531.1	530.3	529.4	528.7	529.4
5°	531.4	531.1	530.7	530.4	529.9	529.3	528.1	527.1	526.0	525.0	525.8
7.5°	526.6	526.2	525.9	525.5	525.1	524.2	522.8	521.3	520.0	518.6	519.1
10°	522.0	521.6	521.2	520.7	520.2	519.2	517.5	515.9	514.3	512.7	513.1
12.5°	516.2	515.7	515.1	514.6	514.1	512.9	510.9	509.0	507.1	505.1	505.4
15°	506.2	505.3	504.5	503.7	502.9	501.4	499.1	496.8	494.6	492.3	492.1
17.5°	494.0	492.8	491.6	490.5	489.3	487.3	484.7	481.9	479.2	476.5	476.0
20°	484.6	483.4	482.2	481.0	479.8	477.8	474.7	471.6	468.5	465.4	464.7
22.5°	474.2	472.8	471.5	470.2	468.8	466.5	463.2	459.9	456.7	453.3	452.3
25°	457.7	456.1	454.4	452.8	451.2	448.5	444.8	441.1	437.3	433.6	432.0
27.5°	440.4	438.3	436.3	434.3	432.2	429.2	425.2	421.3	417.3	413.4	411.4
30°	428.3	426.0	423.8	421.5	419.3	416.0	411.7	407.5	403.2	399.0	396.7
32.5°	415.6	413.0	410.5	407.9	405.4	401.9	397.5	393.1	388.7	384.4	381.7
35°	395.7	392.8	389.9	387.0	384.1	380.4	375.9	371.3	366.9	362.3	359.2
37.5°	374.4	371.4	368.5	365.5	362.5	358.5	353.4	348.4	343.5	338.5	335.0
40°	359.5	356.5	353.4	350.5	347.5	343.5	338.3	333.1	328.0	322.8	319.0
42.5°	345.1	342.0	338.8	335.7	332.6	328.3	323.0	317.5	312.2	306.8	302.9
45°	322.8	319.4	316.1	312.7	309.4	305.0	299.5	294.1	288.7	283.3	278.8
47.5°	299.7	296.3	292.8	289.3	285.9	281.3	275.7	270.0	264.3	258.7	254.1
50°	284.0	280.5	277.0	273.5	269.9	265.3	259.5	253.7	247.9	242.1	237.5
52.5°	268.1	264.6	261.1	257.7	254.3	249.5	243.6	237.6	231.7	225.8	221.2
55°	244.5	240.9	237.3	233.7	230.1	225.2	219.4	213.5	207.6	201.7	197.0
57.5°	221.2	217.4	213.7	209.9	206.1	201.4	195.5	189.8	184.0	178.1	173.4
60°	204.6	201.0	197.3	193.7	190.1	185.4	179.6	173.7	168.0	162.2	157.5
62.5°	189.6	185.8	182.0	178.3	174.5	169.7	163.8	157.8	151.9	145.9	141.5
65°	166.3	162.4	158.5	154.6	150.7	145.9	140.1	134.2	128.5	122.7	118.8
67.5°	142.1	138.4	134.6	130.9	127.2	122.6	117.2	111.8	106.4	101.1	97.7
70°	126.7	123.0	119.2	115.4	111.5	107.0	101.9	96.7	91.5	86.4	83.4
72.5°	110.5	107.0	103.6	100.1	96.7	92.6	87.6	82.7	77.9	73.0	70.5
75°	88.4	85.1	81.7	78.4	75.0	71.2	67.0	62.7	58.5	54.2	52.1
77.5°	66.1	63.3	60.4	57.6	54.8	51.6	48.1	44.7	41.2	37.8	36.6
80°	51.7	49.2	46.5	43.9	41.2	38.6	35.9	33.1	30.4	27.7	27.5
82.5°	39.3	36.9	34.5	32.1	29.7	27.7	26.2	24.6	23.1	21.5	21.4
85°	22.0	20.2	18.4	16.5	14.7	13.7	13.4	13.2	12.9	12.7	12.5
