

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: P333440-930

Luminaire Tested: **S125DIW-S1090D770U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333440-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S1090D770U930-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6124.4 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse

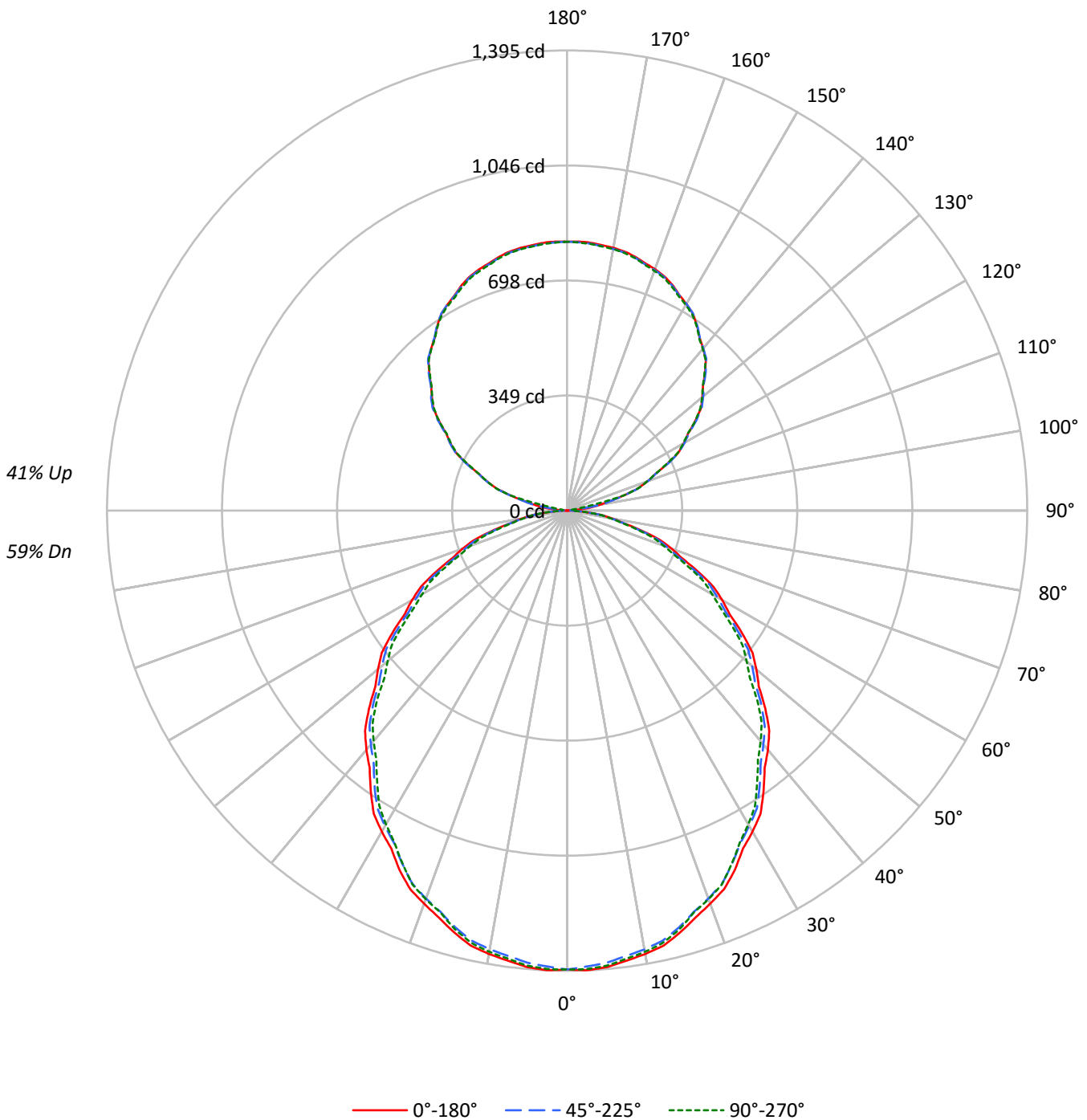
Input Watts (W): 53.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59																				
1	100	95	91	88	93	89	86	83	77	75	73	67	65	63	57	56	54	50																				
2	91	83	77	72	84	78	72	68	68	64	60	59	55	53	50	48	46	42																				
3	83	73	66	60	77	69	62	57	60	55	50	52	48	45	44	41	39	35																				
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	33	30																				
5	70	58	49	43	65	54	47	41	48	42	37	41	37	33	36	32	29	26																				
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	29	26	23																				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20																				
8	55	43	35	29	51	40	33	28	36	30	25	31	26	23	27	23	20	18																				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	16																				
10	48	36	28	24	45	34	27	23	30	24	21	27	22	19	23	20	17	15																				

