

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: P333438-940

Luminaire Tested: **S125DIW-S1090D770U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333438-940  
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-S1090D770U940-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6542.0 lumens  
Efficiency: N/A  
Efficacy: 122.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

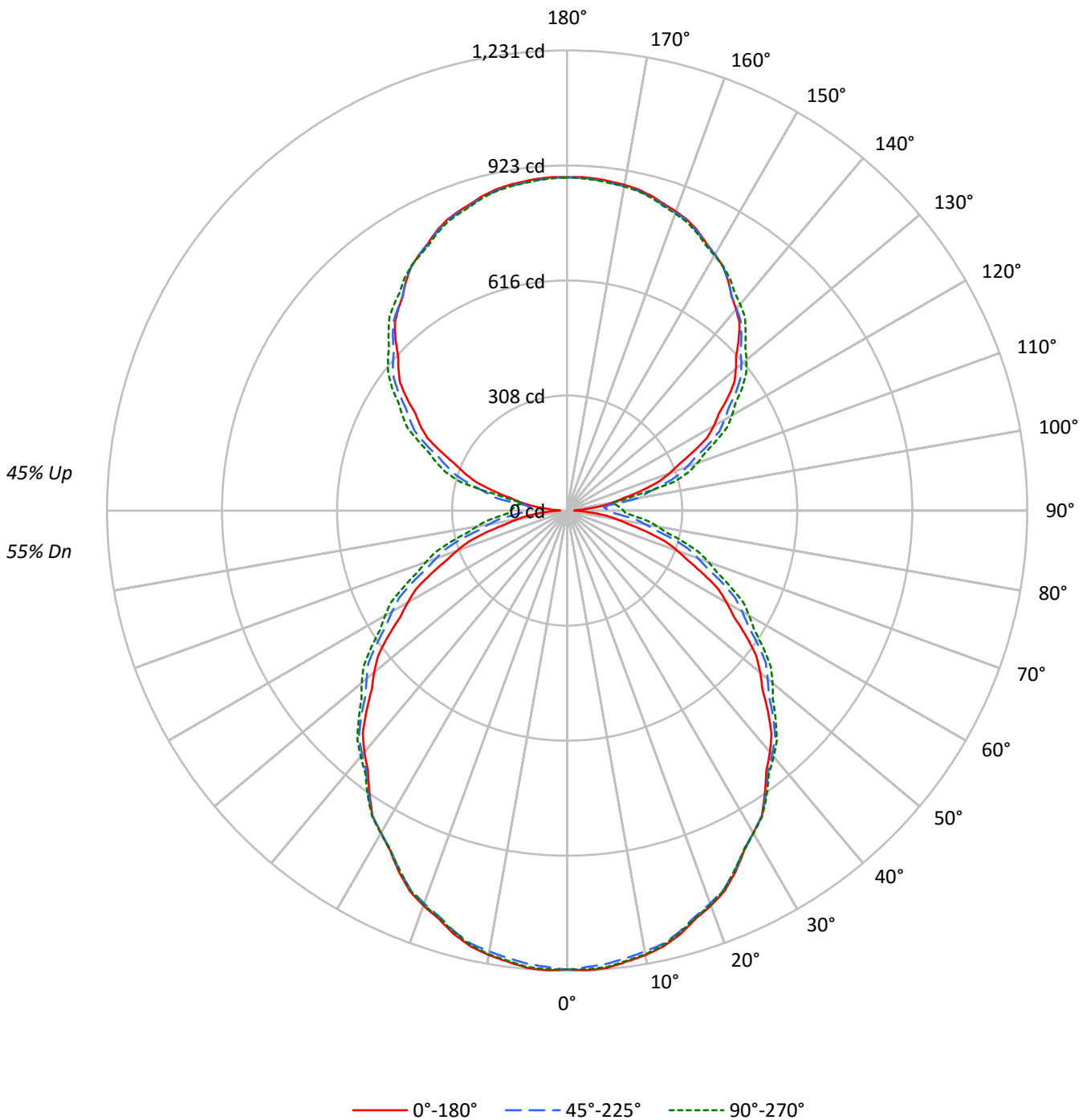
Input Watts (W): 53.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-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	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60	55
1	98	93	89	85	91	87	83	80	74	71	69	63	61	59	52	51	49	44
2	89	81	74	69	82	75	70	65	64	60	56	55	51	49	45	43	41	36
3	81	71	63	57	75	66	59	54	57	51	47	48	44	41	40	37	35	31
4	74	63	54	48	68	58	51	45	50	44	40	43	38	35	36	32	30	26
5	68	56	47	41	63	52	44	39	45	39	34	38	34	30	32	28	26	22
6	62	50	42	36	58	47	39	34	40	34	30	34	30	26	29	25	22	20
7	58	45	37	31	53	42	35	29	37	31	26	31	27	23	26	23	20	17
8	54	41	33	27	50	38	31	26	33	27	23	29	24	21	24	21	18	15
9	50	37	30	24	46	35	28	23	31	25	21	26	22	18	22	19	16	14
10	47	34	27	22	43	32	25	21	28	23	19	24	20	17	21	17	15	13