87.5°	8.1	8.0	7.9	7.8	7.7	7.8	8.1	8.4	8.7	9.0	9.1
90°	3.0	5.4	7.9	10.3	12.7	14.9	16.7	18.4	20.2	22.0	23.3
92.5°	12.6	12.7	12.9	13.0	13.2	14.1	15.8	17.7	19.5	21.2	22.6
95°	55.0	47.4	39.9	32.4	24.8	21.1	21.4	21.5	21.8	22.0	23.3
97.5°	116.8	121.6	126.3	131.0	135.7	125.6	100.8	76.0	51.2	26.4	26.5
100°	164.1	168.1	172.1	176.1	180.1	166.8	136.0	105.4	74.7	44.0	40.2
102.5°	216.9	219.8	222.7	225.7	228.6	228.1	224.1	220.1	216.1	212.1	171.3
105°	301.1	302.5	303.8	305.1	306.4	307.7	308.8	309.9	311.0	312.1	314.2
107.5°	379.4	380.0	380.7	381.3	382.0	383.1	384.6	386.2	387.6	389.2	390.1
110°	432.2	432.8	433.5	434.2	434.9	435.8	437.2	438.5	439.9	441.2	441.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	483.5	484.7	485.8	487.0	488.2	489.1	489.7	490.3	491.0	491.6	491.5
115°	562.2	562.9	563.6	564.2	564.9	565.2	564.9	564.7	564.5	564.2	564.7
117.5°	633.3	634.1	635.1	635.9	636.8	637.5	638.0	638.5	639.0	639.5	639.4
120°	681.3	682.2	683.1	684.0	684.8	685.2	685.0	684.8	684.5	684.3	684.8
122.5°	726.1	726.7	727.2	727.7	728.2	728.7	729.0	729.3	729.6	730.0	730.2
125°	790.3	791.3	792.1	793.0	793.9	794.1	793.7	793.2	792.8	792.4	793.0
127.5°	851.2	851.4	851.6	851.9	852.0	852.6	853.7	854.7	855.7	856.8	856.6
130°	890.4	890.6	890.9	891.0	891.3	891.7	892.4	893.0	893.7	894.4	894.6
132.5°	926.4	926.8	927.2	927.6	928.0	928.7	929.4	930.3	931.2	932.0	932.2
135°	980.4	980.2	980.0	979.7	979.6	979.9	980.8	981.6	982.6	983.4	983.9
137.5°	1028.3	1028.4	1028.5	1028.6	1028.6	1029.2	1030.1	1031.1	1032.1	1033.0	1033.5
140°	1059.5	1059.9	1060.3	1060.8	1061.3	1061.7	1062.1	1062.6	1063.0	1063.5	1064.1
142.5°	1087.4	1088.3	1089.1	1089.9	1090.7	1091.2	1091.5	1091.7	1092.0	1092.3	1092.8
145°	1130.5	1131.2	1131.9	1132.5	1133.2	1133.5	1133.5	1133.5	1133.5	1133.5	1133.8
147.5°	1164.7	1166.0	1167.2	1168.5	1169.7	1170.2	1170.0	1169.8	1169.5	1169.3	1169.5
150°	1189.6	1190.4	1191.3	1192.2	1193.1	1193.4	1193.2	1193.0	1192.7	1192.5	1192.5
152.5°	1210.3	1211.1	1211.8	1212.5	1213.1	1213.3	1213.0	1212.5	1212.1	1211.8	1212.1
155°	1239.6	1239.8	1240.0	1240.2	1240.4	1240.2	1239.6	1238.9	1238.2	1237.5	1238.5
157.5°	1264.1	1264.0	1263.9	1263.8	1263.6	1263.2	1262.4	1261.7	1260.9	1260.2	1261.3
160°	1278.6	1277.9	1277.2	1276.6	1275.9	1275.5	1275.2	1275.0	1274.8	1274.5	1275.9