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

	0°	45°	90°
0°	8985	8985	8985
5°	9005	8919	8976
10°	8950	8857	8907
15°	8852	8750	8787
20°	8715	8601	8616
25°	8565	8424	8416
30°	8380	8232	8192
35°	8183	8027	7914
40°	7981	7804	7692
45°	7761	7600	7448
50°	7519	7354	7133
55°	7287	7076	6877
60°	7009	6795	6554
65°	6677	6460	6240
70°	6360	6069	5861
75°	5794	5602	5410
80°	5159	5077	4950
85°	4483	4565	4320



TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.2	2.1
10°-20°	370.5	6.1
20°-30°	547.1	8.9
30°-40°	638.4	10.4
40°-50°	641.2	10.5
50°-60°	562.8	9.2
60°-70°	419.4	6.8
70°-80°	239.8	3.9
80°-90°	71.5	1.2
90°-100°	29.6	0.5
100°-110°	182.5	3.0
110°-120°	331.0	5.4
120°-130°	424.8	6.9
130°-140°	456.9	7.5
140°-150°	428.9	7.0
150°-160°	346.9	5.7
160°-170°	224.4	3.7
170°-180°	77.4	1.3
0°-30°	1048.8	17.1
0°-40°	1687.2	27.5
0°-60°	2891.2	47.2
0°-90°	3621.8	59.1
90°-120°	543.2	8.9
90°-150°	1853.8	30.3
90°-180°	2503.0	40.9
0°-180°	6124.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1389	1386	1376	1385	1385	132
15°	1324	1320	1309	1314	1314	373
25°	1202	1196	1182	1184	1181	553
35°	1038	1033	1018	1012	1004	649
45°	850	845	832	819	816	655
55°	647	643	628	619	611	578
65°	437	434	423	413	408	433
75°	232	230	224	221	217	248
85°	60	62	62	60	58	68
90°	1	5	10	13	14	5
95°	34	32	10	12	13	44
105°	178	180	180	180	179	188
115°	334	336	337	335	331	330
125°	474	478	478	476	474	423
135°	591	595	594	592	589	456
145°	686	687	687	687	684	429
155°	755	752	753	754	750	348
165°	797	793	794	797	793	225
175°	815	812	812	816	811	78
180°	815	815	815	815	815	



TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2
2.5°	1394.7	1394.2	1393.5	1392.9	1392.4	1391.1	1389.1	1387.2	1385.2	1383.2	1385.2
5°	1389.0	1388.5	1388.0	1387.6	1387.1	1385.6	1383.2	1380.7	1378.3	1375.8	1378.0
7.5°	1376.2	1375.7	1375.2	1374.8	1374.3	1372.6	1369.9	1367.3	1364.6	1361.9	1364.1
10°	1364.8	1364.3	1363.8	1363.3	1362.9	1361.2	1358.5	1355.8	1353.2	1350.5	1352.4
12.5°	1350.7	1349.8	1348.9	1348.0	1347.2	1345.5	1343.0	1340.5	1338.0	1335.5	1337.1
15°	1324.0	1323.3	1322.6	1321.8	1321.1	1319.4	1316.7	1314.0	1311.3	1308.6	1309.9
17.5°	1293.5	1292.4	1291.3	1290.2	1289.2	1287.2	1284.4	1281.7	1278.9	1276.0	1277.6
20°	1268.0	1267.5	1267.0	1266.5	1266.0	1264.1	1260.9	1257.8	1254.6	1251.4	1253.1
22.5°	1242.4	1241.5	1240.6	1239.7	1238.8	1236.9	1234.0	1230.9	1228.0	1225.0	1226.1
25°	1201.9	1200.7	1199.5	1198.2	1197.0	1194.8	1191.6	1188.5	1185.3	1182.1	1182.6
27.5°	1154.5	1153.8	1153.1	1152.3	1151.6	1149.7	1146.3	1143.0	1139.8	1136.5	1136.6
30°	1123.7	1123.0	1122.3	1121.5	1120.8	1118.6	1114.9	1111.3	1107.6	1103.9	1103.4
32.5°	1090.3	1089.2	1088.0	1086.9	1085.8	1083.6	1080.3	1077.0	1073.7	1070.5	1069.6
35°	1037.9	1036.9	1035.9	1034.9	1034.0	1031.8	1028.3	1024.9	1021.5	1018.1	1016.8
37.5°	983.5	982.3	981.0	979.8	978.6	976.4	973.1	970.0	966.7	963.5	961.6
40°	946.6	945.3	944.1	942.9	941.7	939.3	935.9	932.5	929.0	925.6	923.4
42.5°	906.9	905.9	904.9	903.8	902.8	900.6	897.2	893.7	890.3	886.9	884.8
45°	849.7	848.7	847.7	846.8	845.8	843.8	840.9	838.0	835.0	832.1	829.2
47.5°	788.1	788.1	788.1	788.2	788.2	786.5	783.0	779.4	775.9	772.4	769.4
50°	748.4	747.7	747.0	746.2	745.5	743.6	740.7	737.8	734.8	731.9	728.7
52.5°	707.9	707.4	706.9	706.3	705.8	703.9	700.8	697.7	694.6	691.4	688.6
55°	647.2	646.5	645.7	645.0	644.2	642.1	638.7	635.3	631.9	628.4	626.2
57.5°	583.1	582.7	582.4	582.0	581.6	579.9	577.0	574.1	571.3	568.3	565.5
60°	542.6	541.6	540.6	539.6	538.7	536.9	534.2	531.5	528.8	526.1	523.7
62.5°	500.3	499.5	498.8	498.0	497.3	495.7	493.3	491.1	488.8	486.5	483.8
65°	436.9	436.4	435.9	435.5	435.0	433.4	430.7	428.0	425.3	422.7	420.4
67.5°	375.5	374.5	373.5	372.4	371.5	369.9	367.9	365.9	363.9	361.9	360.0
70°	336.8	335.6	334.4	333.1	331.9	330.2	328.0	325.8	323.6	321.4	319.9
72.5°	294.6	293.7	292.9	292.0	291.2	290.1	288.7	287.2	285.8	284.4	282.7
75°	232.2	231.7	231.2	230.7	230.2	229.4	228.2	227.0	225.8	224.5	223.8
77.5°	174.8	174.6	174.4	174.2	174.0	173.6	172.8	172.2	171.5	170.8	170.4
80°	138.7	138.7	138.7	138.7	138.7	138.4	137.9	137.5	137.0	136.5	136.2
82.5°	107.0	106.6	106.2	105.8	105.4	105.2	105.1	105.0	104.8	104.8	104.4
85°	60.5	60.7	61.0	61.2	61.5	61.6	61.6	61.6	61.6	61.6	61.4
87.5°	23.9	24.1	24.3	24.5	24.8	24.9	24.9	24.9	24.9	24.9	24.9
90°	0.6	1.7	2.8	3.8	4.9	5.9	6.8	7.8	8.7	9.7	10.4
92.5°	9.3	8.6	7.8	7.0	6.3	6.4	7.2	8.0	8.8	9.7	10.4
95°	34.4	34.0	33.6	33.3	32.9	30.1	24.9	19.9	14.8	9.7	10.4
97.5°	71.9	72.6	73.4	74.0	74.8	70.1	60.0	49.9	39.8	29.8	25.9
100°	100.9	101.3	101.7	102.1	102.5	103.0	103.5	104.0	104.6	105.1	85.1
102.5°	130.4	130.9	131.4	131.9	132.4	132.8	133.1	133.5	133.8	134.1	130.4
105°	177.6	178.1	178.7	179.2	179.8	180.0	180.0	180.0	180.0	180.0	180.0
107.5°	226.7	226.7	226.7	226.7	226.7	226.8	227.1	227.3	227.6	227.9	227.9
110°	258.5	258.5	258.5	258.5	258.5	258.7	258.9	259.3	259.5	259.8	259.3



TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.5	288.9	289.2	289.5	289.8	290.1	290.2	290.4	290.6	290.7	290.2
115°	333.5	334.1	334.8	335.5	336.1	336.6	336.7	336.8	337.0	337.1	336.6
117.5°	380.0	379.9	379.9	379.9	379.8	380.1	380.7	381.2	381.6	382.1	381.5
120°	409.0	408.9	408.7	408.5	408.5	408.5	409.0	409.4	409.8	410.2	409.9
122.5°	434.6	435.1	435.6	436.1	436.7	437.0	437.2	437.3	437.6	437.7	437.5
125°	474.3	475.2	476.1	477.0	478.0	478.4	478.4	478.4	478.4	478.4	477.9
127.5°	512.0	512.7	513.4	514.0	514.7	515.0	514.9	514.9	514.8	514.7	514.4
130°	535.2	535.9	536.5	537.3	537.9	538.3	538.4	538.6	538.7	538.8	538.4
132.5°	558.4	559.2	560.0	560.8	561.6	561.8	561.5	561.2	560.9	560.6	560.5
135°	591.4	592.2	593.0	593.9	594.7	594.9	594.7	594.4	594.1	593.9	593.5
137.5°	621.7	622.5	623.1	623.9	624.5	624.8	624.5	624.3	624.0	623.8	623.9
140°	641.6	641.8	642.1	642.4	642.6	642.7	642.5	642.5	642.3	642.1	642.5
142.5°	659.4	659.6	659.7	659.9	660.1	660.2	660.5	660.6	660.8	661.0	661.0
145°	685.7	685.9	686.2	686.5	686.7	686.9	686.9	686.9	686.9	686.9	687.0
147.5°	708.7	708.6	708.5	708.5	708.4	708.5	708.7	708.7	708.9	709.1	709.2
150°	723.1	722.8	722.6	722.3	722.0	722.0	722.3	722.6	722.8	723.1	723.4
152.5°	737.1	736.5	736.0	735.4	734.7	734.6	734.9	735.2	735.4	735.6	736.0
155°	755.1	754.3	753.5	752.7	752.0	751.6	752.0	752.2	752.4	752.7	753.1
157.5°	769.0	768.6	768.1	767.6	767.1	766.9	766.9	767.0	767.0	767.0	767.4
160°	778.7	777.9	777.1	776.2	775.5	775.1	775.3	775.4	775.5	775.7	776.2
162.5°	786.4	785.6	784.8	784.0	783.2	782.9	783.0	783.2	783.3	783.4	784.2
165°	796.8	796.0	795.2	794.4	793.6	793.3	793.4	793.5	793.7	793.8	794.6
167.5°	804.5	803.7	802.9	802.1	801.2	800.9	801.0	801.1	801.3	801.4	802.3
170°	808.9	808.0	807.0	806.1	805.1	804.7	804.9	805.0	805.1	805.3	806.3
172.5°	811.8	810.9	809.9	808.9	808.0	807.7	808.0	808.2	808.5	808.7	809.6
175°	815.0	814.2	813.3	812.5	811.7	811.4	811.5	811.6	811.8	812.0	813.0
177.5°	816.4	815.7	815.1	814.5	813.8	813.5	813.7	813.8	813.8	814.0	814.7
180°	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0



TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2	1391.2
2.5°	1387.2	1389.1	1391.1	1392.0	1391.8	1391.6	1391.4	1391.2
5°	1380.2	1382.4	1384.6	1385.6	1385.4	1385.1	1384.9	1384.6
7.5°	1366.2	1368.4	1370.5	1371.5	1371.3	1371.0	1370.8	1370.5
10°	1354.4	1356.3	1358.3	1359.2	1358.9	1358.7	1358.5	1358.2
12.5°	1338.6	1340.2	1341.7	1342.6	1342.5	1342.4	1342.4	1342.3
15°	1311.1	1312.3	1313.5	1314.2	1314.2	1314.2	1314.2	1314.2
17.5°	1279.1	1280.6	1282.1	1282.3	1281.1	1279.9	1278.6	1277.4
20°	1254.8	1256.5	1258.3	1258.5	1257.3	1256.1	1254.8	1253.6
22.5°	1227.3	1228.4	1229.5	1229.6	1228.8	1228.0	1227.2	1226.3
25°	1183.1	1183.6	1184.1	1183.9	1183.2	1182.4	1181.7	1181.0
27.5°	1136.7	1136.8	1136.9	1136.6	1135.9	1135.1	1134.4	1133.7
30°	1102.9	1102.4	1102.0	1101.4	1100.7	1099.9	1099.2	1098.5
32.5°	1068.7	1067.8	1067.0	1065.8	1064.5	1063.2	1061.8	1060.5
35°	1015.6	1014.4	1013.2	1011.6	1009.7	1007.7	1005.8	1003.8
37.5°	959.9	958.1	956.3	954.8	953.7	952.5	951.4	950.3
40°	921.2	919.0	916.8	915.3	914.6	913.9	913.1	912.4
42.5°	882.9	880.8	878.9	877.3	876.2	875.1	873.9	872.8
45°	826.2	823.3	820.4	818.5	817.7	817.0	816.3	815.5
47.5°	766.5	763.4	760.5	758.1	756.4	754.7	753.0	751.3
50°	725.5	722.4	719.2	716.7	715.0	713.3	711.6	709.9
52.5°	685.8	683.1	680.3	677.9	676.0	674.1	672.2	670.3
55°	624.0	621.8	619.6	617.7	616.0	614.2	612.5	610.8
57.5°	562.7	559.9	557.0	555.1	554.2	553.3	552.4	551.4
60°	521.2	518.8	516.3	514.2	512.5	510.8	509.1	507.4
62.5°	481.2	478.6	475.9	473.9	472.6	471.3	469.9	468.6
65°	418.2	416.0	413.8	412.2	411.2	410.3	409.3	408.3
67.5°	358.2	356.3	354.4	353.2	352.6	352.0	351.5	350.9
70°	318.5	317.0	315.5	314.3	313.3	312.3	311.4	310.4
72.5°	281.1	279.4	277.8	276.5	275.5	274.5	273.5	272.6
75°	223.1	222.3	221.6	220.7	219.7	218.7	217.8	216.8
77.5°	169.9	169.5	169.1	168.5	167.8	167.1	166.4	165.8
80°	136.0	135.7	135.5	135.1	134.6	134.1	133.6	133.1
82.5°	103.9	103.5	103.1	102.7	102.6	102.6	102.5	102.3
85°	61.1	60.9	60.7	60.3	59.8	59.3	58.8	58.3
87.5°	25.1	25.2	25.4	25.3	24.9	24.6	24.4	24.1
90°	11.0	11.7	12.3	12.9	13.3	13.7	14.1	14.5
92.5°	11.0	11.7	12.3	12.8	13.0	13.1	13.4	13.5
95°	11.0	11.7	12.3	12.7	12.7	12.7	12.7	12.7
97.5°	22.2	18.3	14.6	12.7	12.7	12.7	12.7	12.7
100°	65.1	45.1	25.1	14.8	14.3	13.8	13.2	12.7
102.5°	126.5	122.8	119.0	112.5	103.4	94.2	85.1	76.0
105°	180.0	180.0	180.0	179.9	179.9	179.7	179.5	179.4
107.5°	228.0	228.0	228.0	227.8	227.4	227.0	226.6	226.2
110°	258.9	258.5	258.1	258.0	258.1	258.3	258.4	258.5