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

	0°	45°	90°
0°	7930	7930	7930
5°	7946	7783	7808
10°	7889	7644	7633
15°	7796	7478	7410
20°	7670	7273	7188
25°	7518	7053	6912
30°	7336	6810	6664
35°	7165	6588	6435
40°	6992	6353	6205
45°	6796	6152	6001
50°	6609	5935	5821
55°	6384	5729	5609
60°	6137	5495	5392
65°	5882	5250	5150
70°	5590	4914	4900
75°	5128	4592	4592
80°	4524	4201	4257
85°	3962	3938	4152



TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.1	1.8
10°-20°	329.6	5.0
20°-30°	490.2	7.5
30°-40°	580.6	8.9
40°-50°	600.3	9.2
50°-60°	553.0	8.5
60°-70°	447.0	6.8
70°-80°	299.4	4.6
80°-90°	157.1	2.4
90°-100°	119.5	1.8
100°-110°	263.9	4.0
110°-120°	405.1	6.2
120°-130°	489.1	7.5
130°-140°	510.4	7.8
140°-150°	471.3	7.2
150°-160°	379.5	5.8
160°-170°	245.4	3.8
170°-180°	84.6	1.3
0°-30°	935.9	14.3
0°-40°	1516.5	23.2
0°-60°	2669.7	40.8
0°-90°	3573.2	54.6
90°-120°	788.5	12.1
90°-150°	2259.3	34.5
90°-180°	2969.0	45.4
0°-180°	6542.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1228	1225	1217	1226	1226	116
15°	1172	1173	1165	1172	1168	330
25°	1065	1068	1062	1066	1060	490
35°	922	930	927	930	930	577
45°	760	772	779	787	788	586
55°	584	603	622	635	640	522
65°	402	430	459	476	482	399
75°	222	253	291	314	321	235
85°	66	106	148	174	184	71
90°	20	64	109	139	151	14
95°	53	82	98	127	137	60
105°	205	228	263	286	295	217
115°	372	385	416	434	438	369
125°	524	528	551	567	572	467
135°	649	652	659	673	676	500
145°	751	751	751	758	759	469
155°	826	822	823	825	820	380
165°	872	868	868	872	867	246
175°	891	888	888	893	887	85
180°	891	891	891	891	891	



TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1230.7	1230.3	1229.8	1229.5	1229.0	1228.1	1226.5	1225.0	1223.6	1222.1	1223.6
5°	1227.9	1227.4	1226.8	1226.3	1225.7	1224.5	1222.6	1220.8	1218.9	1217.0	1219.1
7.5°	1217.0	1216.8	1216.6	1216.4	1216.2	1215.1	1213.2	1211.2	1209.3	1207.4	1209.2
10°	1207.4	1207.4	1207.4	1207.4	1207.4	1206.3	1204.2	1202.0	1199.9	1197.7	1199.6
12.5°	1193.9	1194.1	1194.4	1194.5	1194.8	1194.0	1192.3	1190.6	1188.9	1187.1	1188.7
15°	1172.5	1172.8	1173.0	1173.3	1173.6	1172.8	1170.9	1169.0	1167.2	1165.3	1166.9
17.5°	1144.5	1145.0	1145.6	1146.1	1146.7	1146.0	1144.2	1142.3	1140.4	1138.5	1139.8
20°	1124.4	1124.9	1125.4	1126.0	1126.5	1125.8	1123.9	1122.0	1120.2	1118.3	1119.1
22.5°	1101.2	1102.2	1103.1	1104.1	1105.1	1104.5	1102.4	1100.4	1098.2	1096.2	1097.2
25°	1065.3	1066.1	1066.9	1067.7	1068.5	1068.2	1066.6	1065.0	1063.4	1061.8	1062.8
27.5°	1025.4	1026.5	1027.7	1028.9	1030.1	1029.7	1028.0	1026.1	1024.3	1022.5	1023.2
30°	995.5	997.1	998.7	1000.3	1001.9	1001.9	1000.3	998.7	997.1	995.5	996.0
32.5°	968.6	969.9	971.3	972.8	974.1	974.2	973.0	971.9	970.7	969.6	970.1
35°	922.1	924.0	925.9	927.7	929.6	930.1	929.3	928.5	927.7	926.9	927.7
37.5°	875.7	877.4	879.0	880.7	882.4	883.2	883.0	882.7	882.4	882.2	883.2
40°	843.8	846.0	848.1	850.2	852.4	853.4	853.1	852.8	852.6	852.3	853.4
42.5°	809.1	812.0	814.8	817.5	820.3	822.0	822.6	823.1	823.8	824.4	825.6
45°	759.6	762.5	765.4	768.4	771.3	773.5	774.8	776.1	777.5	778.8	780.7
47.5°	708.8	711.5	714.3	716.9	719.7	722.2	724.5	726.8	729.2	731.4	734.1
50°	674.1	677.1	680.0	683.0	685.9	688.8	691.8	694.7	697.7	700.6	703.6
52.5°	637.5	641.1	644.7	648.3	651.8	655.4	659.1	662.6	666.2	669.8	673.0
55°	583.8	588.1	592.4	596.6	600.9	605.2	609.5	613.8	618.0	622.3	625.3
57.5°	529.0	534.0	539.2	544.4	549.5	554.6	559.5	564.4	569.3	574.2	577.6
60°	492.3	497.7	503.0	508.4	513.7	519.1	524.4	529.8	535.1	540.5	544.5
62.5°	456.7	462.1	467.4	472.8	478.1	483.7	489.5	495.3	501.1	506.8	511.2
65°	402.1	408.2	414.4	420.5	426.7	432.9	439.3	445.8	452.2	458.6	462.6
67.5°	350.5	356.5	362.4	368.4	374.3	380.5	387.1	393.6	400.1	406.6	411.5
70°	313.0	319.1	325.3	331.4	337.6	344.1	351.1	358.0	365.0	371.9	377.0
72.5°	276.4	282.8	289.1	295.5	301.8	308.8	316.5	324.0	331.6	339.2	344.7
75°	221.5	228.5	235.4	242.4	249.3	257.1	265.6	274.2	282.8	291.3	296.7
77.5°	168.8	176.8	184.9	192.9	200.9	209.0	217.2	225.5	233.7	241.9	247.8
80°	136.0	144.0	152.0	160.1	168.1	176.6	185.7	194.8	203.9	213.0	218.9
82.5°	106.2	114.6	123.1	131.5	140.0	148.8	158.2	167.5	176.8	186.1	191.8
85°	66.2	75.0	83.8	92.6	101.5	110.6	119.9	129.3	138.7	148.0	153.9
87.5°	37.7	46.5	55.3	64.1	72.9	81.9	91.2	100.5	109.9	119.1	125.5
90°	19.9	29.7	39.4	49.1	58.9	68.8	78.9	89.0	99.2	109.3	116.2
92.5°	27.6	34.6	41.7	48.8	55.9	64.6	74.8	85.0	95.2	105.4	112.1
95°	53.3	59.8	66.3	72.9	79.4	84.4	87.9	91.4	95.0	98.4	105.0
97.5°	92.8	99.9	106.9	114.0	121.0	123.4	121.2	118.9	116.6	114.4	115.8
100°	123.6	129.7	135.7	141.8	147.8	155.4	164.6	173.7	182.9	192.0	175.8
102.5°	154.9	160.6	166.4	172.1	177.9	185.1	193.8	202.5	211.2	219.9	221.1
105°	205.1	210.0	214.8	219.7	224.5	231.0	239.1	247.1	255.1	263.1	268.5
107.5°	257.3	260.9	264.6	268.2	271.9	277.7	285.7	293.6	301.7	309.7	315.0
110°	291.2	294.4	297.7	300.9	304.1	309.5	317.4	325.1	332.9	340.7	345.4



TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	324.0	326.9	329.8	332.8	335.6	340.9	348.3	355.8	363.2	370.7	375.0
115°	371.9	374.5	377.2	379.8	382.4	387.2	394.3	401.4	408.5	415.6	419.8
117.5°	421.6	422.8	424.0	425.3	426.4	430.6	437.7	444.9	452.0	459.1	462.9
120°	453.3	454.0	454.7	455.3	455.9	459.6	466.2	472.8	479.4	486.0	490.2
122.5°	480.4	481.3	482.2	483.2	484.1	487.7	493.8	500.0	506.0	512.2	516.3
125°	523.5	524.2	525.0	525.8	526.6	529.6	534.9	540.3	545.6	551.0	554.6
127.5°	563.7	564.1	564.5	565.1	565.5	567.9	572.2	576.5	580.8	585.1	588.7
130°	589.0	589.5	590.0	590.4	590.8	593.1	596.9	600.8	604.8	608.6	611.9
132.5°	613.4	614.2	615.0	615.8	616.6	618.3	620.9	623.4	626.0	628.6	632.2
135°	649.3	649.9	650.5	651.1	651.8	652.8	654.4	655.9	657.5	659.2	662.3
137.5°	682.2	682.7	683.3	683.9	684.4	685.0	685.6	686.3	686.9	687.6	690.8
140°	702.9	703.2	703.5	703.7	704.1	704.3	704.4	704.5	704.6	704.7	708.0
142.5°	722.5	722.4	722.4	722.4	722.3	722.4	722.6	722.9	723.2	723.4	726.0
145°	751.1	751.2	751.2	751.2	751.3	751.3	751.3	751.3	751.3	751.3	752.7
147.5°	775.1	775.0	774.9	774.9	774.8	774.9	775.1	775.2	775.3	775.5	776.1
150°	790.9	790.6	790.3	790.0	789.7	789.7	790.0	790.3	790.6	790.9	791.2
152.5°	806.2	805.6	804.9	804.3	803.6	803.4	803.8	804.1	804.3	804.6	804.9
155°	825.9	825.0	824.1	823.2	822.4	822.1	822.4	822.7	823.0	823.2	823.7
157.5°	841.1	840.6	840.1	839.5	839.0	838.7	838.7	838.8	838.8	838.8	839.4
160°	851.7	850.8	849.9	849.0	848.2	847.7	847.9	848.1	848.2	848.4	849.0
162.5°	860.1	859.3	858.4	857.5	856.6	856.2	856.4	856.6	856.7	856.8	857.6
165°	871.5	870.6	869.8	868.9	868.0	867.6	867.7	867.9	868.1	868.2	869.1
167.5°	879.9	879.0	878.2	877.3	876.3	875.9	876.1	876.2	876.4	876.6	877.5
170°	884.8	883.7	882.6	881.6	880.6	880.1	880.3	880.5	880.6	880.7	881.9
172.5°	887.9	886.9	885.8	884.8	883.8	883.4	883.7	884.0	884.2	884.5	885.5
175°	891.4	890.5	889.6	888.7	887.8	887.4	887.6	887.7	887.9	888.1	889.2
177.5°	892.9	892.2	891.5	890.8	890.1	889.7	889.9	890.0	890.1	890.3	891.1
180°	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4



TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1225.0	1226.5	1228.1	1228.7	1228.5	1228.2	1228.1	1227.9
5°	1221.3	1223.4	1225.6	1226.5	1226.3	1226.0	1225.7	1225.5
7.5°	1211.1	1213.0	1214.9	1215.7	1215.4	1215.1	1214.9	1214.6
10°	1201.5	1203.4	1205.2	1206.0	1205.8	1205.5	1205.2	1205.0
12.5°	1190.1	1191.5	1192.9	1193.3	1192.7	1191.9	1191.2	1190.5
15°	1168.5	1170.1	1171.7	1172.0	1170.9	1169.8	1168.8	1167.7
17.5°	1141.0	1142.2	1143.4	1143.7	1143.1	1142.5	1141.8	1141.2
20°	1119.9	1120.7	1121.5	1122.0	1122.0	1122.0	1122.0	1122.0
22.5°	1098.2	1099.2	1100.2	1100.4	1099.7	1099.1	1098.5	1097.9
25°	1063.9	1065.0	1066.0	1065.9	1064.5	1063.2	1061.8	1060.5
27.5°	1024.0	1024.8	1025.5	1025.6	1025.1	1024.7	1024.1	1023.7
30°	996.6	997.1	997.6	997.8	997.6	997.3	997.0	996.8
32.5°	970.6	971.2	971.7	971.8	971.5	971.3	971.0	970.7
35°	928.5	929.3	930.1	930.5	930.5	930.5	930.5	930.5
37.5°	884.3	885.4	886.4	886.9	886.8	886.7	886.5	886.4
40°	854.4	855.5	856.6	857.4	857.9	858.4	859.0	859.5
42.5°	826.9	828.2	829.5	830.2	830.3	830.4	830.5	830.6
45°	782.6	784.4	786.3	787.4	787.6	787.9	788.2	788.5
47.5°	736.9	739.6	742.3	744.0	744.6	745.2	745.7	746.4
50°	706.5	709.4	712.4	714.3	715.1	715.9	716.7	717.5
52.5°	676.1	679.2	682.4	684.3	684.8	685.5	686.1	686.6
55°	628.2	631.2	634.1	636.1	637.2	638.3	639.4	640.4
57.5°	580.9	584.3	587.7	589.8	590.6	591.4	592.2	593.0
60°	548.5	552.5	556.5	558.9	559.7	560.5	561.3	562.1
62.5°	515.7	520.1	524.6	527.3	528.3	529.3	530.3	531.4
65°	466.6	470.6	474.7	477.2	478.3	479.4	480.5	481.5
67.5°	416.3	421.2	426.1	429.3	430.6	432.0	433.4	434.8
70°	382.1	387.2	392.3	395.7	397.3	398.9	400.5	402.1
72.5°	350.3	355.8	361.2	364.6	365.8	366.9	368.1	369.3
75°	302.0	307.4	312.7	316.0	317.4	318.7	320.0	321.4
77.5°	253.7	259.6	265.5	268.9	270.0	271.1	272.2	273.2
80°	224.8	230.7	236.6	240.0	241.1	242.2	243.3	244.3
82.5°	197.4	203.1	208.7	212.6	214.5	216.4	218.4	220.3
85°	159.8	165.7	171.6	175.6	177.7	179.9	182.0	184.1
87.5°	131.7	138.0	144.3	148.5	150.4	152.4	154.4	156.3
90°	123.1	129.9	136.8	141.4	143.7	146.1	148.4	150.7
92.5°	118.8	125.5	132.2	136.5	138.6	140.6	142.8	144.8
95°	111.6	118.3	124.9	129.2	131.1	133.0	134.8	136.7
97.5°	117.3	118.8	120.3	121.9	123.8	125.6	127.3	129.2
100°	159.5	143.2	127.0	119.3	120.4	121.4	122.4	123.4
102.5°	222.4	223.6	224.9	221.3	213.0	204.6	196.3	187.9
105°	273.8	279.2	284.5	288.0	289.8	291.5	293.2	295.0
107.5°	320.3	325.7	331.0	334.2	335.5	336.7	337.9	339.1
110°	350.0	354.6	359.3	362.6	364.6	366.7	368.6	370.7