162.5°	1291.3	1290.6	1289.7	1288.8	1288.0	1287.5	1287.2	1287.0	1286.8	1286.6	1287.9
165°	1307.6	1306.5	1305.4	1304.2	1303.1	1302.6	1302.6	1302.6	1302.6	1302.6	1304.3
167.5°	1320.3	1319.2	1318.1	1316.9	1315.8	1315.1	1315.0	1314.8	1314.7	1314.6	1316.6
170°	1327.6	1326.3	1324.9	1323.6	1322.2	1321.7	1321.9	1322.2	1322.3	1322.6	1324.4
172.5°	1332.4	1331.0	1329.7	1328.4	1327.1	1326.5	1326.7	1327.0	1327.1	1327.4	1329.1
175°	1337.6	1336.3	1334.9	1333.6	1332.2	1331.7	1331.9	1332.1	1332.4	1332.6	1334.6
177.5°	1340.0	1338.8	1337.5	1336.3	1335.0	1334.6	1334.9	1335.2	1335.7	1336.0	1337.4
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	530.3	531.1	531.8	532.2	532.1	532.1	532.0	531.9
5°	526.8	527.6	528.6	528.9	528.7	528.6	528.3	528.1
7.5°	519.7	520.3	520.9	521.0	520.7	520.5	520.1	519.9
10°	513.4	513.8	514.1	514.1	513.8	513.4	513.1	512.7
12.5°	505.6	505.8	506.1	505.9	505.4	504.9	504.4	503.9
15°	492.0	491.8	491.5	491.2	490.5	489.9	489.3	488.6
17.5°	475.4	475.0	474.5	473.7	472.8	471.8	470.9	469.9
20°	464.0	463.2	462.5	461.6	460.4	459.2	458.1	456.8
22.5°	451.2	450.0	449.0	448.0	447.0	446.1	445.1	444.1
25°	430.5	429.0	427.5	426.3	425.3	424.4	423.5	422.6
27.5°	409.5	407.6	405.7	404.2	402.8	401.5	400.2	398.9
30°	394.4	392.2	389.9	388.1	386.6	385.2	383.7	382.3
32.5°	379.1	376.4	373.8	371.8	370.4	369.0	367.6	366.3
35°	356.1	353.1	350.0	347.7	346.0	344.4	342.8	341.1
37.5°	331.6	328.1	324.7	322.1	320.5	318.8	317.2	315.6
40°	315.1	311.3	307.5	304.9	303.2	301.6	300.0	298.3
42.5°	299.0	295.2	291.3	288.5	286.8	285.1	283.4	281.7
45°	274.4	269.9	265.4	262.4	260.8	259.2	257.5	256.0
47.5°	249.5	244.9	240.3	237.1	235.3	233.5	231.7	230.0
50°	233.0	228.5	223.9	220.8	219.1	217.4	215.7	214.0
52.5°	216.5	212.0	207.4	204.1	202.4	200.6	198.8	197.0
55°	192.3	187.6	182.9	179.7	178.0	176.2	174.5	172.8
57.5°	168.6	163.8	159.0	156.0	154.7	153.4	152.1	150.8
60°	152.7	148.1	143.4	140.3	138.8	137.4	136.0	134.5
62.5°	137.2	132.9	128.5	125.8	124.6	123.5	122.3	121.1
65°	114.9	111.0	107.1	104.6	103.5	102.5	101.3	100.2
67.5°	94.4	91.0	87.6	85.4	84.2	83.0	81.8	80.6
70°	80.4	77.4	74.5	72.5	71.5	70.7	69.7	68.9
72.5°	67.9	65.3	62.9	61.1	60.3	59.5	58.6	57.8
75°	50.0	48.0	45.9	44.6	44.0	43.5	43.0	42.4
77.5°	35.4	34.2	33.0	32.3	32.1	31.9	31.8	31.6
80°	27.2	26.9	26.6	26.4	26.3	26.3	26.2	26.1
82.5°	21.1	20.9	20.8	20.6	20.5	20.4	20.3	20.2