TEST NUMBER: P333440-930

CATALOG NUMBER: S125DIW-S1090D770U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	289.7	289.2	288.6	288.3	288.1	288.0	287.7	287.6
115°	336.0	335.5	334.9	334.3	333.5	332.6	331.8	331.0
117.5°	380.7	380.1	379.4	378.9	378.5	378.1	377.8	377.5
120°	409.7	409.4	409.1	408.6	408.0	407.3	406.7	405.9
122.5°	437.2	436.9	436.7	436.1	435.4	434.6	433.8	433.0
125°	477.4	476.9	476.3	475.8	475.4	475.0	474.7	474.3
127.5°	514.1	513.8	513.6	512.9	511.8	510.9	509.9	508.9
130°	538.1	537.7	537.3	536.7	536.1	535.4	534.7	534.0
132.5°	560.4	560.4	560.3	559.9	559.2	558.6	557.9	557.3
135°	593.3	593.0	592.8	592.2	591.4	590.6	589.8	589.0
137.5°	623.9	623.9	624.0	623.7	623.0	622.3	621.6	620.9
140°	642.7	642.9	643.3	642.9	642.1	641.4	640.6	639.8
142.5°	661.1	661.2	661.2	660.9	660.1	659.3	658.4	657.6
145°	687.1	687.3	687.4	687.1	686.2	685.4	684.7	683.9
147.5°	709.4	709.6	709.7	709.3	708.4	707.4	706.5	705.5
150°	723.7	723.9	724.2	723.8	722.7	721.6	720.6	719.5
152.5°	736.2	736.5	736.8	736.4	735.4	734.5	733.5	732.5
155°	753.5	753.9	754.3	754.0	752.9	751.9	750.8	749.7
157.5°	767.8	768.3	768.7	768.3	767.3	766.2	765.2	764.1
160°	776.7	777.3	777.8	777.6	776.5	775.4	774.4	773.2
162.5°	784.9	785.6	786.4	786.2	785.1	783.8	782.7	781.5
165°	795.4	796.2	797.0	796.9	795.8	794.8	793.7	792.6
167.5°	803.3	804.3	805.3	805.2	804.0	802.7	801.5	800.3
170°	807.4	808.5	809.6	809.5	808.3	807.1	805.8	804.7
172.5°	810.6	811.5	812.5	812.4	811.2	810.0	808.8	807.6
175°	814.1	815.1	816.2	816.1	815.0	813.8	812.5	811.3
177.5°	815.5	816.2	817.0	816.9	816.0	815.2	814.3	813.5
180°	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0

(END OF REPORT)