TEST NUMBER: P333438-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	379.2	383.6	387.9	390.9	392.5	394.2	395.9	397.5
115°	424.1	428.3	432.6	435.0	435.8	436.5	437.2	437.9
117.5°	466.7	470.5	474.3	476.9	478.3	479.7	481.2	482.7
120°	494.5	498.7	502.9	505.5	506.4	507.3	508.1	509.0
122.5°	520.3	524.3	528.4	530.7	531.5	532.3	533.1	533.8
125°	558.4	562.0	565.8	568.0	568.9	569.8	570.7	571.7
127.5°	592.4	596.0	599.7	601.7	602.2	602.6	603.1	603.5
130°	615.3	618.6	621.9	623.8	624.4	625.0	625.6	626.2
132.5°	635.9	639.5	643.2	645.2	645.6	646.0	646.4	646.8
135°	665.5	668.7	671.8	673.7	674.1	674.6	675.0	675.5
137.5°	694.0	697.2	700.4	702.2	702.5	702.8	703.1	703.4
140°	711.2	714.4	717.7	719.4	719.6	719.8	720.0	720.1
142.5°	728.6	731.2	733.7	735.1	735.3	735.5	735.7	735.8
145°	754.2	755.7	757.2	758.0	758.2	758.4	758.6	758.8
147.5°	776.8	777.4	778.0	778.0	777.4	776.9	776.2	775.7
150°	791.5	791.8	792.1	791.8	790.9	790.0	789.1	788.1
152.5°	805.2	805.5	805.8	805.5	804.4	803.4	802.5	801.5
155°	824.1	824.6	825.0	824.7	823.5	822.3	821.2	819.9
157.5°	839.8	840.3	840.7	840.3	839.2	838.0	836.9	835.7
160°	849.5	850.2	850.7	850.4	849.3	848.1	846.9	845.7
162.5°	858.4	859.3	860.1	859.9	858.6	857.3	856.0	854.7
165°	870.0	870.8	871.7	871.6	870.4	869.2	868.1	866.8
167.5°	878.6	879.7	880.7	880.7	879.3	878.0	876.6	875.3
170°	883.1	884.3	885.5	885.4	884.0	882.7	881.4	880.1
172.5°	886.5	887.6	888.7	888.5	887.3	885.9	884.6	883.2
175°	890.4	891.5	892.7	892.6	891.4	890.0	888.7	887.3
177.5°	891.9	892.7	893.6	893.5	892.5	891.6	890.6	889.7
180°	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4

(END OF REPORT)