85°	12.3	12.1	11.9	11.8	11.8	11.8	11.8	11.8
87.5°	9.4	9.6	9.7	9.9	10.1	10.2	10.4	10.6
90°	24.7	26.0	27.4	28.2	28.7	29.1	29.5	30.0
92.5°	23.8	25.2	26.5	27.3	27.4	27.5	27.6	27.6
95°	24.7	26.0	27.4	28.2	28.3	28.6	28.8	29.0
97.5°	26.7	26.8	26.9	27.1	27.4	27.6	27.8	28.0
100°	36.4	32.7	28.9	27.1	27.4	27.6	27.8	28.0
102.5°	130.5	89.8	49.0	28.7	28.7	28.8	28.8	28.8
105°	316.2	318.1	320.1	317.1	309.1	301.1	293.2	285.2
107.5°	391.2	392.1	393.0	394.0	394.9	395.7	396.5	397.4
110°	442.1	442.6	443.0	443.5	444.2	444.9	445.6	446.2





TEST NUMBER: P332892-935

CATALOG NUMBER: S124RDIP-S350D1205U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	491.5	491.4	491.3	491.6	492.5	493.4	494.2	495.0
115°	565.2	565.6	566.0	566.3	566.3	566.3	566.3	566.3
117.5°	639.3	639.2	639.1	639.0	638.9	638.9	638.8	638.7
120°	685.2	685.6	686.0	686.0	685.6	685.2	684.8	684.3
122.5°	730.5	730.7	731.0	730.9	730.5	730.0	729.5	729.1
125°	793.7	794.4	795.0	795.5	795.7	795.9	796.2	796.3
127.5°	856.5	856.4	856.3	856.1	855.9	855.7	855.6	855.4
130°	894.8	895.1	895.3	895.4	895.4	895.4	895.4	895.4
132.5°	932.5	932.7	932.9	932.9	932.7	932.5	932.4	932.2
135°	984.3	984.7	985.2	985.7	986.1	986.5	987.0	987.4
137.5°	1034.1	1034.5	1035.0	1035.2	1035.1	1034.9	1034.7	1034.7
140°	1064.8	1065.5	1066.2	1066.6	1066.8	1067.0	1067.2	1067.5
142.5°	1093.3	1093.7	1094.2	1094.5	1094.6	1094.6	1094.7	1094.7
145°	1133.9	1134.2	1134.4	1134.7	1135.1	1135.6	1136.1	1136.5
147.5°	1169.7	1169.8	1170.0	1170.2	1170.4	1170.7	1170.9	1171.1
150°	1192.5	1192.5	1192.5	1192.7	1192.8	1193.1	1193.3	1193.5
152.5°	1212.5	1212.8	1213.1	1213.2	1213.1	1213.0	1212.9	1212.7
155°	1239.3	1240.2	1241.1	1241.2	1240.5	1239.8	1239.2	1238.5
157.5°	1262.5	1263.6	1264.8	1264.8	1263.6	1262.5	1261.3	1260.2
160°	1277.2	1278.6	1279.9	1279.9	1278.6	1277.2	1275.9	1274.5
162.5°	1289.3	1290.6	1291.9	1291.8	1290.3	1288.8	1287.3	1285.7
165°	1306.1	1307.9	1309.7	1309.6	1307.6	1305.5	1303.6	1301.6
167.5°	1318.5	1320.4	1322.4	1322.2	1320.1	1317.8	1315.6	1313.4
170°	1326.1	1327.9	1329.7	1329.5	1327.2	1325.0	1322.8	1320.6
172.5°	1330.9	1332.7	1334.5	1334.2	1331.8	1329.4	1327.0	1324.6
175°	1336.6	1338.6	1340.6	1340.2	1337.6	1334.9	1332.2	1329.6
177.5°	1338.9	1340.2	1341.7	1341.4	1339.2	1337.0	1334.9	1332.8
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6

(END OF REPORT)